

**A DESIGN FOR
COMBINED
WORKPLACE RESIDENCES**

Permission has been granted to the National Library of Canada to microfilm this thesis and to lend or sell copies of the film.

The author (copyright owner) has reserved other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without his/her written permission.

L'autorisation a été accordée à la Bibliothèque nationale du Canada de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur (titulaire du droit d'auteur) se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation écrite.

ISBN 0-315-50402-1

ABSTRACT

A DESIGN FOR COMBINED WORKPLACE RESIDENCES

Raymond de Beeld

January, 1989

Prepared in partial fulfillment of the requirements
of the M.E. Des. (Architecture) degree in the
Faculty of Environmental Design,
The University of Calgary.

Supervisor: Professor M.R. Kirby

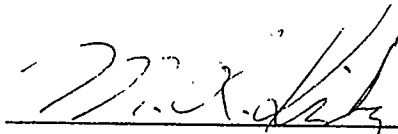
KEY WORDS:

"WORKPLACE RESIDENCES" "HOMEBASED WORK" "WORKING AT HOME"

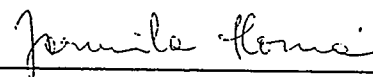
This study proposes a schematic design for six autonomous but adjoining workplace residences located along a pedestrian oriented shopping street (17th Avenue S., Calgary). The project comprises of workplace residences for an auto mechanic, fashion designer, ceramic artist and gallery owner, florist, veterinarian and potter, and chef. Under a condominium arrangement, each unit comprises of independently owned and operated work- living spaces with shared common facilities, leasable commercial space and strong public orientation. The proposed design responds to the work at home lifestyle, the pedestrian shopping character of 17th Avenue, and the quality of place within the context of the city.

THE UNIVERSITY OF CALGARY
FACULTY OF ENVIRONMENTAL DESIGN


The undersigned certify that they have read, and
recommend to the Faculty of Environmental Design for
acceptance, a Master's Degree Project entitled
A Design For Combined Workplace Residences
submitted by Raymond John de Beeld in partial
fulfillment of the requirements for the degree of Master
of Environmental Design



Supervisor Professor M. R. Kirby
(Faculty of Environmental Design)



Professor J. L. A. Horna
(Faculty of Social Science)



Professor Tang G. Lee
(Dean's Appointed Examiner, Faculty of Environmental Design)

Date February 28, 1989

TABLE OF CONTENTS

Chapter 1: INTRODUCTION

BACKGROUND	1
OBJECTIVES	1
SCOPE AND LIMITATIONS	1
ORGANIZATION OF DOCUMENT	2

Chapter 2: HISTORICAL BACKGROUND AND PRECEDENTS

EMERGENCE	5
DECLINE	6
RE-EMERGENCE	6
RECENT PRECEDENTS	7

Chapter 3: WORKING AT HOME

WORKING AT HOME	15
FAMILY	16
LONELINESS	16
PROFESSIONALISM	17

Chapter 4: CONTEXT

SITE	19
RELATIONSHIP TO DOWNTOWN CORE	22
RESIDENTIAL QUALITIES	22
COMMERCIAL QUALITIES	23
TRANSPORTATION SYSTEMS	27
PHYSICAL QUALITIES	28
ENVIRONMENTAL QUALITIES	30

Chapter 5: REDEVELOPMENT GUIDELINES AND RESTRICTIONS

CITY OF CALGARY POLICY	33
CITY OF CALGARY OBJECTIVES FOR 17TH AVENUE ..	33
ZONING	33
REDEVELOPMENT GUIDELINES	34
17TH AVENUE PUBLIC IMPROVEMENTS	34

UPTOWN 17 BUSINESS REVITALIZATION ZONE	35
UPTOWN 17 BRZ OBJECTIVES AND GUIDELINES	35
COMMUNITY CONCERNS	36

Chapter 6: HISTORICAL

CONNAUGHT/ WEST VICTORIA	39
CLIFF BUNGALOW	39
LOWER MOUNT ROYAL	40
17TH AVENUE DISTRICT	41

Chapter 7: PROGRAM

OBJECTIVES	43
NATURE OF DEVELOPMENT ENTITY	43
OUTDOOR SPACE	43
PARKING REQUIREMENTS	43
CHEF	44
FLORIST	44
COMMERCIAL POTTER AND GALLERY OWNER	44
FASHION DESIGNER	45
VETERINARIAN AND POTTER	46
AUTO MECHANIC	46

Chapter 8: DESIGN

CONCEPTUAL ELEMENTS	49
SITE ELEMENTS	56
UNIT ELEMENTS	64

Chapter 9: CONCLUSION

CONCLUSION	75
------------------	----

APPENDIX 1: ISSUES	77
APPENDIX 2: GOALS AND OBJECTIVES	78
APPENDIX 3: COMMERCIAL SPACE TO BREAKEVEN ..	80
APPENDIX 4: COST PER WORKPLACE RESIDENCE ...	81
APPENDIX 5: ALTERNATIVE CONCEPTUAL MODELS ..	82
APPENDIX 6: FIRE SEPARATION OF UNITS	83
ENDNOTES	85
BIBLIOGRAPHY	89

LIST OF FIGURES AND TABLES:

1. Prehistoric Hut	5
2. Medieval Townhouse	5
3. Parisian Walk- up Apartment	6
4. Hub Mall, Edmonton	6
5. La Ville Radieuse, Le Corbusier	6
6. Alexandra Terrace Apts, Calgary	7
7. Alexandra Terrace Apts, Calgary	7
8. IPS Cartoon Studio, Tokyo Japan	8
9. Artisan Housing, Staten Island N.Y.	9
10. 1984 Winner, "A New American House Comp." ..	10
11. "Go Home", Del Mar Calif.	11
12. Meola Studio/ Apartment, New York N.Y. ...	12
13. Working at Home	16
14. Location of Site within Calgary	19
15. View from Tompkins Park Towards Site	19
16. 7th Street	19
17. Relationship to Tompkins Park	20
18. Immediate Context	20
19. Existing Site Buildings	21
20. Site Analysis and Existing Features	21
21. Relationship to Downtown Core	22
22. Housing at 7th St. and 18th Avenue S.W. ..	22
23. Housing along 8th St. W.	22
24. Social Characteristics	23
25. Constraints and Opportunities of 17th Ave.	24
26. 17th Avenue S.W. (looking west)	25
27. 17th Avenue S.W. (across from site)	25
28. 17th Avenue District	25
29. Tompkins Park and 17th Avenue S.W.	26
30. 17th Avenue and 7th St. S.W.	26
31. 17th Avenue S.W. (looking east)	26
32. 17th Avenue S.W. (rush hour)	27
33. Vehicular Access	27
34. Pedestrian Access	27
35. Parking Access	28
36. Tompkins Park	28
37. Open Space	28
38. Building Scale	29
39. Building Texture	29
40. Relationship to Street	29
41. Relationship to Lane	30
42. Climatic Features of Calgary	31
43. Zoning	34
44. Sunlight Performance Standard	34
45. 17th Avenue Public Improvements	34
46. Uptown 17 Business Revitalization Zone ...	35
47. Pearce House (13th Ave and 7th St S.W.) ..	39
48. View from Mount Royal, 1919	39
49. Tompkins Park, 1915	41
50. Tompkins Park (looking east)	41
51. 17th Avenue and 8th Street S.W. (1940-1) ..	41
52. Concept	49
53. Urban Street	49
54. Public Space	49
55. Continuity of Urban Fabric	51
56. Existing Site Buildings	51
57. Structural Grid References	51
58. Horizontal Layers	52
59. Vertical Layers	52
60. Narrow Frontages	52
61. Massing	54
62. Pedestrian Circulation	54
63. Street Orientation	54
64. Lane Orientation	55
65. Rear Lane	55
66. Public Space (plaza and hall)	56
67. Common Area	56
68. Plaza	56
69. Plaza Activity (market)	58
70. Plaza Activity (performances)	58
71. View to Hall from 17th Avenue S.....	58
72. Workshop/ Studios Along Lane	61
73. Residential Common	61
74. Residential Common	61
75. Surface Parking	63
76. Underground Parking	63
77. Loading Zone	63
78. Required Parking	64

CHAPTER 1: INTRODUCTION

INTRODUCTION

BACKGROUND

This M.D.P. proposes a schematic design for six autonomous but adjoining workplace-residences located along a public oriented shopping street. The project comprises of workplace-residences for an auto mechanic, fashion designer, potter and gallery owner, chef, veterinarian and potter (with a public gallery), and a florist. Each unit would comprise of independently owned and operated work-living space with shared common facilities, leasable commercial space and strong public orientation.

This project began with an interest in workplace residences resulting from our (my wife and I) experience and frustration of operating a fashion accessories business from our home. More than one workplace residence was chosen to explore a range of design possibilities of different occupations, family units, lifestyle attitudes, etc. Six units were initially chosen intuitively based on size of the site, typical business frontage widths, and the existing density of adjacent developments. The different programmatic requirements between each of the six units allows the exploration of different design solutions to the workplace residence relationship.

The final product is design drawings and a model. The written document functions as a supplement to explain and analyze the design solution.

OBJECTIVES OF M.D.P.

The objectives for this project are four-fold:

- (1) To demonstrate an architectural response to an increasingly common lifestyle that combines the work and home environments.
- (2) To provide an alternate shopping experience that is more personal, active, locally oriented, entertaining and educational.
- (3) To enhance the public realm and the pedestrian shopping character of 17th Avenue S.
- (4) To provide an example of redevelopment along 17th Avenue that is sensitive to the existing urban pattern while enhancing the quality of place.

SCOPE AND LIMITATIONS

The proposed design solution is intended as an exercise in the design of workplace residences with a commercial/retail emphasis for a particular site. In depth analysis of issues related to construction details, marketing programs, management studies, etc. are beyond the scope of this project. Any financial figures that are provided serve more as a background and add an element of reality to the design exercise. Financial figures such as land costs and leasing rates are applicable to the 1986 to 1987 time frame and may have changed since.

The design solution is site specific and is limited in its applicability to other projects and site locations. However, many of the design principles relating to workplace residences and urban design can be generalized for other sites along the 17th Avenue district. While many activities are speculated in the proposed design solution, the architect can only provide the vision and built framework to accommodate and encourage such uses. It is the clients and the public that will eventually determine the final result and success of the project.

ORGANIZATION OF DOCUMENT

The document functions as a supplement to explain and analyze the design solution. The first chapter, Introduction, describes the background and objectives of the project. Chapter two, Historical Background and Precedents, provides a brief historical background to multi-use buildings in general, and workplace residences in particular. Chapter three, Working at Home, looks at the nature of and increasing trend, of working at home. The latter part of the chapter examines the main issues of family, privacy, loneliness and professionalism which arise when one works and lives in the same environment.

Chapter four, Context, examines the existing conditions of the site and 17th Avenue district in terms of definable areas, transportation systems and physical qualities as it relates to introducing a new development within an existing urban fabric. This chapter serves as background and supports decisions made during the design process. Similarly, chapter five, Redevelopment Guidelines and Restrictions, continues the discussion of the site and context as it relates to development guidelines and restrictions imposed by various governing bodies. City policy, proposed public improvements, zoning guidelines and restrictions, Uptown 17 Business Revitalization Zone guidelines and community concerns are examined in terms of their goals and impact on the development site.

Chapter six, Historical, describes the historical background of the 17th Avenue district and adjacent residential neighbourhoods so as to understand the existing patterns of urban development, architectural form and social character. Chapter seven, Program, describes the preliminary program used to develop a design solution for the six hypothetical clients.

Chapter eight, Design, explains the major design decisions and features of the schematic design. The last chapter, Summary and Conclusions, summarizes the design proposal with brief comments on the lifestyle of working at home, the alternate shopping experience, and the character of 17th Avenue and the city. The design drawings are reduced for inclusion at the end of the document.

LEAVES 3, 37, 73 AND 87 ARE
OMITTED IN PAGE NUMBERING.

FEUILLETS 3, 37, 73 ET 87 NON
INCLUS DANS LA PAGINATION.

National Library of Canada
Canadian Theses Service.

Bibliothèque nationale du Canada
Service des thèses canadiennes.

CHAPTER 2:

HISTORICAL BACKGROUND AND PRECEDENTS

HISTORICAL BACKGROUND AND PRECEDENTS

This chapter reviews the historical background of multi-use buildings in general, and workplace residences in particular. Some recent precedents of workplace residences are also reviewed. The examination of precedent provides insight as to how other architects have resolved the various issues related to designing workplace-residences.

EMERGENCE

Multi-use buildings and workplace-residences are not a new phenomena. They have been built and used by man for centuries (Fig. 1). The combination of workplace and residence was the norm and not the exception prior to the emergence of capitalist exchange in the 14th to 16th century [1]. However their popularity as architectural and urban models have experienced periods of decline and re-emergence.

Perhaps the best known example of early workplace-residences dates back to medieval times, when they characterized the medieval town and contributed to its distinct form (Fig. 2). Since medieval society was comparatively immobile and compact, the street became the place of business and as such it made sense to work beside, in or above it.

As cities grew in population and congestion, the one to one relationship of workplace to residence, common in medieval times, became less practical as it was necessary to stack many residences over a single place of work. The Parisian walk-up apartment block of the early 1800's was such a structure (Fig. 3). These structures were lined with ground level shops, restaurants, cafes and theatres, above which there were four or five floors of apartments.

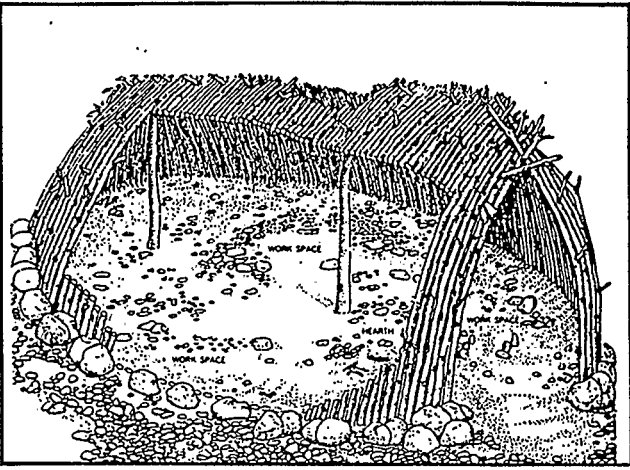


Figure 1. Prehistoric Hut (c. 10,000 B.C.)



Figure 2. Medieval Townhouse Combining Workplace and Residence

Haussmann adopted this model as the basic building block for his highly successful streets and boulevards [2]. The enclosed passage or galleria further refined this popular multi-use commercial-residential model. The galleria represented the rich potential of adding to and renewing the existing city on a human scale, and was possibly the last and best example of a truly urban private multi-use structure that contributed to the public realm (Fig. 4).

DECLINE

The Industrial Revolution brought about a fundamental change in society and the shape of the city. Out of necessity, not by choice, the machine revolution forced work out of the home and into the centralized factory resulting in unprecedented urban growth. The once close-knit family had now entered the commuter lifestyle, with each family member traveling to a separate workplace to earn a living. Since new residential areas tended to be built near the place of work, a variety of health problems caused by factory smoke and industrial wastes contributed to unsatisfactory living conditions.

Instead of piecemeal remedial legislation, the Utopian and Park Movements advocated the concept of functional segregation to solve the various urban problems. Subsequently through the Athens Charter in 1933, the Congress International d' Architecture Moderne (CIAM) advocated the systematic segregation of residence, work, and recreation, forming the ideological base for modern urban planning (Fig. 5). As these theories gained acceptance, the popularity of workplace residences and multi-use buildings fell into a rapid premature decline as urban models.

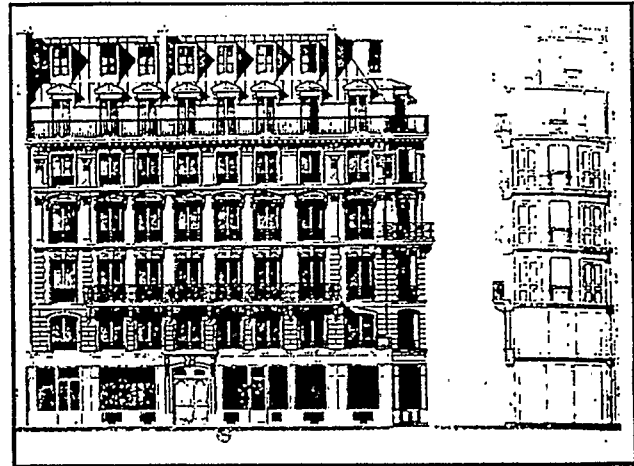


Figure 3. Parisian Walk-up Apartment (early 1800's)



Figure 4. Hub Mall (Modern Galleria Type), Edmonton (1973)

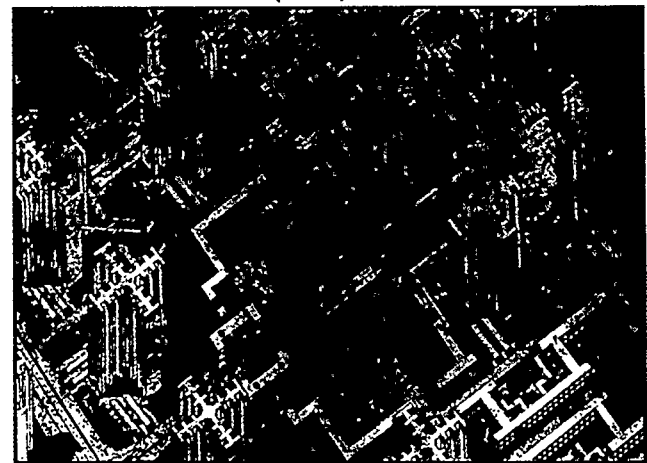


Figure 5. La Ville Radieuse, Le Corbusier
Segregation of Residence, Work & Recreation

RE-EMERGENCE

The Modern Movement's inability to transform the city into a more livable and humane habitat as initially envisioned, brought about re-evaluation of segregationist urban planning policies in the 1960's by individuals such as Jane Jacobs and Lewis Mumford [3]. Isolated building prototypes such as the office tower, shopping centre, or single family residence, fulfilled internal demands but failed to create a coherent city and vital urban life. Searching for the lost joys of urban life, the multi-use building is enjoying renewed interest.

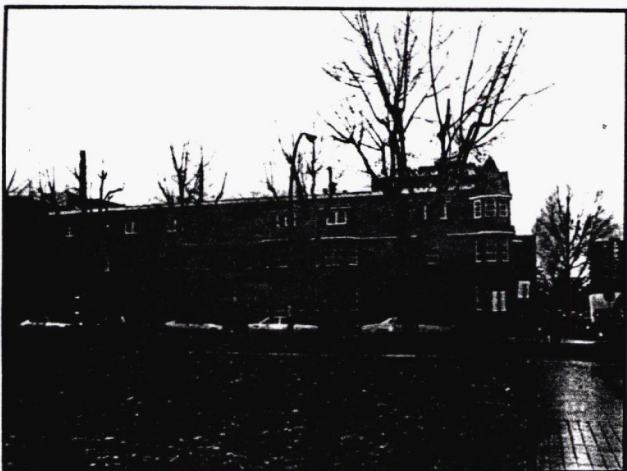


Figure 6. Alexandra Terrace Apts, Calgary
(front view)



Figure 7. Alexandra Terrace Apts, Calgary
(rear view)

RECENT PRECEDENTS

An increasing number of multi-use projects incorporating both workplace and residence have been built within the last decade. This has been partly in response to the work at home trend and the increased interest of many architects towards issues dealing with the city. The following projects represent a variety of design responses to the relationship and expression of combined work and living environments.

Alexandra Terrace Apartments, Calgary, Alta.;

Daniel Jenkins, Architect.

Perhaps the most successful local example near 17th Avenue is the Alexandra Terrace Apartments (15th Ave. and 2nd St. S.W.). Originally an apartment building, the structure was renovated such that each of the six units could be sold either as commercial or commercial-residential premises. The main floor is designed for commercial use, while the lower floor can be used in conjunction with the main floor or can be rented out to other businesses. The second and third floors are used either as office space or residence. When used as a residence, the main living area is located on the second floor with the bedrooms and bath on the third. The kitchen and bathroom areas are minimal and can be hidden by closing bifold doors depending on the desired use. This project is interesting for its adaptability either as commercial or residential uses on the upper floors. The project has been successful in attracting business tenants who commute from outside the city or deal with out of town clients who stay the night. Street visibility of the lower level commercial spaces is poor and may be partly attributed to the business turnover in these spaces.

IPS Cartoon Studio, Tokyo, Japan, (1984);
SKM Architects and Planners, Architects.

Located in a low rise, high density residential neighbourhood, this project consists of a workplace and residence for a female cartoonist. What is significant about this project is the spatial organization and hierarchy of the living-working and private-public spaces. The structure observes the palazzo building type, with its rusticated wall and colonnade suggestive of the piano nobile [4]. The ground floor contains studio and ancillary spaces related to work, whereas the living spaces are located on the second floor and bedrooms on the third. The space between the street facade and the building per se, is conceived as a gallery. Filled with natural light, the gallery functions as an interactive space connecting the lower (work-place) and main floor (residence), and serves as a transition zone between public and private uses.

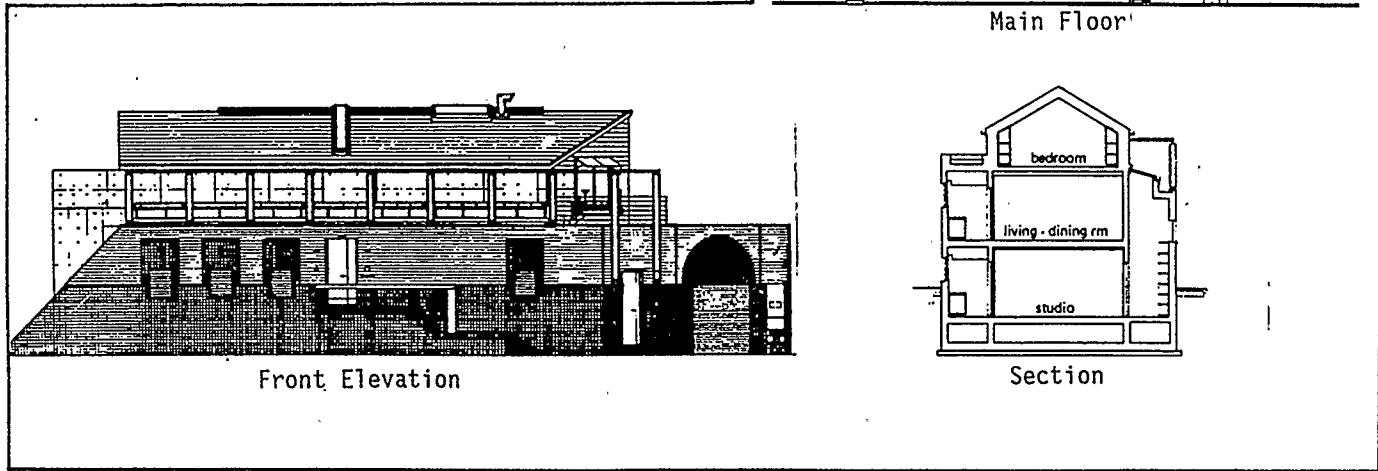


Figure 8. IPS Cartoon Studio, Tokyo Japan

Artisan Housing, Staten Island, N.Y. (unbuilt);
Steven Holl, Architect.

This project required residential and studio space for seven artists working in several disciplines in which the architect proposed converting an existing warehouse into shared workspace and erecting individual houses against the structure's outside wall. Each artisans craft is expressed in the design of the second level of each house in terms of form and materials. For example, a tin pyramid tops the tinbender's house while a roof of etched glass covers the glassetcher's entryway. Similarly, expressions of craft exist for the papermaker's, woodworker's, mason's, plasterer's and

metalworker's houses. The project received a New York Chapter A.I.A. Architectural Award for unbuilt projects because of its strength in "clarity of concept and straightforward implementation" [5]. What is notable about this project is how the architect gives expression to the type of work activities carried out by each resident artisan. While the architect achieves a separate identity for each residence, the economic and social advantages of shared workspace is maintained. However, the individuality and resemblance to detached housing forms has been achieved at the expense of desirable outdoor spaces between the residences.

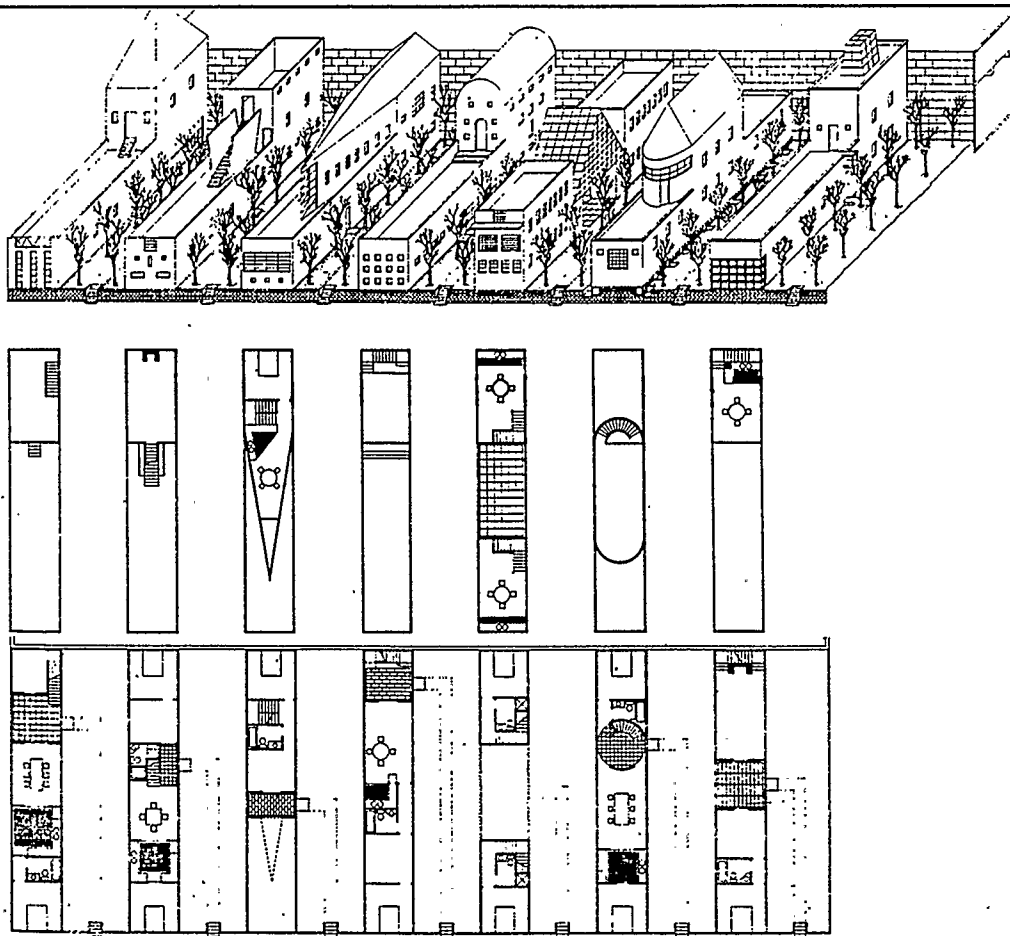


Figure 9. Artisan Housing, Staten Island N.Y.

1984 Winner, "A New American House Competition";
Troy West, Architect.

The competition asked architects to design alternatives to the single family detached house, with rooms for offices and living quarters. The project incorporates offices along the street with rowhouses behind. Since the competition stipulated that the workplace and living area had to be physically attached, the architect inserted a linear kitchen and courtyard off to the side linking the house and workspace. Although the design solution is suburban, this project exemplifies the awareness that some people like to commute to work - even

if its only to their own backyard. An interesting feature of this project is the relationship between the workspace and residence proper which takes into account the changing needs of family households through time. With minor modifications, the office area can be expanded or converted to other uses. Functionally, the office space works well in terms of privacy and accessibility. Clients can be received without an invasion of privacy to the home. Children playing in the yards can be watched through windows and patio doors, while internally the connection to the kitchen allows the parent and their children to remain close by.

