COMMUNITY PLAN MONITORING: 
A CASE STUDY 

by 

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In this thesis, a monitoring system is designed and implemented for the Community Development Plan for the Mount Pleasant neighbourhood of Vancouver, British Columbia. The literature review first provides the context for plan monitoring by showing that the complexity of urban systems necessitates a continuous planning process, i.e., a cyclical or iterative linking of decision-making, implementation and monitoring in order that planning can adapt to changing community goals, issues, and trends.

The role of monitoring in this continuous planning process is initially reviewed in terms of systems feedback and control. However, the complexity of urban systems suggests that concentrating on the goals and objectives of a plan provides too narrow a perspective for monitoring. An expanded role for plan monitoring, one that also addresses assumptions, policies, decisions and issues of concern, is reviewed in the context of a general monitoring system model. This model incorporates four sub-systems: information collection; technical evaluation; provision of advice; and monitoring system improvement.

The case study is conducted in three stages: first, a monitoring system based on the four function model is designed for the Mount Pleasant Plan; second, monitoring
Abstract

System requirements are specified for one section of the Plan, the Mount Pleasant industrial area strategy; and third, data are collected and analyzed for the still more specific policy to maintain existing residential uses in the industrial area.

Two types of data are collected: quantitative data related to goals and assumptions; and "soft" or qualitative data related to policy issues. Subsequent analysis suggests that the two data types, examined in isolation, could lead to different conclusions about policy effectiveness. While the quantitative data indicate that the policy for existing residential uses is performing satisfactorily, the soft information reveals first, a possible flaw in the wording of the policy statement, and second, the wish of local residents to change the policy.

The implications of the case study are that in addition to goals and objectives, assumptions, policies and issues should be monitored. The case study further suggests, as indicated in the literature review, that soft information can improve the efficiency of monitoring systems by providing an "early warning" of emerging issues and thus indicating where more detailed study is required.
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CHAPTER 1
INTRODUCTION

1.1 PROBLEM STATEMENT

Practically all municipalities in Canada have an Official Community Plan, i.e. a strategic policy document adopted by local governments to control the use and development of land under their jurisdiction. In a typical community planning process, planners seek public input to determine issues or problems, identify goals and objectives, develop policy options, assess policy impacts, and present their findings to the locally elected members of Council who then decide on which policies to adopt. Any part of the planning process may be repeated a number of times before the plan is adopted by municipal Council. Following adoption, the recommendations and policies in the plan are implemented by staff. Subsequently, the outcomes of the plan may be monitored to determine if the goals and objectives of the community are being achieved. Finally, the plan is reviewed and the planning process is renewed, either as a result of a problem revealed by monitoring or at a pre-determined time interval.

A shortcoming of community planning is the relatively little attention that appears to be given to plan
monitoring, both in the planning literature and in planning practice. In addition, under conditions of fiscal restraint, monitoring programs are often drastically reduced or cut altogether. However, monitoring has an important role to play in ensuring that the aims and policies of a community plan continue to address the changing needs of the community.

The purpose of this thesis is to review the literature on monitoring in the context of community planning and to design and implement a community plan monitoring system. In doing so, the following questions will be addressed:

- What is the role of monitoring in the planning process?
- What is the nature and function of a plan monitoring system?
- What are the elements of a monitoring system? and
- What constitutes an effective monitoring system?

1.2 CONTEXT

Community planners in the first half of the 20th Century generally produced master plans that focused on achieving a pre-determined end state. Since the 1960s and possibly earlier, the emphasis in planning has changed considerably. Rather than espouse a static view of communities, the current view is that planning should be a cyclical process of implementation, review and adaptation to
changing community values, goals and issues. In this context, monitoring has become increasingly important.

Generally speaking, all planners monitor to some extent. For example, reading the local newspaper, discussing issues with a colleague, or collecting data can all be considered as monitoring activities. As discussed in the literature however, a community plan monitoring system provides more than statistical data. It transforms that data into useful information by checking the plan’s assumptions and forecasts, determining if the aims of the plan are being met and are still relevant, verifying the effectiveness of policies in achieving community objectives, and suggesting amendments to the plan. The challenge for planners with respect to monitoring is to design a monitoring system that uses resources efficiently and at the same time provides useful information.

It was mentioned earlier that there is very limited literature on monitoring. Most texts on planning models and methods deal exclusively with the steps in the planning process leading to plan adoption. Plan implementation receives less attention while monitoring gets practically none. Although monitoring is often acknowledged as an important component of planning, nothing further is added to the discussion. As a result, most of the literature cited in the thesis is contained in reports dealing with the
design and implementation of a monitoring system for a specific plan. Furthermore, most of the literature comes from England where regional planning is required by legislation. Most of that literature relates to monitoring of long-range strategic policy plans at the regional or metropolitan level.

1.3 METHODOLOGY

The aim of the thesis, to design and implement a community plan monitoring system, will be pursued by means of a review of the literature pertaining to monitoring and a case study. The latter consists of designing and implementing a monitoring system for the plan for the Mount Pleasant area in the City of Vancouver, British Columbia.

The Community Development Plan for Mount Pleasant, adopted by Vancouver City Council in 1987, was prepared by a citizen's planning committee with the assistance of the Vancouver Planning Department. It is a broad-based plan, covering various physical, social, economic and environmental issues. Pertinent to the thesis purpose, the plan states that the "Community must review progress and continually monitor the Plan" (Vancouver 1989a). However, while the implementation of the Plan's recommendations was closely monitored by Planning Department staff, no system was set up to monitor the outcomes of the Plan.
Chapter 1. Introduction

The case study will be undertaken as if the thesis investigator had been a planner assigned the task of designing and implementing a monitoring system. First, the Plan will be examined in order to understand its context and purpose. Next, an overall organizing framework for the monitoring system will be developed. The monitoring system will then be set out in operational detail for the industrial area strategy described in the Plan. Finally, the monitoring system will be implemented for that portion of the Plan addressing existing residential uses in the Mount Pleasant industrial area. Data will be collected and analyzed as if the monitoring program had been in operation on an on-going basis since 1987, when the Plan was adopted. Finally, the findings of case study will be discussed in order to comment on plan monitoring in general.

1.4 SCOPE

This thesis is about monitoring, particularly in the context of community land use planning, and deals with planning theory only as necessary to highlight theory on monitoring. The thesis does not specifically address the community planning process and it offers a critique of that process only where it relates to monitoring.

In terms of designing a monitoring system, the thesis concentrates on the Mount Pleasant Community Development
Plan. Further, the monitoring system is fully implemented for only one of the several policy areas contained in the Plan.

1.5 ORGANIZATION

The thesis has five chapters. Chapter 2, the literature review, is presented in two parts. The first part provides a brief review of planning practice in order to set the context for community plan monitoring. It is argued that the complexity of planning problems and the limitations of rational planning necessitate a continuous planning process where monitoring is quite important. In the second part, the literature on plan monitoring is reviewed. The review presents the concept of feedback and control, describes a monitoring model, and discusses in detail each of the four components of that model.

In Chapter 3, a monitoring system is designed for the Community Development Plan for Mount Pleasant. First, the local area planning process in Vancouver is explained. Second, the Mount Pleasant community and the contents of the Plan are described. Third, a monitoring system, based on the literature reviewed in Chapter 2, is proposed.

In Chapter 4, the proposed monitoring system is implemented for the Mount Pleasant industrial area strategy. First the industrial area strategy is described and the data
requirements for monitoring the strategy are specified. Finally, data for monitoring the policy for residential uses in the industrial area are collected and analyzed.

The final chapter first summarizes Chapters 2, 3 and 4. Next, the implications for monitoring and planning are drawn from the case study findings and from the experience of implementing the monitoring system. This discussion leads to some general conclusions about plan monitoring. The chapter ends with suggestions for further research.
CHAPTER 2

PLAN MONITORING THEORY AND PRACTICE

In Chapter 1, it was suggested that monitoring does not receive detailed attention, either in planning texts or in planning practice. The purpose of this chapter is to review the theory and practice of community planning and to understand and clarify the role of monitoring. The first section takes a look at community planning with the intention of providing the context for monitoring in community planning. The following sections examine the theory and practice of monitoring, present a general plan monitoring model, and discuss each component of that model. The final section summarizes the chapter and provides the basis for designing and implementing a monitoring system in Chapters 3 and 4.

2.1 PLANNING THEORY AND PRACTICE

In this section, community planning is reviewed in terms of urban land use planning as practised in Canada. A definition of planning is followed by a brief history of planning practice. A rational planning model is then presented. A discussion of the limitations imposed by complex planning problems provides the context for community planning and plan monitoring.
Chapter 2. Plan Monitoring

2.1.1 What is Planning?

Most people have at some time made a plan of some sort, for example for planting a garden or taking a vacation. All planning activity generally shares the following steps: goals are identified, options are evaluated, an action is taken, and the outcomes of the action are evaluated. Although the above steps are not always undertaken systematically and in the order indicated, they are usually considered at some point in the planning process. The practice of community planning, while somewhat more complex, generally involves the same set of basic steps.

Planning has been defined in general terms as "foresight in formulating and implementing programs and policies" (Hudson 1979:387). Land use planning has been defined as "the process of protecting and improving the living, production and recreation environments in a city through the proper use and development of land" (Leung 1989:1). Both definitions imply that planning serves to guide decisions that shape the future of a city. Regarding land use, decisions are typically made about the type, amount and location of uses of land (Leung 1989:2).

The purpose of community planning has always rested in its pursuit of the public interest. In market economies, public planning is justified in cases where uncontrolled development could create negative impacts on the community
or where the private sector cannot provide public goods and services at a socially acceptable standard.

In the late 19th century, planners were concerned with improving living conditions in industrial cities (Leung 1989:5). Regulations regarding water supply, sewage disposal, sunlight, fire protection and housing conditions were enacted in the interests of health and safety. Since then, many more elements of public interest have been considered in planning, for example efficiency, equity, environmental protection, recreation and visual amenity. Today, "modern planning is applied to the full range of problems that arise in the public domain" (Friedmann 1987:24). Planning is now practised at all levels of government in areas related to security, the economy, social welfare, the environment, regional development, land use, and transportation.

Over the past three or four decades, debate in planning has revolved around determining "what" should be planned, "how", "by whom", and "on whose behalf" (Hudson 1979:387; Bracken 1981:13). Land use planning has adopted a goal-oriented and issues-based approach to problem solving and encourages public participation. Although primarily concerned with land use and development, community planning also addresses a broad set of social and economic objectives.
Chapter 2. Plan Monitoring

A number of planning theories are discussed in the literature and these are not reviewed here. A good overview of current theories is provided in Hudson (1979) while an in depth history of the evolution of planning theory is presented in Friedmann (1987). The next section provides a short description of land use planning in Canada with particular reference to Vancouver. This is then followed by the description of a commonly used planning model.

2.1.2 A Brief Overview of Planning Practice in Canada

In Canada, most municipalities produce official land use plans which are approved by the locally elected municipal Council and the Provincial Government. Typically, the official plan is a strategic policy document used to guide functions such as the preparation of site-specific plans, the drafting of zoning by-laws, the control of land subdivision, and the planning and programming of public facilities and basic infrastructure (Leung 1989:218). Unlike by-laws, official plans do not have the force of law. However, they do carry weight and influence decisions because they are formulated and subsequently approved through visible public processes.

All municipalities in the lower mainland of British Columbia, with the exception of Vancouver, have an Official Community Plan. While the City of Vancouver's Charter does
not require it to have a plan, the City did recently produce two documents that approximate a city-wide plan. The first, Goals for Vancouver (Vancouver 1980), is a statement of broadly-based public goals and their policy implications for the development of the City of Vancouver. The second document, The Vancouver Plan (Vancouver 1986), provides a strategy for managing change in core area employment, city housing, transportation, and urban environment. This document however was not officially adopted by City Council.

As with virtually all municipalities, land use and development in Vancouver is controlled by zoning and development by-laws. In addition, Vancouver has official development plan by-laws that govern land use and development in six sub-areas surrounding the Central Business District. Some Vancouver neighbourhoods have local area plans which are policy documents similar to official municipal plans.

Planning in the lower mainland of B.C. also provides a good example of the notion of a hierarchy of plans (Leung 1989:218; Riera 1979:3.25). At the regional level, the Greater Vancouver Regional District (GVRD) has produced a strategy for region-wide land use planning, now called "Creating our Future" (GVRD 1975; GVRD 1990). Of particular note is the Regional Town Centres policy which encourages decentralized office development in selected suburban
municipalities. Although the regional plan has no force of law, it does influence the review and updating of official municipal plans. The official plans in turn influence planning at the neighbourhood level and the drafting of zoning by-laws.

2.1.3 A Rational Planning Model

A planning model frequently discussed in texts on planning and policy analysis is widely used as a rational approach to community planning. The "rational planning model" has many variations. Although it is presented here as having eight steps, it has been described in as few as three and as many as eleven steps (Friedmann 1987; Patton 1986; Lichfield 1975; Leung 1989). The various descriptions of the model differ only in the amount of detail provided.

For our purposes, the rational planning model is a problem solving sequence of eight steps:

1. Description of the problem.
2. Formulation of goals and objectives.
3. Identification and design of major alternatives for reaching the goals identified within the given decision-making situation.
4. Prediction of major sets of consequences that would be expected to follow upon adoption of each alternative.
Chapter 2. Plan Monitoring

5. Evaluation of consequences in relation to desired objectives and other important values.
6. Decision based on information provided in the preceding steps.
7. Implementation of this decision through appropriate institutions.
8. Feedback of actual program results and their assessment in light of the new decision situation.

(Steps two to eight are from Friedmann 1987:78).

These steps are listed sequentially, but graphical depictions usually show the steps linked to each other. An example of such a model is provided in Figure 1 (Patton 1986). At any point in the process, it is possible to go back to an earlier step if necessary. The last step, feedback of program results, is the main function of monitoring. A number of techniques, many of which are identified and described by Patton (1986), have been developed for each of the steps. The selection of a technique will depend on the problem being addressed and the experience and preferences of the planners involved.
Chapter 2. Plan Monitoring

The next section describes the complexity of planning in the "real world". The purpose is to introduce the current view of community planning practice and to demonstrate the importance of monitoring.
2.1.4 The Complexity of Community Planning

In addressing problems or issues confronting a community, planners and decision-makers strive to make the right decisions. However, there will always be some uncertainty surrounding plans and decisions. The following discussion provides some of the reasons.

The rational approach to planning assumes that it is possible to agree on a set of goals and objectives, identify and analyze problems, generate all possible solutions to those problems, and evaluate those solutions against stated objectives (Bracken 1981:16; Hudson 1979:388; Etzioni 1968:264). If all the above conditions are satisfied, a rational decision can be made.

However, complete rationality is possible only in theory. In King's words, "rational planning (or decision-making) is severely limited by the finite capacity of [people] to absorb and utilize information, the absence of perfect information, and the inability of planners to specify rational means of implementation" (1974:3). This corresponds to Simon's (1976) notion of "bounded" rationality (Friedmann 1987:151). Under conditions of bounded rationality, decision-makers must rely on common sense to choose actions that appear to be good enough (Ibid.).
Chapter 2. Plan Monitoring

The above discussion implies that decision-makers still behave as rationally as possible. However, it has been argued that "all analysis and evaluation is essentially political and depends ultimately upon the subjective values of the analyst" (Riera 1979:2.8). For example, Riera refers to Dror's (1968) "extrarational model" of decision-making to suggest that political judgement in decision-making may sometimes contradict the purposes of a plan (Ibid.:2.9).

The human limitations for undertaking rational planning are compounded by the complexity of the problems that planners and decision-makers confront. This complexity has led Rittel and Webber (1973) to describe public policy problems as "wicked." Some of their characteristics, as described in Patton (1986:1), are:

1. They are not well defined.
2. Their solutions cannot usually be proven to be correct before application.
3. No problem solution is ever guaranteed to achieve the intended result.
4. Problem solutions are seldom both best and cheapest.
5. The adequacy of the solution is often difficult to measure against notions of the public good.
6. The fairness of solutions is impossible to measure objectively.
Chapter 2. Plan Monitoring

Several other factors contribute to the complexity of planning. In Canada, we have at least three levels of government, each with its own legislation, policies, programs, bureaucracies and multiplicity of agencies. The interests or concerns of one agency will often overlap with those of other agencies both within and among the three levels of government. As a result, as Sutton puts it, "many of the important decisions shaping the future of a community lie outside the control of the planning agency" (1979:35). In addition, social, economic and demographic trends, both inside and outside the city, create a changing background of issues, needs, and values.

To summarize this discussion, the following quote provides an accurate description of the planning context.

The reality is more like a constant process of evaluating events and decisions against a shifting background of trends and values inferred from the way issues are handled and the reactions of public and business groups. Even when it is perceived that a formal change to the public policy context is required e.g. an amendment of the plan, the problem of formulating and selecting a new policy is made difficult by our comparatively poor understanding of the system we are planning, and the difficulty in accurately forecasting the effects of new policies. We do not have formulae that relate the relevant variables together, and selecting a "corrective action" is far from an automatic process. (Sutton 1979:38)
2.1.5 Implications for Planning and Monitoring

Given the characteristics of planning problems, there is now general agreement that planning practice has to be more cognizant of and responsive to change. It has been argued that planning should adopt an "evolutionary perspective" in dealing with constantly emerging social issues (Friedmann 1987:167), that it should strive for "flexibility, adaptiveness, and continuity" (Sutton 1979:22), and that it should become a "more managerial, continuous process of review and adaptation to policy" (Bracken 1981:15).

These arguments call for a cyclical or iterative planning process in which monitoring plays a crucial role. If the first six steps of the rational planning model are collapsed into the decision-making function, we get a simplified planning model consisting of three major functions: decision-making, actions (implementation) and monitoring (feedback), as shown in Figure 2 (Riera 1979:3.5). As depicted in this model, a decision leads to action which has an impact on the community, and monitoring collects information about the community and its external environment. The cycle is completed when this information is fed back to the decision-making process which in turn may modify the actions of the planning agency.
Chapter 2. Plan Monitoring

Figure 2. A Continuous Planning Model
2.2 PLAN MONITORING THEORY

The previous section described the community planning context and introduced the concept of plan monitoring. This section reviews the systems theory of monitoring. First, a working definition of plan monitoring is provided. Next, monitoring is described according to the systems theory concept of feedback and control.

2.2.1 What is Monitoring?

Monitoring is sometimes seen as data collection and information processing (Sutton 1979:24). However, the literature reviewed here indicates that for monitoring to be useful to a planning organization, it should do considerably more, as illustrated by these three definitions:

A monitoring system provides the information with which progress towards plan objectives can be assessed, and also supports specific recommendations for plan changes. (Ragatz 1983:2)

A strong monitoring system is needed to collect and analyze information, and to give early warning of actual and potential problems. It should also be capable of indicating whether or not policies are working satisfactorily, and, if not, why not. (Calgary 1977:6)

Given also the broad intention that ... planning should become a more managerial, continuous process of review and adaptation to policy, ... [an] essential concept in this role is that of monitoring, whose broad function is to assess ongoing change, to measure the impacts experienced as a result of implementing plans and policies, and thereby reveal the need for, and requirements to be met by, the plan 'review'. (Bracken 1981:15)
Chapter 2. Plan Monitoring

These definitions indicate that the purpose of monitoring is to provide "feedback" about the results of plan implementation. Planners and decision-makers then use that information to adjust plans, policies and decisions in order to more effectively achieve community goals and objectives. This corrective action can be seen as a means of controlling the development of a community.

2.2.2 Systems Feedback and Control

The concept of feedback and control has received considerable attention in systems theory. This section reviews feedback and control processes first with respect to engineering systems and second as applied to planning of urban systems. Urban systems are then compared to engineering systems in order to point out the ways in which urban systems differ from the ideal systems concept of feedback and control.

A system has been defined as a complex whole composed of a set of connected or inter-related parts (McLoughlin 1969:75). In addition, systems theory holds that a complex system can be broken down into parts for the purpose of overall system analysis and optimization (Catanese 1979:105). Examples of engineering systems are a bicycle, an electrical generating station, or a heating system. In the human environment, the parts of the system are
Chapter 2. Plan Monitoring

"persistent human activities" and the connections are "human communications" (Ibid.:77). For example, an entire city, a neighbourhood, a transportation network, or an organization can all be defined as systems, or as sub-systems of larger systems.

The application of feedback and control processes has been most successful in engineering systems and industrial processes (Sutton 1979:29). The household thermostat provides a familiar and straight-forward example of a feedback and control device designed to maintain a steady state. This type of control, called "error-controlled regulation" (McLoughlin 1969:85), has also been referred to as "negative feedback."

McLoughlin lists four features common to all system control (1969:85):

1. The system to be controlled.
2. The intended state or states of the system.
3. A device for measuring the actual state of the system and thus its deviation from the intended state.
4. A means of supplying correcting influences to keep the system within the limits set.

Figure 3 (Sutton 1979:30) illustrates the concept of feedback and control in a typical industrial process. The model applies equally to more complex engineering systems.
Chapter 2. Plan Monitoring

In the case of a thermostat, the house can be thought of as a system whose internal temperature is to be maintained at a desired level. The thermostat monitors the temperature and compares it to its internal setting, the
Chapter 2. Plan Monitoring

desired state. If the temperature has deviated beyond a certain limit, the thermostat controls the furnace in order to maintain the system at the desired state. The external environment, outside temperature, cannot be controlled and is not affected by the system state, the internal temperature of the house.

Systems feedback and control in the community planning context, a popular concept during the 1950s and 1960s, was adapted from engineering systems. In the case of urban systems, the process was conceived for the purpose of controlling development in order to achieve a desired state, i.e. community goals and objectives.

In McLoughlin's planning control model, illustrated in Figure 4 (1969:86), the city is the system to be controlled, the desired states are expressed in the plan, and monitoring provides feedback on the actual state of the city. The planner is the "helmsman steering the city" either by directing public expenditure or by regulating private development (McLoughlin 1969:86). To assist in decision-making, a model is used to predict the outcomes of alternative control actions. If monitoring reveals a serious deviation from the intended state, either the predictive model or the plan may need to be revised.
The above planning control model is similar to that applied to industrial processes in the sense that the actual state of the system is compared to the intended state and a model of system behaviour is used to predict the outcomes of corrective actions. However, in reality, the city is a complex system containing many parts and connections where
few of the characteristics of engineering systems apply.
Sutton compares the two systems in Table 1.

Table 1. Comparison of Urban and Engineering Systems

<table>
<thead>
<tr>
<th>Engineering Systems</th>
<th>Urban Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The system is clearly circumscribed and the system state has no effect on environmental variables.</td>
<td>Multiple interactions cross system boundaries.</td>
</tr>
<tr>
<td>2. The desired system state is clearly defined.</td>
<td>The desired system state is not reducible to a simple objective function.</td>
</tr>
<tr>
<td>3. The desired system state is stable over a long period of time.</td>
<td>The desired system state changes over time.</td>
</tr>
<tr>
<td>4. Control is direct.</td>
<td>Control is diffuse and widely distributed among other agencies and groups.</td>
</tr>
<tr>
<td>5. Performance criteria are small in number, well-defined, quantifiable, and have a stable relationship.</td>
<td>Performance criteria are wide ranging, explicit and implicit, and quantitative and qualitative.</td>
</tr>
<tr>
<td>6. Control variables are few in number.</td>
<td>There is a multiplicity of variables.</td>
</tr>
<tr>
<td>7. Effects of actions are predictable within narrow and well defined limits.</td>
<td>Consequences of interventions are subject to uncertainties.</td>
</tr>
<tr>
<td>8. Disturbances from the environment are independent of each other, of the system state, and of control actions.</td>
<td>Interventions may stimulate counter actions or 'snowball effects'.</td>
</tr>
</tbody>
</table>

Source: Sutton 1979:34
The right side of Table 1 to some extent reiterates the earlier discussion about the complexity of the community planning context. To summarize, planning problems, for example housing affordability, traffic congestion or air pollution, are not well understood and thus create uncertainty in choosing appropriate control mechanisms; in a dynamic urban planning context, the desired states, i.e. community goals and objectives, are subject to change; and the planning agency is but one of several agencies exercising limited control over some aspect of urban development. Thus, in an urban system, control decisions are not as straight-forward and predictable as with engineering systems.

The review of monitoring has thus far focused on providing feedback about the actual state of urban systems, particularly in relation to the goals and objectives as specified in a plan. However, the concept of plan monitoring has been expanded since the planning control model was first introduced. The following sections review more recent literature on plan monitoring.
2.3 A PLAN MONITORING SYSTEM

In this section, a plan monitoring system model (Riera 1979) is presented. This general model, describing the monitoring component of the continuous planning model presented earlier, includes the functions considered essential to link plan implementation and decision-making. This model will be used as the framework for the review of monitoring in the remaining sections of this chapter. Depicted in Figure 5 (Riera 1979:3.9), the monitoring system model has four components or sub-systems:

1. The information collection sub-system involves the collection, processing, and storage of all types of information.

2. The technical evaluation sub-system is concerned with analyzing the information, evaluating the importance and implications of change, formulating action possibilities, and preparing advice.

3. The advisory sub-system involves the communication of that advice to decision-makers.

4. The improvement sub-system is responsible for evaluating the performance of the monitoring system and recommending improvements. (Riera 1979:3.7)
Figure 5. A Plan Monitoring System

An application of this model in community planning is shown in Figure 6 (Ontario 1982:3). Note that the first three components (information collection, technical evaluation and advisory) are included, if somewhat implicitly. First, data relating to the assumptions and the performance or outcomes of the plan are collected. These data are then analyzed in order to determine if the assumptions remain valid and the objectives of the plan are being achieved. Components of the plan are reviewed if
necessary. Finally, advice based on the analysis is provided to Council.

![Diagram of Plan Monitoring Process]

* In the form of an annual monitoring report.

Figure 6. Monitoring a Community Plan

The remainder of the chapter reviews the literature in terms of each of the four sub-systems of the monitoring system model. Each sub-system is reviewed individually.
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2.4 THE INFORMATION COLLECTION SUB-SYSTEM

The information collection sub-system is responsible for collecting, processing, and storing all types of information. The first sub-section below describes a data collection strategy that has been proposed in the literature as a means of coping with the possibly enormous data requirements. The second sub-section briefly discusses the types of information in order to provide the basis for reviewing the subjects of monitoring in the third sub-section. This is followed by a discussion of data sources and processing methods.

2.4.1 A Data Collection Strategy - Mixed-scanning

An attempt to collect, process and analyze all of the information that might be useful for plan monitoring would soon become an enormous and probably endless exercise. For this reason, a data collection strategy based on the "mixed-scanning" approach to decision-making (Etzioni 1968:Chapter 12) is often advocated. The mixed-scanning approach has two components: scanning and tracking (Sutton 1979:44-45, Wedgwood-Oppenheim 1975:10). The scanning component involves a wide-ranging scan, with a low resolution of detail, of all matters of potential significance. Any problems judged to be significant are then studied in greater detail. The tracking component involves the more
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focused, higher resolution collection of data about specific matters known to be significant.

2.4.2 Types of Information

a) What is Information?

Information is a term often applied to data at all levels of collection, processing and analysis. Catanese provides a useful distinction by identifying a three-level hierarchy: data, information and intelligence (1979:91-93). At the base of the hierarchy is data. Data are the "recorded observations of real world phenomena" (Ibid.). Information is "the level of knowledge needed to solve a problem or show patterns" (Ibid.). Information is produced when the data are manipulated. For example, data may be aggregated or sorted, or descriptive statistics may be computed. At the top of the hierarchy is intelligence, which represents the ability "to seize the essential factors from complex information and data" (Ibid.). Intelligence, expressed for example as social or economic indicators, provides decision-makers with what they need to know. All three levels together create knowledge, the "total concept of data, information and intelligence with a feedback loop" (Ibid.). The feedback loop is necessary because a problem
discovered at one level of the information hierarchy may need to be resolved at another level.

b) Quantitative vs. Qualitative Data

Most analytical methods rely on the use of quantitative data. Examples of quantitative data are the total population in a given territory, or the number of houses constructed over a given period of time. However these data are sometimes not readily available or are available only after time lags that may hamper early detection of change.

There are many situations in which only qualitative data are available. Examples include data about public opinion, consumer behaviour or levels of education. Qualitative data have proven to be quite useful in situations where information is wanted quickly. Changes in societal values can be signalled by reactions to a specific event such as a development application, rezoning, or application to remove a property from the Agricultural Land Reserve.

c) Indicators

Indicators provide quantitative measures of conditions in society and are widely relied upon in planning and decision-making. Commonly cited economic indicators include the unemployment rate, the Consumer Price Index, and the
rate of economic growth. The OECD (1982) offers a list of social indicators as shown in Table 2. These indicators are objective measures that can be readily collected (Roseland 1988:9).

In plan monitoring terminology, indicators are sometimes called quantitative performance criteria and are usually used to evaluate the achievement of goals and objectives or to check assumptions and forecasts. A single indicator however is likely to relate only to a narrow aspect of an objective. For example, monitoring the construction of affordable housing will not indicate that certain target groups have gained (Sutton 1979:27). In this situation, information about the distribution of benefits will be required in order to fully gauge policy impacts.

Social and economic indicators have been combined to generate more informative indicators of social and economic change. Statistics Canada has for example developed a leading composite indicator of future economic growth based on a set of indicators about current economic activity.

Social area analysis is a multi-variate statistical method which combines data variables to create indicators of social condition such as poverty (Bracken 1981:104). A related application is the analysis of neighbourhood change in terms of changing housing conditions and market perceptions (Goetze 1980).
Table 2. The OECD List of Social Indicators

<table>
<thead>
<tr>
<th>SOCIAL CONCERN</th>
<th>INDICATOR</th>
</tr>
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<tbody>
<tr>
<td><strong>HEALTH</strong></td>
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<tr>
<td>Length of life</td>
<td>Life expectancy</td>
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<tr>
<td>Healthfulness of life</td>
<td>Perinatal mortality rate</td>
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<td></td>
<td>Short-term disability</td>
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<td></td>
<td>Long-term disability</td>
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<tr>
<td><strong>EDUCATION AND LEARNING</strong></td>
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<tr>
<td>Use of educational facilities</td>
<td>Regular education experience</td>
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<tr>
<td>Learning</td>
<td>Adult education experience</td>
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<tr>
<td></td>
<td>Literacy rate</td>
</tr>
<tr>
<td><strong>EMPLOYMENT AND QUALITY OF WORKING LIFE</strong></td>
<td></td>
</tr>
<tr>
<td>Availability of employment</td>
<td>Unemployment rate</td>
</tr>
<tr>
<td></td>
<td>Involuntary part-time work</td>
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<td></td>
<td>Discouraged workers</td>
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<tr>
<td>Quality of working life</td>
<td>Average working hours</td>
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<td>Travel time to work</td>
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<td></td>
<td>Paid annual leave</td>
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<td>Atypical work schedule</td>
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<td>Distribution of earnings</td>
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<td></td>
<td>Fatal occupational injuries</td>
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<td></td>
<td>Work environment nuisances</td>
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<tr>
<td><strong>TIME AND LEISURE</strong></td>
<td></td>
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<tr>
<td>Use of time</td>
<td>Free time</td>
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<tr>
<td></td>
<td>Free time activities</td>
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<tr>
<td><strong>COMMAND OVER GOODS AND SERVICES</strong></td>
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<tr>
<td>Income</td>
<td>Distribution of income</td>
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<td></td>
<td>Low income</td>
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<tr>
<td></td>
<td>Material deprivation</td>
</tr>
<tr>
<td>Wealth</td>
<td>Distribution of wealth</td>
</tr>
<tr>
<td><strong>PHYSICAL ENVIRONMENT</strong></td>
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<tr>
<td>Housing conditions</td>
<td>Indoor dwelling space</td>
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<td></td>
<td>Access to outdoor space</td>
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<td></td>
<td>Basic amenities</td>
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<tr>
<td>Accessibility to services</td>
<td>Proximity of selected services</td>
</tr>
<tr>
<td>Environmental nuisances</td>
<td>Exposure to air pollutants</td>
</tr>
<tr>
<td></td>
<td>Exposure to noise</td>
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<tr>
<td><strong>SOCIAL ENVIRONMENT</strong></td>
<td></td>
</tr>
<tr>
<td>Social attachment</td>
<td>Suicide rate</td>
</tr>
<tr>
<td><strong>PERSONAL SAFETY</strong></td>
<td></td>
</tr>
<tr>
<td>Exposure to risk</td>
<td>Fatal injuries</td>
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<tr>
<td></td>
<td>Serious injuries</td>
</tr>
<tr>
<td>Perceived threat</td>
<td>Fear for personal safety</td>
</tr>
</tbody>
</table>

*Source: OECD (1982), reproduced in Roseland (1988).*
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In other work, social and economic indicators have been incorporated into social accounting frameworks (Roseland 1988). Fox (1985), Pyatt (1985) and Czamanski (1973) provide a useful literature on social accounting.

2.4.3 What to Monitor?

Determining what to monitor is an empirical question, the answer to which depends on the scope of the plan, the nature of the goals and objectives, and available resources (Calgary 1977:8). Bracken (1981:85-87) provides a number of points to consider in deciding what to monitor. Essentially, he emphasizes that monitoring systems should relate to the plan, i.e. that attention should be paid to the plan's objectives, the issues addressed, implementation, policy interactions, and technical and political decision-making. The following sub-sections examine the various categories of information that have been proposed as the subjects of plan monitoring.

a) Goals and Objectives

Goals and objectives are fundamental to rational planning for a number of reasons: they provide a long term view; in a participatory process, they confirm public values; they highlight conflicts; and they permit the evaluation of plan outcomes (Bracken 1981:28). Goals have
been defined as "formally and broadly worded statements about what we desire to achieve in the long run" (Patton 1986:140). Objectives are usually "more focused and concretely worded statements about end states" (Ibid.) usually with a shorter term outlook.

The aim of an objective may be clear, such as "to increase the availability of affordable housing" or "to increase the use of public transportation." But an objective may be vague, such as "to improve the image of a community." Communities will sometimes deliberately express their objectives in vague terms for political or technical reasons (Riera 1979:2.10). For example, "motherhood" statements, which all can agree with, will be adopted when specific statements would be mired in divided opinion. Or improvement made toward a qualitative objective sounds better than failure to meet a numerical target.

The most common purpose of plan monitoring is to evaluate change in a community in relation to the goals and objectives as set out in a community plan or related document. The usual approach to monitoring goals and objectives is to develop indicators or formulate key questions that can be answered through data collection. Goals and objectives are most easily monitored when they are expressed as quantitative targets. When expressed in
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qualitative terms, it may be more difficult to know to what extent the objectives are being achieved (Ontario 1982:6).

b) Policies and Decisions

Policies and decisions are fundamental to plan implementation. Policies are statements that "indicate the manner in which a municipality intends to act in order to achieve its objectives" (Ontario 1982:5). In other words, policies guide on-going decision-making toward achieving desired ends (Sutton 1979:10). In land use plans, policies indicate "the way in which land should be used" (Floyd 1978:476).

As with objectives, policies can be quite specific in setting targets or they can provide a more general indication of plan intent (Riera 1979:2.10). Precise policies are sometimes avoided because they can conflict with the desire of a City Council or planning agency to maintain flexibility in decision-making. For example, they may not allow subtle changes in implementation without drawing attention to changes in outcomes (Bracken 1981:300).

Policies may be ordered by level of specificity. Three levels have been identified by Sutton: strategic, general, and operational (1979:60). The least specific are strategic policies which are broad statements of intent that often resemble goal statements. General policies expand on
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strategic policies and may provide "indications of the quality, quantity and location of the desired output plus its timing and sectoral impacts" (Ibid.). Operational policies are the most specific and guide day-to-day decisions.

The above hierarchy is useful in plan monitoring because it can provide a logical link between specific operational policies and the broader goals of a plan (Ibid.:61). It should be noted that the level of specificity is relative and will vary between plans.

Policy monitoring occurs at three levels: "determining whether policies are being implemented (implementation monitoring); assessing whether implementation of the policies is achieving the aims of the plan (impact monitoring); and finally reviewing whether these aims continue to be appropriate (strategic monitoring)" (Floyd 1978:477).

Decisions are guided by policies and monitoring of decision-making can be quite revealing. For example, it may be discovered that decisions are not following adopted policies. This may be due to changing interpretation of long term objectives or conflicts over the means of achieving long term goals (Sutton 1979:37). It is also possible that a decision is subject to more than one policy.
Policy "stress" is created when a decision cannot be consistent for all policies (Floyd 1978:479).

Monitoring decision-making can also indicate changing priorities. Distinguishing between explicit and implicit policy will assist in this regard (Riera 1979:F.17). Explicit policy is a statement derived from a formal community planning process. Implicit policy on the other hand is not formally stated and results from decisions made either without reference to any policy or in contravention of explicit policy. Riera adds that to discover a shift in policy commitment, it is necessary to identify lead decisions (Ibid.).

To assist in identifying policy shifts, Riera (1979:F.18-19) lists three types of decisions. First are spontaneous decisions, taken when urgent action is required. Second, policy can result from a series of decisions which have a cumulative effect. Third is the process of creeping commitment, whereby the set of decision options is gradually reduced over time to the point where no alternative choice is available. Recognition of creeping commitment can lead to the determination of impacts before they occur and thus allow for provision of timely advice (Ibid.).
c) Policies and Decisions of Other Organizations

The policies and decisions of other public agencies, particularly those that impact on the community, should also be considered in deciding what to monitor. Agencies operate at all levels of government and significant decisions are often made outside the community. For example, federal or provincial decisions about funding co-op housing projects are ultimately felt in the community. Another example is provincial government decisions regarding road construction or funding of public transit.

d) Assumptions

The assumptions that are made during plan making have also been proposed as a subject of monitoring. Wedgwood-Oppenheim (1978:12) describes planning as a "process whereby aims, factual evidence and assumptions are translated by a process of logical argument into appropriate policies." Assumptions are made about social attitudes and values, forecasts, or the impacts of the policies and actions of other organizations. To emphasize the importance of monitoring assumptions, Wedgwood-Oppenheim adds that "when the outcomes of a plan deviate from expectations it is because some of these assumptions were incorrect" (Ibid.).

Where possible, indicators are used to monitor assumptions. Some assumptions are explicitly written in a
plan, whether quantitative such as a population growth or qualitative as in public tastes. Other assumptions are implicit and although not written in the plan and perhaps based on ideology, they also form a basis for the plan (Ontario 1982:5). For example, implicit assumptions are often made about the political climate or the behaviour of the market.

Many policies are based on forecasts. Typical examples of planning forecasts are the growth and structure of the population, economy, employment, families, or households. Assumptions are made about the accuracy of the forecasts, how the variables interact, how they will change, and how they will affect the outcomes of the plan (Wedgwood-Oppenheim 1978:12). The approach used in monitoring forecasts is to compare a forecast with the current measure or estimate of the variable. If serious deviations are discovered, adjustments are made to the forecasts, assumptions, and plan as required.

e) Issues of Concern

Another subject of monitoring is tracking the development of key issues and identifying emerging issues. Although community plans address various issues, not all community issues are addressed directly by the policies in a plan. However, all important issues should be monitored.
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Indicators and social area analysis have been used successfully to monitor the development of known issues (Floyd 1978:479).

Identifying matters of future concern is more problematic. Floyd states that forecasting can assist in identifying new issues as well as assessing the continued relevance of current issues (Ibid.:480). The method of forecasting advocated relies heavily on qualitative "intelligence" and "personal judgements" as a way of staying "a few steps ahead of the game" (Ibid.).

f) Uncertainty and the Unforeseeable

Finally, planning and decision-making occur in a climate of uncertainty. In fact, all of the above information categories have a component of uncertainty (Sutton 1979:44). For example, the goals and objectives of a plan may lose relevance as public values and perceptions change. Planners also have to contend with potential problems created by the unintended consequences of policy implementation. There will also be uncertainty about possible actions of other agencies and the value judgements that will be made (Floyd 1978:481).

The importance of considering uncertainty has been emphasized in the literature. Wedgwood-Oppenheim contends that "relevant issues more often arise as problems concerned
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with the unintended consequences of our policies or problems unrelated to existing policies" (1975:12). Floyd argues that monitoring "should be much more concerned with the future rather than with past changes" (1987:477).

The implications for monitoring are that it needs to be able to perceive relevant problems quickly. This means that in addition to tracking the implementation of past policies, monitoring will have to be concerned with anticipating new problems and choices. (Riera 1979:F.8). Sutton adds that monitoring for the unforeseeable would be facilitated by making explicit in a plan its assumptions about expected policy impacts and interactions, and sensitivity to changes in social and economic trends (1979:44).