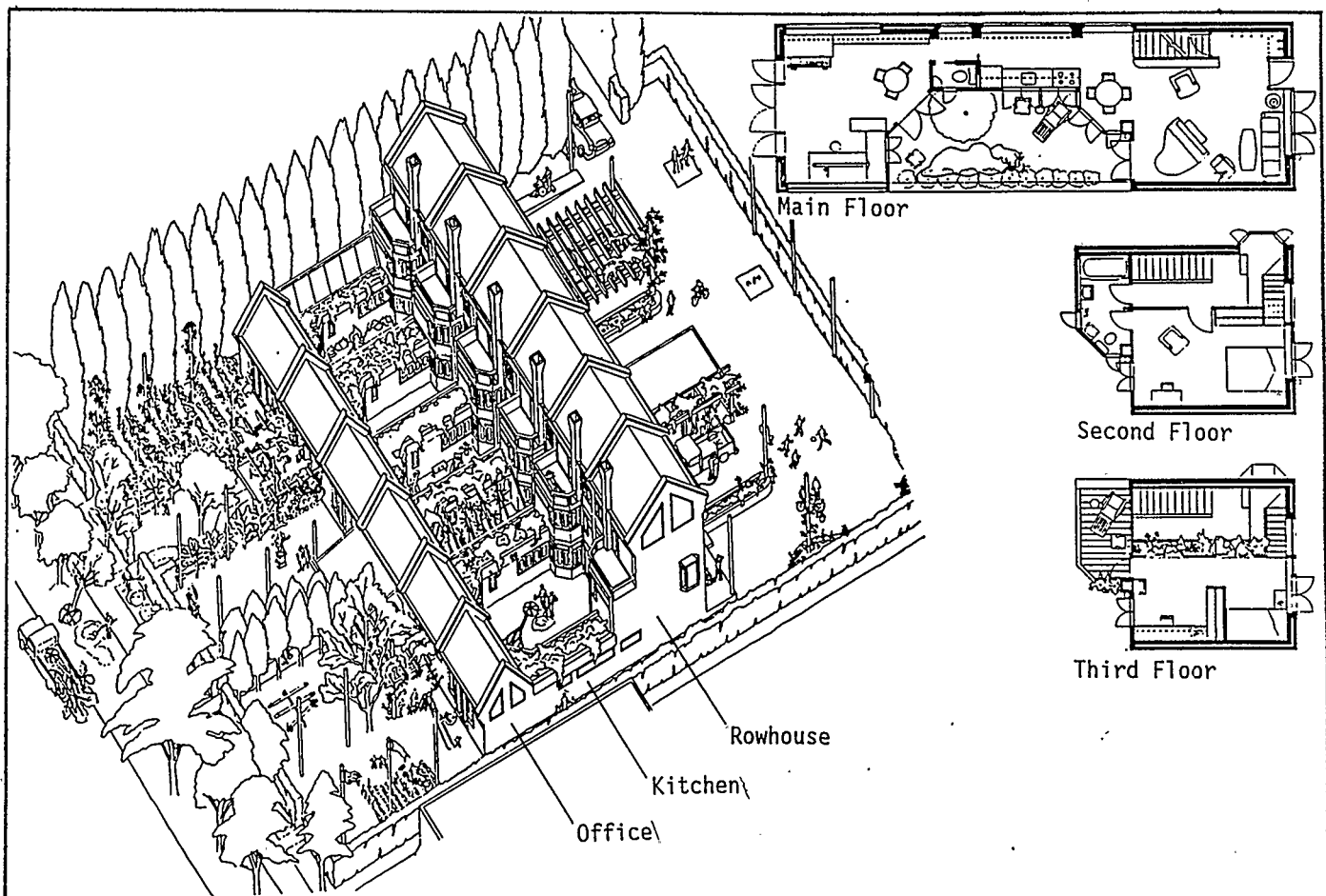


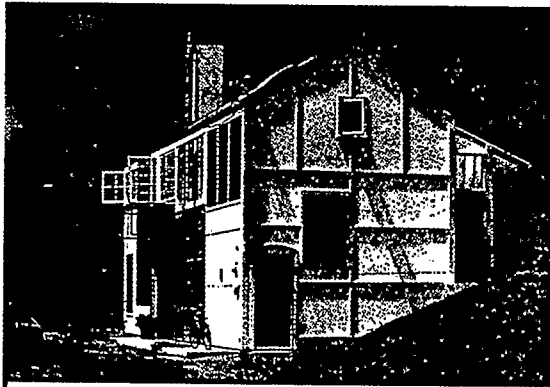
Figure 10. 1984 Winner, A New American House Competition;
Troy West, Architect

"Go Home" Del Mar, Calif. (1981);
Smith and Others, Architects.

The architect's idea was to create a "minimal home" combining workspace and residence, that would be cheap enough to make it economically accessible to a broader public. The site measures 18 X 36 m and is located on the boundary between commercial and residential land uses. In order to get around local zoning ordinances, the architect had to create a communal kitchen and laundry on the ground floor, to be shared between four households.

Each unit occupies a 3.6 X 6 m strip of land and has two floors with a combined floor area of 43 m². The ground floor functions as a working area while the top floor contains the living space. While the project offers only a minimum of space, it is commendable for its attention to detail and unit identity, not normally associated with low cost housing.

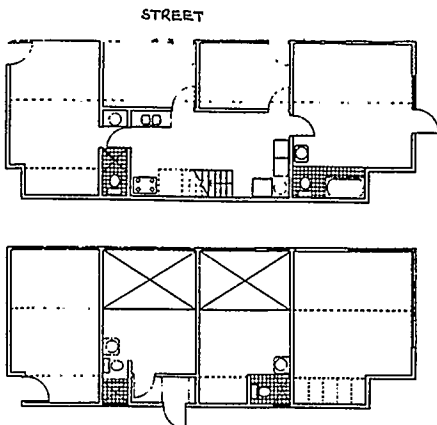
The architect financed project was an immediate commercial success since it sold for less than half the price of an equivalent condominium in the same neighbourhood (\$40,000 land cost and \$10,000 construction cost, 1981 dollars). This was the first of a series of "Go Homes" to be designed by the architect.



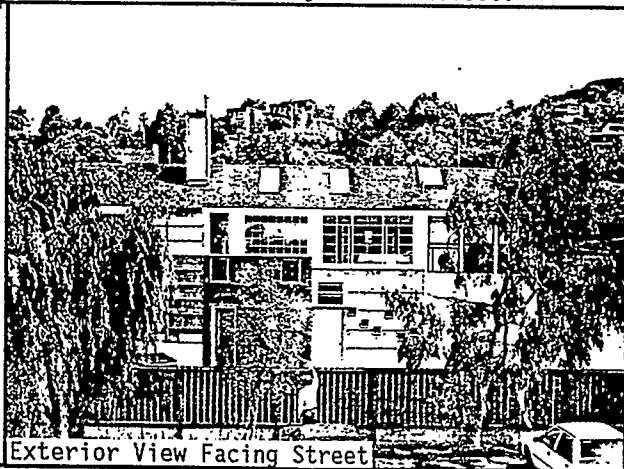
Exterior of Four Unit "Go Home"



Interior of Unit



Main (below) and Second (above) Floors

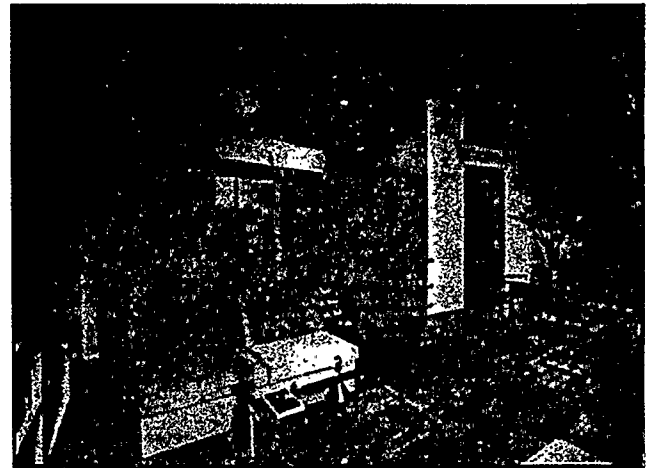


Exterior View Facing Street

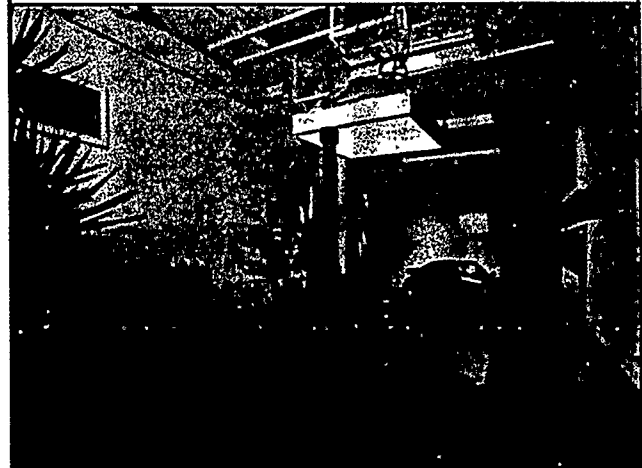
Figure 11. "Go Home", Del Mar Calif.

Meola Studio/Apartment, New York, N.Y. (c.1983);
Gillis Associates, Architects.

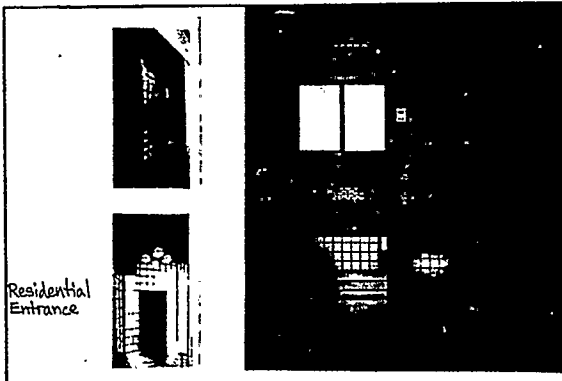
The project required the renovation of an existing truck-storage garage into residential and studio space for a photographer. The architect declared the building's dual purpose through different materials, colour and lighting, with a new recessed facade at street level. What is notable about this renovation project is the handling of entry, circulation and vertical separation of the living and working spaces. The top floor of the building contains the residence while the ground floor is occupied by the garage and photographic studio. A new mezzanine was inserted at mid-floor serving both the apartment and studio, thus merging the two halves of the building with a double circulation system. In the front portion of the building, the main staircase connects the vestibule with ancillary residential spaces (guest room and laundry) as well as the apartment on top. At the back, a circular staircase connects the studio, photographic presentation area and modeling agency office. At street level, the facade is divided into a private residential entrance, conventional business entrance and an overhead door for the garage, whose rear wall folds to allow wide passage directly into the studio.



Interior of Residence



Interior of Studio



Residential Entrance

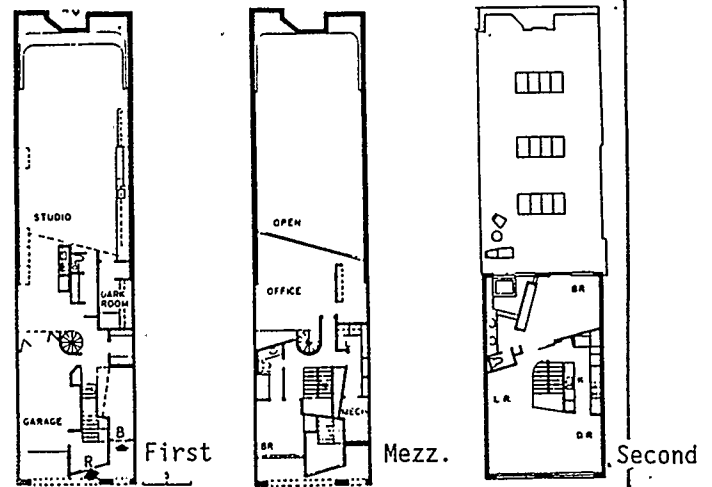


Figure 12. Meola Studio/ Apartment, New York N.Y.

The recent projects reviewed represent a wide variety of design responses to workplace residences. Three important issues appear to be dealt with in each project, although with different means to resolve the issue. The first deals with the separate articulation and expression between workplace and residence in terms of different colour, materials or spatial location. The second issue deals with circulation between the private and public spaces within the building (typically the workplace and residence proper). This has been handled by separate private and public entrances/stairs or the introduction of an intermediate or semi-public space. The third issue arises with multiple unit projects where individual identity is a concern and is achieved through the use of colour, exterior detail or articulated roof forms.

CHAPTER 3:

WORKING AT HOME

WORKING AT HOME

This chapter describes issues encountered when working and living in the same environment compared to travelling to a separate workplace. The first section examines the general aspects of working at home, while the second section examines the issues related to family, privacy, loneliness and professionalism.

WORKING AT HOME

Although people have always worked at home, perceptible and measurable growth has occurred in the last decade [1]. According to the 1988 "National Work at Home Survey", in the United States more than 24 million people say they do some income producing work at home (6 million full-time). In Canada, the corresponding figures are 2 million and 0.5 million respectively [2]. In Canada, this represents a more than doubling in the last two years the number of Canadians who work but don't "go" to work.

The work at home trend is being spurred partly by the wider use of personal computers (powerful business software) and improved telecommunication systems (new phone services), but also by the pressure to find ways of improving work productivity without having to totally sacrifice personal life [3]. Perhaps, in our post-industrial society, we are seeing the beginnings of a return to earlier patterns where people can work together with family members during the day and perhaps become more involved in community activities in the evening.

use

The difference between working in a traditional workplace separate from home, and working at home, can be significant depending on the individual and their type of work. For many

people home is a refuge from work, two different life spheres that should not be mixed. This value orientation can be a problem when the two begin to mix causing stress and hardship. For these individuals, working at home is not a benefit but an imposition or a nuisance. Despite these possible drawbacks, the benefits of working at home are greater for most people in terms of ease. Depending on the type of work involved, a workplace residence can be located almost anywhere the owner likes. This can be advantageous for two-career couples. The time spent on the rituals of "getting ready" and commuting to work can be eliminated. Working at home also allows the opportunity and flexibility of working when you want.

Productivity

Depending on the individual, productivity can change for better or worse when the work environment moves to the home. Until the home-worker becomes self managed, it is easy to be distracted from work activities by demands imposed by the home environment, family or friends. Even if the home-worker is willing to work, one of the biggest problems working at home is getting people to realize that just because you are home doesn't mean your available. For the adjusted individual, working at home can improve productivity through the elimination of non-productive time associated with commuting, bad weather, and co-worker interruptions. Morale and job satisfaction can also improve from greater personal responsibility and control.

Financial

There are many financial savings associated with working at home compared to working outside the home. Savings typically include items

related to rental of a separate workplace, business wardrobes, meals, reduced child care costs, expense and time of commuting, insurance and taxation benefits.

Self-employment

People work at home for a variety of reasons. For some it may be a necessity (physical disability), lifestyle consideration (care for a family member), lack of capital (new business), convenience, or financial/tax advantages. But for many, working at home is primarily a choice in lifestyle [4]. The quality of living, the maximum joy and the minimum of dreariness, has become more important to many people than the hard-cash measure, the standard of living [5].

The pros and cons of self-employment depends on how one views the situation. Being self-employed entails the ability to make decisions, as well as live with their consequences and responsibilities. Self-employment also requires self-discipline to concentrate on career related tasks and the ability to establish meaningful production quotas and performance measurement. Benefits can include a sense of control over one's work and hours, a greater sense of satisfaction, less stress, and one's own definition of what success is. Likewise, the benefits of self-employment can be also be seen as drawbacks for the unadjusted individual or those forced to work at home. Whether or not working at home is desirable, depends not on what the issues are, but how the individual feels about the issues [6].

FAMILY

The primary family issues of working at home deal with time and space[7]. The issue of time becomes a problem when the homeowner is confronted with family members during "working

hours" or when the home-worker expects other family members to become "employees". According to William Atkinson, the root of the problem lies in other people's perceptions of the home-worker as being something other than a professional. One of the greatest problems facing home-workers is the frustration of not having enough time necessary to devote to work. Even when time is available, the amount of "life interruptions" that delay work can become a psychological drain over time.

The space issue becomes apparent as a problem of interruptions. The problem is usually not so much with one's family as it is with the lack of a proper working environment. Unless the working environment provides privacy, family members may intentionally or unintentionally invade upon the workers territory causing interruptions. The issue of privacy can also affect family members when insufficient isolation exists between the family and the home-worker. Some family members simply don't like to have their spouses around all day since it makes them feel constricted, especially if they have been apart during working hours over a number of years.



Figure 13. Working at Home

LONELINESS

The issue of loneliness and the extent to which it affects the home-worker depends on the individual and the circumstances surrounding their environment. For many people, loneliness is the single greatest drawback to working at home [8]. Loneliness can be a significant problem if no one is home and if the work requires little contact with people. The problem can be compounded with the lack of feedback, physical absence of other people and psychological isolation. The home-worker who suffers from loneliness may become more susceptible to persuasion and outside influence, out of a need for social contact instead of business objectives.

PROFESSIONALISM

Homeworkers, particularly women, often have difficulty with family, friends, neighbors and clients who lack respect for what they do. Neighbors and community members have a tendency to view the home-worker with suspicion and sometimes assume that they are actually unemployed, poor, a loser, social misfit or amateur. As an example, credit institutions and clients (customers) may be more willing to support businesses with an address different than the residence, rather than one operated out of a home, in the belief that a commercial address shows a greater seriousness of commitment. The problem of professional image can be particularly acute with potential clients and customers who question our seriousness, sophistication and substantial nature of your business.

Establishing a professional image can include many aspects such as business manner, income, professional equipment, self respect, etc. Within the architectural realm, establishing a formal work area that is separate and

private can do a lot to present a desired image.

REGULATORY CONSTRAINTS:

In Calgary, legal home occupations in residential land uses require a "Home Occupation Development Permit" [9]. According to Burt Anderson, the city's chief license inspector, in effect, anyone using a telephone or desk to do work in their homes needs a license. Home occupations are limited to those uses which do not:

- (1) Have outside storage of material, goods or equipment on or off the lot or display any form of advertising related to the home occupation;
- (2) Create a nuisance by way of dust, noise, smell or smoke;
- (3) Generate any additional commercial or private vehicular traffic or any additional on-street parking;
- (4) Employ any person other than a resident of the dwelling;
- (5) Have any aspect of their operation visible from outside the building where they are carried on.

During 1987, 219 Home Occupation Development Permits were issued in Calgary, but thousands of people operate in-home businesses illegally without a permit. While some people may not be aware that they need a permit, many work illegally to avoid: paying the license; letting their neighbours know about their activities; or meeting the restrictions imposed by the permit.

While the nature of work is changing and the number of home-workers is increasing, regulatory laws (primarily city by-laws) have been slow in changing. Some cities such as Chicago, Ill. still have home occupation ordinances that prohibit home-working in some residential areas. While zoning bylaws may work against some home-workers today, it is likely that many laws will be revised to accommodate the needs and desires of the increasing number of people who choose to work at home.

CHAPTER 4:

CONTEXT

CONTEXT

This chapter describes the site and context. The context is examined in terms of residential and commercial qualities, transportation systems and physical qualities. The contextual qualities of the surrounding urban fabric can provide guidelines as to the nature of future developments. Existing patterns and uses may provide clues as to the means of integrating new developments with the adjacent urban fabric, while enhancing the existing positive qualities of the district.

SITE

The site is located on the south side of 17th Avenue South between 7th Street West and College Lane with public access from all four sides of the site (Fig. 18). The 2,416 m² property is bounded by Tompkins Park on the northwest corner, one and two storey retail structures across 17th Avenue, Western Canada High School to the east, residential properties to the south, and the historic six storey Anderson Apartments and two storey commercial Mount Royal Block on the west.

The flat site contains two existing single storey buildings, the Bank of Montreal building and the Semble Furniture building (Fig. 20). Vegetation is sparse on the site with the exception of three mature 10 m cottonwood trees along 7th Street. A few smaller but skimpy trees are located along the alley. The residential properties immediately south of the site contain many mature coniferous and deciduous trees that moderate the micro-climate along the lane and add to the charming atmosphere of the lane.

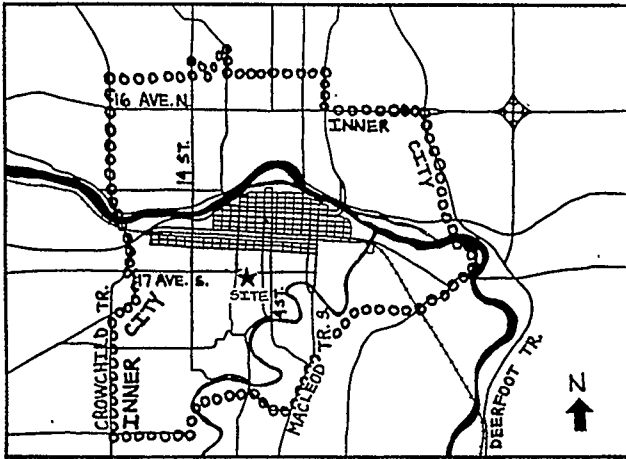


Figure 14. Location of Site within Calgary



Figure 15. View from Tompkins Park towards Site

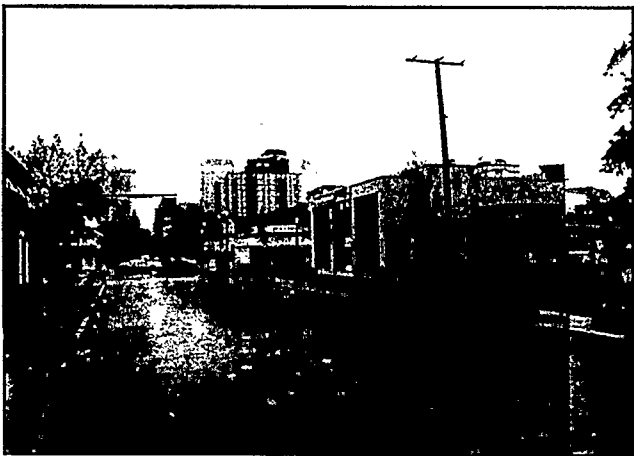


Figure 16. 7th Street, Looking North
(site on the right)



Figure 17. Relationship to Tompkins Park

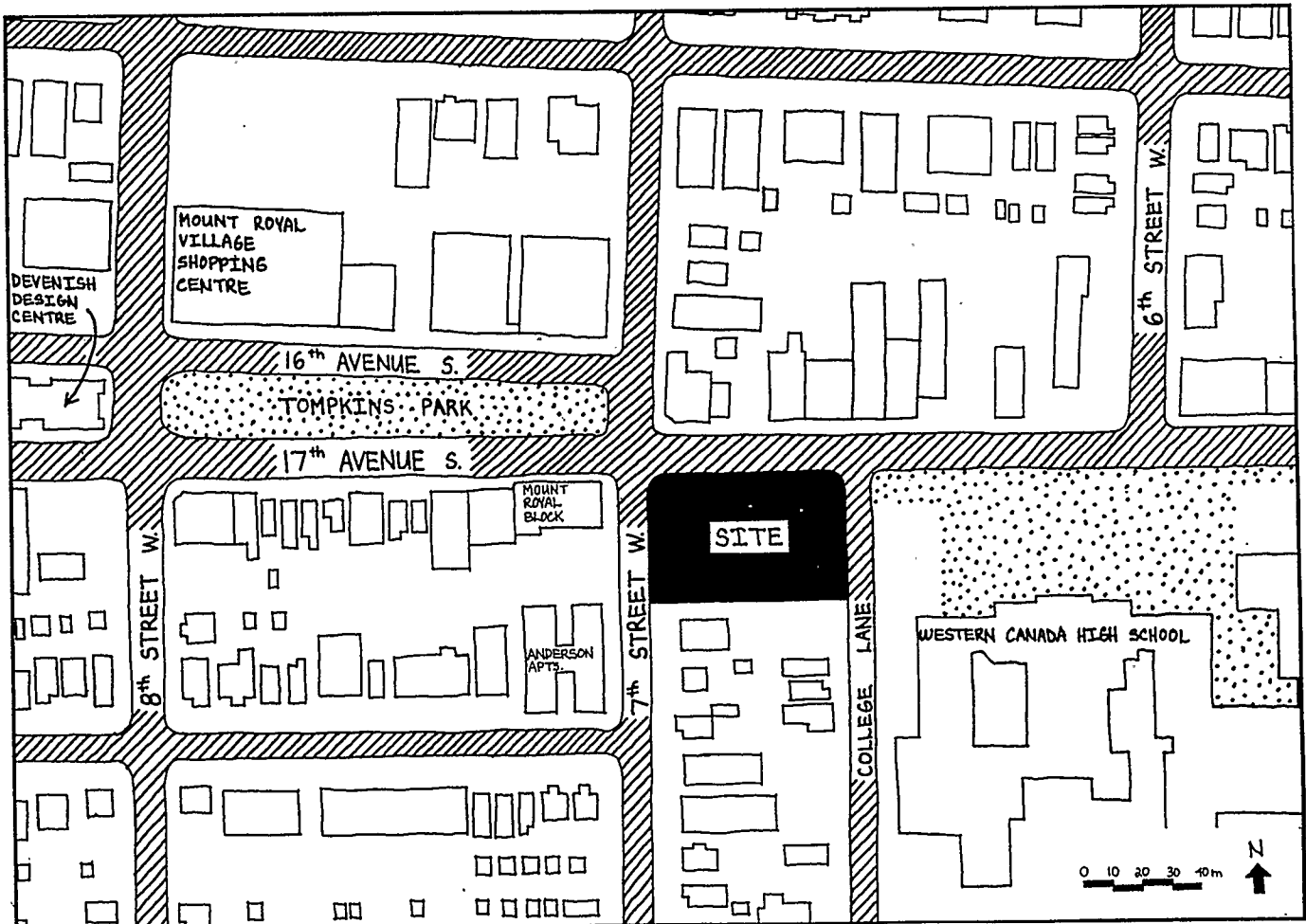


Figure 18. Immediate Context

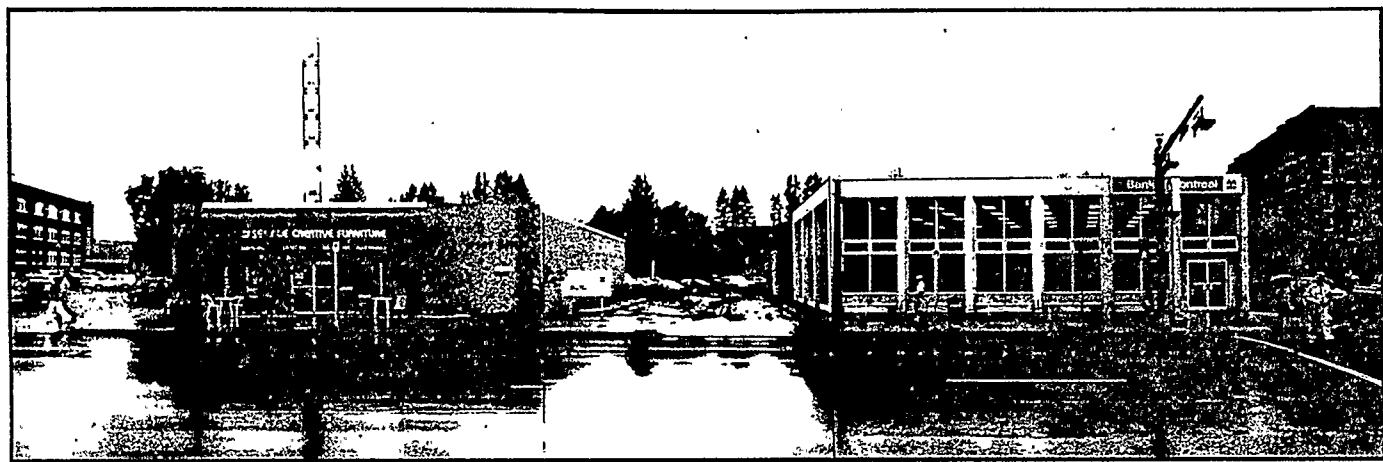


Figure 19. Existing Site Buildings (looking south from 17th Ave.)

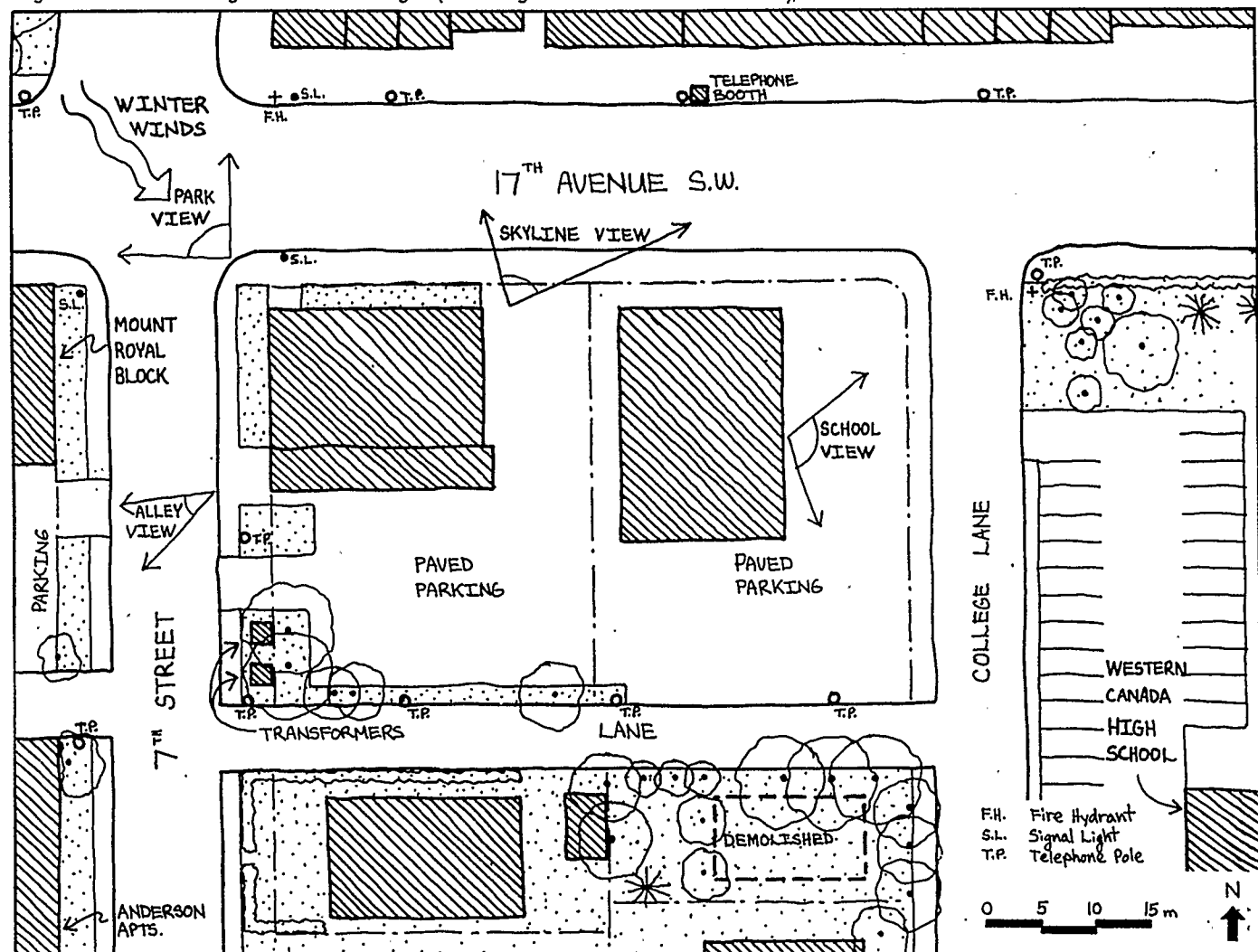


Figure 20. Site Analysis and Existing Features

RELATIONSHIP TO DOWNTOWN CORE

Proximity to the downtown core and high density residential housing makes the site desirable for commercial development (Fig. 21). Separation from the downtown core by the high density residential community of Connaught/West Victoria has enabled the 17th Avenue district to maintain a separate identity and character from that of the downtown. Most of the downtown core is within 1 1/2 kilometers of the site and is far enough away to allow views of the skyline (depending on adjacent buildings).

RESIDENTIAL QUALITIES

Housing Stock

The surrounding residential communities are characterized by a variety of housing forms (Figs. 22, 23). Connaught/West Victoria is the only community in Calgary designated primarily RM-7 where some of the city's highest density new apartment buildings form the dominant dwelling type [1]. Lower density, older apartment buildings and turn of the century single family dwellings still exist as residual pockets of the older residential community.

The residential dwellings of Cliff Bungalow and Lower Mount Royal comprise a mixture of large 1 1/2 and 2 1/2 storey single detached houses (original housing stock) and walkup apartment buildings. In Cliff Bungalow, single detached housing represents 79% of the original housing stock, with the balance represented by walkup apartments [2]. In Lower Mount Royal, apartments or row house structures comprise 85% of the total dwelling units. Single detached and converted structures represent 4% and 11% of the total dwelling units, the bulk of which is located in eastern Lower Mount Royal [3].

The original residential structures were of

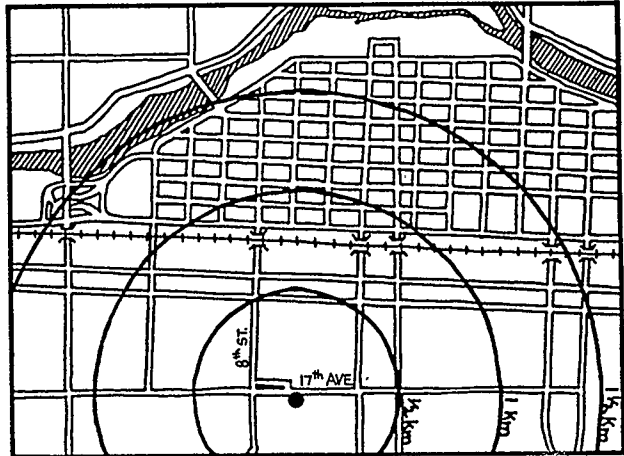


Figure 21. Relationship to Downtown Core



Figure 22. Housing at 7th St. and 18th Avenue S.W.



Figure 23. Housing along 8th St. W. (looking north)

a mail-order style with predictable designs, reasonable price and of wide appeal [4]. They were typically constructed and finished with wood, while stucco and brick were also present to a lesser extent. There is a great variety of window and front facade details with porches and varandahs quite common. The houses exhibit consistent roof heights and pitches throughout the neighbourhood. Front yards are consistent in depth and provide individual pedestrian access to structures.

Residential Streetscape

Three main elements contribute to the positive aesthetic quality of the streetscapes in Lower Mount Royal, Cliff Bungalow and to some extent Connaught/West Victoria. The uniform setback combined with the relatively uniform roof lines provide a sense of order (1 1/2 and 2 1/2 storey pitched roof lines of the original developments, and the 2 1/2 to 3 1/2 storey flat roofs of walk-up apartments). The development of detached housing on narrow lots provides a repeating dominant shape with a sense of individualism and personal identity. The mature vege-

tation enhances the residential quality of the neighbourhood.

Social Characteristics

Like other Inner City communities, Lower Mount Royal, Cliff Bungalow and Connaught/West Victoria exhibit a large concentration of young adults (20-29 years), a small and declining pre-school population, and a large proportion of senior citizens (fig. 24) [5] [6] [7]. The population density (1981) varies between 87 to 170 persons per net hectare for the communities of Lower Mount Royal (3,277 persons), Cliff Bungalow (2,204 persons) and Connaught/West Victoria (11,200 persons). These communities also have lower than city average occupancy rates (persons per occupied dwelling units) which have been decreasing for the last few years. Connaught/West Victoria differs from the other two communities in that it has a very transient population and lacks a sense of neighborhood since it is a staging area for thousands each year who move to Calgary and then move elsewhere in the city.

COMMERCIAL QUALITIES

As one of the few remaining regional pedestrian oriented shopping streets in Calgary, 17th Avenue S.W. is unique in its vitality and diverse urban character. It represents the evolution of Calgary in cross-section, like tree rings of history, from the open fields west of Sarcee Trail, to the suburbs west of Crowchild Trail, to the early beginnings of Rouleauville near Center Street. The avenue is interspersed with concentrations of older commercial and residential buildings among contemporary medium-rise office developments with retail uses at grade.

DEMOGRAPHICS				
	'81 POP.	PERSONS/ NET HECTARE	OCCUPANCY RATE	
Lower Mt. Royal	3,277	170	1.70	
Cliff Bungalow	2,204	87	1.62	
Connaught/ W. Vict.	11,200	158	1.65	

AGE DISTRIBUTION				
	school age 0-14 YRS	young adult 20-29 YRS	middle age 30-64 YRS	senior 65+ YRS
Lower Mt. Royal	17%	42%	27%	14%
Cliff Bungalow	19%	35%	30%	16%
Connaught/ W. Vict.	14%	37%	34%	15%
Calgary (average)	36%	20%	37%	7%

Figure 24. Social Characteristics

With many art galleries, restaurants, speciality shops, and independent businesses ranging from corner grocers to upscale boutiques, 17th Avenue presents a combination of familiar comforts and pleasant contrasts. Combined with the individualistic personalities of the merchants, the district attracts a colourful cross-section of clientele. This attraction is partly attributed to the sense of community that has developed between business owners, city shoppers and local residents, something which is lacking in other shopping environments. The 17th Avenue district offers the potential of historic richness, human variety, and cultural excitement which is lacking in many areas of the city.

According to a recent market evaluation study, about 50% of all 17th Avenue shoppers reside within walking distance [8]. The trade area for goods and services provided along 17th Avenue vary depending upon their nature. For example, specialty retail, clothing and office businesses draw from a city-wide trade area, while restaurant, furniture and food/grocery businesses draw upon the inner city and higher income neighbourhoods. Personal and automotive services attract customers from nearby neighbourhoods.

17TH AVENUE DISTRICT CONSTRAINTS AND OPPORTUNITIES

Constraints:

- * High vehicular traffic.
- * Low awareness of avenue as a major shopping destination.
- * Existing parking lots underutilized (piecemeal).
- * Lack of highly visible, accessible and attractive parking.
- * Lack of information as to the location and availability of short term parking locations.
- * Lack of pedestrian amenities.
- * Poor quality sidewalks.
- * Limited recreation and entertainment facilities.
- * Length of business area (beyond preferred walking distance).
- * Limited evening activities.
- * High land costs.

Opportunities:

- * Many older or heritage buildings (familiarity and stability).
- * Low building height (sunshine and human scale).
- * Central location (accessibility).
- * City wide recognition for fashion clothing and high quality specialty goods.
- * Reputation for service quality and friendliness.
- * Adjacent to high density residential areas.
- * Large professional office component in the business mix.
- * Visually interesting pedestrian environment.
- * Location of Thompsons Park (focal point of 17th Ave).
- * Underutilized areas (open space, parking lots and pedestrian connections).
- * Many long time businesses (stability).
- * High pedestrian activity along avenue.

Figure 25. Constraints and Opportunities of 17th Avenue.



Figure 26. 17th Avenue S.W. (looking west)

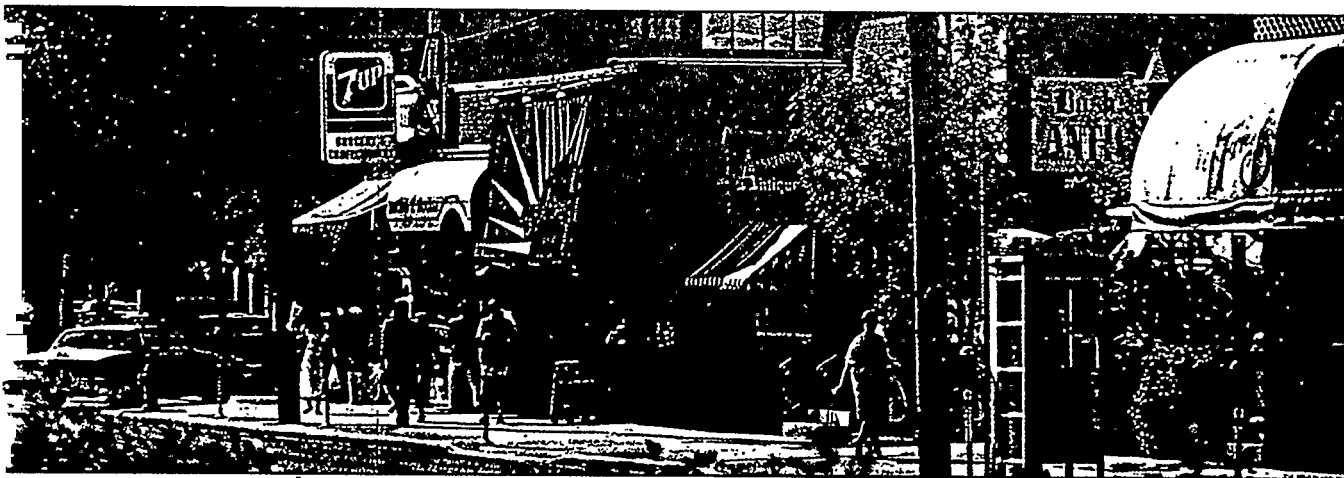


Figure 27. 17th Avenue S.W. (across from site)



Figure 28. 17th Avenue District (commercial buildings in black)



Figure 29. Tompkins Park and 17th Avenue S.W.

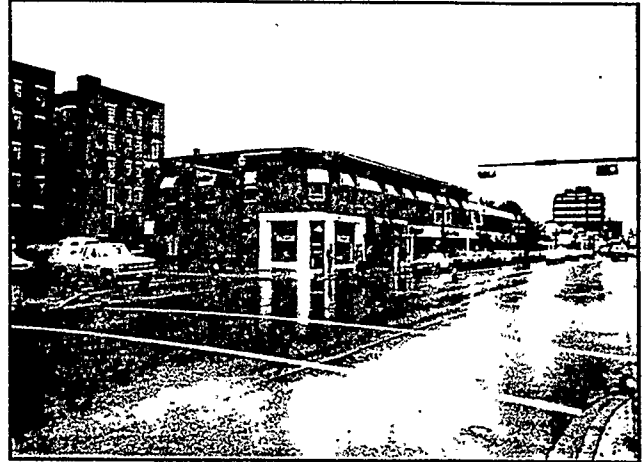


Figure 30. 17th Avenue and 7th St. S.W.

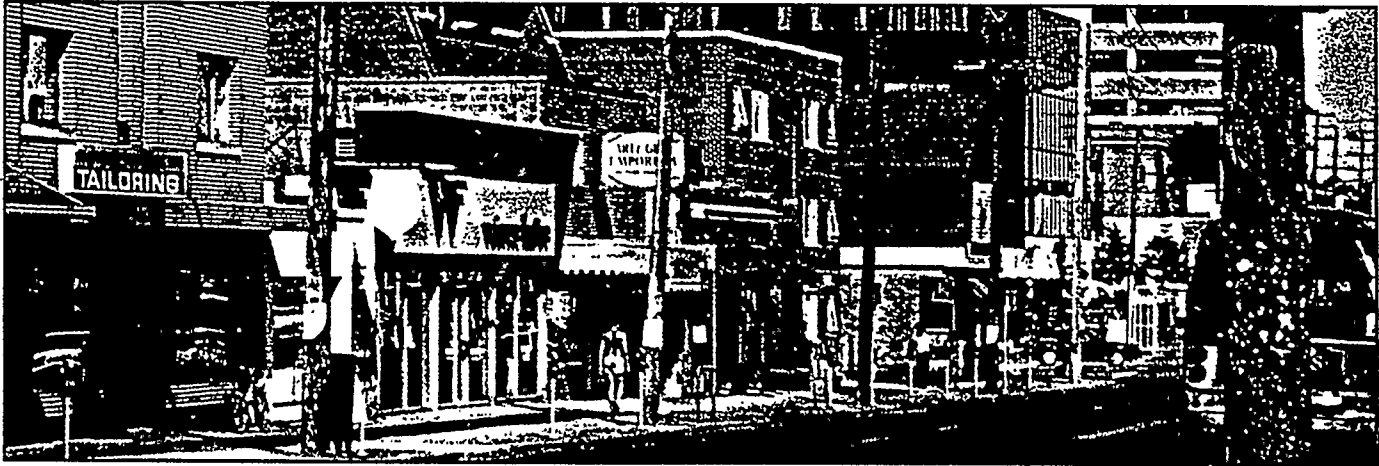


Figure 31. 17th Avenue S.W. (looking east)





Figure 32. 17th Avenue S.W. (rush hour)

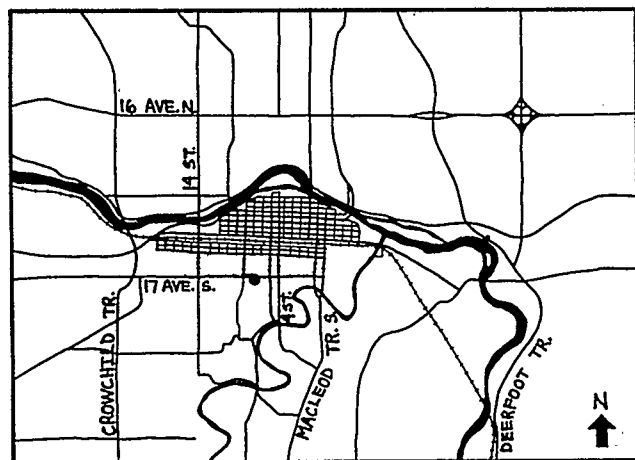


Figure 33. Vehicular Access (showing major roads)

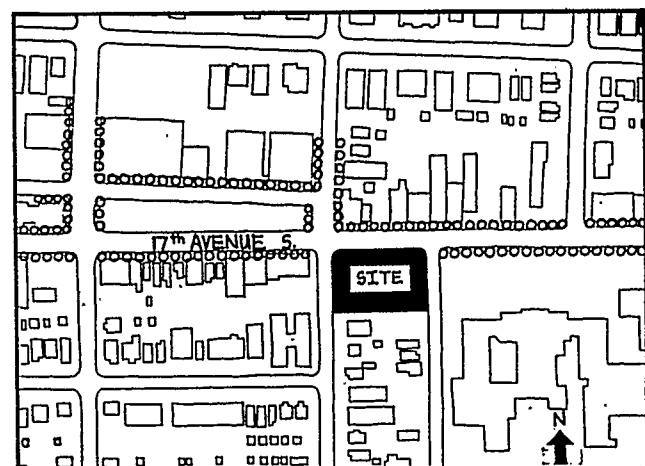


Figure 34. Pedestrian Access

TRANSPORTATION SYSTEMS

An understanding of the transportation system is essential to the success of redevelopment along 17th Avenue. The transportation system imposes a number of opportunities and constraints on the design of each new development.

Vehicular/ Transit Access

17th Avenue functions as a primary east-west corridor within Calgary's transportation network. This allows easy vehicular access from all areas of the city (Fig. 33). Public transit is also easily accessible with five city bus routes along 17th Avenue. Unfortunately, no public transit route runs the entire length of 17th Avenue (15th Street W. to Macleod Trail). The resulting congestion of pedestrian and vehicular traffic produces a lively atmosphere.

Pedestrian Access

17th Avenue is one of the few streets in Calgary outside the downtown core with a well established pattern of pedestrian activity (Fig. 34). The bulk of the pedestrian activity results from local and regional shoppers moving from store to store along the avenue. Several merchants have mentioned that many local residents in the area often stroll along 17th Avenue on a regular basis as a form of social activity.

Parking Access

The availability of short term public parking is a key element to the success of 17th Avenue as a regional pedestrian shopping street. The city is currently looking at short term parking alternatives such as angle parking in commercially designated portions of selected side streets or a series of small surface lots adjacent to residential areas [9]. Within the

immediate vicinity of the site, parking access is adequately provided by on-street and private property surface lots (Fig. 35). The parking access problem is not so much a lack of parking, but a lack of highly visible, accessible and attractive parking [10]. However, as existing parking lots are taken over for new developments, the availability of surface parking will decrease as the demand intensifies.

PHYSICAL QUALITIES

The physical qualities of the street environment contribute to the emotional response of the space. This is particularly true for pedestrian oriented streets such as 17th Avenue. The physical qualities along the avenue influence not only the pedestrian's satisfaction and experience but also the economic success of property and business owners.

Open Space

The 17th Avenue district is similar to other inner city areas in that there is a deficiency of quality public open space [11]. Fortunately, the site is adjacent to the two primary open spaces along the avenue: Tompkins Park and Western Canada High School. Tompkins Park offers the potential to intensify its role within the shopping district as a place of relaxation and focal point of local activities (Fig. 36). Western Canada High School provides visual relief from the commercial environment and opens up both sides of the avenue to sunlight.

The recognition of road right-of-ways as open space is often overlooked. Along each side of 17th Avenue, the pedestrian open space varies in width from 3 m to 10 m, adding to the casual/informal character of the district. Unfortunately, this latent open space has been developed poorly or entirely forgotten.

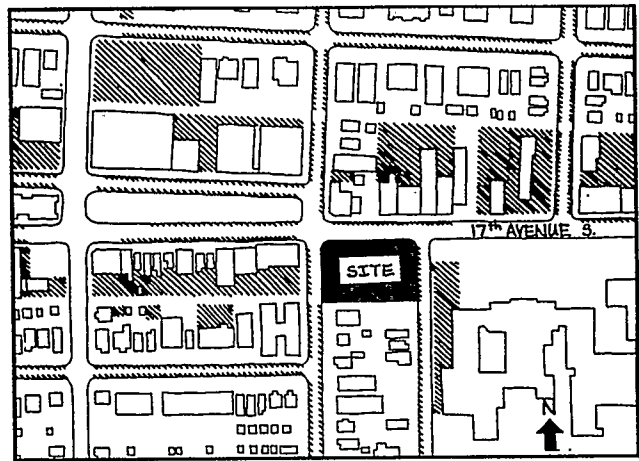


Figure 35. Parking Access (existing parking sites)



Figure 36. Tompkins Park (from site)



Figure 37. Open Space (in black)

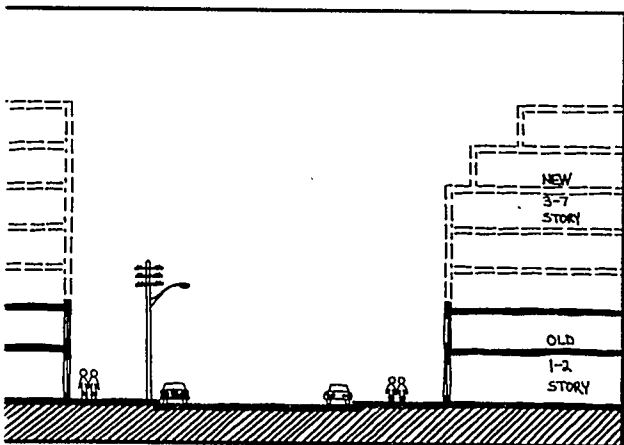


Figure 38. Building Scale



Figure 39. Building Texture,
(adjacent to Devenish Design Centre)

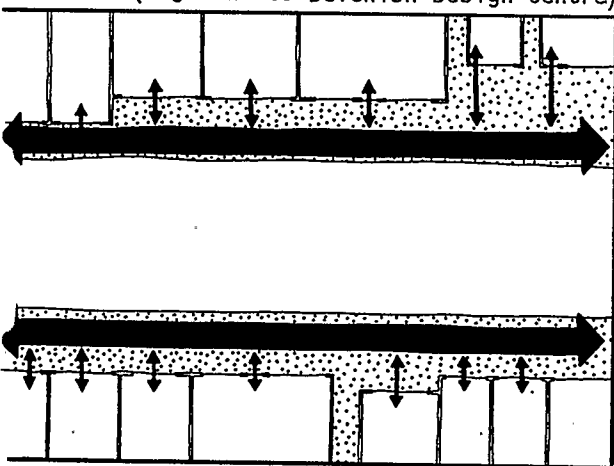


Figure 40. Relationship to Street (direct access
between individual shops and sidewalk)

Building Scale

There are two different building scales visible along 17th Avenue. The larger scaled buildings (3-7 storeys) are relatively new and sit uncomfortably with the street, lane and older adjacent buildings (Fig. 38). The lower scaled buildings (1-2 storeys) are typically older, more individualistic in character and usually occupy narrow street frontages. These lower scaled structures are most prominent in the more popular pedestrian retail areas.

Building Texture

An infinite variety of textures, materials and forms contribute to the character and vitality of 17th Avenue. These qualities are found particularly on the older or newly renovated structures (Fig. 39). An interesting development within the last year has been the renovation of old building facades into colourful "art-oriented" visual statements. However, unlike the buildings, sidewalks, patios and plazas lack variety and texture with the banal use of concrete as a flooring material. Along 17th Avenue, large areas of glazing at grade, provide an essential transparent band between street and commercial activities.

Relationship to Street

Development along 17th Avenue has traditionally incorporated narrow individual store front access directly to the street and level to grade (Fig. 40). This practice has contributed to the vitality of the avenue while ensuring its status as a long narrow public open space and not just a vehicular corridor. The automobile, both parked and in motion, is a necessary element of the streetscape and character of 17th Avenue.

Relationship to Lane

The lanes on either side of 17th Avenue typically form the boundary between commercial and residential land uses. They are commonly used for parking access to surface lots behind individual commercial buildings (Fig. 41). These lanes offer an exciting potential for redevelopment because of their openness, sometimes treed edges, informal character and pedestrian/vehicular activity. Existing developments have neglected the opportunities of the lane as a place and zone of transition between differing land uses.

ENVIRONMENTAL QUALITIES

Climate

Variability is perhaps the most characteristic feature of Calgary's climate (Fig. 42). Despite the variability which can occur hourly, Calgary's climate is ranked third most desirable among major Canadian cities, behind Victoria and Vancouver [12]. A characteristic feature of Calgary's climate is the chinook (warm dry winds), both a saving grace and a menace to Calgarians. The chinook brings a welcomed relief by providing a break in the cold winter weather and by extending the use of normally vacant outdoor spaces during the winter. However it creates many problems such as frequent freeze-thaw cycles, subsequent freezing of melted runoff and difficulty in planning outdoor winter recreational events.

While temperatures range from the mid -40's to the mid 30's, the mean maximum daily temperature is only below freezing in December, January and February. However the frost free season is relatively short, averaging 112 days per year. Favoured with relatively clear skies and low pollution levels, Calgary experiences one of the highest percentages of sunshine (2,200 hours/

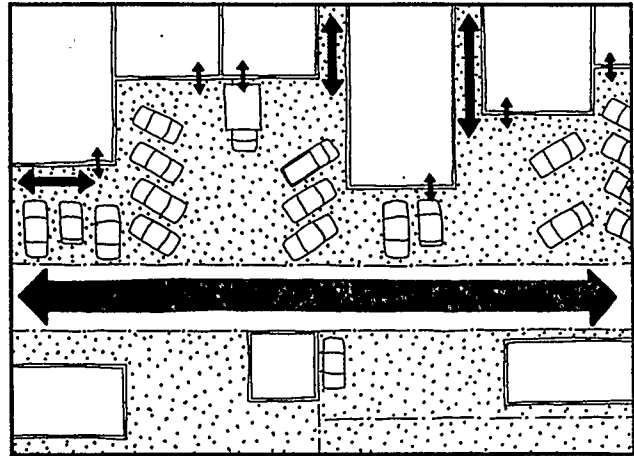


Figure 41. Relationship to Lane (rear access to shops and corridors to street) year ave.) in Canada with daily averages ranging from 10.4 hours in July to 3.1 hours in December. High noon sun angles vary between 63 degrees (summer) and 15 degrees (winter) [13].

The prevailing winds usually come from the west to north and when combined with the Mount Royal escarpment, help deflect pollutants towards the Stampede Grounds. While monthly wind speeds average between 14.4 km/hour and 18.2 km/hour, wind gusts from the west to north can reach up to 127 km/hour [14]. Annual precipitation and humidity is lower than most Canadian cities and is the least significant of the four climatic factors [15].

Vegetation

The vegetation contributes to the desirability of the 17th Avenue district. Since much of the district was developed prior to WW I, vegetation consists of many large trees and shrubs. However, over the years, commercial redevelopment has reduced the density of vegetation along 17th Avenue, when compared to adjacent residential streets. The mature vegetation enhances the residential quality of the district, both in reducing noise and wind, and in creating an attractive atmosphere.