2.4.4 Sources of Information

To monitor each of the subjects reviewed above, information will be collected from a number of sources. This section presents an overview of the sources of available data. Rather than provide a detailed listing of data items, the intent here is to indicate the categories of data sources and to discuss their usefulness for monitoring.

a) Published Data

There are numerous sources of published data. Government agencies such as Statistics Canada, Canada
Mortgage and Housing Corporation, and the British Columbia Central Statistics Bureau regularly publish reports related to population, employment and housing. Data are often available at the municipal level. When generated consistently, published sources can be used to construct useful time-series.

There can however be limitations to published data. For instance, the available data may not relate closely enough to policy effects; time lags may be too long; or published estimates may be based on expectations about policy impacts, thus creating a risk of circular reasoning when using those estimates to assess local impacts (Bracken 1981:303). In addition, because data are usually aggregated at the municipal or regional level, they do not address smaller geographic areas of interest such as local neighbourhoods.

b) Operational Data and Information Systems

Most municipalities now have computerized databases used to maintain data of an operational nature. Systems for processing and managing development and building permits, business licenses, and property tax collection are now quite widespread. Permits and licenses data are indispensable because they describe the local development processes. They can indicate change in the community, provide a good record
of development and business activity, and also reveal what
decisions are being made over time. Property tax assessment
databases are useful because they contain a record for each
property in a municipality and can thus be used to build a
property database. Regarding other agencies, access to
operational data or periodic reports generated from these
data will help in monitoring. For example, vehicle
registration data is frequently used by transportation
planners.

c) Surveys

Sometimes the necessary data is simply not available
and a survey will have to be conducted. Many types of
survey are possible. For example, field surveys may be
conducted to determine land use. Telephone surveys or
interviews may be used to assess public opinion. Surveys
can be costly and are usually recommended as a last resort
when all existing sources of data have been exhausted.

d) Public Participation

Public participation is not only accepted as necessary
for legitimate planning, it is also a good way to monitor
change in community values, goals, and issues. Public
participation can also help to evaluate the significance of
policy impacts.
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e) Soft Information

In monitoring, "soft" information refers to information that is non-specific, wide-ranging, highly qualitative, usually subjective and even speculative (Sutton 1979:44). This is the type of information that can deal with uncertainty and the unforeseeable and can provide an "early warning" of new issues, emerging policies, or significant changes in the community (Ibid.; Ontario 1982:15; Wedgwood-Oppenheim 1975:13).

The sources of soft information are numerous and some are listed here: professional networking; press clippings; public meetings; memoranda, minutes and reports; published journals; and opinions and rumours. Information relating to significant or unexpected events is useful in modifying assumptions or revealing the need for considering other factors. For example, reactions to events or decisions made in visible public processes such as Council meetings may reveal changing values in the community (Sutton 1979:42).

f) Time Series Data

Time-series data provide the best indication of cycles and trends. However, the creation of time-series should be carefully planned, taking into account the purpose for which it is required. The choice of time interval has implications for what a time series can reveal. For
example, seasonal variations will not appear in an annual time series. Similar cautions are needed with Census data which are collected every five years and for some variables, every ten years. If, for example, one Census occurs during a period of economic boom and the next during a recession, indications of change may be misleading.

Time series data are regularly published by a number of agencies. In some cases however, individual data sets may have to be assembled into a series. Goetze (1980:34) stresses that elementary, consistent, annual time-series data are ideal for studying neighbourhood change. To monitor change at the neighbourhood level, where published data are usually not available, time-series will have to be constructed locally. Operational municipal data, possibly supplemented by a regular survey, will be quite useful in this regard.

\textit{g) Remote Sensing}

A common application of remote sensing is monitoring land use from aerial photographs. In a built up community, large scale aerial photographs make it possible to determine building site coverage, a general land use category, and building set back from lot boundaries. Examples of other applications for large scale aerial photographs are geological mapping, agricultural monitoring, and topographic
mapping. Images from satellites are smaller scale and thus more suitable for determining larger land use features such as agricultural zones, forests, rivers and urban areas (Aronoff 1989:Chapter 3).

2.4.5 Data Processing and Storage

Data that are collected have to be processed and stored for further analysis if they are to generate useful information and valuable intelligence. As discussed earlier, processing converts data to information and intelligence. The data will be aggregated where appropriate, various descriptive statistics will be computed, indicators will be calculated, and data for time series will build on existing series. Aggregation is typically done by geographic area. For example, computing total population for each neighbourhood in a city. Aggregation can also be done by other categories, for example by major industry or occupation group, or by a population characteristic such as age group or household type.

Geographic information systems (GIS) have great potential for monitoring, particularly for data collection and processing. A GIS is a computer based system that can store and manipulate geographically referenced data. It has four sets of capabilities: data input; data management; data
manipulation and analysis; and data output (Aronoff 1989:39). Geographic data have two components: the spatial component which specifies a geographic location, and the attribute component which describes some feature (Ibid.:38). Data output can be in the form of data files, tables or maps.

Most of the data required for and generated by community planning are referenced to a location, which can be described for example by street address or by latitude and longitude coordinates. The database management capabilities of a GIS facilitate the assembly of data corresponding to any user-specified geographic area (e.g. a local neighbourhood), thus reducing the amount of time and effort required to collect or aggregate data. The number of possible GIS applications is practically limitless (see Aronoff 1989:16-20). For example, a GIS could readily identify areas in the city where services (e.g. neighbourhood parks per capita or minimum distance from a park) are not at city standard.

Processing and storing soft information has received special attention in the literature, where a number of similar suggestions are made by Sutton (1979), Ontario (1982), and Wedgwood-Oppenheim (1975). Much of this information will relate to issues and all authors recommend a filing system where each issue is categorized by a number
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of dimensions, for example date, policy category, issue category, geographic area, and level of priority. Examples of priority levels for issues are: require an immediate response, require further study, have potential for becoming important, or are unimportant.

Various methods can be used to file soft information. In one example, issues were written on cards that were coded by edge-punching. In another case, a library type filing system was used. Today, computer database programs are useful for storing, managing and retrieving data.

2.5 THE TECHNICAL EVALUATION SUB-SYSTEM

Discussion has thus far concentrated on the information collection sub-system. We now turn to the technical component of the monitoring system. The technical evaluation sub-system is concerned with analyzing data, evaluating the importance and implications of change, formulating action possibilities, and preparing advice for decision-makers.

The primary purpose of analysis is to determine if plan outcomes are meeting the objectives set out in the plan and to discover the factors responsible for change. Analysis can improve our understanding of policy impacts and thus assist in preparing and assessing alternative courses of action to improve or update the plan (Riera 1979:F.14-15).
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Measuring progress toward plan objectives is relatively straight-forward. However, determining the factors that are causing change will require additional analysis such as examining the implementation, enforcement and effectiveness of a policy. This analysis is more complex because a simple causal relationship does not always exist between planned actions and their outcomes (Wedgwood-Oppenheim 1975:11), and policies can have unintended side-effects as well as cumulative effects. In addition, external forces such as social and economic trends or the policies of other organizations can have an impact (Ontario 1982:17).

Evaluating the significance of observed impacts will be a matter of professional and political interpretation. Experience, substantive knowledge of the issue, and values will all contribute to that interpretation and subsequent formulation of advice. In some cases a relatively minor policy modification will be sufficient. In other cases our expectations about policy performance will be revised. Where a major change is deemed necessary, the rational planning process will be repeated, i.e. problem definition, identification of goals and objectives, and so on. At this point, problem identification is linked to the advisory component of monitoring which then feeds back into the continuous planning process.
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The next few sections look at some of the ways the above analyses can be undertaken. The material presented here focuses primarily on measuring change rather than determining its causes. First, different methods of data analysis suitable for monitoring are reviewed. Second, two approaches to monitoring are discussed.

2.5.1 Methods of Analysis

Several methods for data analysis have been devised and the sampling provided here is meant to indicate possible types of monitoring analysis. The following methods are quantitative and will reveal change in the community but not necessarily the reasons for that change.

a) Before-and-After Comparisons

The before-and-after approach involves comparing conditions in a community before a new policy is implemented and after it has had time to have an impact (Patton 1986:311). This method requires two data sets. The significance of the observed impact is then evaluated against the objectives of the policy. It is usually assumed that the observed effects were due to the policy or program.
b) Actual-Versus-Planned Comparisons

As the title implies, the approach involves the comparison of actual plan or policy performance to predetermined targets. When actual performance data are collected regularly over a period of time, this method is also useful for assessing change. However it does not allow us to determine conclusively the extent to which change can be attributed to the policy (Patton 1986:312).

c) With-and-Without Comparisons

The with-and-without approach is more experimental in nature. It involves a before-and-after comparison of two groups or areas, one with a program or policy and the other without (Patton 1986:311). An example of this method might be to compare the effect of modifying the industrial zoning in one area with another area where industrial zoning is unchanged.

A true experimental design, one that permits the evaluation of cause and effect, requires the use of treatment (with) and control (without) groups that are randomly selected from the population. In real world planning situations, policies cannot be assigned randomly in such a manner. Thus the with-and-without approach is limited by the ability to select two areas or groups that are similar enough to reduce the effect of other factors.
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The above approach is called "quasi-experimental design" (Patton 1986:314).

d) Time Series Comparisons

Time series data can reveal impacts of a policy or plan over time. This is particularly helpful in the "interrupted time series design" (Patton 1986:316) where a series is collected for a period of time both before and after introduction of a policy or program. Such a time series may indicate a change in trend or a jump to a higher or lower level.

The analysis of time series is complicated when trend data are not smooth, but various statistical smoothing techniques are available. Care should also be taken to verify that data are collected consistently over time. As with other analyses, impacts may lag policy implementation, other policies may be inter-related, and cause and effect relationships are not always clear.

e) Cost-Oriented Analyses

Cost-oriented approaches have been applied to the monetary evaluation of policy outcomes. They are basically similar to cost benefit and cost-effectiveness analyses, except that they are done after a policy or program is implemented. In cost benefit analysis, costs and benefits
are quantified in dollar terms and usually discounted back
to the program start-up date. The results can be used to
check the original cost benefit analysis and to monitor the
costs of policy implementation.

2.5.2 Approaches to Monitoring

Two approaches to monitoring are reviewed here. These
methods are interesting in that they reflect two different
outlooks on planning.

a) Target Tracking Approach

The target tracking approach to monitoring starts with
a target value for a variable set at some point in the
future. The target usually relates to the objectives of a
plan or policy and the variable of interest is then tracked
to identify deviations from the target (Riera 1979:3.16).
This approach so far resembles the actual-versus-planned
performance comparison above. If the variable is "off
target," the significance of the deviation is determined
before deciding to adjust the plan trajectory.

b) Rolling Target Approach

The rolling target approach to monitoring is a somewhat
more flexible variation of target tracking. "Rather than
emphasize the identification of deviations from the
predetermined targets, it uses new information available each year to prepare a revised set of forecasts and targets" (Riera 1979:3.21). As a result of using this approach to monitoring, a plan's assumptions, objectives and policies will be reviewed frequently.

Compared to target tracking, the rolling target approach makes a more realistic assessment of what is possible. Change is accepted as an indication of the condition of the system rather than as a failure to meet pre-determined targets. This condition is taken into account in revising targets and determining a new set of responses (Riera 1979).

2.6 THE ADVISORY SUB-SYSTEM

In the first two components of the monitoring system, information collection and technical evaluation, data are collected and then analyzed to determine policy impacts, departures from plan objectives, and the development of issues. In the event that significant changes are revealed, alternative courses of action may be formulated and then evaluated in terms of their impact on the objectives of the plan. The advisory sub-system represents those activities required to communicate the above information to decision-makers, for example through a report written and presented to City Council.
In addition to communicating advice to decision-makers, reports might be produced for more general public distribution. Wedgwood-Oppenheim (1975:24) identifies three principal ways in which information is made available: formal or informal reports on particular issues; routine reports; and meeting specific requests for information. A formal or informal report on a particular issue will be made following an examination of that issue and may have a restricted audience. A routine report, usually produced annually, would cover all changes impacting on the community and focus on significant developments.

The timing of reports can also be important. Floyd suggests that monitoring reports should be "synchronized with the processes they seek to influence" (1978:484). This might involve for example the provision of up-to-date information to coordinate with a capital budgeting process. Elsewhere, it is stressed that reports released at the same time once a year will improve continuity (Ontario 1975:16). In other cases, more frequent reporting may be desirable, as with reports on particular issues mentioned above.

A basic format for a monitoring report is presented by the Ontario Ministry of Municipal Affairs and Housing (Ontario 1975:16-18). The suggested outline has four sections. First, the introduction provides some background to the monitoring work and a comment on progress or problems
Chapter 2. Plan Monitoring

of that work. The second section covers changes in the background context of the plan. The implications of significant changes in social and economic trends or other plan assumptions are discussed here. In section three, individual policy areas are reported individually, preferably in the same order as they appear in the plan. The material would discuss progress in policy implementation, significant changes in the community, and reasons for departures from expected changes. The final section includes a summary of conclusions from the previous sections, a discussion of alternative courses of action, and recommended actions or changes to the plan.

To make reports informative, easy to digest, and appealing to a wide audience, Wedgwood-Oppenheim (1975:24) point out the need to reduce the bulk of information. He also adds that reports should as much as possible:

1. Avoid tabulated data.
2. Use numbers rounded to 1 or 2 significant digits.
3. Avoid absolute levels in favour of proportions or percentages to indicate comparisons or changes.
4. Use graphic illustrations.
5. Synthesize information using prose rather than numbers. and
6. Repeat information that is important, possibly in several forms. (Ibid.)
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The advisory sub-system completes the link between monitoring and decision-making as indicated with the continuous planning model. It is with these advisory activities that feedback actually occurs.

2.7 THE IMPROVEMENT SUB-SYSTEM

The fourth and final component of the monitoring system is concerned with continuously evaluating and improving the performance of the monitoring system. The improvement sub-system calls for an objective appraisal of monitoring system performance, consideration of operational changes, and the development of improvements (Riera 1979:F.15). The purpose of improvement is to make monitoring systems more dynamic and responsive to any changes required by the plan, the community, or other considerations.

Most monitoring systems will be implemented incrementally, gradually expanding and refining their collection and analysis of data. At the same time, regular monitoring activity will be evaluated and improved in light of changing conditions and available resources. For example, alternative methods will be explored and tested, and more informative indicators of conditions in the community will be developed. As issues change, some data sets will be dropped while others will be added. Report formats and communication procedures will also be modified.
In order to work, monitoring system improvement needs to be explicitly supported by the planning agency and responsibilities for improvement have to be clearly defined. In addition, the planning agency will be responsible for ensuring information flow both within the organization and out to the community, other agencies and City Council. The recipients of information will in turn provide feedback on the relevance and usefulness of information and this will contribute to system improvement.

2.8 SUMMARY

This section briefly summarizes the main points that will be utilized to design and implement a monitoring system in the next two chapters. The importance of monitoring in a continuous planning process was emphasized in the initial discussion of the uncertainty associated with planning in complex urban systems. When viewed in this context, monitoring is seen to play an integral role in linking plan implementation back to decision-making.

To assist in designing a monitoring system, a four component model (data collection, technical evaluation, advisory, and system improvement) was then reviewed. The four components or sub-systems describe the monitoring system in distinct functional parts. However, the parts are
closely inter-related and together represent a complete plan monitoring system.

Clearly, the monitoring requirements for a long range regional policy plan will differ from those for a community land use plan. What to monitor will be determined after carefully considering the purpose of the plan and balancing that against available resources. In order to manage potentially enormous data requirements, a mixed-scanning approach was recommended. The tracking component called for the detailed collection of data considered to be important. The broad and less detailed scan, relying primarily on soft information, was equated to an early warning system, and it was argued that a future-oriented monitoring system would rely heavily on scanning in order to anticipate change.

The purpose of analysis is to measure and determine the causes of change. While a number of techniques were presented, most were designed to measure change rather than reveal its causes. An assessment of the underlying causes would rely heavily on substantive knowledge and experience. The results of the analysis are then evaluated to determine the significance of departures from plan objectives. Any recommendations resulting from the analysis are then communicated to decision-makers.

The monitoring system itself will also be subject to performance evaluation. The system will be reviewed to
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determine if it is collecting the right data, providing useful information, and utilizing resources efficiently. Thus, just as with the planning process, monitoring is itself a continuous process.
CHAPTER 3

MONITORING SYSTEM DESIGN

The purpose of the thesis is to design and implement a monitoring system for community planning. It is proposed to accomplish this purpose by means of a case study which will examine and utilize the Community Development Plan for Mount Pleasant (Vancouver 1989a). The case study will be conducted as if the monitoring system had been requested at the time of Plan adoption in 1987.

The purpose of this chapter is to design a monitoring system which will then be implemented in the subsequent chapter. However, before a monitoring system is designed, it is important to understand the context and purpose of the Plan. The first section introduces the local area planning model that was used to prepare a number of neighbourhood plans in the City of Vancouver. The second section describes the Mount Pleasant community and the Community Development Plan. The final section proposes a framework for monitoring the Plan.
3.1 LOCAL AREA PLANNING IN VANCOUVER

The local area planning model currently used in Vancouver was initiated in the early 1970s, largely the result of citizen dissatisfaction with the urban renewal programs of the 1950s and 1960s. During that earlier period, land was expropriated and redeveloped with little or no community input. People were displaced from their homes, often causing the permanent disruption of communities. An attempt to build a freeway into downtown Vancouver unified public opinion against insensitive development decisions.

Concerned about the physical and social turmoil caused by urban renewal, citizens used the electoral process to change representation on City Council. Responding to the shift in public attitudes toward neighbourhood protection and improvement, City Council directed City staff to involve citizens in the decisions affecting their neighbourhoods.

After a number of options for citizen participation were explored by the Planning Department, City Council decided on a partnership model. This model involves "drawing citizen committees from the community and working, with assistance from City staff and other agencies, to define problems, describe issues, set objectives, and develop neighbourhood plans" (Vancouver 1986a:5).

1 This section draws primarily from the material in Vancouver 1986a.
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In deciding on the initiation of local area planning programs, priority is given to areas where the livability of the neighbourhood is under threat, where there are opportunities for achieving City goals and guiding land use change, and where there is local interest (Vancouver 1989c). To facilitate the process a site planning office is usually opened in the area and staffed by City planners.

The City of Vancouver is divided into 22 local areas (Figure 7), defined by the Social Planning Department in the 1960s to represent what citizens considered as their neighbourhood. The Community Development Plan for Mount Pleasant is one of 15 local area plans officially adopted by Council between 1973 and 1989 (Vancouver 1989c). About half of the local area plans are for sub-areas of local areas. However, all plans address a broad range of community issues and provide policies for controlling land use, enhancing local services and amenities, and promoting social and economic development. In this respect, local area plans are similar to the community plans discussed earlier in Chapter 2. In the absence of an official plan for the entire City of Vancouver, local area plans are especially important.
3.2 THE COMMUNITY DEVELOPMENT PLAN FOR MOUNT PLEASANT

The Community Development Plan for Mount Pleasant was adopted by Vancouver City Council on October 6, 1987, six years after a local area planning program was initiated. It was prepared by the Mount Pleasant Citizens' Planning Committee, with the assistance of the Vancouver Planning
Department and other civic departments and agencies. Containing recommendations on social, economic, and physical development, the Plan is "a guide for the future of Mount Pleasant [that] establishes a framework for public organizations to use when determining budgets, resources, priorities, programs or by-laws applicable to this community" (Vancouver 1989a: preface).

In approving the Plan, Council and City staff made a commitment to carry out its numerous recommendations. However, the role of local citizens did not end with the Plan's approval. For it is clearly stated in the introduction to the Plan that the "community must review progress and continually monitor the Plan" (Vancouver 1989a: preface). However, no formal plan monitoring has been done beyond tracking implementation of the recommendations, the local area site planning office was closed over two years ago, and the citizen's planning committee has not met in over a year (Apostolides 1992).