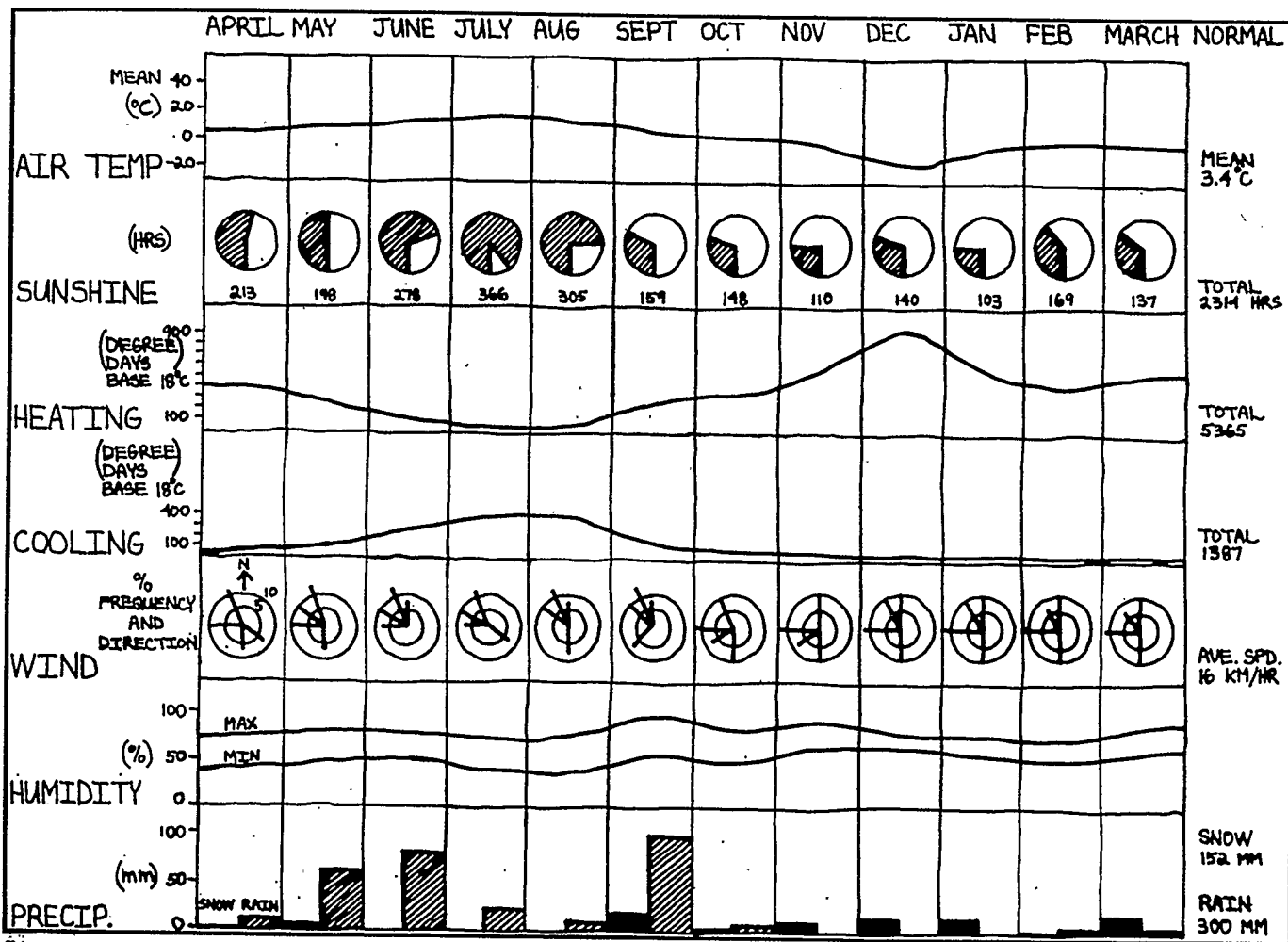


Figure 42. Climatic Features of Calgary

CHAPTER 5: REDEVELOPMENT GUIDELINES AND RESTRICTIONS

REDEVELOPMENT GUIDELINES AND RESTRICTIONS

This chapter describes redevelopment guidelines and restrictions along 17th Avenue S. imposed by various governing authorities. Redevelopment guidelines and restrictions are reviewed in terms of: city policy, objectives and public improvement program; zoning restrictions and redevelopment guidelines; Uptown 17 Business Revitalization Zone objectives and guidelines; and community concerns. These parameters influence the type, density, scale and character of redevelopment along the avenue.

CITY OF CALGARY POLICY

As established in the Lower Mount Royal Area Redevelopment Plan (1983), city policy suggests the development of 17th Avenue S. as a "Regional Pedestrian Oriented Commercial Strip". According to the city, the role of 17th Avenue is to function as a transition zone between the high density residential district of Connaught/West Victoria to the north, and the medium and low density residential districts of Lower Mount Royal and Cliff Bungalow to the south. The city's land use policies for 17th Avenue are intended to minimize the impact of commercial development on adjacent residential areas and reflect the capacity constraints of the transportation system.

CITY OF CALGARY OBJECTIVES FOR 17TH AVENUE [1]

- * Emphasize the regional pedestrian shopping street character of 17th Avenue.
- * Provide a commercial land use density that reflects the capacity of the transportation system (3 F.A.R.).
- * Provide building profiles that are sensitive to the pedestrian environment.

- * Encourage development that respects 17th Avenue's role between high and medium/low residential districts.
- * Ensure the provision of adequate parking in new developments.
- * Provide for low-rise, medium density residential development within Lower Mount Royal.
- * Encourage design that compliments the scale and character of the original homes in Lower Mount Royal.

ZONING

Land use along 17th Avenue is zoned C-3 General Commercial (Fig. 43). This land use provides for a wide variety of retail commercial and personal service uses at high intensity. Permitted uses applicable to this project include personal service businesses, restaurants, retail stores and veterinary clinics. Automotive and dwelling units fall under discretionary uses. Discretionary use rules require that a minimum of 25% of the gross floor area of the building shall be used for commercial purposes. Dwelling units require separate entrances, no location below any commercial storey and a minimum of 40% of the site landscaped if the residential component exceeds 50% of the gross floor area. Automotive oriented services may be considered appropriate if there is no front yard vehicular access or parking [2].

The C-3 zoning allows a maximum of 3 F.A.R. (floor area ratio) [3] and a height limit of 23 m (6-7 storeys). While zoning allows a maximum of 3 F.A.R., the existing density of development along 17th Avenue is less than 1 F.A.R. and within the last couple of years, some new developments have only produced single storey retail structures [4]. In order to meet the city's sunlight performance standards, building heights on the south side of the avenue must

allow the penetration of sunlight on to the north sidewalk, thus restricting the height to 17.6m at the 5.2m setback line (Fig. 44).

REDEVELOPMENT GUIDELINES

To reinforce the existing land use and pedestrian shopping street character of 17th Avenue S., the city recommends that new developments be designed to [5]:

- * Accommodate continuous retail frontage at grade.
- * Incorporate at-grade store front windows, wall face detail, and individual store front access.
- * Provide weather protection for pedestrians.
- * Allow sunlight to fall on north sidewalks and open spaces.
- * Limit certain auto oriented land uses.
- * Provide landscaping of setbacks.
- * Provide public access to parking in commercial buildings during non-office hours.
- * Limit parking access from 17th Avenue.
- * Limit negative visual impact of parking on adjacent residential areas.
- * Encourage reuse of older buildings with the relaxation of parking requirements.

17TH AVENUE PUBLIC IMPROVEMENTS

The city has proposed a public improvement program for 17th Avenue from 14th Street W. to 1st Street E. The first stage of this program will begin in 1987 in the area around Tompkins Park between 6th and 9th Streets W. The program includes upgrading Tompkins Park, removal of overhead powerlines, new brick edged sidewalks, street trees and furniture, as well as pedestrian scaled light standards (Fig. 45) [6].

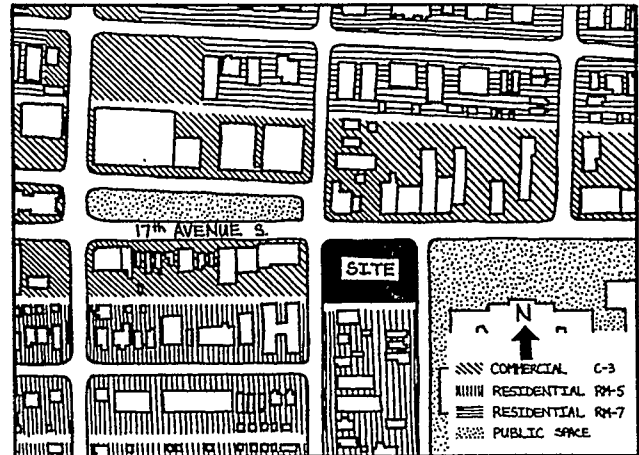


Figure 43. Zoning (site zoned C-3)

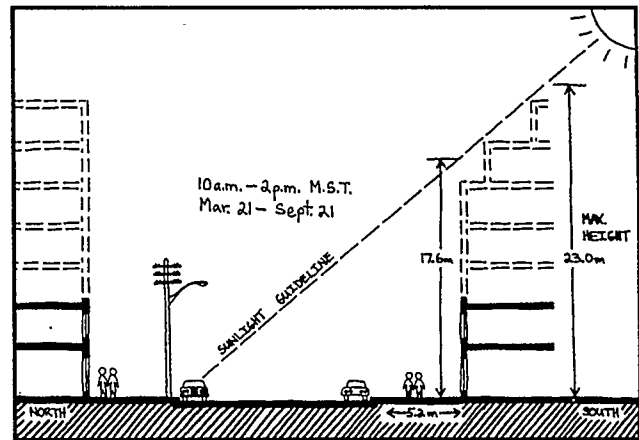


Figure 44. Sunlight Performance Standard



Figure 45. 17th Avenue Public Improvements (1988)

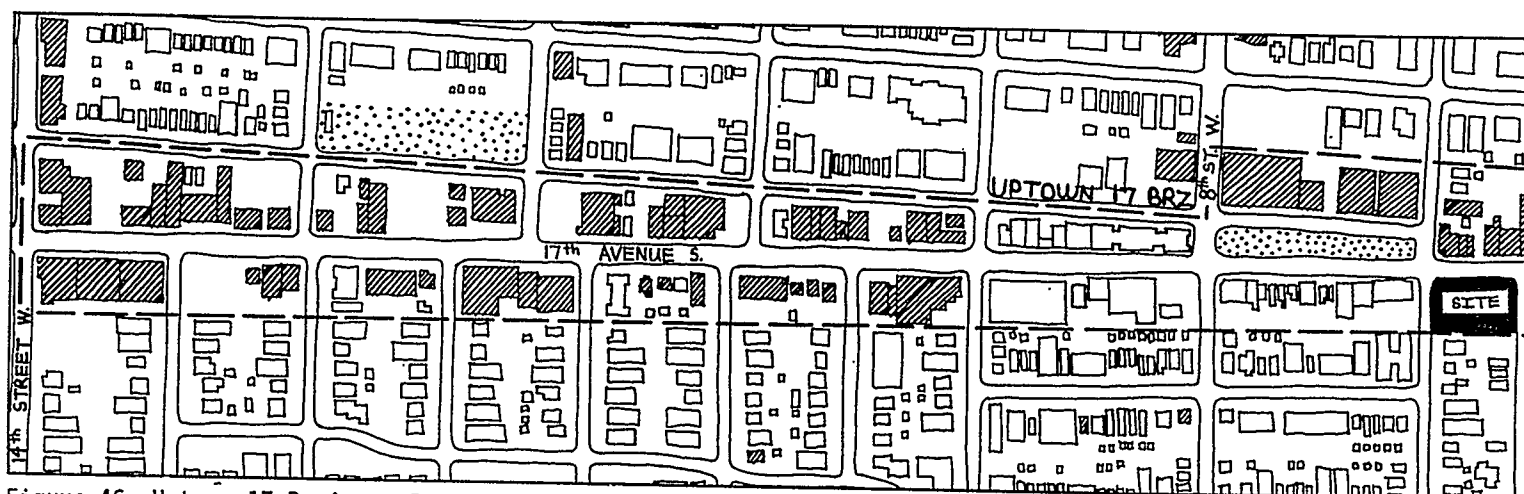


Figure 46. Uptown 17 Business Revitalization Zone

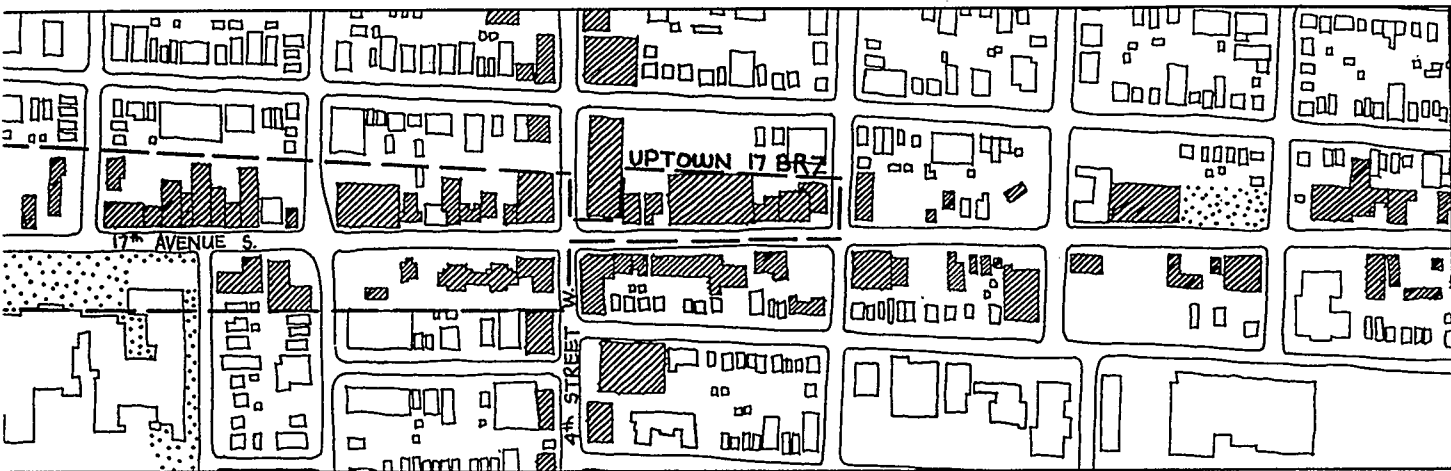
UPTOWN 17 BUSINESS REVITALIZATION ZONE

The Business Revitalization Zone (BRZ) concept was legislated by the province of Alberta in 1983 to enable businesses and municipalities to improve the stability of commercial districts. The Uptown 17 Business Revitalization Zone is a joint-venture between the City of Calgary and participating property and business owners along 17th Avenue between 14th Street W. and 3rd Street W. (Fig. 46). The organization is funded by an additional levy on property taxes within the BRZ in order to finance its promotion oriented activities and encourage public and private sector improvements. The organization was established to enhance the shopping environment; offer an alternative to the shopping center syndrome; improve business activity; offer a streetscape consistent with Calgary's cultural tradition; and create a unified image [7].

UPTOWN 17 BRZ OBJECTIVES AND GUIDELINES [8]

- * Encourage the development of small scale, independent, speciality businesses.
- * Enhance the physical image and character of the pedestrian environment.

- * Encourage colourful and individualized storefronts.
- * Provide outdoor planting and seating areas, outdoor merchandising, or cafes.
- * Provide street accessories (lighting, banners, flower boxes and seating).
- * Provide pleasant connections to parking areas.
- * Ensure the provision of adequate parking.
 - * Increase and ensure short term parking availability.
 - * Develop an unified signage program.
- * Encourage a merchandising mix that promotes an "alternative" shopping destination.
 - * Emphasize goods and services that are unique.
 - * Encourage the provision of high quality goods.
 - * Increase the market penetration of "city-wide" products and services.
- * Improve the business activity of the 17th Avenue district.
 - * Sponsor annual promotional activities.
 - * Sponsor co-operative advertising campaigns.
 - * Develop business support programs.



- * Ensure the adherence of redevelopment guidelines for 17th Avenue as described in the Lower Mount Royal Area Redevelopment Plan.

COMMUNITY CONCERNS

The city has conducted a number of "Open Houses" (1981) in which a number of community concerns arose regarding commercial land use along 17th Avenue [9].

- * 17th Avenue's expanding role as an arterial route.
- * Poor quality of pedestrian environment.
- * Trend to office development.
- * Preservation of sunlight on sidewalks and open spaces.
- * Lack of parking.
- * Increase in traffic volumes and noise.
- * Condition of streets and sidewalks.
- * Height of recent developments.
- * No concern for people places.

These concerns are similar to those experienced in other inner city communities.

CHAPTER 6:

HISTORICAL

HISTORICAL

This chapter describes the historical background of the 17th Avenue district and adjacent residential areas. An understanding of local history can provide insight into the area's unique qualities of place and memory. This insight can be incorporated into the design process so that the final design is sensitive to and enhances the underlying patterns of urban development, architectural form and social character.

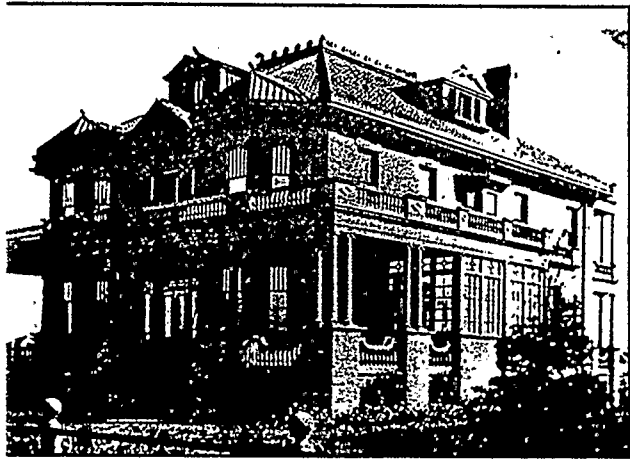


Figure 47. Pearce House (13th Ave and 7th St S.W.)

CONNAUGHT/ WEST VICTORIA

The residential community of Connaught/West Victoria was once the site of country estates of prominent early Calgarians. These country estates eventually gave way to two and three-storey homes along wide tree lined boulevards. The neighborhood began to deteriorate in the 1960's with the widening of through traffic commuter roads and the construction of high rise apartment buildings. Because of the community's proximity to the downtown, significant pressure exists to redevelop the remaining low density residences. Unfortunately, the community has been sacrificed to developers, who along with the city, have been unable to successfully accommodate large numbers of people in a small area.

CLIFF BUNGALOW

The Cliff Bungalow area was originally owned by the Canadian Pacific Railway and subsequently developed between the years of 1907 and 1912 during Calgary's boom period. The lot frontages and sizes reflect the original single and two family development pattern of 25 ft. (7.6 m) and 50 ft. (15.2 m) frontages, 80% of

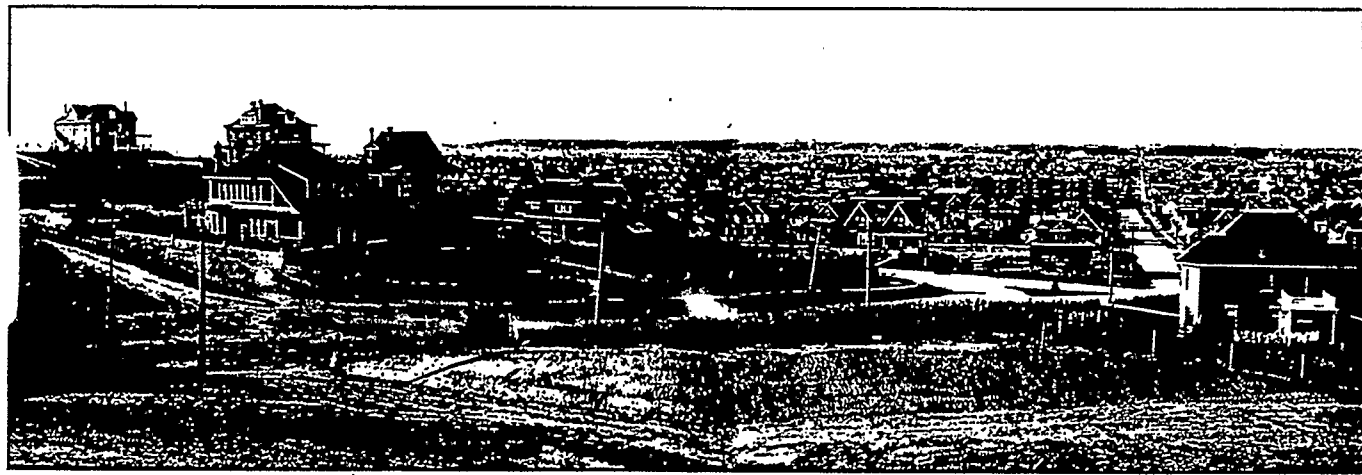


Figure 48. View from Mount Royal, 1919 (looking north)

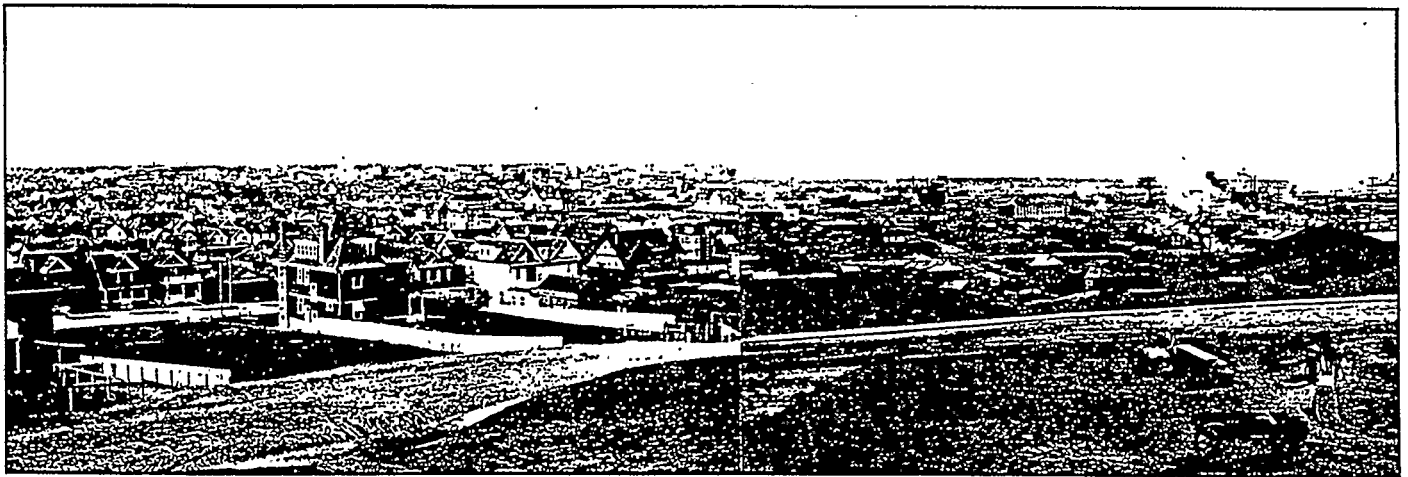
which are 6,000 sq.ft. (558 m2) or less in area. The largest single property in the community is Western Canada College, established in 1903 as an all male non-denominational private school that closed in 1924 due to financial difficulties. In 1926 the Calgary Public School Board purchased and operated the school as it exists today. Development from the 1920's to the end of the 1940's consisted of single family wood frame houses, two family housing and small apartment buildings. Numerous apartment buildings of varying size were built after 1935 when zoning for much of the area allowed apartment developments.

LOWER MOUNT ROYAL

Lower Mount Royal was annexed to the City of Calgary in 1907 as part of the original C.P.R. subdivision of Mount Royal. The original wood and stucco single family residences in Lower Mount Royal were constructed on 25' and 50' frontage lots, similar to Cliff Bungalow in character, time span and development pattern. While there was a difference in the quality and type of housing between Lower Mount Royal and Mount Royal, the social division that exists

today between the two districts was not apparent in the early years. The different social characteristics began to emerge with the housing shortage in Calgary during and after WW II when Lower Mount Royal residents were encouraged to subdivide their homes or take in borders. Although intended as a temporary measure, subdivided homes became popular at a time when many of the children of the original families had grown up and moved away.

Calgary's Interim Development By-law of 1951 changed the character of Lower Mount Royal from predominantly single family housing to walk-up apartments. The introduction of R-4 (now RM-5) residential and C-3 commercial zoning along 17th Avenue resulted in the present character of Lower Mount Royal today. Over the past 20 years, many of the original homes had been demolished due to redevelopment pressures. The 1960's and 1970's witnessed a number of new walk-up apartments while recent developments in the 1980's can be typified by luxury condominium apartments and a few office conversions of original single family homes.



17TH AVENUE DISTRICT

According to archeological evidence recovered during the construction of Mount Royal Village shopping centre, the area around Tompkins Park was used as an Indian buffalo slaughter ground 8,000 to 10,000 years ago [1]. Around 1850, a small church was established on 17th Avenue and Center Street, beginning the settlement pattern along the avenue as it exists today. Prior to the numbering of streets in 1904, the central portion of 17th Avenue was known as Notre Dame, the boundary between the city of Calgary and the village of Rouleauville (Mission area today). The western portion of 17th Avenue merged into the Old Banff Coach Road and became the gateway to the Rocky Mountains for many years.

The orientation of the city's two grid-iron street patterns resulted in a thin strip of land between 7th and 8th Street West, now known as Tompkins Park. The land was donated to the city in 1915 by Elinor Tompkins on the condition that it remained a park. This portion of 17th Avenue has remained the focal point of activity and a meeting place among the local commercial businesses.

A single track streetcar line began on the southside of 17th Avenue in 1909, followed by paving on the north side in 1910 between 4th Street and 14th Street West. Despite the streetcar line, commercial expansion, particularly on the south side of the avenue, did not really take place until after WW II. Since the war, the district has evolved gradually, retaining its casual atmosphere and charm despite narrowly escaping redevelopment pressures of the late 1970's. With the downturn in the economy and the decrease in the price of land, recent redevelopment has been restricted to renovation work and small scaled new construction.

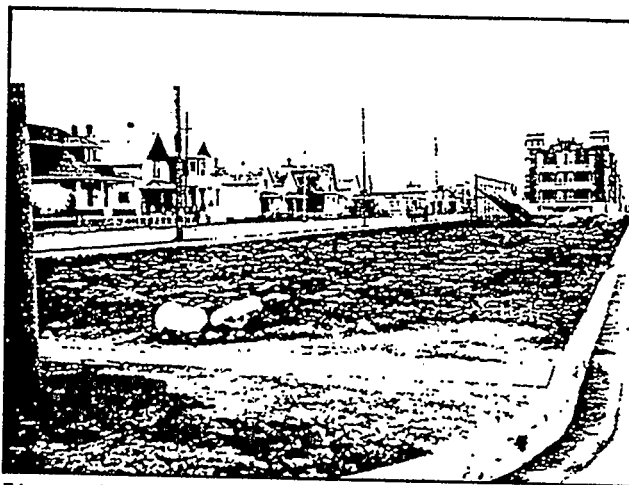


Figure 49. Tompkins Park, 1915 (looking West)

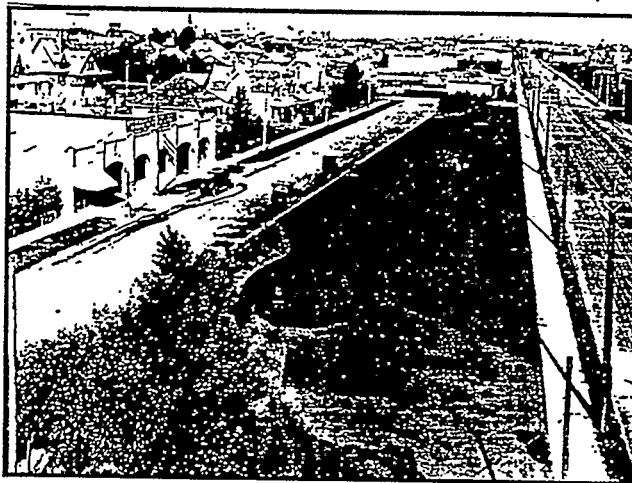


Figure 50. Tompkins Park (looking east)

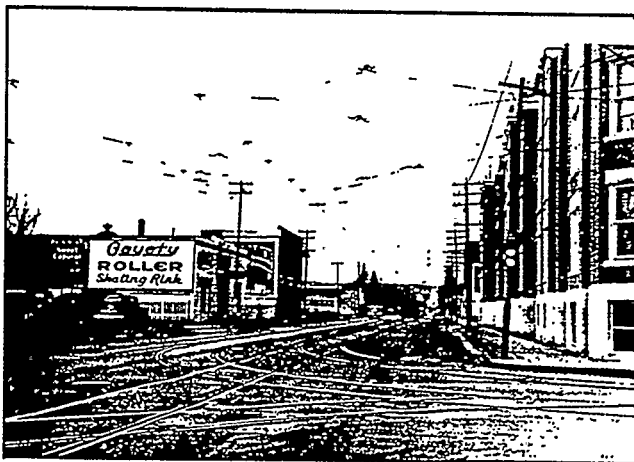


Figure 51. 17th Avenue and 8th Street S.W. (1940-1)

CHAPTER 7: PROGRAM

PROGRAM

This chapter describes the preliminary program used to develop a design solution for combined workplace-residences. The program, as described below, will be expanded and refined as part of the design process. The program briefly outlines the project objectives, nature of development and spatial requirements for six workplace residences.

An initial assumption of six workplace residences was estimated to be a suitable level of development given the size of the site and the existing density of adjacent developments. A brief economic feasibility analysis was undertaken to determine the minimum density of development required to offset construction and land costs (Appendix 3). The programmatic requirements for each unit was developed for six hypothetical clients whose composition of occupation, family unit, work-living relationship, functional requirements, etc. were based from known individuals. The hypothetical clients include: a ceramic artist and gallery owner; auto mechanic; veterinarian and potter; florist; chef; and fashion designer. Each individual's workplace residence would comprise: commercial space; adjoining residence; and possibly leaseable space.

OBJECTIVES

The overall objectives for the project are:

- to demonstrate an architectural design suitable
- to an increasingly common lifestyle that combines the work and home environment; to provide
- an alternate shopping experience that is more
- personal, active, locally oriented, entertaining
- and educational; to enhance the public realm and
- the pedestrian shopping character of 17th Avenue

S.; and to provide an example of redevelopment along 17th Avenue that is sensitive to the existing urban pattern while enhancing the quality of place.

NATURE OF DEVELOPMENT ENTITY

The six workplace residences would be legally arranged as a condominium development whereby individual units are owned exclusively by each of the six members who have legal title to their own unit and part of the common property. To offset the high cost of land, the development entity would provide supplemental income through commercial and/or studio leases. For each of the six owners, the leaseable space would provide flexibility to reduce mortgage payments or allow expansion of their own commercial enterprises in the future.

The allocation of revenue and expenses (capital and operating) of common property to each member would be based on the percentage of each member's land title area in relation to the total land title area of all members. Items under title of common property would include: required parking stalls; required loading stall(s); sideyards (including sidewalks); public oriented open space; leaseable commercial space (if required); and possibly private recreational and/or social facilities for members. Utility services (except garbage), excess parking requirements [1] and leaseable space (within each member's own unit) would be the responsibility of each member.

OUTDOOR SPACE

The development of the site should include "common" outdoor space for public meeting, socialization and relaxation. This outdoor space should be the focal point of activities on

the site and a place of destination and experience along 17th Avenue. Activities would be informal, temporal, and festive in nature, adding to the shopping experience along the avenue. Indoor business activities are anticipated to extend onto the common outdoor space during good weather.

PARKING REQUIREMENTS

Specific parking requirements by building or site use [2]:

Residential Dwelling	1 stall/	unit
Offices/ Retail	1 stall/	46 m2 net
Restaurants/ Bars	1 stall/	3.5 m2 net
Workshop/ Studio	1 stall/	93 m2 gross
Veterinary Clinic	1 stall/	25 m2 gross
Automotive Service	1 stall/	46 m2 gross

The required on site parking can be waived if an alternative site within 120 m can be secured for the exclusive use and necessary time period. Parking access from 17th Avenue is restricted. The required loading spaces for the above uses is 1 stall/9300 m2 gross.

CHEF

A workplace residence for a single male chef who owns and operates a gallery restaurant and bar. The workplace residence should reflect the extroverted and party-going nature of the client as well as his love for urbanity, people, food and art. The spatial qualities of the structure should evoke feelings related to energy, risk, relaxation, mass, sensuality, mystery and time. The client prefers the use of ordinary and raw materials, new and used.

The gallery restaurant and bar should reflect the character and concentration of arts activities in the 17th Avenue district. The client suggests that works of art should be integrated into the building. The spatial

arrangement of the restaurant should include indoor and outdoor seating for 80-100 people, a feature bar, visible cooking area, private office and lots of storage.

Since the client is a late riser, the residence should be oriented towards the setting sun. The residence should also be suitable for entertaining large numbers of guests. Functional requirements include a very large open living area, small gourmet kitchen, indoor/outdoor eating area, large sleeping area, hot tub "under the stars", outdoor terraces and a garden area for edibles and florals.

FLORIST

A workplace residence for a husband and wife florist team. The work and living environments should reflect the client's respect and love of the natural environment while maintaining a sense of urbanity. The structure should respond to changes in the seasons and the explore the use of natural light. Small tropical, desert and temperate greenhouses to grow, study and sell various plant species should be integrated with the working and/or living spaces.

The flower shop (100-140 m2) sells both cut flowers and potted plants. Space should be provided for a private office, flower arranging, cut flower sales, potted plant sales, and coolers for display and storage. The client requests that the activities of the flower shop be visible to public. Technically, the flower shop should be well ventilated (high humidity from plants), contain non porous flooring (gets wet from watering), and have the necessary plumbing facilities to maintain the plants. In order to maximize the life of cut flowers, their display space should not get overly warm from

irect exposure to the sun.

The interior of the residence (100-140 m2) should be open to the outdoor environment yet maintain a sense of shelter, enclosure and mass. The functional requirements include a modest living/dining area, kitchen with seating area, sleeping area, study, exercise area, and hot tub. The residence should have lots of outdoor living space and garden areas.

COMMERCIAL POTTER AND GALLERY OWNER

A workplace residence for a commercial potter and an art gallery owner who are married without children. The client requested a strong separation between working and living environments. The spatial qualities of the structure and site work are to be warm, naturalistic and inward focused. The use of handmade ornament in building details is desired.

A commercial production pottery studio (75 m2) is required. Since the studio is operated on a wholesale basis, a public street entrance is not necessary. The studio should have a high ceiling, lots of natural light, industrial flooring and an in-floor mechanical system. The studio should have a special place for the conception of artistic ideas. This "thought provoking" space, possibly above the studio floor, should be intimate and inspirational.

The gas kiln should be in a separate room (10 m2) adjacent to the studio. Technical and safety requirements include: an air-tight separation between other working areas; a 1 hour fire resistance rating of any wall between occupied areas; a minimum 10 foot ceiling height; the careful location and termination of the kiln chimney; and service and safety clearances around the kiln.

A small art gallery (75 m2) specializing in

works of clay, wood, fiber, metal, leather and glass is required. The gallery would operate as an independent business from the pottery studio but would feature the client's work as well.

The spatial arrangement of the residence (100-130 m2) is to be open and loft-like with the ability to separate public and private areas when desired. The main living area should be capable of intimate social gatherings and have lots of wallspace and shelving for the clients extensive art collection. The focus of this room should be a floor to ceiling fireplace incorporating a ceramic and wood mural. A small "galley" kitchen and formal dining area should be separate from the main living area when needed. The entrance to the residence should be large with plenty of adjacent storage. A spacious sleeping area, one large bathroom and a den for personal office work (doubles as a guest room) is also required.

FASHION DESIGNER

A workplace residence for a single fashion designer with one child. The client designs, manufactures, wholesales and retails her own line of moderately priced sportswear, casualwear and eveningwear (more expensive). The client wishes to have regular in-house fashion shows throughout the year for both her wholesale and retail clients.

To reduce overhead, the retail clothing boutique (75-100 m2) will also function as a showroom for local "cash and carry" wholesale activity (fashion agencies carry the line nationally). Instead of the traditional "retail glitz" of upscale boutiques, the client prefers that the boutique be understated with simple forms, raw or natural materials and clean details to emphasize the clothing on display.

A reception/office area (10-20 m²) to greet wholesale buyers should provide separation from the boutique and studio when buyers view clothing lines. This space should be accessible to both the boutique and studio.

For the manufacturing operations, the studio (75-100 m²) need only be a "raw" warehouse-like space with high ceilings, natural light, noise control and heavy floor loadings. While some of the manufacturing operations will be contracted out off-site, hired employees will be working in the studio and boutique. A separate private entrance to the studio is required for shipping and receiving. The studio should be expandable in the future.

The residence should be a large open loft volume combining living and dining spaces with a spacious kitchen adjacent. The sleeping area should be separate and private from other living spaces, preferably on a different floor level.

VETERINARIAN AND POTTER

A workplace residence for a veterinarian and potter with two children. The clients require two visually separate but interconnected commercial spaces for an animal clinic and an art gallery. In addition they require interconnections between the working and living environments for family and operational reasons.

The functional requirements for the animal clinic (70-90 m²) include: small waiting and reception area; examination room with sink, storage and horizontal surface; enclosed surgery area; preparation area, with abundant storage, wet facilities and working surfaces; a well ventilated and insulated kennel area for approximately a dozen animals; and a lead-walled xray area with darkroom closet. The clinic should be located at ground level and close to parking to

ease the arrival of sick or injured animals.

The pottery studio (40-60 m²) should have a high ceiling, natural light, industrial flooring, space for an electric kiln as well as a private service entrance. The storage of materials, equipment, and sink area should not be visible to the public when desired.

An small informal art gallery (25-45 m²) open to the public is required to display the client's pottery and works by other local artisans. The art gallery and pottery studio should be visually connected to each other but restrict public access in between. The client intends on working as much as possible in the studio while the gallery/showroom is open.

The residence (125-145 m²) should incorporate natural materials and simple forms to evoke a rural feeling for a home located within the city. The clients' functional requirements for the residence include one large open living space, a library, a well equipped kitchen suitable for entertaining, three bedrooms and two bathrooms. The parents require separation from the children's bedrooms.

AUTO MECHANIC

A workplace residence for an auto mechanic and his family. The client requested that the work and living environments be as separate as possible yet maintain the theme and expression of his occupation throughout both environments.

The automotive garage provides maintenance and repairs to exotic European imports, high performance and collector cars. Catering strictly to dedicated automotive enthusiasts and the social elite of Calgary, the client requests an image matching his reputation as the creme de la creme of automotive garages. His customers demand the best in personal service, technical

expertise and updated image. The garage should celebrate and express the fusion of technology and art. The image should also be romantic, futuristic, chic, cleanly, spiritual and sensual. The garage requires two service bays (with hoists), a private office, a service/reception counter, and a storage area for parts and equipment.

The client is also interested in operating or leasing out a small area, in conjunction with the garage, for some type of cafe/lounge with an automotive theme. The cafe (50-75 m2) would be decorated with accessories, oddities, and memorabilia of the automotive culture, for display and/or sale. The cafe would offer views of 17th Avenue and the service area of the garage.

The spatial arrangement of the residence should be traditionally defined as "rooms" yet maintain an open, airy feeling with lots of natural light. The minimal functional requirements call for a modest living area, three bedrooms, one and a half baths, a well equipped kitchen, audio-visual den, and outdoor areas for relaxation, seasonal entertaining and display of selfmade and collected kinetic objects. In addition, a functionally independent guestroom and exercise area is also required.

CHAPTER 8:

DESIGN

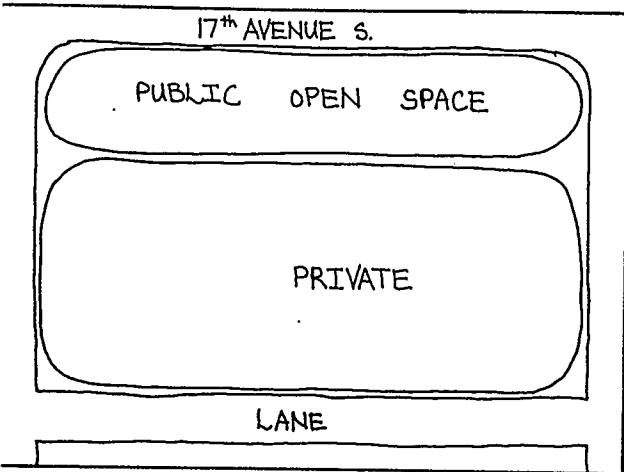


Figure 52. Concept

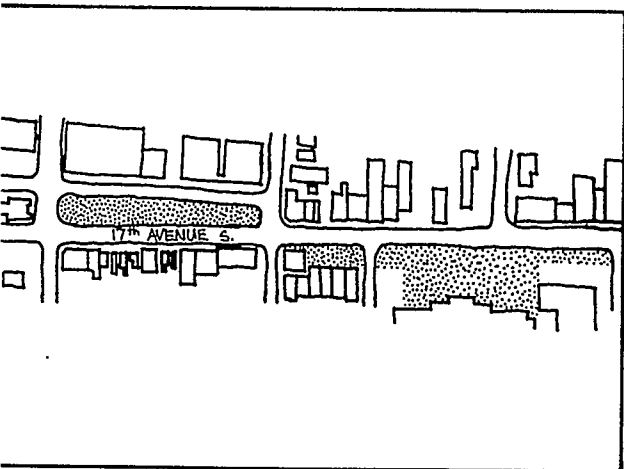


Figure 53. Urban Street

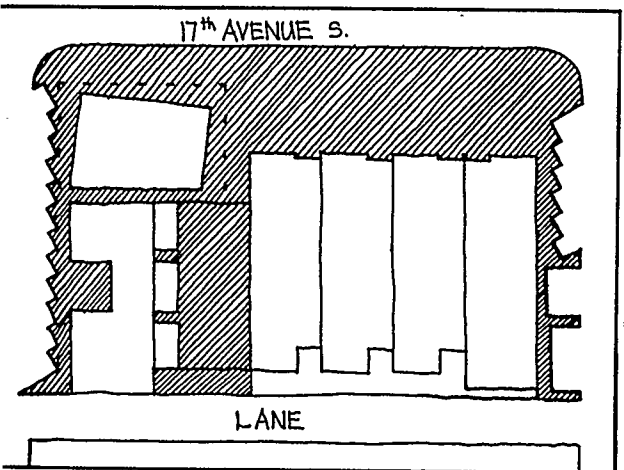


Figure 54. Public Space

DESIGN

This chapter describes the proposed schematic design. Major decisions and design features are explained in terms of conceptual, site and unit elements.

OVERALL CONCEPT

The concept for the proposed design solution is street oriented with a commitment to improve the public realm. An activity based plaza (or enlarged sidewalk) is the focus and central organizing element of the design (Fig. 52). This is complimented by the hall, an indoor public space functioning much like the plaza but sheltered from the environment. The overall design concept reinforces the original urban pattern developed along 17th Avenue. Alternative conceptual models that were considered are listed in Appendix 5.

PUBLIC REALM

There are few places in Calgary to go to of an urban nature which are of little or no cost, particularly during the winter. The creation of a public realm which is accessible and public, informal in nature, and offers opportunities for interaction and involvement is necessary to fill the void in our present urban culture.

Public urban spaces fulfill valuable social functions for citizens and visitors to participate in the ordinary events of human life. Accordingly, they should be designed to encourage meetings, conversations, and sociability. The incorporation of public space within this project attempts to counter the trend of increased privatization and "indoorsing" of the public realm [1].

URBAN STREET

The vast majority of public open space in North American cities is located within road right-of-ways. This often ignored public space is re-examined in an effort to improve the quality of urban life and the public realm. In the proposed design solution, 17th Avenue (from 14th St. W. to 4th St. W.) is envisioned as an identifiable open space with its own character and focal points (Fig. 53). The street is viewed as a series of destinations and not merely a transportation corridor. Along the avenue, buildings each contribute to the public realm physically with plazas, courtyards, interior public spaces and/or socially with public oriented activities.

While the automobile and its infrastructure is accepted, the pedestrian's use of the public realm and street assumes an equal or greater importance in the design solution. The focus on the street allows people to be a part of everything. The shops, sidewalk, plaza activity, weather and automobile - all add to the experience of shopping.

RETAILING IN THE CITY

The function of buying and selling goods has a continuous history of providing the city and its inhabitants with many memorable and interesting places. Shopping has traditionally offered one of the most concentrated expressions of informal public life.

Contrived theatricality, induced activities, self-consciously created novelty, overt historicism, privatization and romantic simulation of urban space, characterize many new retail developments, inviting comparisons to Disneyland [2]. Retail complexes like West Edmonton Mall, offer a carefully contrived

memory of shopping and the city in an earlier and more urbane form. Redeveloping the inner city with a popular formula approach in a suburban mold is dangerous in that it separates functions, "sanitizes" the experience, permanently defines urban space and eliminates the street.

The proposed design solution attempts to provide an alternate shopping experience that is more personal, active, locally oriented, entertaining and educational. The individuality and personality of each merchant is emphasized in the design so as to express the personable economic activity that occurs between the merchant and the shopper. Shopping can be more than the pure acquisition of goods. It can be a pleasurable social experience worth indulging for its own sake as a form of social entertainment. The more ephemeral aspects of retailing are introduced into the project adding vitality, unpredictability and excitement to the shopping experience.

CONTINUITY OF URBAN FABRIC

New developments should add to the diversity of historic layers, not replace them, in order to maintain a sense of cohesiveness, familiarity and stability within the community. Maintaining a diversity of building type, size, age and quality within the urban fabric enables a wide range of residential, cultural and commercial enterprises to exist. Much of the diversity, vitality and character of 17th Avenue is the result of a varied urban fabric that supports a wide range of enterprises with differing rent thresholds. Replacing the older and lower quality structures along 17th Avenue would probably result in the disappearance of the more interesting and unusual businesses that tend to locate in low rent premises.

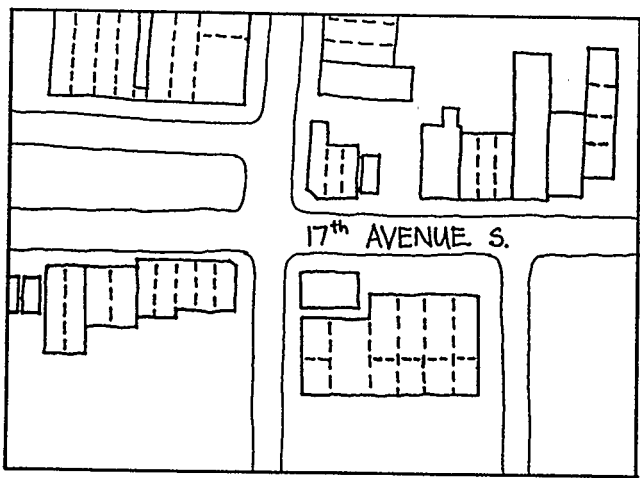


Figure 55. Continuity of Urban Fabric

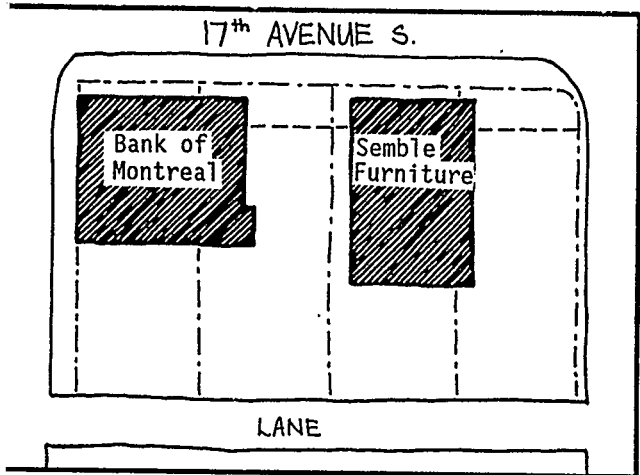


Figure 56. Existing Site Buildings

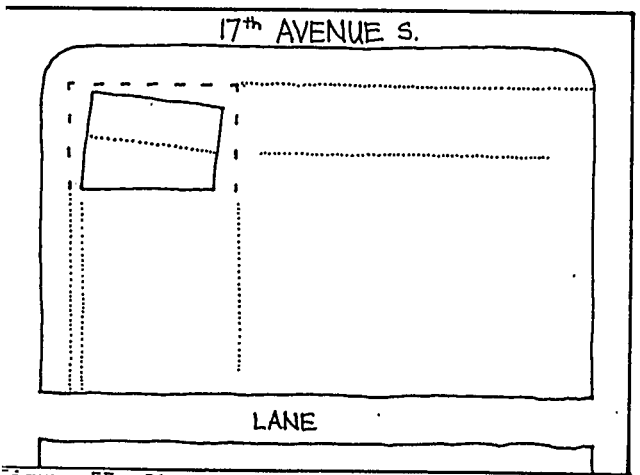


Figure 57. Structural Grid References
(Bank of Montreal Bldg.)

The proposed design solution attempts to add to the urban fabric while respecting existing uses, patterns, rhythms and scale of the local context (Fig. 55). The structural framework of the Bank of Montreal building would be retained, enclosing a new structure within. The existing structural grid would be the reference point to the placement of new elements in the plan and elevation (Fig. 57). Reasons for retaining the Bank of Montreal building include: continuity of familiar image to local residents; structure easy to renovate; retention of development potential within setback; and historical reference point to similar Bank of Montreal buildings built in Calgary.

While wanting to retain all of the existing buildings, it was necessary to remove the Sembler Furniture building due to its awkward site location, low development density and lack of significant historical or architectural value. However, the building footprint would be retained on the plaza floor as a reminder of its former presence. The removal of the Sembler Furniture Building is offset by the increased number and diversity of enterprises supported by the plaza, hall and workshop/studios spaces, adding vitality and character to the project and 17th Avenue.

IMAGE

The image of the proposed design solution is derived from the site, regional landscape, local history and cultural traditions. The development acknowledges and reinforces the underlying pattern of development of the urban fabric. The treatment of the built form doesn't resort to contrived historicism, but is contemporary through the use of materials, technology and detail. The "historically styled" approach

to the recent introduction of streetscape elements along 17th Avenue would be avoided. Instead, the image, for the project would be derived from the spirit of individualism and character of the original settlers of the area and the existing merchants along 17th Avenue. An image of individuality, personality, and openness to the public would provide an alternative to the often anonymous and carefully contrived image of many recent retail developments.

BUILDING LAYERS

The conceptual organization of the project reflects the existing urban pattern of development along 17th Avenue that defines public and private space both horizontally and vertically. Horizontally, the most public spaces occur along 17th Avenue and become progressively more private towards the lane, passing through the parallel zones of sidewalk, plaza, commercial shops, studio/workshops and outdoor yard (Fig. 58). In response to developing a transition from commercial to residential uses along the lane, the last two zones replace the usual service/parking zone.

Vertically, the most public spaces occur at grade level and progressively become more private with the increase in height (Fig. 59). The mezzanine level is typically semi-public because of its administrative and service functions. Private spaces within residences are also further differentiated, with the most private spaces occurring on the top floor. Below grade, public access is limited or restricted due to the service nature of the spaces.

NARROW FRONTAGES

The design concept continues the traditional development pattern of narrow commercial

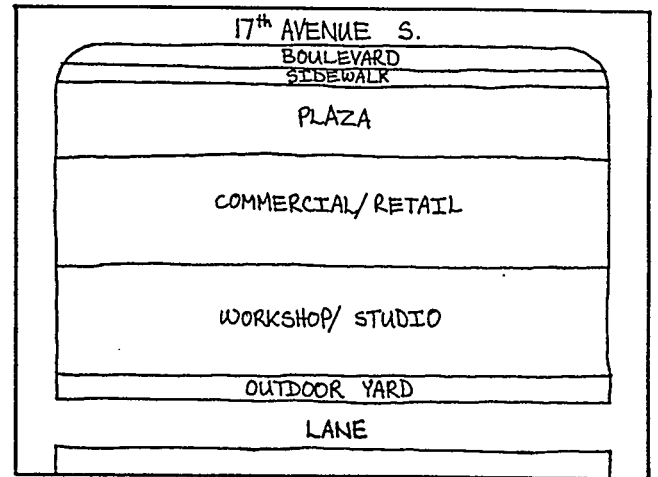


Figure 58. Horizontal Layers

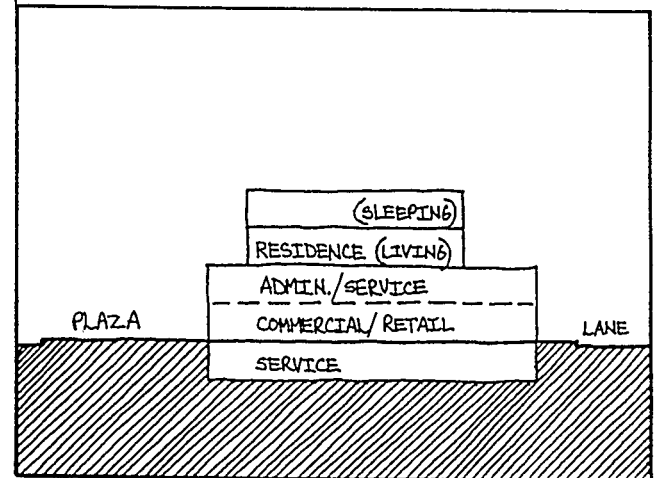


Figure 59. Vertical Layers



Figure 60. Narrow Frontages
(looking south from Tompkins Park) 52

frontages, typically 7.6 m (25') in width, originally established along 17th Avenue (Fig. 60). This pattern establishes the width for each workplace residence but is modified to 8.6 m (28') to accommodate the structural system which is based on the width of three underground parking stalls. Within each workplace residence, the narrow pattern is further subdivided into subsidiary strips separating "served" and "servant" spaces of two and one parking stall widths respectively. An extra strip, one stall in width, defines the circulation passage between the plaza and the lane. The existing Bank of Montreal building distorts the ideal pattern somewhat.

INDIVIDUAL IDENTITY

Many businesses along 17th Avenue are owner operated and portray the personalities of their owners. Continuing this tradition, each workplace residence expresses the personality and occupation of its owner. The individual identity would be expressed in the design of the workplace residence and the adjoining public space in terms of form, materials, texture and colour. Highlighting the personality of each merchant further personalizes the shopping experience along 17th Avenue which already has a reputation for personal service and friendliness.

PEDESTRIAN CIRCULATION

Along 17th Avenue, a 3 m tree lined boulevard buffers the pedestrian environment from automobile traffic, entices pedestrians further into the plaza, offers a contrast to the plaza's hard surface, defines the edge of the site and reintroduces vegetation along 17th Avenue. The rough texture from the foundation of

the former Semble Furniture building, subtly defines the sidewalk circulation through the plaza. Along the Bank of Montreal building, the sidewalk material extends to the curb past the trees as the pedestrian circulation gradually moves back to the edge of the street. Where the traffic is less and much slower, and the character of the space is informal, both the pedestrian and the automobile share the lane. Circulation between the lane and the plaza occurs through the hall with its large garage doors that remain open during good weather. The hall also provides access to the underground garage and residential common.

MASSING

Conceptually, the massing of the proposed design is derived from local precedents along 17th Avenue which feature residential uses over commercial uses at grade, particularly the older commercial structures. The residence was stacked on top of the commercial component as the result of four objectives: (1) to maximize the revenue potential of the ground plane with retail space (economic); (2) to provide a public space at grade; (3) to provide visual and psychological separation between work and home environments; and (4) to provide a clear distinction between public and private space.

The commercial component of the project extends two storeys in height as is typical of adjacent commercial buildings. Above the two storey cornice line established by the Bank of Montreal building, residential uses are differentiated from commercial uses and are defined by texture, material or setback (Fig. 61). The residential setback minimizes the impact of the height and density of the building to the pedestrian, allows greater penetration of sunlight

onto the plaza, provides a deck overlooking the plaza activities, and provides some degree of visual privacy from the plaza for the residents. Below grade spaces fulfill storage, service and parking requirements.