It has not been the practice of the Vancouver Planning Department to monitor local area plans. The City does however prepare two monitoring reports for distribution to the general public. The first, the Vancouver Monitoring Program (Vancouver 1992b), is compiled twice a year by the Planning Department. This program was developed to monitor the Vancouver Plan (Vancouver 1986b) which, although not
officially adopted by City Council, provides a strategy for managing change in the City. The Monitoring Program collects time-series data in areas related to employment, housing, transportation, the urban environment, and population. Information sheets, produced from these data, are distributed individually.

The second monitoring program, Vancouver Trends (Vancouver 1991b), is published annually by the City Manager's Office. It was developed to monitor the City's progress toward a broad set of goals identified in Goals for Vancouver (Vancouver 1980). Data collection is organized into sections corresponding to the ten categories of goals in Goals for Vancouver. Each section lists the goals, summarizes key findings, and provides a large number of time-series charts for the purpose of identifying long-term trends.

At the regional level, the GVRD has a general monitoring system (GEMONI), which collects time-series data on a range of demographic, economic, and development indicators, e.g. housing starts and completions, migration, vital statistics, labour force and employment. These data are generally available at the municipal level. In addition, the GVRD has a Commercial and Industrial Floorspace System (CIFS) which contains floorspace data for each commercial and industrial property in the GVRD.
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The following sub-sections describe the history of the Mount Pleasant community, the issues that led to the initiation of a local area planning program, the planning process, and the content of the Plan.

3.2.1 The Community of Mount Pleasant

Situated at the south-east end of False Creek, Mount Pleasant is one of Vancouver's oldest communities. Its rich history goes back to the last quarter of the 19th Century when the area along Brewery Creek was being developed for industrial purposes. In 1872, a bridge was built across False Creek to the foot of Main Street and commercial and residential development soon followed the lead of industry.

Mount Pleasant prospered in the early 1900s, creating visions of an 'Uptown Vancouver'. The area surrounding the intersection of Broadway, Main and Kingsway became a centre of commercial and cultural activity. A number of important buildings were constructed, some of which still remain. However, by the 1930s, the uptown focus had shifted west to the intersection of Broadway and Granville. Industrial activity began to dominate and large homes were converted to rooming houses to accommodate industrial employees.

Today, Mount Pleasant is a culturally diverse community of approximately 22,000 residents, about 5% of the City's 1991 population. In addition to containing a variety of
housing types, ranging from single to multiple family dwellings, the area is host to significant commercial and industrial areas.

Five neighbourhoods were identified during the community planning process (Figure 8), each characterized by a distinct combination of land uses (Vancouver 1989a):

1. **Mount Pleasant Industrial** is developed primarily for industry with mixed uses allowed in the Main Street area. Commercial uses are permitted on Broadway and Cambie Streets. A number of residential buildings remain in the core industrial area from the period prior to 1960 when the area was zoned residential.

2. **West Mount Pleasant** is a residential area mainly consisting of two-family and multiple conversion dwellings with some multiple-family dwellings on 10th Avenue. Commercial activities are permitted on Cambie and Broadway.

3. **Main Street Core** is characterized by commercial development along the major arterials. Multiple family dwellings occupy most of the area off the major streets.

4. **Mount Pleasant North** consists largely of three-storey apartment buildings, older multiple conversion dwellings, and some single family housing. and
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5. Mount Pleasant Triangle contains a mixture of old and new one- and two-family dwellings and conversions of older houses. The area south of 16th Avenue has a higher proportion of single family houses.

![Figure 8. Mount Pleasant Neighbourhoods]

3.2.2 Impetus for the Plan

Mount Pleasant was described in the early 1980s as a community at a "significant crossroads". This description
was a fitting metaphor. Whereas in the past major streets led to the heart of Mount Pleasant, they now "carry increasing volumes of commuter through-traffic, fragmenting and disrupting the very heart of this community" (Vancouver 1985:1).

A number of other issues contributed to the growing image or perception of a community in decline:

- Lack of community organization or cohesion.
- Highly transient population.
- Low level of community services.
- Socially deviant behaviour, particular street prostitution and public drunkenness.
- Physical deterioration of commercial and residential areas (Vancouver 1985; Vancouver 1989a).

At the same time however, the citizens of Mount Pleasant recognized a number of positive features that could provide opportunities for community development:

- A diverse population with a wide background of experiences.
- Commercial and industrial businesses providing a variety of employment opportunities.
- A large supply of relatively affordable housing.
- Convenient access to the cultural, entertainment and retail activities of a thriving and vibrant downtown.
• Many buildings of heritage merit which provide a unique identity for this community.
• Spectacular views of downtown Vancouver and the north shore afforded by northwest facing slopes (Vancouver 1985:23).

It was felt by many that if the above problems were not addressed, Mount Pleasant would "cease to exist as a community with focus and aspirations for the future" (Ibid.:1). In response to local citizens and business owners expressing concern over the negative physical and social trends facing the community, a local area planning program was initiated in August of 1981.

3.2.3 The Planning Process

In April 1982, a neighbourhood planning office staffed by City planning personnel was opened. At the same time, local residents, property owners, and community groups formed the Mount Pleasant Citizen's Planning Committee to work with City staff in preparing the plan. The Plan was completed in three stages over a period of five years. In the first stage, a draft overall policy plan based on community-wide issues was developed. Five neighbourhood plans were then prepared during the second stage. The product of the final stage was the Community Development
Plan for Mount Pleasant which combined the work of the first two stages.

3.2.4 Description of the Plan

The Community Development Plan for Mount Pleasant has three parts. The first introduces the reader to the Mount Pleasant community and provides some background information. The second part, titled Community Development Strategies, presents several recommendations dealing with the broad issues facing the community. Each of its ten sections focuses on a substantive issue area, for example community social development, housing, and industry. The third part provides recommendations for zoning changes in each of the five Mount Pleasant neighbourhoods and several commercial and residential sub-areas within them. The intent of these zoning changes is to reinforce a defined character for each area while ensuring the overall integrity of the Mount Pleasant community.

In both the second and third parts of the Plan, each section presents the background issues, lists the goals of the community, and provides a number of recommendations. First the goals are listed together and then recommendations are provided by sub-category. There is not always a direct relationship between goals and recommendations. In most cases, a goal is quite general while a recommendation is
Chapter 3. Monitoring System Design

more specific and directed at making some progress toward achieving one or more related goals. The Plan did not include an analysis of goal inter-relationships. The issues and goals are presented in Appendix A of the thesis, and the recommendations are in Appendix B.

While most of the recommendations called for immediate action, some specified that further study of an issue was required. Each recommendation clearly specified the department or agency responsible for implementation. Besides the Planning Department, several agencies were involved in both planning and plan implementation, for example Social Planning, Engineering, Health, Permits and Licenses, Police, Parks, and Housing and Properties.

Although the Plan is directed at a broad range of community goals, the available tools are generally limited to those controlling the use and development of land. However, these tools can have far-reaching implications for the development of the Mount Pleasant Community. The majority of recommendations call for amendments to existing zoning, rezoning, or the creation and enforcement of various regulations.

3.3 THE MONITORING SYSTEM

As discussed in Chapter 2, the purpose of plan monitoring is to obtain information about plan impacts and
other change in the community and to provide advice to
decision-makers based on an analysis of that information.
The purpose of this section is to develop a framework for
monitoring the Mount Pleasant Plan. The monitoring system
model identified in Chapter 2 is adopted for this case
study. This model has four functional components or sub-
systems: information collection, technical evaluation,
advisory, and monitoring system improvement. Each component
is developed in the following sub-sections.

3.3.1 The Information Collection Sub-System

The information collection sub-system is responsible
for collecting, processing, and storing all types of data.
However, it is first necessary to determine what data will
be collected and what their sources are.

An initial step would be to list all the goals and
objectives, assumptions, and policies in a community plan.
For each item on the list, at least one key question may be
asked. For example, if one assumption is that the
population will increase by a certain amount, we would want
to measure population growth. In some cases, the key
question may be expressed as a performance indicator. For
each key question, one or more data sources will be
identified.
As will become evident, the data requirements can be quite large. A data collection strategy based on the mixed-scanning approach identified in Chapter 2 will probably have to be implemented. Once the final requirements are established, processing and storing procedures can be specified. The possibility that data requirements will change with time must also be kept in mind.

The following sections provide an organizing framework for developing a monitoring system. The framework, based on that presented by the Ontario Ministry of Municipal Affairs (Ontario 1982), will be used in Chapter 4 to implement the monitoring system.

a) Plan Implementation

A large number of recommendations were made in the Mount Pleasant Plan. Some identified actions that were to be implemented immediately while others called for further study. For monitoring to be effective in assessing the outcomes of a plan, the implementation of each recommendation should first be verified. The intent here is to identify the current status of the Plan. Table 3 is proposed for tracking plan implementation.

For each recommendation, it is sufficient to know what action was taken and when. The name of the agency responsible for implementation can also be recorded. If an
action produces more recommendations, these should be added to the table. Recommendations which were not implemented should be investigated.

<table>
<thead>
<tr>
<th>RECOMMENDATION</th>
<th>AGENCY</th>
<th>ACTION TAKEN</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAN SECTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan Sub-Section 1. Recommendation</td>
<td></td>
<td></td>
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<tr>
<td>Plan Sub-Section 2. Recommendation</td>
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<td></td>
<td></td>
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<tr>
<td>Plan Sub-Section 1. Recommendation</td>
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</tr>
</tbody>
</table>

Table 3. Plan Implementation Schedule

b) Goals and Objectives

The basic purpose of monitoring is to determine progress in achieving the goals and objectives set out in the plan. For each goal in the Mount Pleasant Plan, a key question can be asked. If the question is quantitative in nature, an indicator may be developed. Table 4 provides a useful organizing framework. Attention should also be paid to goal inter-relationships, either conflicting or complementary.
Chapter 3. Monitoring System Design

<table>
<thead>
<tr>
<th>GOALS and OBJECTIVES</th>
<th>KEY QUESTIONS</th>
<th>INFORMATION NEEDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAN SECTION</td>
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<tr>
<td>Plan Sub-Section</td>
<td></td>
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<tr>
<td>1. Goal</td>
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<td>2. Goal</td>
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<tr>
<td>Plan Sub-Section</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Goal</td>
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</tbody>
</table>

**Table 4. Goals and Objectives Schedule**

c) Policies and Decisions

The main purpose for monitoring policies is to determine their effectiveness in achieving goals and objectives. If the objectives of a plan are not being achieved, it may be due to an inappropriate policy. This may in turn be due to a poor or faulty understanding of the issue or it may be that decisions are not being made in accord with the policy.

As discussed in Chapter 2, policies can be classed in one of three categories: strategic, general, and operational. Operational policies provide the detail needed for implementing the general and strategic policies which more closely reflect the goals and objectives of the plan. Depending on the policy being monitored, the information needed for monitoring may be identical to that needed for goals and objectives.

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Land use and development in Vancouver is controlled by zoning and development by-laws which specify among other things, permitted uses and building size. These by-laws are often accompanied by design guidelines. Taken together, the contents of the by-laws are policies that guide day to day staff decision-making related to development control. Thus, according to the hierarchy of policies, they are operational policies.

For each policy in a plan, some key questions may be asked. The substantive matter of these questions will depend on the goals of the plan and the intent of the policy. Table 5 will help to organize policies for monitoring. Regarding monitoring of decision-making, it is assumed that operational procedures ensure that decisions are usually made in accord with policies. However, exceptions should be flagged for further review.

<table>
<thead>
<tr>
<th>POLICY</th>
<th>KEY QUESTIONS</th>
<th>INFORMATION NEEDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy Area 1. Policy</td>
<td></td>
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<tr>
<td>Policy Area 1. Policy</td>
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</tbody>
</table>

Table 5. Policies Schedule
Chapter 3. Monitoring System Design

d) Policies and Decisions of Other Organizations

A list of policies of outside agencies that are considered significant in terms of the outcomes of the plan should be listed along with the reasons for their significance. The same should be done for policies that are anticipated.

e) Assumptions

Another subject of monitoring is verifying the Plan's underlying assumptions. Assumptions might include values, forecasts and other social and economic trends. The forecasts or projections will themselves be based on a number of assumptions. If assumptions are found to be in error, a portion of the plan may need to be reviewed.

No assumptions are explicitly written in the Mount Pleasant Plan. In fact, they were not even included in background studies. For each assumption that is made or can be somehow identified, a key question relating to its verification can be asked. Ideally, this question will be expressed as an indicator. Table 6. provides a simple method for recording this information.
By virtue of their nature, these items are difficult to monitor in a systematic fashion. For example, the occurrence of certain events may signal the emergence of a new issue, the flaring up of a dormant issue, or a change in community values. Depending on the situation, it may be possible to prepare a timely response. Regarding the unexpected side-effects of policies, these will usually be discovered after they have occurred. However, experience may suggest areas to monitor closely in order to anticipate and perhaps prevent side-effects.

Soft information and the notion of an early warning system referred to in Chapter 2 are most useful in monitoring under conditions of uncertainty. The sources of this type of information are varied as well as variable. An effort should be made to provide opportunities for communicating this type of information within the planning department.
g) Data Needs

The above tables will require data. To organize data collection, a structured framework, describing available data sources, is recommended. For each item of information needed in the above tables, the columns in Table 7 should be completed. To assist in developing the mixed-scanning strategy, a priority level can be set for each data item.

<table>
<thead>
<tr>
<th>INFORMATION NEEDED</th>
<th>SOURCE</th>
<th>FREQUENCY</th>
<th>WHEN AVAILABLE</th>
<th>BASE DATE</th>
<th>ASSEMBLY PROBLEMS</th>
<th>HOW RELIABLE</th>
<th>PRIORITY</th>
</tr>
</thead>
</table>

Table 7. Data Needs Schedule

h) Data Processing and Storage

As data is collected, it will be processed and stored. For example, data might be aggregated, various descriptive statistics might be computed, and time series might be expanded. Also, tables and graphics might be printed and data stored for later analysis. Exact procedures will vary with the type of data collected and the facilities available. However, a clear set of documented procedures would facilitate the management of data collection, processing and storage.
Chapter 3. Monitoring System Design

i) Note on Local Area Data Collection

Collecting data for Mount Pleasant requires special effort because the neighbourhood is a sub-area of Vancouver and most published data sources at best provide information at the municipal level. However, the Planning Department has been obtaining Census data at the local area level since 1971. With the increasing popularity of Geographic Information Systems, obtaining local area data from other databases may become routine in the years to come.

The City of Vancouver does not yet have a GIS, and this makes it difficult to collect operational data for a single neighbourhood. All operational data bases include, in addition to the property or business address, a property coordinate number defined by an 'on' street, 'at' street, and 'lot number'. The 'on' and 'at' street numbers can be used to define area boundaries which can then be used to extract a group of data records. An alternative approach would be to extract all data records for processing on a desktop PC using a less expensive GIS software package. This option is currently being explored within the Planning Department.

3.3.2 The Technical Evaluation Sub-System

The technical evaluation sub-system is concerned with analyzing information, evaluating the importance and
implications of change, formulating action possibilities, and preparing advice. Two related types of analyses will be done most frequently. The first is comparing change over time. Examples of methods for this analysis are before-and-after comparisons and time series comparisons. These methods will be used to check the assumptions of the plan as well as plan impacts.

The second type of analysis is comparing actual plan outcomes with the objectives or targets set out in the plan. The actual-versus-planned comparison was cited as an example. This method may be used in conjunction with the target tracking or the rolling target approaches to monitoring.

In all cases, the significance of the results of the initial analysis will need to be evaluated. Also, an attempt should be made to determine the reasons for the observed impacts. This analysis may entail additional study and will most likely involve people with expertise in the particular area of interest.

Based on the above assessment, it may be decided that some aspect of the plan should be modified. This may require initiating a "mini" planning process where alternative actions or solutions are formulated and evaluated, and if necessary, advice is provided to Council.
3.3.3 The Advisory Sub-System

The advisory sub-system involves the communication to Council of advice generated during technical evaluation. The most common method for communicating the results of monitoring will be through policy reports submitted to Council via the City Manager. Reports might also be prepared for distribution to the general public.

Some ideas for preparing readable and informative reports were suggested in Chapter 2 and are recommended. For example, reports could be produced annually unless circumstances require a report on a specific topic. Also, while monitoring will cover a wide range of topics, reports could focus on significant changes.

The monitoring report could be organized as a series of information sheets. The first page would introduce the reader to the plan and the monitoring system. The following sheets would then be organized according to information category where each category, for example goals and objectives, is referenced to the Plan if possible. If applicable, the implications for overall goal achievement could be included on each information sheet. The final section could then provide advice to Council on alternative courses of action. In reports prepared for the general public, the last section could present the decisions made by Council and a plan of action for the following year.
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One advantage of information sheets is that reports can be assembled from routine monitoring activities. In this way, significant items can be selected for the annual or special reports as desired. This method is currently being used with the Vancouver Monitoring Program and it has proved effective there.

3.3.4 The Improvement Sub-System

The improvement sub-system involves the evaluation of the performance of the monitoring system and its enhancement. Throughout the monitoring exercise, there will be opportunities for making improvements. This is particularly significant during the initial start-up phase where a monitoring system will be implemented incrementally.

The success of monitoring will depend to a large extent on organizational considerations. First of all, monitoring duties and responsibilities should be made clear. Second, commitment and support of management will help provide a sense of purpose, particularly if the results of monitoring are seen as making a contribution to the planning process. Finally, regular monitoring-related meetings will help to ensure that information flows out to those who need it and back in to those who can improve the system.

In this chapter, a monitoring system for the Community Development Plan for Mount Pleasant was designed on the
basis of the literature reviewed in Chapter 2. The Plan was first described and shown to be a broad-based policy plan that relied primarily on zoning control to achieve the goals of the local community. The monitoring system which was then designed provided: an information collection sub-system, including an organizing framework for data collection; a technical evaluation sub-system, with suggestions for data analysis; an advisory sub-system, including suggestions on a format for communicating the results of monitoring; and an improvement sub-system, with recommendations for improving the monitoring system.
CHAPTER 4
MONITORING SYSTEM IMPLEMENTATION

In the previous chapter, a monitoring system for the Community Development Plan for Mount Pleasant was proposed. In this chapter, the monitoring system is implemented for the section of the Plan that contains the Mount Pleasant industrial area strategy. First, the section on industry is examined more closely. Second, the data requirements for monitoring the industrial strategy are specified. Finally, the monitoring system is implemented for the policy addressing residential uses in the industrial area. For the purposes of the case study, data will be collected and analyzed, and the resulting information will be treated as if the monitoring system had been in place since 1987.

4.1 THE PLAN FOR INDUSTRY IN MOUNT PLEASANT

The Mount Pleasant industrial area (Figure 9) is characterized by a gradual north facing slope, small lot sizes, and a high concentration of wholesaling, service, and light manufacturing activity (Vancouver 1992a). Note that Figure 9 shows the zoning as it existed in 1987 prior to plan implementation. M-1 is a zoning district for light industry and M-2 is zoned for heavy industry.
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Figure 9. The Mount Pleasant Industrial Area - 1987
During the planning process, four areas of concern were identified:

1. The retention of industrial focus;
2. Major streets (Cambie and Main);
3. Residential uses; and
4. The Brewery Creek industrial enclave.

Each of these concerns is discussed individually below.

The goals and recommendations listed below are as contained in the Plan (Vancouver 1989a) and provided in Appendixes A and B. All of the recommendations for the industrial area entail controlling land use and development. These controls have been implemented through zoning by-laws. The policy statements provided below are from the zoning district schedules in the Vancouver Zoning and Development By-Laws, or from related Land Use and Development Policies and Guidelines.

4.1.1 Retention of Industrial Focus

Due to its proximity to the Downtown and the Central Broadway commercial area, the industrial area had been under pressure from commercial uses which can bid higher for the land and thus force out industry. The local community, concerned about the loss of blue collar jobs, wanted to "curtail the erosion of the industrial integrity of the area" (Vancouver 1989a:47).
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a) Goal

To create an atmosphere in the Mount Pleasant Industrial Area conducive to industry.

b) Recommendation

1. Director of Planning and Economic Development Office to tailor to Mount Pleasant an I or IC zoning schedule to allow industry, industrial-office, business service and clearly ancillary industrial retailing in existing M-1 and M-2 Districts of Mount Pleasant, in consultation with property owners and industrialists in the area, as well as interested parties in the community, and bring forward the proposed zoning to City Council for referral to a Public Hearing.