Similarly along the lane, the studio/workshop spaces extend two storeys in height, differentiating the work and home environments. It is intended that the character of the lane be intimate, informal and residential in atmosphere, thus the studio/workshops are setback 3m from the lane in order to provide outdoor yards landscaped with trees. Above the studio/ workshops, the residential setbacks provide a transition in building height to the lower 2 and 1/2 storey residential structures south of the lane.

STREET ORIENTATION

The project reinforces the existing urban fabric and traditional commercial architecture found along much of 17th Avenue. The project is outwardly oriented towards the street with narrow individual store fronts each with direct access from the sidewalk to shop interiors (Fig. 63). Large glazed display windows reduce the barrier between the street and the commercial activities within. The extension of the sidewalk and plaza flooring material, and the ability of the display windows to slide, retract or tilt open, further reinforce the connection to the street and its role as the main public open space. Above the shops, residences are also oriented to the street with window and roof deck views of Tompkins Park, Western Canadian High School, the plaza and 17th Avenue.

LANE ORIENTATION

Existing developments along 17th Avenue

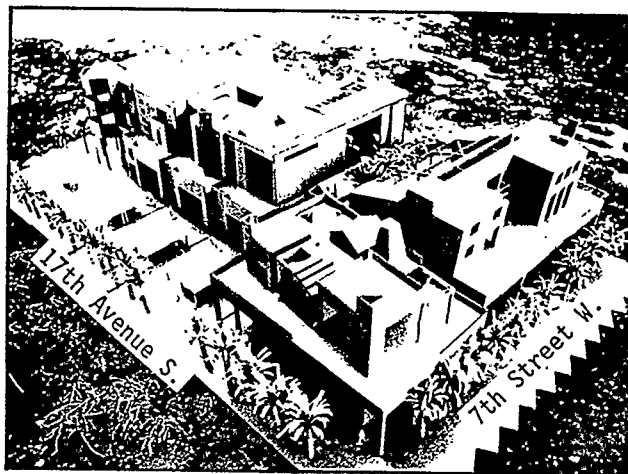


Figure 61. Massing

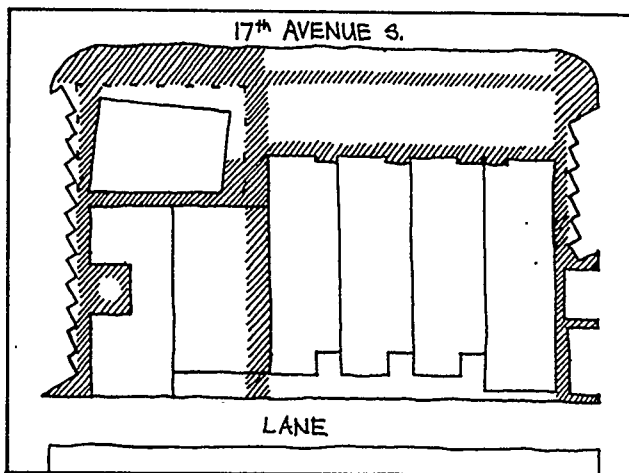


Figure 62. Pedestrian Circulation

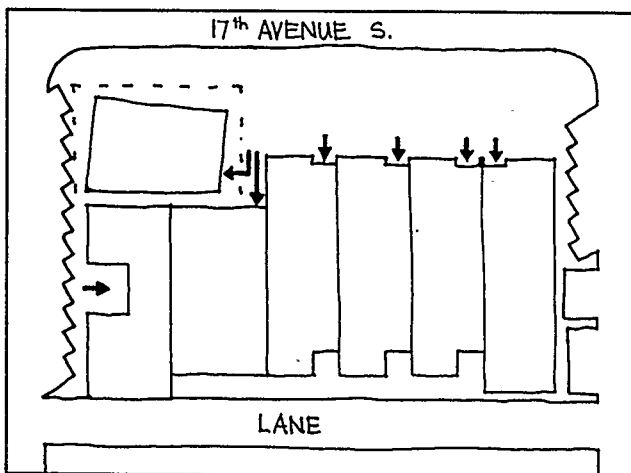


Figure 63. Street Orientation

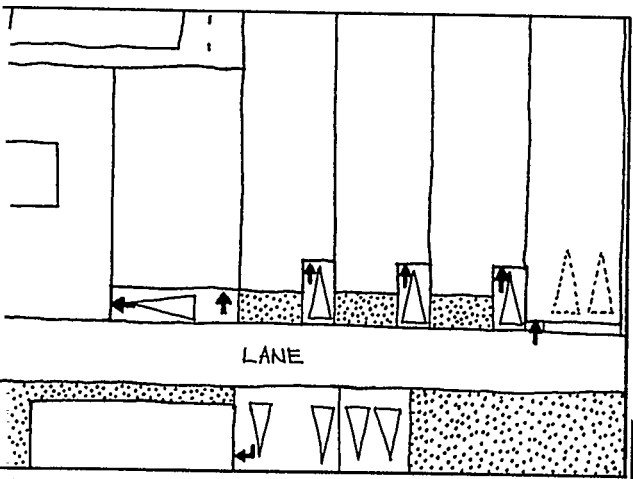


Figure 64. Lane Orientation



Figure 65. Rear Lane (looking east from 7th St.)

a unique place and zone of transition between commercial and residential land uses. Unfortunately, commercial developments often present blank facades (often without regard to height or setback), exposed garbage bins, parking lots and increased automobile traffic, all to the detriment of adjacent residential properties. However, the lane can provide an alternate environment to the street that is informal and charming through its interesting mixture of textures, materials and forms. The placement of workshop/studio spaces with small landscaped rear yards along the lane creates an alternate street environment with a residential or bohemian atmosphere that is compatible to adjacent residential properties.

SITE ELEMENTS

PLAZA

The plaza is conceived as an extension of the street and the adjoining shops (Fig. 66). It is the outdoor "living room" of the project contributing to the public realm of the city. The plaza is treated like a stage that is adaptable to multiple activities and highlights the ordinary events of daily life. The facades of the shops become the backdrop to the plaza with their supporting role.

The plaza evolved from the enlargement of the required 5.2 m setback and aligns with the structural grid of the existing Bank of Montreal building. The location of the public space along 17th Avenue acknowledges the importance of the street and its role in the city. The location of shop entrances off the plaza ensures people activity and importance of the space within the project. The plaza is open, inviting and visible to pedestrians. It is designed as an extension of the street and sidewalk, public and inviting, not under the dominant control of the supporting commercial enterprises, typical of so-called "public space" in shopping malls.

The plaza (and hall) support the more ephemeral retail activities that don't require permanent or long term commitments or unnecessary infrastructure normally provided by shopping malls or retail shops (Fig. 68). With the warmth of personal service, these retail activities bring life, excitement and a festive air to the shopping experience. They also provide a changing attraction to the project and good rental income to the six clients.

Many services are essential to the effective and efficient function of the plaza (and hall). Storage for vendor carts, chairs and

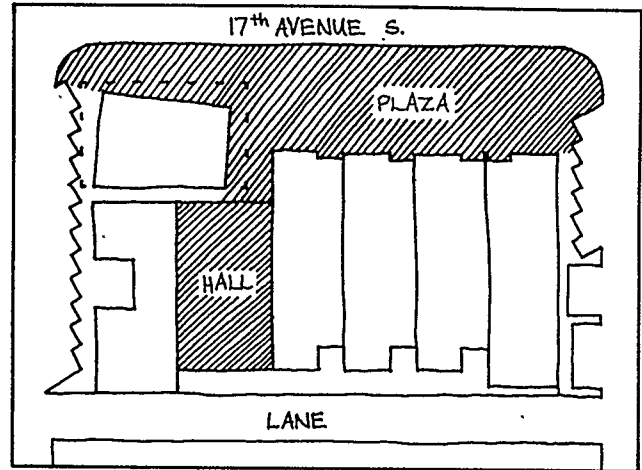


Figure 66. Public Space (plaza and hall)

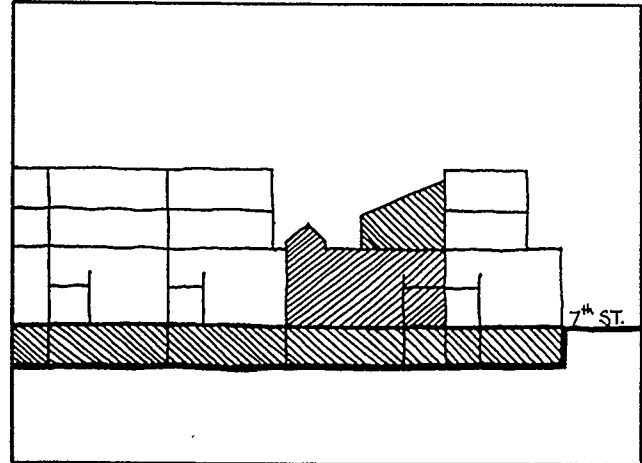


Figure 67. Common Area
(garage/hall/residential common)

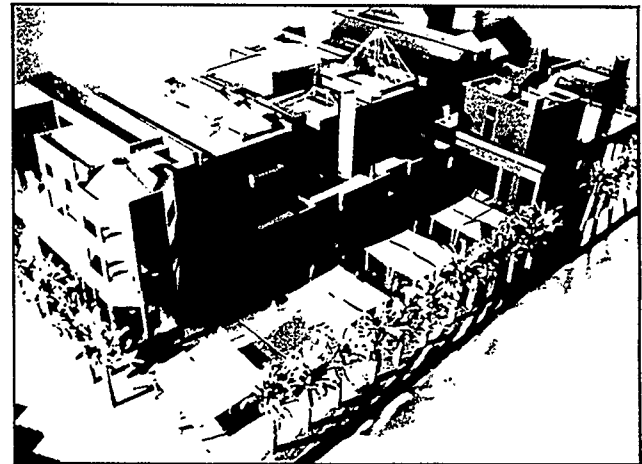


Figure 68. Plaza

displays are required and provided on the lower level, via the parking garage ramp. In order to maintain flexibility, electrical and water connections are integrated into the flooring pattern of the plaza. Additional lighting, acoustic and electrical outlets, overhead fastening devices, and projection screen are integral to the design of the shop facades. Other services such as public washrooms, lockers, instabank machines (Bank of Montreal), post office/ticket outlet, and administration office are located along the hall.

A modest water fountain on the plaza provides a visual interest and social function. The fountain provides a place to meet, a ledge to seat on, water to drink and water to wash food for immediate consumption during the markets. The fountain's visual interest can continue into the winter months with the incorporation of steam connections.

A treed boulevard along 17th Avenue defines the northern edge of the plaza and provides minimal protection from the prevailing northwest winds. However, visibility and exposure concerns overruled the concerns for weather protection along the plaza. An overhead glazed roof over the sidewalk and the indoor hall make up for any disadvantages.

Lights can be put on the bare branches of trees along the plaza to make the public space less dreary and dull. Ice or snow sculptures can be periodically erected adding to the visual interest of the plaza.

In recognition of the potential of sidewalks and plazas to enhance the character of the district, the flooring material adjacent to each unit would be expressive of the client's occupation. This emphasizes the individuality of each workplace residence, personalizes the plaza and

exhibits the sense of civic pride towards the public realm. For example, asphalt embedded with metal auto parts fronts the mechanic's residence, while clay tiles embossed with various animal footprints front the veterinarian/potter's residence. Similarly, expressions of occupation exist for the fashion designer (tinted concrete embedded with "runway" lights), potter/gallery owner (clay tiles), florist (aggregate concrete with grass infill), and chef (concrete embedded with crushed table setting pieces).

PLAZA ACTIVITIES

A variety of activities and experiences are envisioned for the plaza that would add vitality, diversity and character to the city, 17th Avenue and the proposed development (Fig. 69).

The principle activity of the plaza would be relaxation and people watching. A grass bermed boulevard, fountain and building ledges, and chairs would provide seating for shoppers and pedestrians promenading along 17th Avenue. Cafe seating along the edge of the Bank of Montreal building would spill out from the restaurant. The seating would encourage people to spend time in the plaza.

The plaza (and hall) would support many retail oriented activities that are ephemeral in nature. Seasonal or short term markets offering crafts, dry goods or foods could be regularly scheduled. The work produced in the studio/workshops along the lane could also be displayed occasionally on the plaza.

Many seasonal, community, civic or national celebrations could occur on the plaza such as the Uptown 17 Colorday Festival or Chalk Walk, Stampede festivities, performing arts festivals, ethnic celebrations, winter festivals, New Years

Eve bashes, etc. These more formal, organized and yearly activities would attract participants and observers from a city-wide region. Street entertainers and various performing arts groups could perform on the plaza as a means of promoting their own activities and events.

Many of the activities on the plaza would be hosted or supported by the six principal tenants. These activities would include: automobile displays and workshops; fashion shows; visual arts and crafts sales, exhibits and demonstrations; gardening and floral seminars; cooking seminars and ethnic food fairs; and animal shows/clinics. Besides creating an interesting pedestrian environment, these activities benefit 17th Avenue's reputation as a place for service quality and friendliness. By offering displays and demonstrations to the public in a casual and non-threatening environment, the participating businesses would benefit by the increased public exposure and future sales.

Another attraction to the plaza would be provided by a large outdoor screen for films and videos located on the Bank of Montreal building facing the plaza (Fig. 71). A multi t.v. video screen would provide unlimited programming opportunities such as television simulcasts, music/fashion/product videos, electronic messages, etc. Advertising time could be sold to offset the cost of the equipment. Alternatively, film presentations could also occur in the hall when better environmental, acoustic and public access controls are required.

The plaza activities discussed above would not happen by themselves, but would have to be programmed and promoted by the condominium manager. Hopefully, the success of the generated activities would later encourage other more spontaneous and unplanned events and

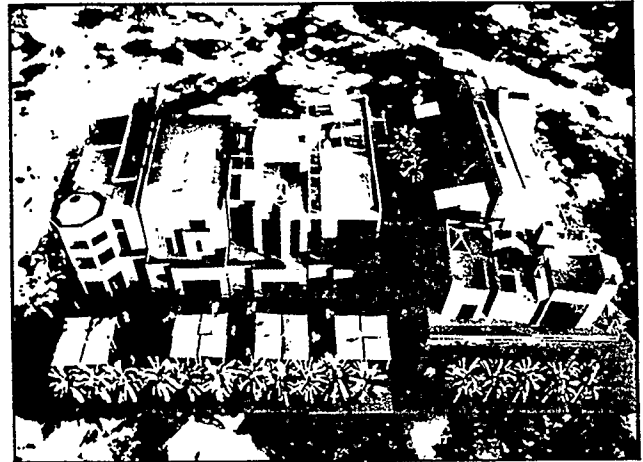


Figure 69. Plaza Activity (market)

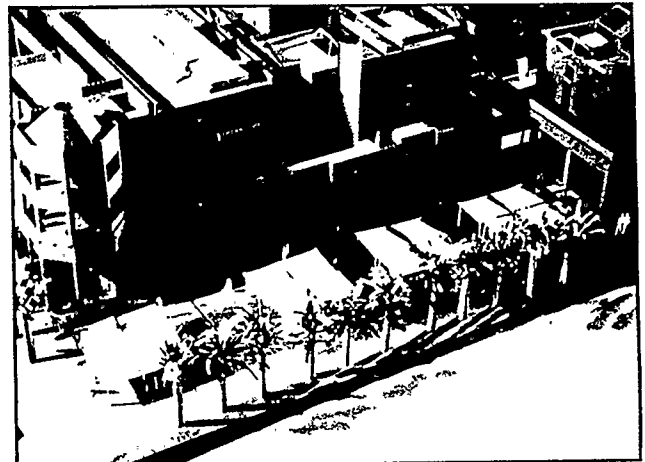


Figure 70. Plaza Activity



Figure 71. View to Hall from 17th Avenue S.

performances. The success of outdoor and noncommercial activities on the plaza would hopefully encourage other business and property owners to do likewise, with the final result that coordinated activities can take place along the entire 17th Avenue district.

HALL

During the winter, much of the activity of the plaza would retreat into the hall. The hall would provide a public space to warm up in when travelling by foot along 17th Avenue (Fig. 71).

The hall complements the plaza with its protective environment. Many of the activities described for the plaza would be held in conjunction or separately from the plaza. The hall provides a public place that is indoors, attracts pedestrians to the project as well as supplement the income of the six clients through the rental of short term or temporary stalls.

The hall is conceptually organized in plan and section similar to the other workplace residences with all the service functions located against the one wall. At grade, the service core provides stair access to the underground parkade and common residential deck, combined parent's and handicapped washroom, post office (currently operated out of the Semble Furniture building), entrance to the pottery gallery, storage space and twin garbage bin storage. The mezzanine level contains additional public washrooms, storage and mechanical areas for the hall and exercise area above, and a small office for the part-time condominium manager. The mezzanine corridor is enlarged to provide standing room for views into the hall and out to 17th Avenue.

The main volume of the hall is clear spanned (8.2m) to allow a diversity of

activities to occur within the space. Electrical and plumbing connections serving the central portion of the hall are integral to the floor patterning. At either end of the hall, large glass overhead doors would allow light and views into the space and would remain open during periods of good weather.

A skylighted corridor links the workshop/studios and loading space along the lane to that of the plaza through the hall. The skylight provides additional natural light into the middle of the hall including the adjacent retail spaces with their large windows, and signifies the entrances to the corridor. The adjacent retail and studio spaces (including a future entrance to the veterinary clinic), stairway to the underground parkade and common residential deck are all accessible from the hall and contribute to its pedestrian activity.

COMMERCIAL/ RETAIL

The underlying objective in designing any retail space is to attract the customer into the store, sell them something and get them out. The exchange should also be comfortable, personal and individual to the customer. The design of the shop is only one component of the total concept and image of a successful store. Equally important components include display, promotion, service, price and location.

The dynamic nature of retail activities require that commercial/retail spaces be flexible over time and use. The flexibility of the space is achieved by placing all the services such as entries, stairs, washrooms, storage, etc. along one wall leaving the rest of the double height volume free for display or studio/workshop uses. This reinforces the narrow strip character of the design concept and

allows future flexibility in the mix of retail vs. studio/workshop floor areas. By locating the offices, washrooms, mechanical spaces and large storage areas on the mezzanine and lower floor, it was possible to maximize the net selling area of the ground floor.

Two alternatives were explored to increase the available retail space and thus improve the economics of the project. A split level scheme of upper and lower grade shops with exterior circulation was rejected in favour of a double height scheme of narrower individual shops at grade with interior circulation. The latter alternative provided: continuation of established precedent of grade level shops in the area; easier handicapped accessibility; aesthetically cleaner facades without exterior stairs, balconies or railings; circulation system between the two levels protected from the outdoor environment; increased visibility of display windows by passing pedestrians; lower commitment by shoppers to enter the store resulting in potentially higher impulse foot traffic within the shop; and most importantly, the opportunity of shops to open up directly to the plaza. This alternative met existing spatial requirements (with a lower capital commitment by the six clients) while allowing the possibility of future expansion of the mezzanine level if spatial or financial conditions change. The interior spaces are also potentially more exciting and flexible because of their double volume.

The key elements in the design of the commercial/retail spaces are inspired by the older commercial structures in Calgary. The older shops typically consisted of high ceilings, distinct door entries often setback into the building and to one side, large display

windows and decorative details individual to each shop or building. In contrast, the uniform 2.7m (9') ceilings, entirely glazed facades and backlit awnings are elements common in many recent commercial structures.

The commercial/retail spaces are designed to reduce the physical and psychological barriers between street, sidewalk, and shop interior. This is achieved by locating the commercial/retail space at grade, extending the sidewalk flooring material into the shop interior, introducing large display windows that extend down to the floor, and enabling these display windows to slide open or retract during good weather.

STUDIO/ WORKSHOPS

While the industrial city of the 19th Century segregated work from residence to improve living conditions, many workshops today can be integrated into most parts of the city without adverse effects. Wasted, left over, or least desirable spaces not suitable for other "higher order" functions may be particularly suited to workshop activities, provided the space is cheap to rent and can be easily changed in size and function.

Since the incubation of many successful enterprises have had their start in residential garages it seemed appropriate to develop the commercial property along the lane as studio/workshops. This use along the rear of the site offers a number of opportunities for each unit, the project and the city. The workshop/studios provide: additional rental income; future expansion for each unit; diversity and vitality within the development and neighbourhood; and alternate street environment of a secondary and informal nature. While eliminating the negative

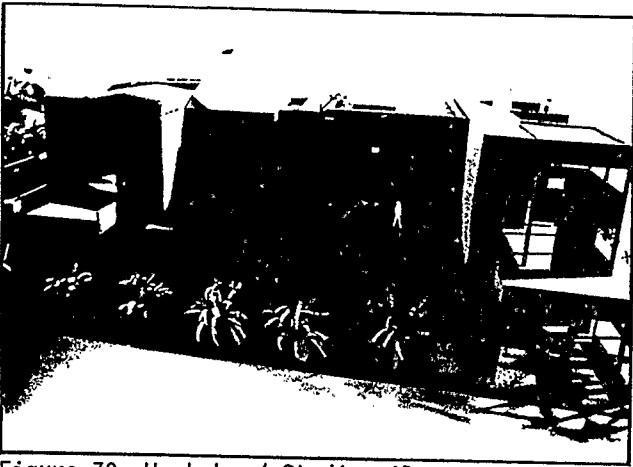


Figure 72. Workshop/ Studios Along Lane

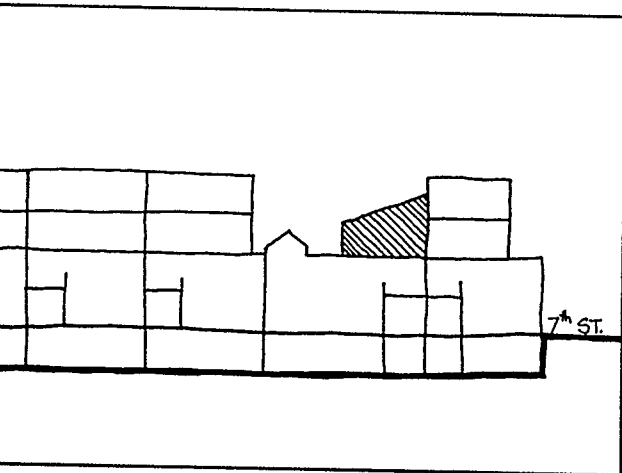


Figure 73. Residential Common

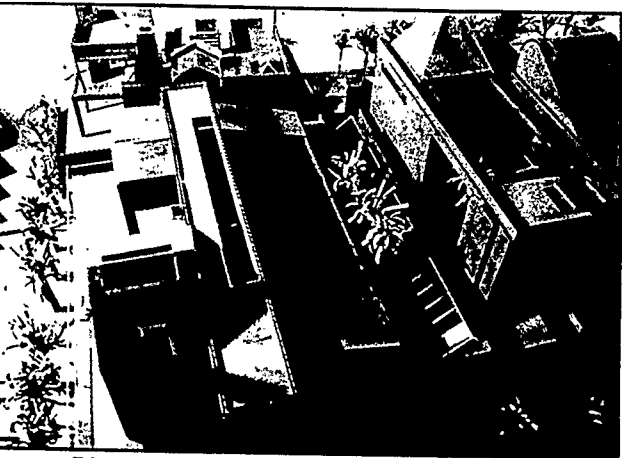


Figure 74. Residential Common

visual impact of "blank" rear facades and parking lots on the adjacent residential neighbourhood, the studio/workshops optimize site orientation with respect to light and grade level access while contributing to the "artistic" flavour of 17th Avenue (Fig. 72).

Informal residential entries and private parking spaces contribute to the transition between commercial and residential land uses. The introduction of vegetation bordering the lane adds to the residential quality while providing enjoyable outdoor workspace. The facades along the lane are more informal in design and material. Echoing the architectural vocabulary of the residential garages across the lane, many of the studio/workshop spaces, including the hall, incorporate garage doors to facilitate ease of access and allow work activity to flow outdoors and onto the lane during good weather.

The interior of the studio/workshops are unfinished with exposed concrete block walls and floors. This helps to reduce the rental costs and allows the users to finish their own spaces as money and time permits. The lack of finishes is made up with the abundance of natural daylight from double height south facing windows and/or large skylights.

RESIDENTIAL COMMON

The residential common located on the residential level above hall offers recreational and social facilities for the clients and their employees (Figs. 73, 74). Facilities include an indoor lap pool, hot tub and exercise area all under a glass solarium, as well as change rooms and roof deck. The roof deck accessible via overhead glass garage doors, offers an outdoor area for exercising, relaxation, sunbathing or gardening. Small garden plots on carts would

maintain the flexibility of the deck and could be moved inside the solarium during the winter.

The exercise area and deck can also accommodate various private, business and communal social functions. These could include activities such as parties, receptions, communal B.B.Q.'s, or celebrations. For special events, electrical and plumbing connections in the floor at centre of the exercise area, can accommodate a small wet bar and serving area for food catered from the restaurant below.

The residential common increases the possibility of encounters among residents and adds to the sense of community and common purpose among the clients. The facilities benefit the clients' relationship with their employees too. The added fringe benefit can attract better employees, keep them motivated and develop a stronger personal relationship with their employees through non-work activities. The common area provides an alternate environment from ones residence and workplace yet is conveniently close. Because of the demands on the client's time, convenience is an important factor for working couples, single parents and those who own and operate their own businesses. By sharing recreational and social facilities, the residential common becomes greater utilized, more elaborate and economical than if each residence were to have their own facilities.

RESIDENCES

All of the residences have entries off the street that are somewhat formal and enclosed. With the exception of the Chef's residence, secondary informal entries are also provided from the lane adjacent to loading or parking stalls. All of the residences have one or more decks with multiple solar exposure and degrees

of privacy. During good weather, the main living areas open directly onto the landscaped decks through a series of garage, sliding, or multiple doors that give a feeling of openness to the units. This openness to the exterior environment is enhanced by the abundant use of windows and skylights in units that would normally be dark and closed with only two exterior facades. This openness and connection to the outdoors is important to people whose lifestyle requires many hours at a time within one building.

The residences incorporate the latest design features sought after by today's home buyers. These features include: fireplaces (sometimes in the master bedroom as well); 3m (10') or double height living areas; kitchens with natural daylight; spacious bathrooms; and intimate or alternate living spaces such as audio visual dens, libraries or reading nooks.

Because each of the six clients own their own businesses and either both work or are single parents, time and privacy is a cherished commodity. In some cases, the master bedroom almost becomes a separate apartment from the rest of the residence. The design of the residences incorporate features and details that are low-maintenance such as natural materials that don't require resurfacing or painting, no carpets, and essentially no yards to attend to. Any maintenance that is required can be contracted out through the business or condominium group.