2. Director of Planning to ensure that no existing industrial use to be made non-conforming through new zoning, and that all existing uses appear either as outright or conditional uses in the new schedule.

c) Action Taken

The area bounded by Yukon, 2nd, the lane east of Main, and the lane north of Broadway (Figure 10) was rezoned to I-1 on October 25, 1988.
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d) Policy

The primary intent of the I-1 Schedule is to permit light industrial uses that are generally compatible with one another and with adjoining residential or commercial districts. It is also the intent to permit advanced technology industry, and industry with a significant amount of research and development activity. Service commercial uses compatible with and complementing light industrial uses are also permitted but not offices or retail stores.

Figure 10. The Mount Pleasant Industrial Area - 1992
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4.1.2 Major Streets

The community noted that Cambie and Main Streets were important entrances to the downtown. It was thus felt that the physical appearance of the areas along Cambie and Main Streets should be enhanced.

a) Goal

To redefine uses and building forms on the Cambie and Main Street corridors which enhance the appearance of these major streets.

b) Recommendation

1. City Council to instruct the Director of Planning to make application to rezone portions of Cambie and Main Street to C-3A, with appropriate design guidelines; and that the application be referred to a Public Hearing.

c) Action Taken

The industrial area between Cambie and Yukon Streets (Figure 10) was rezoned to C-3A on October 25, 1988. The industrial area on Main Street was rezoned to IC-2 on the same date.

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d) Policy

Cambie Street

The intent of the C-3A Schedule is to provide a wide range of goods and services, to maintain commercial activities, specialized services and some light manufacturing enterprises while preserving the character and general amenity of the area and its immediate surroundings, and to provide for dwelling uses designed compatibly with commercial uses.

Main Street

The primary intent of the IC-2 Schedule is to permit light industrial uses that are generally compatible with one another and with adjoining residential or commercial districts. It is also the intent to permit advanced technology industry, industry with a significant amount of research and development activity, and commercial uses compatible with and complementing light industrial uses.

The general intent of external design guidelines is to achieve a form of development compatible with the function and character of abutting major streets. The specific intent is to achieve building continuity that contributes a unified image to development along major streets in the IC-2 district.

4.1.3 Residential Uses

In 1961, the area south of 3rd Avenue to Broadway had been rezoned from residential to industrial uses, and residential uses were made non-conforming to the zoning by-

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1 A non-conforming use is one which either contradicts a regulation in the zoning schedule or is not permitted at all either as an outright or conditional use.
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law. Because of this non-conforming status, owners of residential buildings encountered difficulty obtaining insurance or funding for renovations and alterations. Also, non-conforming buildings cannot be replaced in case of fire, thus removing incentive to invest in building improvements.

At the time of plan preparation it was estimated that approximately 100 residential buildings remained, some with architectural and heritage merit. The residents of Mount Pleasant wanted to remove the restrictions imposed on existing residential uses.

a) Goal

To accommodate existing residential uses by reducing uncertainty with respect to upgrading.

b) Recommendation

1. Director of Planning to include within proposed industrial zoning district schedules the following conditional use description:

"Residential uses which existed prior to and have been used continuously as such since (date of enactment)."

2. Zoning guidelines should state clearly that residential uses are permitted with the understanding that owners and occupants will seek no operational limitations to industry.
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c) Action Taken

The recommendations were implemented on October 25, 1988.

d) Policy

The dwellings remaining in the area do so in peaceful co-existence with industry. Residents recognize and accept the limitations imposed by industry. With the understanding that no change in this attitude will be forthcoming, some stability for existing residential uses should be granted.

The following statement, permitting residential uses as a conditional\(^2\) approval use, was added to the I-1 zoning district schedule:

Dwelling Unit existing as of and used continuously since October 25, 1988, provided that any additions thereto are limited to 10 percent of existing floor space or 37 m\(^2\) (400 sq.ft.), whichever is the lesser.

4.1.4 Brewery Creek Industrial Enclave

The Brewery Creek area, located east of Main Street, contains a mix of industrial, commercial and residential uses as well as a number of historically and culturally important activities. The area is also in close proximity to a number of theatrical and arts organizations. The community expressed the desire to preserve the physical

\(^2\) Conditional approval use means a use of land or a building which may be permitted and with conditions.
character of the area and allow live-in artist studios on a test basis.

a) Goal

To allow development of the Brewery Creek character area along Scotia Street.

b) Recommendations

1. Director of Planning to work with the Mount Pleasant Citizen's Committee to prepare appropriate zoning and companion design guidelines to foster the unique character of the Brewery Creek Industrial Enclave and that the Director of Planning bring forward recommendations for consideration by City Council prior to the end of 1987.

2. Director of Planning to examine the Brewery Creek Industrial Enclave, between Main and Brunswick, for a potential pilot project for other areas of the City, incorporating industrial uses and artist studio and accommodation.

c) Action Taken

The Brewery Creek Industrial Enclave was rezoned to IC-3 on October 25, 1988.
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d) Policy

The general intent of the IC-3 Schedule is to permit a mix of light industrial, live arts and theatre, residential and related uses that are generally compatible with adjoining residential and commercial districts. Service uses compatible with and complementing light industrial uses and a limited number of office uses are also permitted, but not general retail stores.

The general intent of the external design regulations is to achieve certain public objectives with respect to the historic Brewery Creek water course.

Live-in artist studios are permitted as a conditional approval use.

4.2 MONITORING SYSTEM FOR INDUSTRY IN MOUNT PLEASANT

The previous section described each of the four substantive areas of the Mount Pleasant Plan that deals with the Mount Pleasant industrial area. In this section, the data requirements for monitoring industrial activity are established utilizing the framework suggested in Chapter 3. In the following tables, the headings are numbered as they appear in the text of the Plan.
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4.2.1 Plan Implementation

Table 8 lists the recommendations set out in the Plan, the primary agency responsible for implementing the recommendations, the action taken, and the date. The recommendations are arranged by each of the four substantive issues area identified in the Plan.

<table>
<thead>
<tr>
<th>RECOMMENDATIONS</th>
<th>AGENCY</th>
<th>ACTION TAKEN</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 INDUSTRY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5.1 Retention of Industrial Focus 1. New zoning schedule with no existing uses made non-conforming.</td>
<td>Planning</td>
<td>Rezoned to I-1.</td>
<td>Oct. 25, 1988</td>
</tr>
<tr>
<td>2.5.2 Major Streets 1. Rezone Cambie and Main to C-3A.</td>
<td>Planning</td>
<td>Cambie rezoned to C-3A, Main rezoned to IC-2.</td>
<td>Oct. 25, 1988 Oct. 25, 1988</td>
</tr>
<tr>
<td>2.5.3 Residential Uses 1. Add as conditional use.</td>
<td>Planning</td>
<td>Incorporated in I-1 and IC-3 schedules.</td>
<td>Oct. 25, 1988</td>
</tr>
</tbody>
</table>

Table 8. Plan Implementation Schedule
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4.2.2 Assumptions

No assumptions were explicitly written in the Mount Pleasant Plan and no forecasts were included. However, a number of assumptions could be read 'between the lines'. Regarding residential uses in industrial areas for example, it might be assumed that building owners would be eager to obtain building permits that were denied in the past. This assumption and a key question are listed in Table 9.

<table>
<thead>
<tr>
<th>ASSUMPTIONS</th>
<th>KEY QUESTIONS</th>
<th>INFORMATION NEEDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 INDUSTRY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5.3 Residential Uses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Applications for residential building permits for renovations will be made.</td>
<td>How many permits are being issued?</td>
<td>Building permits by purpose.</td>
</tr>
</tbody>
</table>

Table 9. Assumptions Schedule
4.2.3 Goals and Objectives

The goals for industry presented earlier are listed in Table 10. No objectives which might have set shorter term targets for industry were specified in the Plan. For each goal, a number of key questions and the information needed to answer each question are set out.

<table>
<thead>
<tr>
<th>GOALS</th>
<th>KEY QUESTIONS</th>
<th>INFORMATION NEEDED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.5 INDUSTRY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.5.1 Retention of Industrial Focus</strong> 1. To create an atmosphere in the Mount Pleasant Industrial Area conducive to industry.</td>
<td>What sort of development is occurring? Levels of industrial employment? What type of firms are moving in? What are the land uses? Are land values stable?</td>
<td>Development permit Building permits Employment Business licenses Floorspace data Property data</td>
</tr>
<tr>
<td><strong>2.5.2 Major Streets</strong> 1. To redefine uses and building forms on the Cambie and Main Street corridors which enhance the appearance of these major streets.</td>
<td>What is the appearance of these streets? What sort of development is occurring?</td>
<td>Visual inspection Development permit Building permits</td>
</tr>
<tr>
<td><strong>2.5.3 Residential Uses</strong> 1. To accommodate existing residential uses by reducing uncertainty with respect to upgrading.</td>
<td>Are residential buildings remaining? Are residences being renovated?</td>
<td>Property data Building permits</td>
</tr>
<tr>
<td><strong>2.5.4 Brewery Creek</strong> 1. To allow development of the Brewery Creek character area along Sootis Street.</td>
<td>What sort of development is occurring? Are live-in artist studios increasing?</td>
<td>Development permit Building permits Business licenses</td>
</tr>
</tbody>
</table>

Table 10. Goals and Objectives Schedule
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4.2.4 Policies and Decisions

The intent of the industrial zoning district schedules is to support the achievement of the goals for industry in Mount Pleasant. The schedules clearly specify which uses are permitted outright and which uses are permitted by approval of the Director of Planning or the Development Review Board. In addition, accessory uses customarily ancillary to permitted uses will be allowed.

Each permitted use is subject to the regulations specified in the schedules, for example building set back from lot boundaries or maximum floor space ratios (FSR) for various uses. In the I-1 zoning schedule for example, the maximum FSR is 3.00 for manufacturing, transportation & storage, and wholesaling class A. All other uses combined have a maximum FSR of 1.00. In addition, retail uses cannot exceed 1,000 m² (10,000 sq.ft.).

While it is assumed that development permits are issued in accordance with zoning regulations, some particular aspect may be of interest. For example, if retaining industrial character is the intent of I-1 zoning, it may be useful to learn how much floor space is being allocated to accessory retail or office uses. Determining what to monitor with respect to these operational policies and decisions is deferred until further consultation with Planning Department staff.

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4.2.5 Data Needs

For each item of information needed in the above tables, an entry can be made in Table 11.

<table>
<thead>
<tr>
<th>INFORMATION NEEDED</th>
<th>SOURCE</th>
<th>FREQUENCY</th>
<th>WHEN AVAILABLE</th>
<th>BASE DATE</th>
<th>ASSEMBLY PROBLEMS</th>
<th>HOW RELIABLE</th>
<th>PRIORITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building permits</td>
<td>PALS (Vancouver)</td>
<td>Continuous</td>
<td>On request</td>
<td>1984</td>
<td>Need to set 'on/at' boundaries.</td>
<td>Fair improving</td>
<td>High</td>
</tr>
<tr>
<td>Business licenses</td>
<td>BLMF (Vancouver)</td>
<td>Continuous</td>
<td>None</td>
<td></td>
<td>Need special permission</td>
<td>Good</td>
<td>Medium</td>
</tr>
<tr>
<td>Development permits</td>
<td>PALS (Vancouver)</td>
<td>Continuous</td>
<td>On request</td>
<td>1984</td>
<td>Need to set 'on/at' boundaries.</td>
<td>Fair improving</td>
<td>Medium</td>
</tr>
<tr>
<td>Employment</td>
<td>GVRD</td>
<td>?</td>
<td>On request</td>
<td>1991</td>
<td>Available for 1991 only</td>
<td>Very good</td>
<td>Medium</td>
</tr>
<tr>
<td>Employment</td>
<td>Census</td>
<td>10 year period</td>
<td>On request</td>
<td>1981</td>
<td>Cost charge applies</td>
<td>Very good</td>
<td>Medium</td>
</tr>
<tr>
<td>Floorspace</td>
<td>CIFS (GVRD)</td>
<td>2 year period</td>
<td>On request</td>
<td>1989</td>
<td>1991 not yet ready</td>
<td>Fair</td>
<td>Medium</td>
</tr>
<tr>
<td>Land use data</td>
<td>PTF + BLMF</td>
<td>Continuous</td>
<td>On request</td>
<td>None</td>
<td>Need to link 2 files Insufficient detail</td>
<td>Fair</td>
<td>High</td>
</tr>
<tr>
<td>Property data</td>
<td>PTF (Vancouver)</td>
<td>Continuous</td>
<td>On request</td>
<td>None</td>
<td>Need special permission</td>
<td>Excellent</td>
<td>Low</td>
</tr>
</tbody>
</table>

Table 11. Data Needs Schedule

3 BLMF - Business License Master File (City of Vancouver)
CIFS - Commercial Industrial Floorspace System (GVRD)
PALS - Permits and Licenses System (City of Vancouver)
PTF - Property Tax File (City of Vancouver)
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4.3 MONITORING SYSTEM IMPLEMENTATION

In this section, residential uses in the I-1 zoned industrial area of Mount Pleasant are monitored. Data is collected and analyzed and conclusions are drawn from the analysis. Two types of data are collected: quantitative data assembled from available data bases; and soft information, about certain events, obtained from the Planning Department central files. First the quantitative data is presented and discussed. This will provide information about goals and assumptions. Second, the soft information is interpreted. This will provide information about policies and issues. Third, implications for the strategy for residential uses are drawn from the analysis.

4.3.1 Goals and Assumptions

One goal in the Plan was selected for case study investigation. This goal is "to accommodate existing residential uses by reducing uncertainty with respect to upgrading." Given that most of the residential buildings were constructed prior to 1930 and that residential uses were non-conforming from 1960 to 1987, it is assumed that some buildings will require major renovations.

The above goal and assumption are closely related and so are monitored together. Two relevant questions were asked (Tables 9 and 10):
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1. Is the number of residential buildings remaining constant?

2. Are owners obtaining building permits for alterations and renovations?

First, we take a look at all activities in the industrial area. Table 12 shows land use, aggregated by a general land use category, for the entire Mount Pleasant I-1 industrial area in 1991. This table confirms the statement made earlier about the relatively small lot sizes and the high concentrations of manufacturing, service and wholesale uses. Land use for each property was determined first from business license records and second from an actual use code provided in the Property Tax File. Floor space data is available for commercial and industrial uses only.

With reference to the first question, Table 13 provides a detailed breakdown of residential uses for 1987 and 1991. The table indicates that a total of three residential buildings were lost over that four year period. However, closer investigation of the data revealed that four buildings were lost and one was added. That one added use was classed as a church in 1987. A field check revealed that of the four lost uses, two residential buildings were retained and converted to other uses, one was demolished and replaced by a commercial building, and the fourth was demolished but not yet redeveloped.
## TABLE 12. LAND USE IN THE I-1 AREA - 1991

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Number of Lots</th>
<th>Total Area (sq. ft)</th>
<th>Percent</th>
<th>Average Lot size</th>
<th>Total Floorspace</th>
<th>Percent</th>
<th>Average FSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwelling</td>
<td>67</td>
<td>250,470</td>
<td>7.8%</td>
<td>3,738</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional</td>
<td>1</td>
<td>29,621</td>
<td>0.9%</td>
<td>29,621</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>75</td>
<td>665,634</td>
<td>21.4%</td>
<td>9,142</td>
<td>833,030</td>
<td>27.6%</td>
<td>1.21</td>
</tr>
<tr>
<td>Office</td>
<td>30</td>
<td>263,538</td>
<td>8.2%</td>
<td>8,785</td>
<td>272,198</td>
<td>9.0%</td>
<td>1.03</td>
</tr>
<tr>
<td>Parking</td>
<td>19</td>
<td>126,324</td>
<td>3.9%</td>
<td>6,649</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail</td>
<td>12</td>
<td>105,415</td>
<td>3.3%</td>
<td>8,795</td>
<td>100,036</td>
<td>3.3%</td>
<td>0.95</td>
</tr>
<tr>
<td>Service</td>
<td>56</td>
<td>462,807</td>
<td>14.5%</td>
<td>8,291</td>
<td>559,817</td>
<td>19.5%</td>
<td>1.27</td>
</tr>
<tr>
<td>Transportation &amp; Storage</td>
<td>4</td>
<td>29,185</td>
<td>0.9%</td>
<td>7,296</td>
<td>20,549</td>
<td>0.7%</td>
<td>0.70</td>
</tr>
<tr>
<td>Utility &amp; Communications</td>
<td>1</td>
<td>27,443</td>
<td>0.9%</td>
<td>27,443</td>
<td>32,641</td>
<td>1.1%</td>
<td>1.19</td>
</tr>
<tr>
<td>Wholesale</td>
<td>78</td>
<td>919,552</td>
<td>28.7%</td>
<td>11,739</td>
<td>1,003,609</td>
<td>33.2%</td>
<td>1.09</td>
</tr>
<tr>
<td>Vacant</td>
<td>16</td>
<td>76,230</td>
<td>2.4%</td>
<td>4,784</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage &amp; Warehousing</td>
<td>27</td>
<td>225,205</td>
<td>7.0%</td>
<td>8,341</td>
<td>169,094</td>
<td>5.6%</td>
<td>0.75</td>
</tr>
<tr>
<td>TOTAL</td>
<td>386</td>
<td>3,201,224</td>
<td>100.0%</td>
<td>8,293</td>
<td>3,020,974</td>
<td>100.0%</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Source:
City of Vancouver Property Tax File
City of Vancouver Business License Master File
GVRD Commercial Industrial Floorspace System

## TABLE 13. RESIDENTIAL USES IN THE I-1 AREA

<table>
<thead>
<tr>
<th>BUILDING TYPE</th>
<th>1987</th>
<th>1991</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>SINGLE FAMILY DWELLING</td>
<td>32</td>
<td>32</td>
<td>0</td>
</tr>
<tr>
<td>VACANT RESID. &lt; 2 ACRES</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>PROP SUBJECT TO S.26(4)</td>
<td>4</td>
<td>3</td>
<td>-1</td>
</tr>
<tr>
<td>SINGLE FMY WITH BSMT STE</td>
<td>1</td>
<td>0</td>
<td>-1</td>
</tr>
<tr>
<td>DUPLEX</td>
<td>13</td>
<td>12</td>
<td>-1</td>
</tr>
<tr>
<td>MULTI-FAMILY-APT BLOCK</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>MULTI-FAMILY-CONVERSION</td>
<td>16</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>STORE(S) &amp; LIVING QUARTRS</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL BUILDINGS</td>
<td>74</td>
<td>71</td>
<td>-3</td>
</tr>
</tbody>
</table>

SOURCE: City of Vancouver Property Tax File

## TABLE 14. RESIDENTIAL DEVELOPMENT IN THE I-1 AREA

<table>
<thead>
<tr>
<th>BUILDING PERMITS ISSUED 1985-1992</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALTER</td>
</tr>
<tr>
<td>DEMOLISH</td>
</tr>
<tr>
<td>DEMOLISH - R/R</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

SOURCE: City of Vancouver Permits and Licences System
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Table 14 shows total building permits issued for residential uses since 1985, the first full year of operation for the Permits and Licenses System (PALS). According to the information obtained from PALS, no building permits for residential development were issued before 1990. Of the four permits issued, two were for alterations or renovations and two were for demolitions. Due to time lags in updating databases, neither of these two demolitions were recorded in Table 13. However, a field check revealed that both buildings had been demolished and the lots are still vacant. Thus, an additional two residential uses were lost, increasing the total to six.

Note that Table 13 shows a total of 71 residential or dwelling uses in 1991 while Table 12 shows only 67 for the same year. This difference is due to the classification method used. For the purposes of Table 12, a dwelling use was assigned if a building contained only dwelling units, i.e. no business was located in the same building. Table 13, on the other hand, shows all buildings containing residential uses. Also, the Mount Pleasant Plan states that "approximately 100 residential buildings exist in the industrial area" (Vancouver 1989a:49). This number represents the entire industrial area prior to rezoning in 1988, including Cambie and Main Streets and the Brewery
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Creek area. However, the total number of residential buildings was probably closer to 80 than 100.

4.3.2 Policies and Issues

In 1983, as part of the planning process for the Mount Pleasant area, residents expressed the desire to define, within the industrial area, areas suitable for more extensive residential development (Vancouver 1983). However, this idea was later rejected because it was determined that: existing housing clusters were too scattered to permit the definition of logical boundaries; residential redevelopment would decrease the number of affordable units; and development would not provide lower cost family housing.

It was later stated in the draft industrial area plan that "the community would not endorse increasing residential opportunities" (Vancouver 1986d:19) because of the inherent incompatibility between residential and industrial uses, and the upward pressure on land prices that would result from new residential development.

The main intent of the I-1 zoning schedule is to retain an industrial focus for the Mount Pleasant industrial area. The current policy for residential uses, as adopted in the Plan in 1987, is to permit existing residential uses as conditional approval uses and to limit additions to 37 m²
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(400 sq.ft.) or 10% whichever is lesser. No new residential development is permitted, and once abandoned, a residential use cannot be re-instated.

The intent of the policy for existing residential uses is to remove "unreasonable hardship on existing owners" (Vancouver 1989a:49). The Plan further stated that "upgrading and preservation of these residential uses will be nominally facilitated and they may remain marginally longer than if the zoning remained as is" (Ibid.). By implication, it can be assumed that residential uses will gradually disappear. This assumption is supported by the quantitative data in Tables 13 and 14.

However, it seems that the residents living in the industrial area are not completely in accord with existing policy. Two pertinent events or incidents were revealed by soft information.

First, in 1990 a residential property owner appeared before the Board of Variance to request a relaxation to the limitation on the size of additions (Vancouver 1990). However, this limitation is drafted as part of the use description rather than as a separate regulation, and the Board of Variance concluded that it could not grant the relaxation because it does not have the jurisdiction to relax a use description. Thus, this ruling effectively
removed any right of appeal with respect to the above limitation.

In response to the above request, the policy for residential uses was immediately reviewed by the Planning Department (Vancouver 1990). It was recommended by the planner doing the review that the limit on additions be removed from the dwelling use description and inserted in the regulation section of the I-1 district schedule. This recommendation was based on the argument that, although not stated explicitly in the Mount Pleasant Plan, "the original intent of the district schedule was to provide recourse to the Board of Variance for dwelling units" (Vancouver 1990:4). However, the Director of Planning decided not to follow this recommendation. The response written to the owner stated that the limit was considered reasonable and explained the options available under the existing I-1 district schedule. That owner obtained a building permit in 1992 for the purpose of doing some alterations.

The second incident was in relation to the publication of the draft Central Area Plan in 1991 (Vancouver 1991d). Geographically, the Central Area encompasses all or part of the following local areas: the CBD, the West End, and portions of Kitsilano, Fairview, Mount Pleasant, and Strathcona. One proposed policy on business support services recommended confirmation of the Mount Pleasant
Chapter 4. Monitoring System Implementation

industrial area as remaining industrial. In response, some residents living in the industrial area formed a group called the Concerned Citizens of the Mount Pleasant Industrial Lands. The group submitted a petition signed by 107 residents requesting that the I-1 zoning be amended to encourage opportunities for new residential development (Vancouver 1991a).

A response was written to the citizens group explaining how the Mount Pleasant industrial area plays an important role in accommodating business services (e.g. design firms, business equipment and repair, and office supplies) displaced from the downtown area. The letter also added, as had been agreed earlier during the Mount Pleasant planning process, that desirable characteristics of the area such as low density and low cost of housing might not be preserved if new residential development were permitted. The local residents later agreed with this assessment and decided not to press the issue (Howard 1992). In addition, the petition was discussed in the subsequent Report to Council on the public review of the Central Area Plan (Vancouver 1991c). City Council agreed with the proposed policy for business support services, thus reinforcing the existing policy to retain the industrial character of the Mount Pleasant industrial area.
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4.3.3 Analysis and Advice

The results of the above monitoring exercise are in some ways contradictory. On the one hand, monitoring quantitative data reveals a loss of residential uses and almost no house restoration activity, indicating a lack of interest in maintaining existing residential uses. But on the other hand, monitoring soft information reveals that many residents living in the area want more residential development.

There are a number of possible reasons why residents are not upgrading their properties. First, local residents may be renovating their homes without obtaining the required building permits. Second, landlords may not be interested in improving their buildings. Or third, some residents may have resigned themselves to eventually moving out and may not wish to invest in their properties. All of these points could be explored further, probably with a survey.

The low level of residential upgrading activity would probably have been discussed among Planning Department staff by the end of 1989 had quantitative data been collected at the time, and a decision could have been made whether to conduct a field study. At the same time however, the data do not indicate a problem with the policy for residential uses. This matter should be discussed by staff in the near future.
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With respect to the request for a relaxation of the limit on the size of additions, it could be asked whether the goal for residential uses is being achieved or if this limit places "unreasonable hardship on existing owners." As a result of the staff review of residential uses in the industrial area, discussed in the previous sub-section, it was determined that the existing policy was not unreasonable and should therefore not be changed. This matter has thus apparently been resolved and need not be studied further.

Regarding the residents' wishes for more residential development in the industrial area, this is an issue that existed in 1983 and was settled during the planning process. However, the draft Central Area Plan was the catalyst that motivated residents to renew their campaign. Planning Department staff responded to this concern and the matter was discussed during a presentation to City Council, who agreed with existing and proposed policies. The residents also appear to be satisfied with the decision by City Council. While this matter appears to have resolved for the time being, the issue may re-emerge.

An industrial lands review for the City of Vancouver is currently underway and the results of this study will provide a clearer indication of the City's future demand for industrial land. Thus, the issue of residential uses in the Mount Pleasant industrial area may be resolved with more
Chapter 4. Monitoring System Implementation

certainty. In the meantime, it will be important to develop methods for monitoring industrial activity in order to track its development and assess its viability in Mount Pleasant.

In this chapter, the monitoring system proposed in Chapter 3 was implemented for one section of the Mount Pleasant Plan, its industrial area strategy. This part of the plan was described and the data collection framework developed in Chapter 3 was completed. Data were then collected and analyzed for the policy to maintain existing residential uses in the Mount Pleasant industrial area. Two types of data were collected: quantitative data, pertaining to the selected goal and assumption; and soft information about policy related issues. Analysis indicated that, taken individually, these data types would lead to different conclusions about the policy for residential uses. As part of the technical evaluation sub-system, advice was also prepared on the basis of that analysis.
5.1 SUMMARY

The purpose of this thesis, to design and implement a community plan monitoring system in order to learn how monitoring might be more effective in informing the planning process, was accomplished by means of a case study. In Chapter 2, literature indicated that the complexity of urban systems necessitates a continuous planning process rather than one which simply targets desirable end states. That is, a cyclical or iterative linking of decision-making, implementation and monitoring is needed so that planning can adapt to changing community goals, issues, and trends.

Within this context, literature was then reviewed on monitoring within the systems theory concept of feedback and control. In the planning control model, adapted from engineering systems control, it was seen that feedback about the actual state of the urban system is compared to the intended state as set out in the plan and, if necessary, corrective action is initiated. A comparison of engineering and urban systems further illustrated the complexity of the urban environment and suggested that concentrating only on
the objectives of the plan, as with the planning control model, provides too narrow a perspective for monitoring.

To provide the basis for designing a monitoring system, including an expanded role for monitoring, a general monitoring system model was then described. The remainder of Chapter 2 reviewed in turn each of the four sub-systems of the monitoring model. First, with respect to the information collection sub-system, a discussion of the various categories of information that could be collected ended on the notion of "soft" or qualitative information and its potential contribution to a future-oriented monitoring system. Also, given the possibly enormous data requirements of a plan monitoring system, the literature recommended a data collection strategy based on the mixed-scanning approach.

Second, regarding the technical evaluation sub-system, it was shown that while basic analysis can identify the amount or degree of change, determining the significance of that change and subsequently formulating and evaluating alternative action possibilities would require further analysis. Third, the advisory sub-system, concerned with communicating advice to decision-makers, was seen as providing the feedback link for the continuous planning process. Finally, the role of the improvement sub-system
Chapter 5. Conclusion

was examined in relation to implementing a new monitoring system and improving an existing one.

In Chapter 3, the first part of the case study, a monitoring system for the Community Development Plan for Mount Pleasant was designed on the basis of the literature reviewed in Chapter 2. The Plan was first described and shown to be a broad-based policy plan that relied primarily on zoning control to achieve the goals of the local community. The monitoring system which was then designed included: an organizing framework for data collection; suggestions for data analysis; a format for communicating the results of monitoring; and recommendations for improving the monitoring system.

In Chapter 4, the proposed monitoring system was implemented for one section of the Mount Pleasant Plan, specifically its industrial area strategy. This part of the plan was described in detail and the data collection framework developed in Chapter 3 was completed, that is, items to be monitored were identified, one or more key questions were developed for each item, and data needs were described.

Data were then collected and analyzed for the still more specific policy to maintain existing residential uses in the Mount Pleasant industrial area. These data indicated that in the four years since the policy was implemented,
little upgrading of dwellings had occurred. Furthermore, four residential uses were converted to other uses and two residential buildings were demolished, reducing residential uses by 12 percent. This information could be interpreted to mean that, contrary to local residents' wishes as expressed in the Plan, interest in maintaining residential uses was not as high as might have been expected.

On the other hand, the soft information which was also gathered suggested two policy related issues. In the first case, a property owner wanted to build onto an existing house, an addition larger than the maximum permitted under the I-1 zoning by-law, i.e. 10% of existing floorspace up to a maximum of 37 m² (400 sq.ft.). The second incident occurred four years after the Mount Pleasant Plan was officially adopted. In response to the section of the draft Central Area Plan confirming the retention of the Mount Pleasant industrial area for industry, residents of the industrial area submitted a petition to the City requesting that additional residential development be permitted in the industrial area. This petition indicated that the residents sought more than the policy's goal for retaining existing residential uses even though that policy was developed through an extensive public process.
5.2 IMPLICATIONS FOR MONITORING

We generally tend to think of monitoring primarily in terms of collecting quantitative data on plan implementation to provide feedback to decision-makers. The case study in Chapter 4 demonstrated that qualitative data are as important as quantitative data for monitoring community plans. This lends further credence to the claims of a number of authors cited in the literature review. In particular, Wedgwood-Oppenheim (1975), Floyd (1978), and Sutton (1979) suggest that soft information can provide timely information about significant issues in the community.

If only quantitative data had been collected in the case study, it might have been concluded that, although upgrading activity was low and some residential uses were lost, the goal to accommodate existing residential uses in the Mount Pleasant industrial area was being achieved, thus implying that the policy was correct. However, the soft information suggested that the policy did not address all the issues. In one case, the policy did not permit building additions as large as home owners wanted, and in the other case, the policy was more restrictive than the residents' wish to allow new residential development.

The case study experience also demonstrated the validity of the notion that soft information can be
Chapter 5. Conclusion

difficult to identify and locate. For the case study, it was necessary to rely on planners' recollections of relevant incidents and then search for supporting material in the Planning Department central files, where copies of most departmental transactions are stored. The central files are thus a type of operational data base and a logical place for planners to search for soft data. However, retrieving information from such a filing system was labour intensive and time consuming.

To facilitate the retrieval of information relevant to a specific area or issue of interest, soft information could be indexed and cross-referenced by a number of categories such as date, geographic area and issue. However, not all information need be processed in this manner. As the various pieces of qualitative data are collected, they could be evaluated and subsequently processed if judged to be significant in terms of community issues. This implies that staff responsible for monitoring are needed to filter this potentially rich source of information.

5.3 IMPLICATIONS FOR PLANNING

The case study on plan monitoring also has implications for community planning. In Chapter 2, literature was cited which argued that planning should be a continuous process of adaptation to changing conditions in the community and that

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monitoring has an important role to play in informing the planning process. In this regard, monitoring should result in the communication of advice to decision-makers. For example, in response to each of the two issues revealed by soft information, a short study was conducted by staff, advice was prepared, and a decision was made. However, while a formal monitoring system can ensure that information is carefully considered and that advice is prepared, any decision that is made on the basis of that advice is beyond the realm of monitoring. However, a formal monitoring system may increase accountability for decisions.

Regarding the development and implementation of a monitoring system for the Mount Pleasant Plan, the task would have been simplified had the requirements for monitoring been considered during the planning process. In particular, few of the Plan's underlying assumptions were explicitly stated. It is quite likely that assumptions were made about social and economic trends, the significance of various community issues, the expected impacts and possible side-effects of policies, and the sensitivity of policies to changes in the environment. Clearly stated, this sort of information may have provided clues as to what was important to monitor.

With respect to monitoring system implementation in the case study, data were collected and analyzed for only one of
Chapter 5. Conclusion

several policies in the Plan. Further, the Mount Pleasant Plan is only one of 15 local area plans prepared to date. Based on the case study experience, the effort required to monitor all plans could be astronomical. The implication is that planners will need to be critical and strategic in selecting what to monitor. Thus, monitoring will have to be continually evaluated and improved in light of limited resources and increasing demands for information.

In an effort to keep property taxes down, municipal managers must carefully allocate resources. While it may seem that implementing a monitoring system would place additional strain on limited budgets, the opposite may be the case. For example, in collecting data for planning studies, we sometimes unknowingly duplicate the efforts of others who have already gathered the same data. A formal monitoring system could potentially prevent such a waste of resources.

5.4 SUGGESTIONS FOR FURTHER RESEARCH

Given the limited scope and the case study nature of the thesis research, a number of areas for further investigation can be identified. The findings of the case study are based on one policy of the Mount Pleasant Plan. It is quite possible that monitoring other aspects of the Plan could lead to a different set of conclusions.
Similarly, a case study of another plan could provide other insights into monitoring. Perhaps more challenging would be a case study to determine if monitoring results in better decisions or plans.

During the thesis research, no literature was found to indicate how other municipalities monitored their plans. A survey of other municipalities could reveal how widespread monitoring is, how it is undertaken, what sort of data is collected, and how advice is communicated.

5.5 CONCLUSION

The effectiveness of monitoring in informing the planning process can be improved if soft information is collected in addition to quantitative data. Soft information is particularly useful in identifying emerging issues. Thus, it is more efficient to collect only key quantitative data and rely on soft information to indicate the need for detailed study. This is precisely what the mixed-scanning strategy suggests.

As presented in the thesis, monitoring completes the continuous planning cycle by linking, through feedback, plan implementation back to decision-making. For monitoring to be effective, it is necessary that data be collected and analyzed, and that advice be prepared and communicated to decision-makers. The challenge therefore, is to design a
monitoring system that is closely linked to the decision-making process and has procedures for ensuring that information is given careful consideration.

Monitoring, like planning, is a process. However, unlike planning, monitoring has been largely neglected in the literature. While this may be why monitoring appears to be ignored in planning practice, it has also been hinted that planners are not fond of being reminded of their mistakes. However, in pointing out our mistakes, monitoring can make us all better planners.
BIBLIOGRAPHY


Bibliography


Bibliography


Bibliography


APPENDIX A.

MOUNT PLEASANT PLAN ISSUES AND GOALS

1. INTRODUCTION

The numbering for the major headings in this appendix corresponds exactly to that in the Community Development Plan for Mount Pleasant (Vancouver 1989a). This numbering is preserved to facilitate reference to the Plan document. The goals are copied exactly as written in the Plan. The issues are gleaned from the text of the Plan. A number of the issues, where relevant, are taken from the Mount Pleasant Overall Policy Plan (Vancouver 1985). For some of the substantive categories, no issues were discussed in either document. Section 2. provides overall development strategies. The intent of Section 3. is to develop the character of each sub-area while ensuring the integrity of the Mount Pleasant neighbourhood.

2. COMMUNITY DEVELOPMENT STRATEGIES FOR MOUNT PLEASANT

2.1 Community Identity and Representation

Issues

- Difficulty for the community to organize and present a unified voice to City Council and other governments.

Goals

1. To create political and administrative boundaries which are consistent with historic boundaries of Mount Pleasant and other communities.
2. To ensure that community positions on decisions affecting Mount Pleasant are sought and considered.
2.2 Community Social Development

Issues
- Lack of community organization or cohesion.
- Significant minority of residents facing social problems.
- Transiency.
- Street prostitution.
- High crime rates.

Goals
Strategies for community and social development in Mount Pleasant must be aimed at resolution or management of the following problems:
1. Visible and direct impacts of street prostitution and its implications for the community at large;
2. General deterioration of social fabric and physical environment of community;
3. Escalating levels of transiency brought on by the community's poor image and lack of services;
4. High levels of unemployment and welfare;
5. Appearance and/or perception of high levels of crime and socially deviant behaviour (public drunkenness, individuals urinating in public view); and
6. Appearance of economically-depressed commercial areas.

2.3 Housing

Issues
- Affordability/transiency/ownership.
- Absentee ownership or lack of on-site management.
- Neighbourhood character and poor physical upkeep.
- Housing design with respect to safety.
- Usable open space.

Goals
1. To provide a variety of housing types suitable to a variety of household types, and to maintain affordability where possible, balancing with other community objectives.
2. To enhance the quality of residential development by ensuring that the distinctive building and streetscape
Appendix A. Mount Pleasant Plan Issues and Goals

character of each sub-area is reflected in new development, where it exists.
3. To provide amenities necessary to ensure an adequate standard of livability, both on-site and in the community.

2.4 Commerce and Employment

Issues
. Poor pedestrian shopping areas.
. Worn, unkempt, weak commercial centre.
. Vacant premises.
. Poor physical interface between commercial and residential areas.

Goals
1. To improve the economic vitality, image and appearance of the Main and Broadway core.
2. To enhance existing neighbourhood shopping areas.
3. To improve the compatibility of commercial development with adjacent residential development.
4. To examine means of generating small businesses and employment throughout Mount Pleasant.

2.5 Industry

Issues
. Pressures for alternative land uses.
. Loss of blue-collar jobs.
. Viability of industry on Cambie and Main Streets.
. Viability of industrial area east of Main Street adjacent to the north apartment area.
. Residential uses.

Goals
1. To create an atmosphere in the Mount Pleasant Industrial Area conducive to industry.
2. To redefine uses and building forms on the Cambie and Main Street corridors which enhance the appearance of these major streets.
3. To accommodate existing residential uses by reducing uncertainty with respect to upgrading.

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Appendix A. Mount Pleasant Plan Issues and Goals

4. To allow development of the Brewery Creek character area along Scotia Street.

2.6 Tourism, Arts and Cultural Development

Issues
No issues were indicated in the Plan.

Goals
1. To foster significant cultural events in the community of Mount Pleasant, with important tourism potential for both the area and the city.
2. To create city-wide interest in Mount Pleasant.
3. To increase city-wide awareness of the historical importance of Mount Pleasant and to use this interest to increase economic viability for businesses in the area.

2.7 Heritage

Issues
- Loss of Mount Pleasant's historical buildings.

Goals
1. To retain historic buildings.
2. To retain buildings and streetscapes representative of Mount Pleasant's early importance.
3. To improve understanding and awareness of historical importance of Mount Pleasant.

2.8 Parks, Open Space and Recreation

Issues
- Low per capita level of park space.
- Isolation of family housing from parks and recreation facilities.
- Quality of facilities and equipment.
Appendix A. Mount Pleasant Plan Issues and Goals

Goals
1. To acquire and develop park space in critical locations in the community.
2. To upgrade active recreation opportunities east of Main Street.
3. To recognize that city-average park standards will not be met in Mount Pleasant through land acquisition; therefore, employ other techniques such as identified and developed pedestrian walkways, improvements to public right-of-ways and mini-parks to supplement open space requirements.
4. To recognize and develop recreational opportunities on the periphery of the community.

2.9 Traffic, Alternate Transport and Parking

Issues
- Through-traffic, short-cutting, and congestion.
- Congested, complex intersection of Main, Broadway and Kingsway.
- Impacts on pedestrian environment, urban design, commercial vitality, and neighbourhood vitality.
- Parking difficulties in West Mount Pleasant and Main Street Core.

Goals
1. To ensure that through traffic uses major streets and preserve neighbourhood streets for local access and circulation.
2. To develop traffic projects where benefits accrue to local communities by encouraging traffic to by-pass inner city locations.
3. To encourage and facilitate the use of transit, cycling and walking as alternatives to automobile travel.

2.10 Environment

Issues
- General appearance and upkeep.
- Access to the handicapped.
Appendix A. Mount Pleasant Plan Issues and Goals

Goals
1. To generally improve the upkeep, cleanliness and appearance of Mount Pleasant's commercial, industrial and residential areas.
2. To ensure that development, including buildings, public right-of-ways, signage and other built features, contribute positively to the environment as a whole.
3. To ensure that physical obstacles to the mobility of the handicapped and infirm are eliminated.