PARKING

The availability of short term parking is a key element to the success of 17th Avenue as a regional pedestrian shopping street. The resulting parking concept is based on three

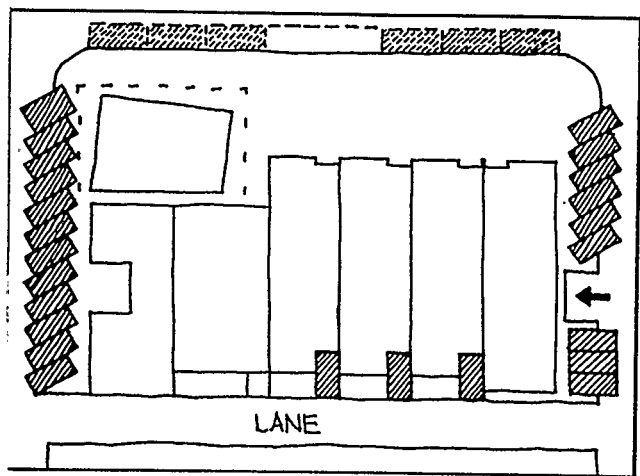


Figure 75. Surface Parking

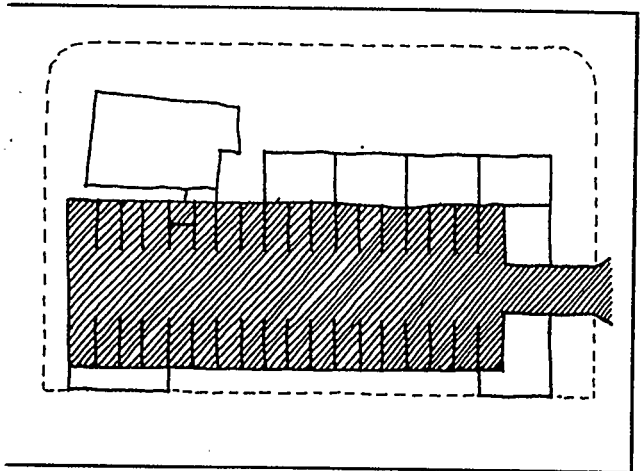


Figure 76. Underground Parking

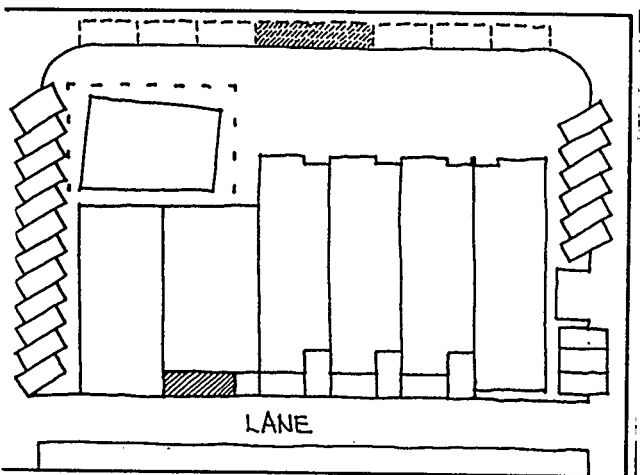


Figure 77. Loading Zone

objectives: to provide highly visible, accessible and attractive parking; to limit negative visual impact of parking on adjacent residential units; and to maximize the utility of the ground plane in terms of public use and commercial revenue. While contrary to the third objective, some surface parking was viewed as desirable for the following reasons: not capital intensive; slows traffic in pedestrian areas; located near high demand areas; and easily located by motorists. The design of the surface parking efficiently combines the roadway and parking aisle and utilizes the underdeveloped boulevard on 7th Street.

Required parking is achieved through the use of angled surface, underground and off-site parking (Figs. 75, 76). Public oriented short term parking is provided at grade along College Lane and 7th Street. Non required loading and short term parking stalls on 17th Avenue would be available only during non-peak hours. A required loading stall is provided along the lane behind the hall (Fig. 77). However, loading would be encourage to use 17th Avenue when possible, providing activity to the plaza and reducing traffic along the lane. Due to high land costs, long term parking for residents, employees and overflow public parking is provided underground. With intensive parking requirements for restaurant/bars, additional parking stalls (in excess of retail requirements) are secured off-site during the evening.

Many underground parking garages tend to be utilitarian and often lack any aesthetic design concern, even though for many workers and the public, it is a common method of arrival that leaves much to be desired. The entrance to the parking garage from College Lane is emphasized by the arched pedestrian bridge that passes over

the ramp. The concrete interior of the garage is partially painted with peach walls and a white ceiling providing an unexpected warm and inviting atmosphere. The floor, beams, doors, pipes, and walls of the stair exit to the hall are left exposed or natural for contrast and emphasis. A narrow band of windows high on the south wall provides some natural daylight.

REQUIRED PARKING:				
	total	day	eve.	min.*
Residential	6	-	6	6
Retail	12	12	-	12
Studio/ Wkshps	5	5	-	5
Automotive	2	2	-	2
Vet. Clinic	3	3	-	3
Cafe	23	23	23	2
Bar	29	-	29	2
	<u>80</u>	<u>45</u>	<u>58</u>	<u>32</u>

* Retail equivalent for cafe/bar with excess parking offsite.

ACTUAL PARKING:	
College Lane	6
7th St.	3
Lane	3
Underground	33
	<u>45</u>
+ 60 offsite stalls (evenings)	
Public at Grade 15	

Figure 78. Required Parking

UNIT ELEMENTS

Because each workplace residence responds to specific programmatic requirements, it may be helpful to review the program corresponding to each unit. Some design decisions may not be fully explained because they are in direct response to programmatic requirements.

MECHANIC'S WORKPLACE RESIDENCE

The commercial/retail component of the mechanic's workplace residence comprises of a service garage and an auto memorabilia boutique that are independently operated but are functionally interrelated. The service garage is located to the rear of the site allowing the boutique to occupy the prime retail frontage along the plaza. The two businesses are separated from each other by the parking garage entry, office and reception spaces.

The garage is divided into two components: the service area on the main floor; and the storage area located below, in the parking garage. The lower level space provides storage for auto parts, flammable liquids, mechanical space for the lifts, and a workbench area with natural daylight from above. This enables the service area to be clean in appearance at all times while minimizing the potential fire hazard. The service area is probably less dangerous than most garages in some people's homes.

To preserve the on-street parking spaces along College Lane, the entrance to the auto garage is from the lane (a true "backyard" mechanic!). The garage doors are setback from the lane to allow easier alignment of automobiles onto the hoists and to provide natural daylight into the storage area below the garage (via suspended steel grates over a glass

skylights).

Since the client and his co-worker are the only mechanics (no front office staff), entry to the garage is direct from College Lane (in front of the three reserved parking stalls) or through the reception area from the boutique. Separated by a glass wall from the reception area, an office for administrative work (for both businesses) and private consultation with customers is provided. As a result of the driveway below, the office floor is raised allowing a view into the service area, above the height of the equipment stored along the wall.

The boutique features a 1950's diner styled bar at the rear of the store. The bar offers a wide and varied selection of non-alcoholic beverages for browsing shoppers and clients waiting for auto repairs. The bar features a glass countertop for the display of memorabilia objects and offers conversation pieces for those drinking at the counter. Period chrome stools, modified with clear resin encased hubcap tops, surround the counter.

Additional seating is provided on the mezzanine level with views to the service garage, boutique and street. The mezzanine view into the garage provides changing views of exotic, high performance and collector cars undergoing servicing, depending on whether the hoists are up or down. Storage and mechanical space is also provided on the mezzanine level. The lower level of the boutique provides washrooms, workshop (repairing and refinishing objects) and storage.

The spatial organization of the residence orients the living spaces to the exterior perimeter with a linear "pedestrian street" along the firewall that links each room to each other as well as the second floor. The main living

spaces open onto the deck via overhead glass garage doors, expressing the theme of the workplace residence.

Upon entering the residence, one enters the double height entrance gallery filled with natural daylight (from the roof and windows). The circulation space also functions as the display area for the client's art and auto memorabilia collection. The linear street quality of the space is emphasized with distant views through glass doors at either end wall. The space explores the idea that "getting there is half the fun", an attitude shared by the mechanic's clients. The wall is constructed of used red bricks providing a warm quality to the space and backdrop to the client's road signage collection. Above the entry doors to the residence are the front and rear ends of a mid 1950's automobile (the front end over the front doorway, etc.) complete with functioning head, tail and signal lights that animate the space.

The second floor circulation, also extending wall to wall, is supported on metal "H" beams over the entrance gallery independent of side walls. The flooring is finished with a very tight open metal grid decking that allows natural daylight from the roof skylight to penetrate into the entrance gallery. The natural colored steel structure that composes the second floor circulation has a sculptural quality to it and evokes an industrial atmosphere to the space.

A suspended catwalk with views to the schoolyard, sky and entrance gallery separates the master bedroom from the children's bedrooms and guest room. The master bedroom features an ensuite bathroom, fireplace and sitting area. A continuous band of windows provides the master bedroom with a 180 degree view of the skyline,

17th Avenue, schoolyard and Mount Royal escarpment. At the other end of the hall is the guest room with a fireplace, vaulted ceiling with skylight and fabulous view of 17th Avenue. A pull down bed built into the wall, allows the guest room to function as a playroom or reading area, when not in use. Window high cabinets built around the walls provide storage and shelving for toys, books and clothes.

FASHION DESIGNER'S WORKPLACE RESIDENCE

The fashion designer's workplace residence is simple and straightforward in organization and detail. The workplace is laid out linearly with the manufacturing at the rear and the boutique at front. The change rooms and storage areas serve as a buffer between the two. The role of boutique is to generate retail sales and expose the designer's clothing to the public. Since the client intends to have regular in-house fashion shows, the concept of the boutique explores the notion of the fashion "runway".

The interior of the boutique is simple in volume and finely detailed with raw or natural materials that emphasize the clothing on display. The polished dark grey tinted concrete floor is patterned with square white marble inlays that support a retractable fashion runway and small recessed low-voltage halogen lights. The floor pattern and inlaid lights extend out to the plaza, imitating the effect of an airport runway. On the ceiling, track lighting mirrors the floor pattern below reinforcing the linear approach.

The rear of the boutique incorporates a raised "stage" that emphasizes the ritual of clothing selection. The stage serves as a storage area for a retractable fashion runway. The irregular hinged doors of the changing

cubicles, the centrally pivoted rear wall door to the studio and the window shutters on the mezzanine, offer a multitude of possibilities of form, color and light that can transform the stage for fashion shows.

The manufacturing studio consists of a large double volume work area with adjoining storage areas under the mezzanine. The interior is filled with natural daylight from a large skylight and window. The floor space remains flexible and open to accommodate the process of production. The studio doubles as a staging area for fashion shows and is formally connected to the boutique via a centrally pivoted door that is used for entry onto the stage and runway. If necessary, the studio can be expanded by extending the mezzanine above.

The administrative and wholesale operations of the business are located on the mezzanine level maintaining privacy from the public. Spiral stairs provide quick access to the mezzanine from the studio. The showroom doubles as a conference room with views to the studio and/or the boutique, if desired.

The fashion designer's residence offers lofty aspirations within modest means. The double height loft volume offers a spacious flexible living area with fantastic light. The residence is organized along a linear axis accented with skylights, fireplace, stove, sink, closet "windows" and bathtub. The axis is reinforced by concrete joints scored with inlaid metal strips echoing the width of the runway floor pattern in the boutique.

The strong, understated, plain materials used in the workplace continue into the residence but with more color and unfinished wood surfaces to create a warmer atmosphere. Interior materials include color tinted and

polished concrete floor, exposed wood ceiling and columns, integral colored stucco fireplace with a "material weave" finish and whitewashed concrete walls. Overall, the interior is simple and flexible, allowing the client to manipulate the residential environment as she likes.

The second floor contains sleeping loft, reading nook, storage and mechanical areas. The sleeping loft features a movable partition wall whose supports are draped with white translucent curtains. The wall currently separates the mother's and child's beds, but can be moved to create different sized spaces or one large one.

A stair-ladder in the reading nook provides access to the upper roof deck. On the roof, pyramid shaped white canvas structures cover three large skylights, sending diffuse light into the bedroom loft, kitchen and dining area. The rooftop skylight structures reflect the occupation of the client and add an sculpture element to the roof deck.

POTTER/ GALLERY OWNER'S WORKPLACE RESIDENCE

The workplace residence for the potter and gallery owner includes an art gallery and commercial production studio, both owned and operated by the clients. Because the two businesses are somewhat related, this allowed the opportunity to develop an unique spatial organization and relationship between the two businesses.

The gallery features a simple double height volume with a large north facing window that tilts open to the plaza. The "picture" window complete with "frame" and "signature" serves to display art objects as well as expressing the art gallery function that occurs behind the facade.

The double height pottery studio features a

series of glass doors and roof skylight to maximize natural daylight. Separated from the other work areas of the studio, the kiln room features a two storey "chimney" vaulted ceiling with a skylight at its apex. A series of doors that rotate, slide or retract, allow different reconfigurations of the interior spaces depending on the occasion. For example, during open houses or receptions, the work area of the pottery studio can be confined behind closed doors at the southern end. The intermediate space can function as a second alternate gallery, completely or semi-open to the gallery proper. The sink and storage area can be closed off by an overhead door or remain open and double as a bar and refreshment area.

The mezzanine floor is minimal and is primarily used for mechanical and storage space. An intimate "thought provoking" space lined with futons and accessible by ladder from the studio, occupies the southern most end of the mezzanine.

The spatial organization of the residence is open and loft-like with vertical openings between different floor levels. At the client's request, the residence incorporates many finishing details handmade with clay such as wall murals, floor tiles, counter tops. Interior materials are warm and natural featuring exposed pine ceilings, hardwood floors and wood cabinets. In contrast to the wood surfaces, colorful but muted plaster walls and lots of natural daylight would add warmth to the residence.

The entry to the residence from the plaza and lane is through a narrow two storey glass enclosed vestibule. Upon arriving from either direction, the visitor is aware of the resident's occupation from the adjacent chimney flue of the kiln along the wall and the

transparent glass and metal landing over the kiln room below. Once through a pair of sandblasted glass and steel doors set into a tall sandblasted glass portal, a colorful inlaid ceramic tile "welcome mat" constructed by the client, greets the visitor in the entry foyer.

The main floor of the residence contains the principle living areas such as living room, dinning room and kitchen. The double height living room features a ceiling skylight, tall windows and a floor to ceiling fireplace incorporating a ceramic and wood mural by the client. The "galley" kitchen receives natural daylight from a light shaft above and a wall opening to the entry. The formal dinning area opens onto the roof deck and features floor to ceiling cabinets and shelves for the client's extensive art collection.

On the second floor, the bathroom also receives natural daylight from the light shaft and east wall via glass block enclosures. The second floor landing provides a variety of views outdoors to the south or north as well as the living room and entry foyer. The den, which doubles as a guest room, features a vaulted ceiling and setback floor area from the south glazed wall, increasing the penetration of natural daylight into the dinning room below. The sleeping loft is located on the top floor overlooking the den, with views of the skyline and Mount Royal escarpment. A large private deck overlooking the plaza is directly accessible from the sleeping loft.

FLORIST'S WORKPLACE RESIDENCE

The florist's workplace residence, alias the "petal house", incorporates a series of terraces, roof gardens and greenhouses. A wired glass enclosed dumbwaiter extending from the

roof deck, through the residence, to the main floor of the flower shop, allows the easy transportation of plants between various floor levels.

The workplace consists of a floral shop and leasable space (a studio at the rear and a retail shop in between). All three spaces have display windows and direct access to the hall. Natural daylight from the adjoining skylight over the corridor filters into the shops and studio space.

The interior of the floral shop features a series of sandblasted glass and metal display platforms suspended from the ceiling by wire cables. A wrenching system allows the height of the displays to vary offering sculptural views of the plants and flowers. Glass enclosed coolers along the western wall contain fresh cut flowers and arrangements that are visible to pedestrians. The transparency of both sides of the coolers allow the exchange of views and daylight between the shop, hall and outdoors. Below a narrow band of windows, the tops of the coolers form a ledge for plants and function as a lightshelf distributing indirect daylight into the shop. Behind the front sliding doors, a traditional stepped flower stand is designed to slide into and out of the plaza. While catering to impulse buyers, the cut flowers on display also add color to the plaza.

The residence is organized around a tall glass-sided and roofed greenhouse densely filled with vines, tropical plants, flowers and fish pond. The lower walls of the tropical garden are lined with sliding glass doors that open onto the dining room, outside terrace and den. Thus the main floor of the residence can be opened from the north deck all the way through to the south deck.

The greenhouse separates the main residence to the north, from the secondary residence to the south. With its own rear entrance, the secondary residence functions as a guest house or independent small rental apartment. The main floor can either be a den with a fully equipped wet bar or an open kitchen and living area. The second floor contains a guest room with adjoining bath. The guest house has fireplaces on both floors and is accessible to the roof deck.

The main residence contains a natural daylight kitchen, dining room adjacent to the garden and a double height living room with a view to the Calgary skyline. The second floor contains the main bathroom and master bedroom. The bedroom overlooks the living and garden areas and is connected to the guest house by an open metal catwalk over the indoor garden.

The main entrance to the residence features a narrow four storey glass roofed volume filled with potted plants along steps and wall ledges. A glass door in the vestibule offers passersby a glimpse of the daylight and flower filled stairway. The residential entrance adds an unexpected personal touch to the shop below. The skylights over the staircase also provide daylight into the kitchen, bathroom and garden.

The staircase from the main living floor to the second floor and roof deck is made of black steel and infilled with sandblasted glass, filtering natural daylight to the spaces below. Intermediate landings protrude into the main entry stairway offering glimpses of the sky and indoor garden. At the top of the stairs is the pyramidal glass greenhouse located on the landscaped roof deck. The greenhouse contains desert and temperate plants surrounding a central sitting area. During good weather, the pyramid greenhouse opens up like a flower petal

for ventilation purposes.

CHEF'S WORKPLACE RESIDENCE

The workplace residence for the chef incorporates the existing Bank of Montreal building. The concept for the renovation explores the themes of building within a building and the collision of the city's two street grids (which occur at the intersection). A new structure is inserted within the old parallel to the south downtown grid reconnecting the site physically to the south downtown. The six degree offset serves to accentuate the old construction from the new, align views to the downtown skyline and Tompkins Park, increase the view to the plaza from the outdoor cafe seating, and diminish the sidewalk width along 7th Street from the existing bank entrance to the facade of the veterinarian/potter's workplace residence.

A new lower level is excavated and leased out as a local bar adding a necessary evening activity to the 17th Avenue district. The design explores the theme of the "bank vault", inspired by the former use of the bank. The "restricted access" to the bar is emphasized by the narrow entrance and riveted metal door leading to the bar below. At mid-landing, a coat check area reveals the first glimpse of the bar before descending the final flight of stairs over the bar proper.

Concrete walls and floors, exposed mechanical, electrical and structural elements, and simple furnishings evoke a rough, unfinished and unpretentious look to the space. In contrast, a finely crafted "gold bar", the hidden treasure within the vault, stretches along the length of the space and is finished in gold leaf. A flat glass skylight located above the entertainment stage, emphasizes the stage and provides

daylight into the space. More importantly, the skylight advertises the presence of the bar at night to passersby on the plaza with the escape of light and view into the bar.

At grade, the design of the cafe organizes all of the services (stairs, washrooms, storage, kitchen area, etc.) between the south wall and an imaginary line extending west at an angle of six degrees from the facades of the adjacent units along the plaza. A feature stairway between the bar and kitchen, leads to the mezzanine level of washrooms and office. Locating the services against the south wall, frees up the main volume with its transparent walls allowing views to the plaza, 17th Avenue and Tompkins Park. Likewise, all the activity of the restaurant, including the kitchen, is visible to the street and plaza. The mezzanine wall above the bar and kitchen would be decorated with large art murals visible to the patrons and pedestrians outside the cafe.

The residence appears to rest on the roof of the existing Bank of Montreal building with a volumetric arrangement of the programmatic parts reminiscent of a culinary display on a platter. The entry to the residence via an external staircase, accentuates the rooftop image. The two grid systems of the old and new construction form a deck around the residence.

From the deck, a visitor is greeted by a glass enclosed entry vestibule that doubles as a solarium with space for plants and room for sitting. When lit at night against the comparatively dark south wall, the entry vestibule creates an impressive entrance.

A high vaulted ceiling topped with a small openable skylight over the kitchen signifies the client's occupation and functions as a natural exhaust stack for heat generated in the kitchen.

Since the client likes to entertain house guests, the kitchen is open to the dining and living areas and their associated views. A small two-tiered counter with sink functions as a breakfast table or bar. Large windows in the double height dining and living areas offer spectacular day and night views of 7th Street, Tompkins Park, 17th Avenue, the downtown skyline and neighbouring roof decks. The formal dining area enclosed in glass, extends outdoors onto the deck through a series of doors. The corner fireplace chimney in the living room accentuates the corner of the residence and functions as a roof deck barbecue, a primitive expression of the client's occupation.

In contrast to the openness of the living areas the bathroom, bedroom and audio visual den are introverted in order to maintain visual and acoustical privacy from the street. Because the residence is designed for a bachelor, privacy within the residence isn't an issue, allowing the bathroom and bedroom to open up with sliding doors. For those romantic encounters, a fireplace is provided and is visible from both the tub and bed.

A roof deck on top of the residence provides additional outdoor space. Over the bedroom, a 1.5 m parapet provides a relatively private deck area, while over the living room, a slightly higher deck features a built-in barbecue into the chimney for those more primitive cooking experiences. Over the den, a stepped deck provides a small roof top garden at the base topped by an outdoor hot tub. The rooftop garden is visible from the living room clerestory window.

VETERINARIAN/ POTTER'S WORKPLACE RESIDENCE

The massing and organization of the

veterinarian/potter workplace residence explores the duality of the client's independent occupations and programmatic elements. The workplace residence is divided into two principle volumes connected by a linear service core that joins the two together.

The massing of the workplace residence responds to the Bank of Montreal building and residential area along 7th Street. The commercial component is setback from 7th Street flush with the cafe proper. The residential component is setback further, matching the residential setback along 7th Street. In terms of height, the workplace continues the height of the cafe, while the peaked roof line, identifying each bedroom, slopes down to the roof line of the apartment building across the lane. The misalignment of the lane on either side of 7th Street is reflected in the facade and massing of the workplace residence and provides a view west down the lane from the studio/gallery and library. A view east along the lane from the stair tower provides a sense of connection to the other workplace residences along the lane. With the adjacent apartment building, the entrance to the lane creates a sense of confinement and provides some degree of privacy from 7th Street and helps to define the semi-public space of the lane.

At the commercial level, a small covered entry garden featuring a modest fishpond and fountain made by potter, serves as the main entrance to both the clinic, studio and residence. The semi-public garden adds a personal touch to the space and expresses the relationship between the two independent but shared occupations. Since the whole family shares duties in operating both businesses, the foyer to the residence also serves as an access

corridor between the two businesses. The foyer provides a spacious entrance to the residence with plenty of storage and closet space, especially convenient for the children's toys and bikes.

The veterinary clinic is designed to be open and inviting for the pets and their owners who may be coming in for a checkup or emergency treatment. The reception area is provided with natural daylight, views and easy orientation of the whole clinic. The preparation area, where most of the non-emergency treatment takes place, is open to the reception area and is separated by a large saltwater aquarium built into the counter separating the two spaces. In addition to the aquarium, views to the entry garden and street, provide waiting (and usually anxious) pet owners something to occupy their minds while their pet undergoes treatment. For health and sanitary reasons, the xray, surgery and examination rooms are fully enclosed.

The design of the pottery studio and adjacent gallery allows the client to work as much as possible while the gallery is open. The arrangement of the working space along the service core maintains flexibility of the business. Sinks, equipment and material storage can be hidden from public view when desired behind a series of sliding doors. A modular work/display counter separates the working area from the gallery proper. The movable counter restricts customer access to the work area but allows the client to demonstrate her work. Natural daylight into the studio/gallery is provided by square sandblasted windows high on the south wall and most of the west wall where 4.4 m high sliding clear glass doors provide visibility and views from the street and Tompkins Park. The workspace is conveniently accessible to the

loading area along the lane for the exchange of materials and equipment. Counter level display cases in the wall of the hall, announce an alternate public entrance into the gallery.

The residence is organized into two parts, the principle living areas (living/dinning room and library) to the south, and service areas (kitchen, breakfast room, washroom and laundry room) to the north. The large 3 m (10') high living/dinning room features a fireplace (open through to the library) and a built-in shelving unit for storage, audio/visual equipment and wet bar. Adjacent to the living room is a double height library featuring a glazed wall with a direct view down the alley. The library, living room, entry corridor and breakfast room open onto the large roof deck. Until the deciduous trees along 7th Street mature, translucent nylon canopies (retractable on sailboat hardware) along the deck provide shade to outdoor areas and protect the main floor interior spaces from extensive solar gain in the late afternoon.

On the second floor, the master bedroom features a vaulted roof with skylight over the bed, fireplace, built-in his and hers closets, and adjacent skylight bathrooms. Separated from the master bedroom but connected by the corridor, the children's bedrooms with their own skylight bathroom and staircase, provide some degree of privacy and independence.

CHAPTER 9:

CONCLUSION

CONCLUSION

This chapter summarizes the design proposal with brief comments on the lifestyle of working at home, the alternate shopping experience and the character of 17th Avenue and the city. The proposed design solution responds to the increasingly common lifestyle that combines the work and home environment. While each workplace residence maintains its own individual identity, visual and acoustical separation is provided between the work and home environments. The image for each workplace residence reflects the homemaker's personality providing a personal touch to the workplace which is typically universal, abstract or corporate in image. The residential common provides shared recreational and social facilities that add convenience and opportunities for social interaction among the clients.

The project provides an alternate shopping experience that is more personal, locally oriented, entertaining and educational. Each workplace residence expresses the personality and occupation of its owner providing an architectural expression of the personable economic activity that occurs between the merchant and the shopper. The more ephemeral aspects of retailing are supported by the plaza and hall, adding vitality, unpredictability and excitement to the shopping experience. The design avoids excessive rigidity, sanitization, "indoorsing" and privatization of the commercial/retail and public spaces. The pedestrian environment offers shoppers a rich visual variety of textures, materials and forms. The plaza and hall provide open space for eating, resting, shopping and socializing. The existing relationship

between the sidewalk and individual shop entrances is maintained.

The proposed design solution provides an example of redevelopment along 17th Avenue that is sensitive to the existing urban pattern while enhancing the quality of place. The design contributes to and strengthens the existing urban fabric by respecting the existing uses, patterns, rhythms and scale of the context. The image, form and organization of the project concentrates the essential ingredients of the city by recognizing the importance of the street, public space and the contribution of building facades. The quality of urban life and the public realm is improved through the diversity of activities throughout the day, and the creation of spaces that are public and accessible. Contextually, the design continues the 5.6 m cornice height, individual identity and at-grade store front detail of adjacent buildings. The commercial impact of the site upon adjacent residential properties is reduced by the residential setback, studio/workshop uses, increased vegetation and the elimination of public parking along the lane. The design responds to the public realm and offers an alternate approach to development exploitation that often overemphasizes economic concerns to the detriment of social or public concerns.

APPENDICES

APPENDIX 1: ISSUES

I WORK- LIVING ENVIRONMENT:

1) Family Lifestyle.

- * Time scarcity
- * "Life interruptions"
- * Needs of today's household
- * Safety (children and pets)

2) Professionalism (public, clients, family and the worker).

- * Image
- * Identity
- * Formality
- * Respect

3) Privacy (public, employees, family and the worker).

- * Acoustic
- * Visual

4) Mental Health.

- * Social contact (loneliness)
- * Psychological isolation
- * Compulsive behaviors (workaholism)
- * Procastination

5) Expansion and Flexibility.

- * Business needs
- * Family needs

6) Relationship to Community and State.

- * Zoning
- * Building codes and regulations
- * Insurance and liability
- * Taxation
- * Labour laws and contractual restrictions

7) Technological.

- * Climate control
- * Electrical
- * Hvac
- * Furniture and equipment requirements

8) Affordability.

- * Cost per unit
- * Amenities

II SITE:

1) Nature of development.

- * Diversity of activities
- * Public orientation
- * Contextual response to district

2) Quality of pedestrian environment.

- * Public open space
- * Pedestrian circulation
- * Pedestrian oriented activities
- * Environmental conditions

3) Transportation.

- * Parking
- * Through traffic

III CITY:

1) Quality of urban life and the public realm.

2) Image and form for Calgary (and 17th Avenue).

3) Clarification of the urban and rural within the landscape.

4) Continuity of the historic fabric.

5) Alternatives to the goal of development exploitation.