3. RECOMMENDED ZONING CHANGES IN MOUNT PLEASANT

3.1 Broadway and Main Street Core

Issues
- Run-down commercial node with no amenity and few modern commercial services.
- Poor pedestrian orientation.
- Lack of parking.

Goals
1. New development should reinforce positive features and activities in the area:
   a) high pedestrian volumes, both of a local and transit origin;
   b) important heritage buildings which form a strong character for the area;
   c) significant "cross road" role of Broadway and Main for traffic and transit;
   d) east end of Central Broadway commercial strip.
2. Public right-of-way improvements should reinforce the same positive features and endeavour to overcome negative problems, such as conflicts between pedestrians and traffic.
3. Commercial node should be clearly defined, in accordance with policies established in setting of beautification priorities - core area includes Main Street between 7th and 12th Avenues, Broadway from Quebec to Prince Edward.
Appendix A. Mount Pleasant Plan Issues and Goals

3.2 Neighbourhood Commercial Areas

Issues
- Lack of character.
- Inconsistent image.

Goals
1. Reinforce and/or encourage the development of district/neighborhood serving commercial areas.
2. Foster and encourage the development of mixed-use projects, thereby increasing residential opportunities and maintaining existing building scale.
3. Ensure that areas with nondescript existing building character or emphasis are developed in future to complement development initiatives, notably on Cambie Street (at 12th and at 16th Avenues) and on Main Street with the new IGA.

3.3 Other Commercial Areas

Issues
- Problems with auto repair services: road testing, auto storage and parking.

Goals
No goals were specified.

3.4 Existing Industrial

Issues
- Competition from commercial uses.
- Relatively high industrial land values.
- Role of Cambie and Main Streets.
- Residential uses.

Goals
1. Create an atmosphere in the Mount Pleasant Industrial Area conducive to industry.
Appendix A. Mount Pleasant Plan Issues and Goals

2. Redefine uses and building forms on the Cambie and Main Street corridors which enhance the appearance of these major streets.
3. Accommodate existing residential uses by reducing uncertainty with respect to upgrading.

3.5 West Mount Pleasant

Issues
- Preservation of neighbourhood character and architecturally significant buildings.
- Need for parks.
- City Hall impacts, traffic and on-street parking.

Goals
1. Preservation of architectural integrity and streetscape quality

3.6 Mount Pleasant Triangle

Issues
- Need for parks.
- Traffic along 12th Avenue.
- Absentee landlords and potential redevelopment.
- "Vancouver Specials" in single family area.

Goals
1. To preserve the general overall building form and streetscape character of area.
2. To continue to provide affordable housing accommodation through the retention of existing buildings.
3. To preserve the character and pride of ownership evident in the RS-1 part of the triangle, noting the desire of some owners to upgrade existing suites and limit development of "Vancouver Specials".
Appendix A. Mount Pleasant Plan Issues and Goals

3.7 10th Avenue Apartment Area

Issues
- Design of older apartment buildings.
- Preservation of original character.

Goals
1. New development should assist in integrating this area into the larger character established by the original houses.
2. New development adjacent to existing buildings should respect and draw upon their positive character elements to ensure a compatible streetscape.
3. To create more visual compatibility, new apartment development should have the image of a single big house rather than a series of connected individual units.
4. All development with a frontage greater than one traditional lot should attempt to develop articulated forms and open space, that will break up the mass and create unit identity.
5. No development should include a frontage greater than 100 feet, unless a single locked-in lot will remain.
6. Consideration to flexible building siting should be given to achieve objectives such as the provision of ground-oriented space.
7. New development should attempt to visually link its open space to the existing open spaces of adjacent properties to ensure adequate views and light penetration.
8. To create open space that meets the needs of family housing by being usable, separated from the land and street traffic, and in the case of children's play areas, easily observed from the unit and the street.

3.8 Main Street Core Apartment Area

Issues
- Design of older apartment buildings.
- Lack of usable open space.
Appendix A. Mount Pleasant Plan Issues and Goals

Goals
1. New development should assist in creating a stronger and more cohesive image for the area by establishing a more consistent character for the area.
2. The main character influence for new development should be drawn from the older masonry apartment buildings.
3. New development should help define a boundary for the heritage area to the west while acting as a transition to the larger scale commercial area to the east.
4. Although the main character reference will be drawn from the area west of Main Street, this character should be developed for the entire area to help link the three smaller sub-areas together.
5. New development in this section of Mount Pleasant should be the most urban in character to respond to the adjacent commercial area and as well as to provide variety throughout the neighbourhood.

3.9 Mount Pleasant North

Issues
- Lack of amenity: parks, trees, sidewalks.
- Traffic flow through neighbourhood.
- Design of older apartment buildings.

Goals
1. New development should assist in creating a stronger and more cohesive image for the area by establishing a more consistent building and open space character.
2. On a sloped site, buildings and open space should be terraced to respond to the topography. On a sloped site there is greater opportunity for more units to have access to grade which should be exploited.
3. New development should explore opening up view corridors to the north that would also act as the project's main open space. New development should attempt to visually link its new open space to the open spaces of adjacent properties to ensure adequate views and light penetration.
4. Create open space that meets the needs of family housing by being usable, separated from the lane and street traffic, and in the case of children's play areas, easily observed from the units.
Appendix A. Mount Pleasant Plan Issues and Goals

5. Where appropriate there may be justification for reduction of the yard requirements in return for creating more usable open space.

3.10 Zoning Anomalies

A number of isolated areas have a zoning that was considered to be inconsistent with the immediate surroundings.
APPENDIX B.
MOUNT PLEASANT PLAN RECOMMENDATIONS

1. INTRODUCTION

The recommendations in the Community Development Plan for Mount Pleasant (Vancouver 1989a) are reproduced in this appendix. The text is as printed in the Plan Summary (Vancouver 1989b).
SECTION 2

2.1 COMMUNITY IDENTITY AND REPRESENTATION

2.1.1 Recommendations: Ward Representation

1. City Council to implement the ward system or a modified ward system including some at large representation in the City of Vancouver.

2. City Council to select ward boundaries which maintain the integrity of historic community boundaries, such as City Staff Option F (from document Wards for Vancouver, January 1982).

3. City Council to establish municipal presence in each ward to provide greater city-neighbourhood liaison, public meeting space and a base for aldermen if the ward system is implemented, could be accomplished in conjunction with existing community facilities, such as Neighbourhood Houses, community centres or with the establishment of ward offices.

2.1.2 Recommendations: Community Input

1. City Council request the City Clerk to report back on costs associated with publishing of City Hall information, including City Council and its Standing Committees agendas, in the Vancouver Sun and Province.

2.2 COMMUNITY SOCIAL DEVELOPMENT

2.2.1 Recommendations: Street Prostitution

1. City Council, with the assistance of the Planning Department, establish a working committee composed of residents, professionals and representatives of various interest groups, to study and prepare recommendations regarding prostitution, aimed at developing city-wide policies and strategies for issue resolution, for presentation to the Federal Government, the Province and City Council.

2. Federal, Provincial and Municipal authorities to continue to review the effectiveness of legislation designed to eliminate the public manifestations of prostitution, and to provide relevant authorities with the necessary powers to effectively deal with juveniles who should not be involved in prostitution at all.

3. City Police Department to protect residential districts of the City from the aggravation of activities associated with street prostitution, notably unnecessarily high levels of traffic, loud verbal exchanges and bodily threats from customers and pimps; accomplish through increased police attention along Broadway and 8th Avenue between Cambie and Clark Drive.
Appendix B. Mount Pleasant Plan Recommendations

4. City Council to request that the Crown Counsel Office seek (1) restrictions from residential areas for all convicted under Section 195.1 of the Criminal Code, and the area of restriction include Mount Pleasant and Grandview-Woodland and (2) imposition of more effective fines on both prostitutes and customers, to more clearly reflect the damage done to this community.

5. City Council to encourage the Attorney General's Department to expedite the appeal process on Section 195.1 acquittals.

2.2.2 Recommendations: Transiency

1. City Health Department to develop a community-oriented health unit in Mount Pleasant, preferably in conjunction with other neighbourhood services and a community meeting place.

2. City Council and Social Planning Department to consider establishment of multilingual, multi-service information centre in Mount Pleasant.

3. Director of Social Planning to study and report back to City Council on "town neighbourhood centre" concept for Mount Pleasant Neighbourhood House.

4. Social Planning and the Community Development Worker to investigate ways and means of enhancing the role of existing schools in the future of the community.

5. Social Planning and the Community Development Worker to investigate community interest in conversion of Mount Pleasant Elementary School to a community school, in conjunction with an enhanced recreational facility role.

6. City Council to advise the Provincial Government with respect to the critical need for English as a Second Language (ESL) education in Mount Pleasant, and the importance of restoring previous levels of funding.

2.2.3 Recommendations: Overall Community Development

1. City Council to review status of Community Development Worker position in conjunction with Director of Social Planning's November report scheduled for the end of 1987.

2. Director of Social Planning, Director of Planning and the Mount Pleasant Citizens' Planning Committee to review status of social problems in Mount Pleasant, and report to City Council as part of Director of Social Planning's November report on outstanding social problems and resource requirements to respond.

3. Police Department to maintain the Police Liaison Team as an extremely valuable resource to the community, to be retained until Mount Pleasant regains a stable residential character.

4. Police Department to continue initiatives aimed at (a) increasing public awareness in regard to personal and property safety, through community information meetings, and (b) implementation of the Block Captain Program.
2.2.5 Recommendations: Nagging Problems

1. City Council to adopt a two year moratorium, on all unacceptable uses, as follows:

<table>
<thead>
<tr>
<th>ACCEPTABLE RESIDENTIAL CARE (STAFFED) AND TREATMENT RESOURCES</th>
<th>INAPPROPRIATE RESIDENTIAL CARE (STAFFED) AND TREATMENT RESOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• seniors' rest home</td>
<td>• half way houses, or group homes, or staffed residential living quarters for those on probation, parole, or in conflict with the law; adults or children</td>
</tr>
<tr>
<td>• adult physically disabled (staffed) resources and independent living</td>
<td>• half way houses, treatment centres, or staffed living quarters for those who are alcohol and drug abusive; adults or children</td>
</tr>
<tr>
<td>• adult mentally disabled (staffed) resources</td>
<td>• emergency group homes for street kids or those requiring a behaviour management program, or therapeutic group homes or therapeutic foster homes with more than one child</td>
</tr>
<tr>
<td>• childrens' residential care (staffed) treatment resources e.g., Laurel House five-bed treatment centre for autistic children under the age of 13</td>
<td>• residential care facilities for adults requiring psychiatric care, or former mental patients</td>
</tr>
<tr>
<td>• group homes for mentally disabled adults; approval to be granted on a case by case basis.</td>
<td>• any drop-in facilities to be located only on major arterial streets e.g., Broadway and not on the same block as any other drop-in facility, or other service with a drop-in component or any other treatment service</td>
</tr>
</tbody>
</table>

Similar to non-market housing, community amenities must already be in place (with the exception of rest homes), small number of beds for each facility, and facilities to be well-spaced in the community for best integration.

2. Director of Planning to advise representative groups regarding development applications involving the following uses:

- drinking establishments;
- night clubs;
- pool halls;
- amusement arcades;
- motels and hotels;
- residential hotels;
- establishments selling or otherwise handling guns, knives or other weapons;
- liquor stores;
- establishments selling or displaying pornographic films or materials;
- treatment clinics providing non-local services.

3. Mount Pleasant Community Police Liaison Team to develop and implement a community-based strategy to control and manage the sale and use of alcohol in Mount Pleasant.

4. Director of Permits and Licenses to investigate and report back on increased control of operations which display or advertise pornographic films or material, or establishments selling or otherwise handling weapons, towards eliminating existing potential negative outward impacts on communities.
### 2.3 HOUSING

#### 2.3.1 Recommendations: Tenure And Affordability

1. City Council to maintain and improve existing zoning controls and policies which encourage tenure and the retention of affordable accommodation with a mix of household types and incomes.

2. City Council, with the assistance of the Social Planning Department, to no longer earmark North Mount Pleasant for government-assisted housing projects, in accordance with the following guidelines:

<table>
<thead>
<tr>
<th>ACCEPTABLE NON-MARKET HOUSING</th>
<th>INAPPROPRIATE NON-MARKET HOUSING</th>
</tr>
</thead>
<tbody>
<tr>
<td>• seniors housing; providing community amenities in place</td>
<td>• family housing (government assisted) within two blocks of a similar development, without &quot;balanced community&quot; income mix approach</td>
</tr>
<tr>
<td>• co-operative housing; providing community amenities in place, must follow income mixed &quot;balanced community&quot; approach</td>
<td>• family housing (government assisted) within two blocks of a similar development, of 25 units or more</td>
</tr>
<tr>
<td>• family housing (government assisted); providing amenities already in place, &quot;balanced community&quot; approach, small projects (8-25 units) and well spaced from any other similar project</td>
<td>• non-family government-assisted housing project, without &quot;balanced community&quot; income mix approach</td>
</tr>
</tbody>
</table>

Balanced community is both single and two parent families with reasonably broad income mix.

#### 2.3.2 Recommendation: Absentee Ownership And Management

1. Director of Permits and Licenses and Director of Planning to prepare an information brochure and poster explaining the procedures to follow regarding enforcement of the Standards of Maintenance and Zoning By-laws.

#### 2.3.3 Recommendations: Overall Residential Design

1. Director of Planning, in consultation with the Citizens' Planning Committee, to prepare and report back on new zoning district schedules which reflect the following distinctive building characteristics of the areas:
Appendix B. Mount Pleasant Plan Recommendations

a) Apartment Area 1 - 10th Avenue between Yukon and Ontario Streets

Objectives

i) to relate architecturally in scale and building form to heritage district to south.
ii) to buffer West Mount Pleasant from commercial development along Broadway.
iii) to allow for families through consideration given in design of buildings and open spaces.

b) Apartment Area 2 - Main Street Core Area, bounded by 10th Avenue, Kingsway, 16th Avenue and Quebec Street

Objectives

i) to develop an urban apartment building form consistent with turn of the century building form prevalent in the area, as an alternative to new, nondescript styles.
ii) to provide a population base in close proximity to commercial uses along Main and Broadway.
iii) to meet the housing needs of all ranges of household types, with focus given to singles, young couples and seniors.

c) Apartment Area 3 - Mount Pleasant North, north of Broadway, between Scotia Street and Clark Drive

Objectives

i) to improve design quality of residential development by visually breaking down long building frontages and creating neighbourhood amenities, including more usable open space.
ii) to accommodate families as an important design consideration.

2. City Council to instruct the Director of Planning to make application to rezone the RT-2 area of the Mount Pleasant Triangle to RT-2A, and that the application be referred to Public Hearing.

3. Director of Planning to establish more clearly definable standards in zoning by-laws and accompanying design guidelines for residential development, for the provision of useable open space and play areas to meet community and social objectives.

2.3.4 Recommendation: RS-1 Area Of Mount Pleasant Triangle

1. Director of Planning and Director of Permits and Licenses to explore and report back to City Council, in conjunction with residents and property owners in the RS-1 area of the Mount Pleasant Triangle, on the possibility of allowing suites in the area in conjunction with upgrading standards of existing suites.

2.3.5 Recommendation: Residential Uses On Major Streets

1. Director of Planning and City Health Department to undertake a city-wide study of problems associated with residential uses situated along major streets, to include examination of the following potential solutions:

a) improved construction standards such as double glazed windows, air conditioning and vibration-reducing structures for new developments along designated streets such as 12th Avenue, Fraser Street, Broadway and Clark Drive;

b) provisions for flexible siting of buildings on designated streets;
Appendix B. Mount Pleasant Plan Recommendations

Residential Zoning Districts in Mount Pleasant

c) improved design standards, including altered balcony and window placement.

d) effective landscaping and fencing techniques to ameliorate noise;

e) reduction of truck traffic on routes not designated for such purpose; and

f) consideration of comprehensive redevelopment strategies in severe situations.

2.3.6 Recommendation: Crime Prevention Through Design

1. Director of Planning and Police Department to research and report back to City Council on the inclusion of CEPTED principles in existing design guidelines applicable to commercial and residential development throughout the City.

2.3.7 Recommendation: Landscaping

1. Director of Planning and Director of Permits and Licenses to explore and implement means of enforcing installation and maintenance of approved landscaping during the life of the building (such as the posting of performance bonds).

2.3.8 Recommendation: Development Levies For Public Amenities

1. City Council review the matter of development levies as a source of funds for much needed community projects.
2.4 COMMERCE AND EMPLOYMENT

2.4.1 Recommendations: Main And Broadway

1. City Engineer to proceed immediately with the implementation of the Main Street Beautification Project if results of polling are favourable.

2. Planning Department and Economic Development Office to assist the Mount Pleasant Business Association with stages 2 and 3 (Facade Improvement and Marketing) of the Downtown Revitalization Program.

3. Council to instruct the Director of Planning to make application to expand the district-serving commercial core at Main and Broadway and that the application be referred to a Public Hearing, in conjunction with the design guidelines modelled on Section 3.1 of this plan.
Appendix B. Mount Pleasant Plan Recommendations

4. City Engineer to consult the Mt. Pleasant Business Association and Mount Pleasant Traffic Planning Committee on any arterial improvements considered for Main, Broadway or Kingsway.

2.4.2 Recommendations: Local Shopping Districts

1. City Council instruct the Director of Planning to make application to rezone existing C-2 Districts at Broadway and Fraser, Fraser and Kingsway (not including the northeast corner of Fraser and Kingsway), Main Street between 12th and 16th Avenues, and Cambie Street between 12th and 16th Avenues to C-2C; and that the application be referred to a Public Hearing.

2. Director of Planning to report concurrently on the similar zoning action for contiguous commercial areas, e.g. west side of Cambie Street between 13th and 14th Avenues, and the south corner of Kingsway and Fraser.

2.4.3 Recommendations: City Initiatives

1. City Council, Director of Civic Buildings and Director of Planning to take into account the following considerations when studying expansion of City Hall facilities to Broadway:

   a) benefits to the community of Mount Pleasant in terms of physically upgrading an important entry to the community;

   b) need for public amenity throughout Mount Pleasant and the extent to which City Hall can provide leadership in this respect to the development industry generally;

   c) need to consolidate public information services in an easily accessible manner; and

   d) need to provide adequate visitor and employee parking to reduce current impacts of parking on surrounding residential community.

2. Parks Board and Planning Department to develop Lions View Park at northeast corner of Broadway and Cambie Street.

3. City to continue to support upgrading of Heritage Hall as a major community resource and heritage focus, with particular attention to the following considerations:

   a) provide funding to increase use of main floor for community functions (specific requirements include air conditioning, proper curtains, sound equipment); and

   b) other measures to increase useability of hall.

2.4.4 Recommendations: Employment Opportunities

1. City Council to designate Mount Pleasant as an area within the City of Vancouver which would benefit from provincial and federal government programs aimed at revitalizing communities requiring such attention.

2. Economic Development Office and Planning Department to assist the Mount Pleasant Business Association, the Vancouver Community College and local community groups with community-based economic and job creation initiatives.
2.5 INDUSTRY

2.5.1 Recommendations: Retention Of Industrial Focus

1. Director of Planning and Economic Development Office tailor to Mount Pleasant an I or IC zoning schedule to allow industry, industrial office, business-service and clearly ancillary industrial retailing in existing M-1 and M-2 Districts of Mount Pleasant, in consultation with property owners and industrialists in the area, as well as interested parties in the community, and bring forward the proposed zoning to City Council for referral to a Public Hearing.

Industrial Zoning Districts

2. Director of Planning to ensure that no existing industrial use to be made non-conforming through new I or IC zoning, and that all existing uses appear either as outright or conditional uses in the new schedule.

2.5.2 Recommendations: Major Streets

1. City Council instruct the Director of Planning to make application to rezone portions of Cambie and Main Street to C-3A with design guidelines as suggested in section 3.4 of this plan; and that the application be referred to a Public Hearing.
Appendix B. Mount Pleasant Plan Recommendations

2.5.3 Recommendations: Residential Uses

1. Director of Planning to include within proposed industrial zoning district schedules the following conditional use description:

"Residential uses which existed prior to and have been used continuously as such since (date of enactment)."

2. Zoning guidelines should state clearly that residential uses are permitted with the understanding that owners and occupants will seek no operational limitations to industry.

2.5.4 Recommendations: Brewery Creek Industrial Enclave

1. Director of Planning to work with the Mount Pleasant Citizens' Planning Committee to prepare appropriate zoning and companion design guidelines to foster the unique character of the Brewery Creek Industrial Enclave, and the Director of Planning bring forward recommendations for consideration by City Council prior to the end of 1988.

2. Director of Planning to examine the Brewery Creek Industrial Enclave, between Main and Brunswick, as a potential pilot project for other areas of the city, incorporating industrial uses, artist studios and accommodation.

2.6 Tourism, Arts and Cultural Development

2.6.1 Recommendations: Fringe Festival

1. City Council to designate the Fringe Festival as an official city event and commit financial resources to the Fringe Festival Committee similar to those given to the Folk and Children's Festivals.

Theatre / Arts Venues
Appendix B. Mount Pleasant Plan Recommendations

2.6.2 Recommendations: Tourism Opportunities

1. City Council endorse the following projects as important to the community of Mount Pleasant and allow project sponsors to indicate City Council support for their efforts:

   a) Heritage Walking Tours
   Sponsored by Vancouver Museums
   (See Section 2.7)

   b) Brewery Creek Historical Society
   Project directed at increasing awareness of Mount Pleasant's early beginnings; study prepared suggesting alternatives for "reviving" creek visually or in a real sense.
   Sponsored by Claude Douglas and Charles Christopherson.

   c) Pioneer Junction Revival
   Project directed at increasing awareness of historical importance of Fraser and Kingsway intersection.
   Sponsored by Mount Pleasant Neighbourhood Association.

2. Director of Planning to work with Mount Pleasant Neighbourhood Association, Business Association and community-based arts groups to develop means of informing local residents and tourists with respect to points of interest in the community (such as information kiosks or other community notification means). (Also See Section 2.7 on Heritage Walk).

2.7 HERITAGE

2.7.1 Recommendations: Preserve Important Buildings And Streetscapes

1. City Council to adopt and immediately implement a Vancouver Heritage Management Plan.

2. City Council to adopt policies to protect heritage buildings in all parts of Mount Pleasant, such as:

   - Offer incentives such as added floor space ratio and height where developers maintain existing buildings; and
   - Seek heritage designation as a condition of rezonings and approval of major conditional uses involving buildings listed in the City's Heritage Inventory.

3. City Council to advise all City departments and staff when dealing with property in Mount Pleasant to regard the retention and reuse of buildings listed on the City's Heritage Inventory as a Council-sponsored objective.

4. Director of Planning to continue monitoring and updating the Vancouver Heritage Inventory.

5. Director of Planning to examine means of allowing some minor commercial use of residential buildings listed on the Vancouver Heritage Inventory if the buildings are no longer suitable for residential use without major structural alteration or additions (for example, permitting a mix of commercial and residential uses in heritage buildings adversely impacted by traffic on 12th Avenue).
Appendix B. Mount Pleasant Plan Recommendations

6. Directors of Planning and Permits and Licenses to institute a system of automatic notification to community groups of all development activities on sites which contain a heritage building or are of heritage significance.

2.7.2 Recommendations: West Mount Pleasant

1. The Director of Planning to develop and report back to Council on a heritage area (HA) zoning district schedule for a portion of West Mount Pleasant.

2. City Council to instruct the Director of Planning to make a Stage One application to the Provincial Government for a Heritage Area Revitalization Program (HARP) designation for portions of West Mount Pleasant and the Main Street Core.

West Mount Pleasant HA Area

Projects suggested for consideration under this program could include the following:

- a) 10th Avenue heritage-theme street beautification;
- b) selected buildings on Main Street;
- c) heritage elements which would reinforce the Main Street beautification project; and
- d) the Brewery Creek urban development project.
Appendix B. Mount Pleasant Plan Recommendations

2.7.3 Recommendation: Brewery Creek

1. Director of Planning, in conjunction with the Mount Pleasant Neighbourhood Association, to pursue preparation of a concept plan for revival of the Brewery Creek Water Course both symbolically and through incentives, such as bonus density, on public and private properties.

Brewery Creek Watercourse

- Proposed Brewery Creek public open space network, accomplished in conjunction with private
- Brewery Creek historic watercourse, marked with signs, exposed aggregate or paint
- Wall murals completed

2.7.4 Recommendations: Community Awareness Of Heritage

1. Director of Planning to continue work with the Vancouver Museum to develop a Mount Pleasant Walking Tour.

2. Director of Planning to continue working with the Mount Pleasant Neighbourhood Association and other community groups to document the history of Mount Pleasant.
2.8 PARKS, OPEN SPACE AND RECREATION

2.8.1 Recommendations: Park Acquisition

1. Park Board and Finance Department, in conjunction with Planning Department, to acquire and develop parks in accordance with the following specific priorities:

   a) Mount Pleasant North, in the vicinity of 7th and Fraser Street (central location to serve the needs of the area);

   b) West Mount Pleasant, between Broadway and 12th Avenues, in the vicinity of Manitoba Street;

   c) Mount Pleasant Triangle, between Broadway and 12th Avenues, Fraser and Glen Streets; and

   d) In accordance with other deficiencies as described in this section.

The acquisition of property for park purposes is almost always associated with the intent to demolish existing buildings and create open space. Should a heritage building be in the middle of a potential assembly, the Park Board will only purchase it, if the building can be relocated on property not controlled by the Park Board. The Park Board will only retain a heritage building if a previously identified recreation function can be accommodated.

2.8.2 Recommendations: Community Recreation Facilities

1. Park Board, Neighbourhood House and Vancouver Community College officials to undertake a needs assessment survey of recreation needs in North Mount Pleasant, the Triangle and the Broadway ALRT Station area, and to report back to City Council and the Park Board with results of that survey.

2. Park Board to investigate opportunities to develop a satellite community centre in the vicinity of King Edward Campus and China Creek Park, in conjunction with Vancouver Community College and local businesses.

3. Park Board to monitor changing population and recreational opportunities in Mt. Pleasant and to ensure that the needs of all residents (including students, the elderly and single parent families) are being met at public and private recreation facilities, noting that a balance must be achieved which meets the needs of the people in the area.
Appendix B. Mount Pleasant Plan Recommendations

2.8.3 Recommendations: Open Space Development

1. City Council to formally adopt a pedestrian/linear park system as a priority for Mount Pleasant. Engineering, Park and Planning Departments to develop a comprehensive plan for this system, including signage, public right-of-way improvements including seating and other improvements, and report back to City Council with respect to costs and project timing.

Pedestrian And Open Space Alternatives

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2. Park Board, Engineering and Planning Departments to develop and explore means of implementing City-initiated beautification project for:

a) 10th Avenue, between Cambie and Main Streets;

b) 7th Avenue, between Prince Edward and Glen Drive; and

c) other linkages necessary to connect (a) and (b) in a continuous manner.

---

Main St. beautification
--- Street beautification (proposed)
----- Pedestrian routes (marked with signage and including rest areas)
------ Emphasis on private improvements to pedestrian route
----- Designated walkway
----- Designated bicycle route
- Full traffic lights
- Pedestrian activated light
3. City Engineer and Park Board staff, in consultation with the Director of Planning and the Mount Pleasant Citizens' Planning Committee, to develop and report back on a street tree planting program for Mount Pleasant, with specific priority given as follows:

   a) identified pedestrian routes;

   b) streets already having received local improvement work, where trees were part of the improvement;

   c) areas of Mount Pleasant historically deficient in tree planting; and

   d) high density residential areas.

Tree types planted should be of a variety which reflect historical planting patterns on the street. Local residents should be consulted.

4. Park Board, Engineering and Planning Departments to include as a part of the Mount Pleasant Traffic Management Plan, consideration of a mini-park system as a specific means of adding open space in areas with a lack of park space.

5. Park Board to undertake minor improvements to park sites at 7th Avenue and Fraser Street, including grass and park benches, with final plans and development to be undertaken when the issue of street closure is determined as part of the Traffic Management Plan.

6. City Engineer to complete improvements and signage on the 2nd Avenue pedestrian walkway and First Avenue cycle route.

2.8.4 Recommendations: Peripheral Recreation Opportunities

1. Park Board, Properties Division and Director of Planning to consider development of a small street end park at the north foot of Ontario Street, as part of future lease considerations of the City-owned right-of-way; and that consideration include connection to the existing designated walkway along 2nd Avenue. Concepts for this street-end park should include access for water-related activities, such as boating.

2. City Council to ensure the plans for the proposed regional park, adjacent to the Science World Centre, continue to give proper attention to the needs of adjacent communities, and that action to undermine the size and role of this park be resisted.

3. Park Board and Planning Departments to ensure that future plans for the development of the CNR/BNR lands give consideration to the following provisions:

   a) Park space which serves adjacent communities as well as the proposed community on these lands; and

   b) Pedestrian linkages from adjacent communities to connect to these park spaces if provided.
2.9 TRAFFIC, ALTERNATE TRANSPORT AND PARKING

2.9.1 Recommendation: Traffic Management Plan

1. Engineering and Planning Departments to complete traffic management plan, with the following principles in mind:
   a) keep commuter through-traffic on major arterials.
   b) improve arterials with an emphasis on improving linkages between crossing arterials, such as left turn bays and advanced signal measures and investigation of the Kingsway/Quebec Connector.
   c) clarify role and designation of streets such as 7th Avenue (between Cambie and Main Streets), 12th Avenue (traffic load throughout Mount Pleasant) and route originating from 2nd Avenue along 5th Avenue and Fraser Street.
   d) implement mitigation measures where commuter shortcutting is detrimental to a neighbourhood in terms of unwarranted traffic, noise and reduction of safety.
   e) consultation with affected neighbourhoods to be a prime consideration before implementation of any measure.

2.9.2 Recommendations: Transportation Projects

1. City Council, in conjunction the City Engineer and in conjunction with affected communities, to study the feasibility of the Grandview Cut roadway, as a measure to direct commuter traffic around the communities of Mount Pleasant and Grandview-Woodland.

2. City Council to ensure that existing residential and commercial districts are protected from potentially negative impacts if the Cambie Street corridor is considered for an ALRT corridor to Richmond.

2.9.3 Recommendations: Alternate Transportation Modes

1. City Council to foster greater public transit ridership with the objectives of reducing traffic congestion and parking shortages.

2. City Council to reconsider the car pooling program, by investigating effective programs in other cities, and support alternate public transit projects such as a commuter rail system along Burrard Inlet.

3. Bicycle Advisory Committee to develop and adopt a comprehensive bicycle program, governing designation of bicycle routes, education, safety and adequate enforcement.

4. Bicycle Advisory Committee to develop an education program specifically directed to motorists and cyclists to reduce accidents and frustration between both groups.

5. Director of Planning to incorporate pedestrian weather protection requirements in existing and future design guidelines.
Appendix B. Mount Pleasant Plan Recommendations

2.9.4 Recommendations: Parking

1. City Council to request that the Director of Planning, the Development Permit Board and the Board of Variance seek every opportunity to ensure that parking standards are upheld in Mount Pleasant, particularly in regard to new developments.

2. City Engineer to undertake a needs survey in the Main and Broadway area and develop alternate strategies for increasing parking in the area, including:

   a) examination of collective parking opportunities for the commercial core;

   b) examination of private development initiatives which could provide parking for the general commercial area;

   c) expansion of the Downtown Parking Corporation into Mount Pleasant;

   d) examination of existing bus stop patterns to eliminate unneeded stops which take up parking spaces and impede efficient traffic flow;

   e) examination of means of providing employee parking and/or seeking incentives to encourage employee use of public transit; and

   f) examination of means of maintaining parking on Main Street, between 2nd Avenue and 7th Avenue.

3. City Engineer to consider co-operative or collective parking opportunities in the industrial area if interest is expressed by property owners in the area.

4. City Engineer to review, in conjunction with the Director of Planning, the Mount Pleasant Business Association and the Mount Pleasant Citizens’ Planning Committee, the concept of pay-in-lieu parking to determine if it would be a viable method to improve existing parking shortages.

5. City Engineer to extend Resident Permit Parking zones to block faces where 60% of responding residents express support.

6. City Engineer to ensure that adequate resources are available to provide for regular enforcement in all areas and special enforcement in problem areas.

7. City Engineer, in consultation with Director of Planning, to review City auto parking and storage standards for commercial uses such as auto repair services and car dealerships.

8. City Engineer, in consultation with Director of Social Planning, to review City standards for security and maintenance of underground parking lots.

2.10 ENVIRONMENT

2.10.1 Recommendations: Physical Upkeep And Appearance

1. Director of Permits and Licenses to report back to City Council, in conjunction with the Mount Pleasant Citizens’ Committee, regarding increased enforcement of the Standards and Maintenance By-law and Zoning By-law infractions.

2. City Council to endorse the concept and offer support to semi-annual citizen-sponsored clean-up days in interested communities, seeking support of civic unions to avoid potential conflicts.
Appendix B. Mount Pleasant Plan Recommendations

3. (a) The City Engineer establish a program to initiate a few Local Improvements each year for pavement, curbs and sidewalks in Mount Pleasant, subject to funding availability;

(b) City Council to establish the requirement that, where possible, site redevelopment should be made conditional upon the provision of curbs and sidewalks on all streets adjacent to the site.

4. Police and Community Development Worker to work with building owners to demonstrate the financial benefits of ongoing maintenance and resident management.

5. City Council to communicate to the Vancouver School Board the need for education at all grade levels, the concept of community pride and community upkeep. The suggestions of community clean-up days and community awareness events could form part of this education.

2.10.2 Recommendations: Community Landscape Project

1. Community groups, together with the Landscape Architects of B.C. or the U.B.C. School of Landscape Architecture, to develop a summer works program aimed at improving the landscape condition of Mount Pleasant, with consideration to possibly include urban garden plots within the concept.

2.10.3 Recommendations: Sign Considerations

1. Director of Planning to report back regarding possible amendments to the Sign By-law to better control the location and size of signs and billboards, such that important views are maintained and signs of businesses in an area are not obscured. Potentially controversial signs or sign removals would be reviewed with relevant community groups.

2. City Council to eliminate roof-top signs as a consideration within the Sign By-law.

2.10.4 Recommendations: General Operations In Commercial Areas

1. City Engineer to work with the Mount Pleasant Business Association to ensure proper and adequate placement of litter containers in commercial areas.

2. City Engineer to continue in the short term with efforts to curtail poster placement on City and Hydro utility poles; however, that consideration be given to providing acceptable alternatives for the display of community information (e.g. kiosks, community information boards or special pole display panels for such purpose).

Community groups must also bear responsibility to take down dated material.

3. City Council to support a district-wide recycling program, with conveniently located depots and give consideration to discussion at a regional level on the reduction and/or elimination of the use of non-recyclable containers.

2.10.5 Recommendation: Handicapped Access

1. City Engineer to continue to improve wheelchair accessibility throughout Mount Pleasant, working with special needs groups and housing co-operatives to determine improvements.
Appendix B. Mount Pleasant Plan Recommendations

Section 3

3.1 BROADWAY AND MAIN STREET CORE

Recommendations

1. Director of Planning to define commercial node at Broadway and Main through extension of C-3A to 12th Avenue.

2. Director of Planning to further define commercial node by terminating C-3A zoning at Prince Edward and concentrate area east for mixed-use, lower scale development. SEE SECTION 3.2.

3. Director of Planning to upgrade existing Central Broadway Urban Design Guidelines to ensure that new development reinforces pedestrian environment and building form and character.

3.2 NEIGHBOURHOOD COMMERCIAL AREAS

Recommendations

1. To ensure that existing commercial characteristics of centres at Broadway and Fraser and Fraser at Kingsway are retained, the pedestrian-oriented, mixed-use zoning C-2C is recommended to replace existing C-2.

2. To provide for orderly development and an improved commercial image for Cambie and Main Streets, between 12th and 16th Avenues, C-2C is recommended to replace the existing C-2.

3.3 OTHER COMMERCIAL AREAS

Recommendation

No changes recommended.

3.4 EXISTING INDUSTRIAL

Recommendations

1. Director of Planning and Economic Development Office tailor to Mount Pleasant an I or IC zoning schedule to allow industry, industrial-office, business-service and clearly ancillary industrial retailing in existing M-1 and M-2 Districts of Mount Pleasant, in consultation with property owners and industrialists in the area, as well as interested parties in the community, and bring forward the proposed zoning to City Council for referral to a Public Hearing.

   Director of Planning to ensure that no existing industrial use to be made non-conforming through new zoning, and that all existing uses appear either as outright or conditional uses in the new schedule.

2. City Council to instruct Director of Planning to make application to rezone portions of Cambie and Main Street to C-3A, with appropriate design guidelines and that the application be referred to a Public Hearing.
3. Director of Planning to include within proposed industrial zoning district schedules the following conditional use description:

"Residential uses which existed prior to and have been used continuously as such since (date of enactment)."

Zoning guidelines should state clearly that residential uses are permitted with the understanding that owners and occupants will seek no operational limitations to industry.

4. Director of Planning to work with the Mount Pleasant Citizens' Planning Committee to prepare appropriate zoning and companion design guidelines to foster the unique character of the Brewery Creek Industrial Enclave and that the Director of Planning bring forward recommendations for consideration by City Council prior to the end of 1987.

5. Director of Planning to examine the Brewery Creek Industrial Enclave, between Main and Brunswick, for a potential pilot project for other areas of the City, incorporating industrial uses and artist studio and accommodation.

3.5 WEST MOUNT PLEASANT

Recommendations

1. Director of Planning to develop and report back to Council on a heritage area (HA) zoning district schedule, for a portion of West Mount Pleasant, as shown in Figure 12 of plan (see page 72).

2. Director of Planning to prepare accompanying design guidelines which will delineate architectural style, form and building materials, to ensure that both renovation and new construction are consistent with the heritage architecture of the area.

3.6 MOUNT PLEASANT TRIANGLE

Recommendation

1. City Council to instruct Director of Planning to make application to rezone RT-2 area of the Mount Pleasant Triangle, to RT-2A.

3.7 10TH AVENUE APARTMENT AREA

Recommendation

1. Director of Planning to develop an amended apartment zoning schedule which encourages a building form consistent with the heritage district to the south.

3.8 MAIN STREET CORE APARTMENT AREA

Recommendation

1. Director of Planning to develop an amended apartment zoning schedule which begins to develop a style of building form and architecture with some variety, to replace the repetitive development which now exists. Other principles outlined herein should be adopted as part of accompanying design guidelines.
3.9 MOUNT PLEASANT NORTH

**Recommendation**

1. Director of Planning to develop an amended apartment zoning schedule which begins to develop a style of building form and architecture which responds to the diverse needs of people living in the area. Useable, on-site open space is a priority.

3.10 ZONING ANOMALIES

3.10.1 North Side of 400 Block West 10th Avenue

Current Use: Parking Lot (City Hall employees)  
Current Zoning: RM-3A  
Proposed Zoning: C-3A  
Reason: City Hall to south, commercial development to north. Existing zoning no longer relevant.

3.10.2 West Side of Cambie Street, between 13th and 14th Avenues

Current Use: Strip commercial development  
Current Zoning: C-2  
Proposed Zoning: C-2C  
Reason: Bring zoning into line with recommended zoning on east side of street.

3.10.3 North Side of 100 Block East 10th Avenue

Current use: Federal Government office building and Postal Station C  
Current Zoning: RM-3A  
Proposed Zoning: C-3A  
Reason: Bring zoning into line with use and zoning to north (along Broadway) and east (Main Street).

3.10.4 North Side of 200 Block East 16th Avenue

Current Use: Small retail outlets  
Current Zoning: C-2  
Proposed Zoning: Amended Apartment Zoning  
Reason: Eliminate zoning anomaly.

3.10.5 North Side of 200-700 blocks East 16th Avenue

Current Use: Two-family Dwellings  
Current Zoning: RT-2  
Proposed Zoning: Amended Apartment Zoning  
Reason: Move zoning boundary to 16th Avenue to provide better transition between apartment uses and lower scale housing developments.

3.10.6 North Side of 400 Block East Broadway

Current Use: St. Michael's Anglican Church  
Current Zoning: RM-3A  
Proposed Zoning: C-2C  
Reason: Bring zoning into line with zoning along Broadway.

3.10.7 West Side of Clark Drive South of East Broadway

Current Use: Two-family Dwellings  
Current Zoning: RT-2  
Proposed Zoning: Amended Apartment Zoning  
Reason: Isolated zoning district.