APPENDIX 2: GOALS AND OBJECTIVES

I WORK- LIVING ENVIRONMENT

- 1) Satisfy the lifestyle needs and aspirations of individuals and families who work at home.
 - * Provide sufficient isolation (visual, acoustic and odor) between the homemaker and the family. Type and degree of isolation will vary depending on the homemaker, family and work activity.
 - * Special consideration of work environment hazards required due to proximity of children and pets.
- 2) Provide a work environment that presents a professional image to the public, clients, family and homemaker.
 - * Provide an actual or perceived separation between the work and living environments.
 - * Provide an image that reflects the homemaker's personality and compatibility with his/her living environment (unlike the usual commercial or corporate image associated with work environments).
 - * Provide an image that reveals seriousness, sophistication and substantialness of the homemaker's work activities.
- 3) Provide privacy from the public, employees, family and the homemaker.
 - * Provide a clear distinction between private and public spaces within the structure.
 - * Allow acoustic, visual and odor privacy between the work and living environments.
 - * Prevent visual and acoustic invasion of the private realm from members of the public during non- working hours.
- 4) Maximize the mental well-being of the inhabitants.
 - * When necessary, provide separation between the work and living environments to reduce anxiety and/ or stress for individuals who require independence from one environment to the other.
 - * Provide an internal environment that is enlivening, productive, unstressful and enjoyable to be in for long periods of time without interruptions.
- 5) Allow the ability to expand and/or manipulate the built environment due to changing business or family needs.
 - * When necessary, minimize the effects of loneliness through contact and views to outdoor activities and the environment (daylight, sunshine, noise, etc.).
 - * Enable the rental of excess commercial or residential space beyond the changing needs of individual owners.
 - * Allow easy manipulation of changes to size and function of spaces.
- 6) Ensure that restrictions, guidelines or objectives of the community and state are achieved providing they do not create undue hardship on the owners.
 - * Too numerous and specific to generalize with respect to zoning, building codes, insurance, liability, taxation, labour laws, etc.
- 7) Achieve the necessary technical demands among and between the living and working environments.
 - * Provide sufficient electrical wiring, outlets and voltages, as well as electrical protection to meet equipment requirements.
 - * Provide separate hvac units and meters to ensure environmental quality, building code and taxation requirements.
 - * Depending on the type of work activity, stringent climate control may be required with respect to pollution, dust, static, humidity, temperature, etc.
- 8) The living and working units should be affordable to ensure a diversity of activities, uses and occupants.
 - * Provide communal or shared amenities that may be too expensive individually but acceptable collectively.
 - * Capitalize on financial savings through economies of scale, communal assets, combined efficiencies, etc.
 - * Provide minimal "raw space" (for particular units?) in which the occupants have the option to complete themselves as time and financial resources dictate.
 - * Provide commercially attractive rental space to offset capital and maintenance costs of work- living units.

- * Provide (optional, individual or communal?) rental space intended for the needs of noncommercial work/living activities (i.e. artist type studios) that would benefit the development and the district.

II SITE

- 1) Achieve an architectural solution that responds to a diversity of activities, public orientation and contextual environment.

Diversity of activities:

- * Provide a diversity of inhabitation, work and recreational activities to complement the existing activities along 17th Avenue.
- * Encourage uses that are open beyond normal office hours (restaurants, bars, entertainment facilities, cultural functions, etc.).
- * Enhance synergism between different activities and uses.

Public orientation:

- * Provide "real" indoor and outdoor public space for social activities.
- * Develop a "public" facade (welcoming) along 17th Avenue at grade.
- * Provide a clear distinction between private and public spaces.
- * Provide public oriented activities and uses at grade and along 17th Avenue, with more private uses above grade and to the rear of the site.

Contextual response:

- * Continue the existing 2-3 storey building height (human scale).
- * Provide individual identity and personality for each workplace residence.
- * Incorporate at-grade store front windows, wall face detail, and narrow individual store front and residential access.
- * Incorporate a wide variety of textures, materials and forms.
- * Encourage the development of the lane and rear property areas as a transitional zone that is informal, relaxed, intimate scaled and neighbourhood oriented.

- 2) Improve the quality of the pedestrian environment.

Open space:

- * Provide outdoor public space for eating, resting, shopping and socializing.

- * Provide seasonally protected public space along the avenue (to encourage walking).

Pedestrian circulation:

- * Provide pleasant connections to parking areas.
- * Improve the condition of the pedestrian street environment.
- * Consider the sidewalk as a space that supports and encourages daily activities of public life (something more than just travel and access).
- * Maintain the direct relationship between the sidewalk and individual store front access.

Pedestrian oriented activities:

- * Protect public views to the avenue, Tompkins Park, Western Canada High School, the downtown skyline and shop interiors.
- * Ensure activity beyond normal office hours.
- * Encourage a diversity of activities and user groups.

- 3) Minimize the impact of the transportation network on the surrounding pedestrian, commercial and residential environments.

Parking:

- * Provide highly visible, accessible and attractive parking.
- * Reduce commercial spillover into residential streets/lanes.
- * Provide a means to inform the public as to the location and availability of short term parking.
- * Limit the negative visual impact of parking on adjacent residential units.
- * Redesign existing lots which are cramped, confusing in circulation and poor in lighting and signage.

Through traffic:

- * Minimize noise and air pollution caused by high traffic volume on 17th Avenue.
- * Minimize traffic congestion on 17th Avenue by providing side access from side streets and the lane.
- * Provide street parking along side streets and lane to slow traffic in pedestrian areas.

III CITY

- 1) Improve the quality of urban life and the public realm.

- * Integrate not segregate uses (diversity).
 - * Encourage accretion of parts no planned wholes.
 - * Organize the city by public spaces not residential typology.
 - * Reintegrate "culture" with ordinary living and the physical environment of the city.
 - * Create an active people place throughout much of the day.
 - * Introduce "collective art" and ritual to the public environment.
 - * Enhance opportunity and choice for city residents.
- 2) Search for an architectural image and form for 17th Avenue and Calgary.
- * Develop an appropriate image and form derived from the site, landscape, local history and cultural traditions.
- 3) Clarify the urban and rural within the landscape.
- * Concentrate rather than scatter the essential ingredients of the city.
 - * Contribute and strengthen the site with the existing urban fabric to create contiguous street spaces not isolated building nodes.
 - * Avoid the introduction of suburban or rural models for a site that is urban.
- 4) Provide continuity of the historic fabric.
- * Illuminate and integrate the local site history into the architecture (genius loci).
 - * Add to the historic layers, not replace them.
 - * Respect existing uses, patterns, rhythms and scale of context.
- 5) Search for alternatives to the goal of development exploitation.
- * Scale, integration and density of development sensitive to site and context; not the maximization of developer's economics.
 - * Search for goals which better match pragmatic reality with intellectual ideal.

APPENDIX 3: EST. COMMERCIAL SPACE TO BREAK-EVEN

The intention of this analysis is to quickly determine the approximate density of development required to offset construction and land costs. It should only be interpreted as a rough rule of thumb.

HARD AND SOFT COSTS:

Land Cost: 2416 m² @ \$538/m² = \$1,300,000
 Bldg-Res.: 836 m² @ \$645/m² = \$539,000
 Bldg-Com.: X m² @ \$860/m² = \$860 X
 TOTAL HARD COSTS: \$1,839,000 + \$860 X
 Soft costs: 5% of Hard Costs \$92,000 + \$43 X
 TOTAL HARD AND SOFT COSTS: \$1,931,000 + \$903 X

REVENUE:

Commercial: X m² @ \$172/m² = \$172 X
 Residential: 836 m² @ \$86/m² = \$72,000
 TOTAL REVENUE \$72,000 + \$172 X

Development Cost = Revenue
 (Prop.Tax)(Yr.Amort.Factor)(H&S Costs) = Revenue
 (1.0145)(.1036)(903X+\$1,931,000) = \$72,000+\$172X
 \$95X + \$203,000 = \$72,000+\$172X
 \$131,000 = \$77X
 X = 1700 m²
 or = 283 m²/unit

Each workplace unit would comprise of 139 m² residential; and at least 283 m² commercial space to offset development costs.

Notes:

- (1) Yearly amortization factor for 30 years of monthly payments @ 10% interest compounded semi-annually (factor = 0.1036). From "Interest Amortization Tables" by McGraw-Hill Ryerson Ltd, 1971.
- (2) Estimated 6 month construction period without revenue.
- (3) Assume 100% occupancy rate.
- (4) No management expenses.

(5) Estimated property taxes @ 1.45% of total cost (50% commercial @ 1.7%; 50% residential @ 1.2%)
 (6) Estimated construction costs: \$80/sq. ft. (\$860/m2) main flr; \$60/sq. ft. (\$646/m2) 2nd flr; \$25/sq. ft. (\$269/m2) below grade (Ken Hutchinson Arch'ts). Estimated commercial rent for 17th Avenue: \$10-18/sq. ft. net, main flr; \$5-7/sq. ft. net 2nd flr (Ken Hutchinson Arch'ts and P.J. Toole and Cote).
 (7) Estimated land costs: around \$50/sq. ft. (Floen and Sloan Appraisals Ltd).

APPENDIX 4: EST. COST/ WORKPLACE RESIDENCE

(INCL. LEASEABLE SPACE)

TOTAL DEVELOPMENT COSTS:

Land	2,416 m2 @ \$538/ m2	\$1,300,000
Bldg- Com.	1,441 m2 @ \$860/ m2	\$1,240,000
Bldg- Res.	836 m2 @ \$430/ m2	\$360,000
Total Cost		\$2,900,000

SIX UNITS; COST/UNIT:

Land	403 m2 (33.3' X 130' lot)	\$216,600
Bldg- Com.	240 m2	\$206,800
Bldg- Res.	139 m2	\$60,000
Total Cost/ Unit		\$483,400

SEVEN UNITS; COST/UNIT:

Land	345 m2 (29' X 130' lot)	\$185,700
Bldg- Comm.	206 m2	\$177,300
Bldg- Res.	139 m2	\$60,000
Total Cost/ Unit		\$423,000

EIGHT UNITS; COST/UNIT:

Land	302 m2 (25' X 130' lot)	\$162,500
Bldg- Comm.	180 m2	\$155,000
Bldg- Res.	139 m2	\$60,000
Total Cost/ Unit		\$377,500

Notes:

(1) The total building area for commercial use is equivalent in each analysis.

(2) Without having real clients and not knowing their financial resources, it is assumed that a cost of \$483,450/ unit would be feasible financially for each of the six units. The average cost/ unit would be closer to \$422,995 if the leaseable space above the indoor common area was sold as condominiums instead. It is assumed that this cost is equivalent to buying a new house (139 m2), new business premises for one's self (139 m2) and to lease out (102 m2), at an equivalent location.

CHECK WITH ACTUAL BUILDING AREAS:

DEVELOPMENT COSTS:

Land Cost:	2416 m2 @ \$538/m2 =	\$1,300,000
Residential:	1326 m2 @ \$645/m2 =	\$855,000
Commercial:	1965 m2 @ \$860/m2 =	\$1,690,000
Lower Com.:	493 m2 @ \$269/m2 =	\$133,000
Garage:	33 stalls @ \$12,000 ea.	\$396,000
Pool:		\$50,000
TOTAL HARD COSTS:		\$4,424,000
Soft Costs:	5% of Hard Costs:	\$221,000
TOTAL HARD AND SOFT COSTS:		\$4,645,000

Dev. Cost = (Prop. Tax) (Yr. Amort. Factor) (H&S Costs)
 = (1.0145) (.1036) (\$4,645,000)
 = \$488,200

REVENUE:

Commercial:	1965 m2 @ \$183/m2 =	\$359,600
Lower Com.:	182 m2 @ \$86/m2 =	\$15,700
Lower Stor.:	311 m2 @ \$27/m2 =	\$8,400
Residential:	1326 m2 @ \$86/m2 =	\$114,000
TOTAL REVENUE		\$497,700

As a rough approximation, a positive yearly cash flow (revenue less development costs) is possible.

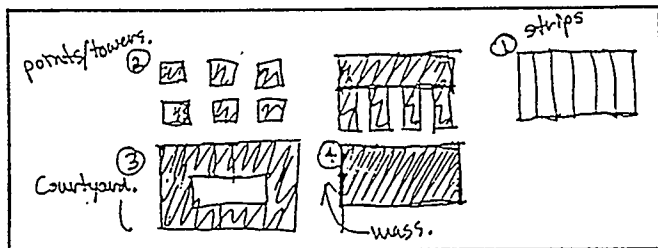
NOTES:

- Residential area includes residential common.
- Landscaping costs for plaza not included.
- Potential revenue possible from parking, plaza and residential common.
- Estimated underground parking costs: \$8,000 - \$10,000/stall (City of Calgary Engineering Dept.); \$12,000 - \$20,000/stall, depending on the depth and amount of shoring required (Read James Christofferson Ltd.).

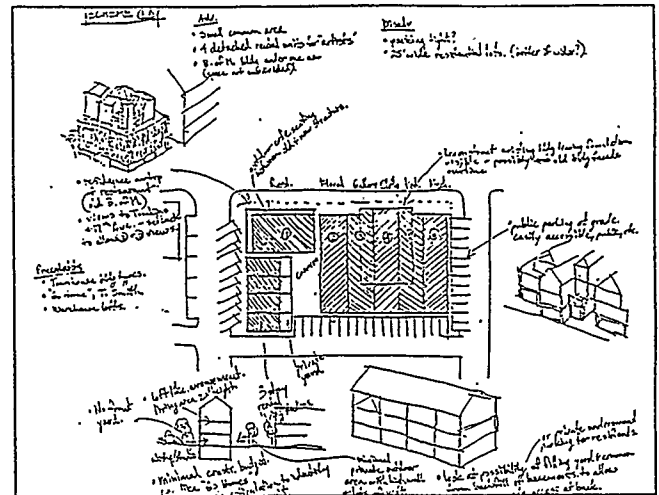
APPENDIX 5: ALTERNATIVE CONCEPTUAL MODELS

Four conceptual models were examined as a basis of organizing the site: (1) strip; (2) point/tower; (3) courtyard; and (4) mass/block. The strip concept follows the traditional development of 17th Avenue with each workplace residence occupying long narrow lots with commercial uses at grade and residential uses above. The point/tower concept consists of individual towers for each workplace residence resting upon a sloping landscaped platform consisting of common rental commercial space (along 17th Avenue). The courtyard concept introduces a common public outdoor space surrounded by commercial uses at grade with residential uses above. The mass/block concept, typical of some recent larger scaled developments along 17th Avenue, consists of a homogeneous massing and facade treatment with commercial uses at grade and residential uses above (access by a centralized entry).

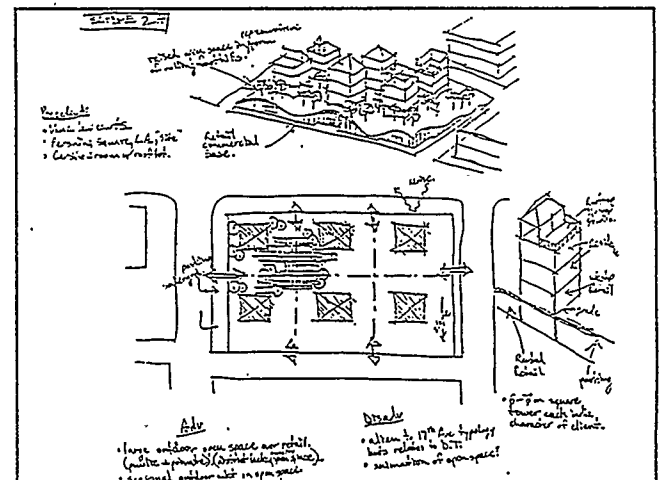
The strip model was eventually selected for its compatibility with the existing context and most equitable division of the site among the competing alternatives. The effectiveness of the point/tower and courtyard concepts deteriorated given the size of the site and the density of development required, and thus were rejected. The mass/block model was also rejected because it poorly addressed the public space and workplace residence relationships.



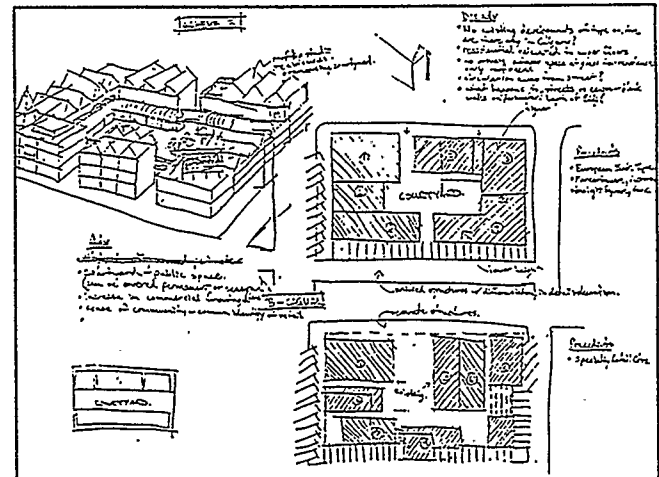
Alternative Conceptual Models



Strip Concept



Point/Tower Concept

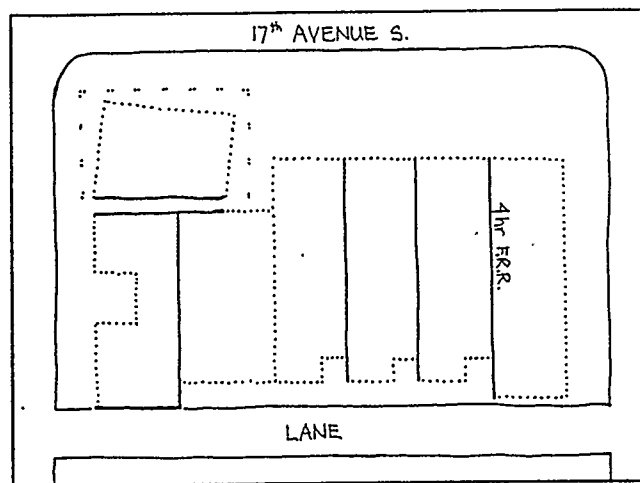


Courtyard Concept

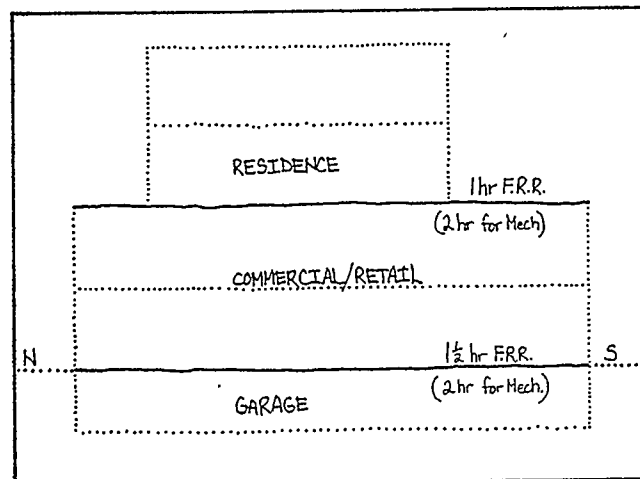
APPENDIX 6: FIRE PROTECTION

This appendix highlights the major requirements of fire protection as suggested by the Alberta Building Code. The underground parking garage is separated from other occupancies by a 1/2 hour fire resistance rating (FRR). Each of the workplace residences at the commercial/retail level is separated from other by a 4 hour FRR firewall of non-combustible construction. Each workplace residence consists of structurally independent 2 hour FRR concrete block walls). At the residential level, each workplace residence is separated from the other by a 1 hour FRR (need not be a firewall).

Within each workplace residence, the residence is separated from the workplace by a 1 hour FRR fire separation. The exception is the mechanic's workplace residence which requires a 2 hour FRR fire separation between the repair garage and other occupancies. However, the Alberta Building Code is not clear with the combination of repair garage and automotive boutique. In the design, it is assumed that wired glass windows would be acceptable in the wall between the repair garage and the automotive boutique (to allow the exchange of views). This assumption is based on the reduced combustible content of the repair garage (flammable materials located in the storage area are separated by a 2 hour FRR fire separation) and any examples in Calgary of automotive businesses with display/reception spaces separated from the garage proper by large glazed windows.



Firewalls



Fire Separations

ENDNOTES

ENDNOTES:

CHAPTER 2: HISTORICAL BACKGROUND AND PRECEDENTS

1. Pahl, R.E. Divisions of Labour, Oxford: Basil Blackwell, 1984. The concepts of work and home in pre-industrial society is summarized in G. Venini, Prospects for Home Based Work in Canada, April 1987.
2. Zeidler, Eberhard. Multi-Use Architecture in the Urban Context, 1983, p12.
3. Jacobs, Jane. The Death and Life of Great American Cities, 1961, and Lewis Mumford. The City in History, 1961.
4. Piano Nobile - The main floor of a house, containing the reception rooms. It is usually higher than the other floors, with a basement or ground floor below and one or more shallower storeys above.
5. "New York Chapter/ A.I.A. Architectural Awards for Unbuilt Projects" in Architectural Record, p60-1, March 1986.

CHAPTER 3: WORKING AT HOME

1. William Atkinson, Working At Home, 1985, p12. Jack Nilles of the University of Southern California's Center for Futures Research, has generally been credited with being the first to notice, promote and publish the trend of working at home. Alvin Toffler became the most famous and influential proponent of the movement when he wrote the Third Wave, 1980.
2. According to a survey by Link Resources of New York, in Home-Office Computing, September 1988, p38 and the Calgary Herald, June 16, 1988, pE4.
3. "Answers Sought On Why People Work At Home" in the Home Office, June 1986.
4. Robert Fulmer, "Planning For The Future" in Managerial Planning, March/April 1985, p52.
5. Andrew Brown, "Even Without High-Tech Help, Many Like to Work at Home" in the Calgary Herald, June 16, 1988, pE4.

6. William Atkinson, op. cit., p25.
7. Ibid, p86.
8. Ibid, p33.
9. Information from the City of Calgary Planning Department, Development Division. The cost of the Home Occupation Development Permit is \$287 (1988) for one year plus the purchase of a business license, generally between \$45 to \$65. Note that the zoning of the site for this project is commercial (C-3) which allows both commercial and residential land uses.

CHAPTER 4: CONTEXT

1. City of Calgary, Connaught/West Victoria Area Redevelopment Plan, 1982 p58.
2. City of Calgary, Cliff Bungalow Area Redevelopment Plan, 1984, p60.
3. City of Calgary, Lower Mount Royal Area Redevelopment Plan, 1984, p59.
4. Jack Peach, Calgary Herald, Saturday September 10, 1983.
5. City of Calgary, Connaught/West Victoria Area Redevelopment Plan, 1982 p24.
6. City of Calgary, Cliff Bungalow Area Redevelopment Plan, 1984, p58.
7. City of Calgary, Lower Mount Royal Area Redevelopment Plan, 1984, p24.
8. Uptown 17 BRZ and RW Consultants in Uptown 17 Market Evaluation and Improvement Program Summary, November 1986.
9. Connaught/West Victoria ARP, op. cit., p23. According to Mary Axworthy of the city Planning Department, the city will begin shortly on implementing angle parking on 16th Avenue, north of the Devenish Building.
10. David Down, et. al., The Avenue: Seventeenth Avenue BRZ Guidebook, 1984, p16.
11. Connaught/West Victoria ARP, op. cit., p10.
12. According to the climate severity index (an

indication of desirability of the climate.
City of Calgary, Calgary in Fact, 1986,
p12.

13. Faculty of Environmental Design Calgary in Winter, 1988, p21, p23 and p24.
14. Faculty of Environmental Design Calgary in Winter, 1988, p19.
15. City of Calgary, Calgary in Fact, 1986,
p12.

CHAPTER 5: REDEVELOPMENT GUIDELINES AND RESTRICTION

1. City of Calgary, Lower Mount Royal Area Redevelopment Plan, 1983, p5, p8.
2. City of Calgary, Land-Use Bylaw, March 1980, p118.
3. Floor Area Ratio: the ratio of gross floor area of the building divided by the gross site area.
4. The price of land along 17th Avenue has decreased in value since the bust of the building boom in the late 1970's - early 1980's, forcing some land speculators to liquidate their holdings or downscale their developments.
5. Lower Mount Royal ARP, op. cit., p10.
6. Ibid, p24; and conversations with Mary Axworthy of the city Planning Department.
7. David Down, et. al., The Avenue: Seventeenth Avenue BRZ Guidebook, 1984, p4.
8. Uptown 17 Market Evaluation and Improvement Program, 1986; conversations with Marjorie Culler (chairperson, Uptown17 BRZ); and David Down, et. al., op. cit.
9. Lower Mount Royal ARP, op. cit., p66.

CHAPTER 6: HISTORICAL

1. Historical facts from Jack Peach, "17th Avenue Has Always Had Its Own Character" in the Calgary Herald, Saturday January 17, 1987; and City of Calgary, Lower Mount Royal Area Redevelopment Plan, 1983, p51.

CHAPTER 7: PROGRAM

1. Since parking requirements vary according to use, some units may require more or less on-site parking stalls. The allocation of "common" parking stalls would be based on the same method as described for revenue and expenses of common property. The calculation of common parking stalls would be based on the requirements for office/retail use. The "lease" of excess stalls between members would be negotiated individually.
2. City of Calgary, Land Use By-Law, March 1980, p45-53.

CHAPTER 8: DESIGN

1. "indoorsing" refers to activities that once took place outdoors which have been gradually regulated indoors through sanitation laws, social reforms, licensing, regulations and advances in technology. For further explanation and background of the term see Grady Clay in "Why Don't We Do It In The Road?" in Planning, May 1987, p18-21.
2. Look at all the shopping malls in Calgary that have "village" in their name, and who try to imitate the historic notion of such an environment.

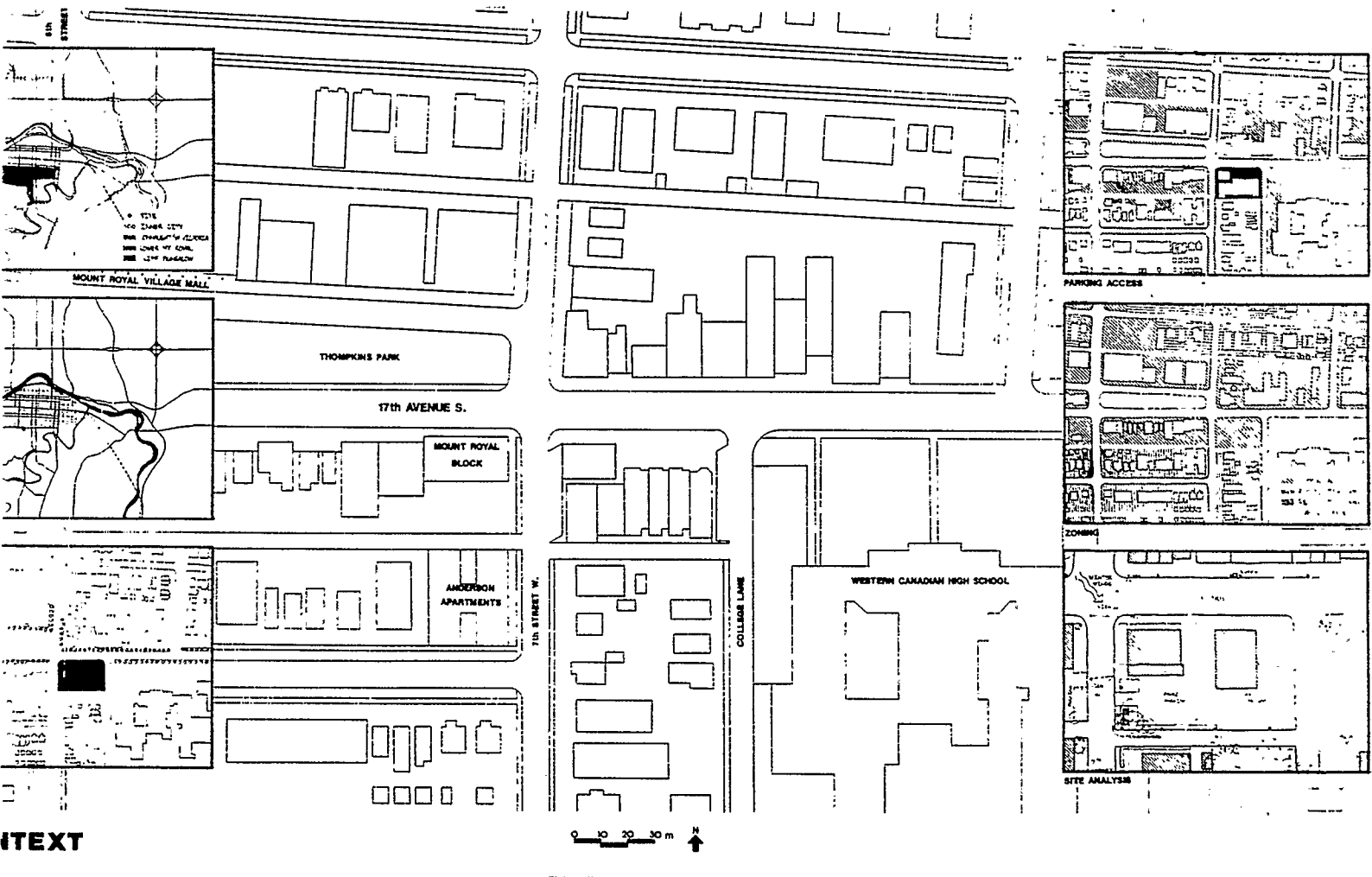
BIBLIOGRAPHY

BIBLIOGRAPHY

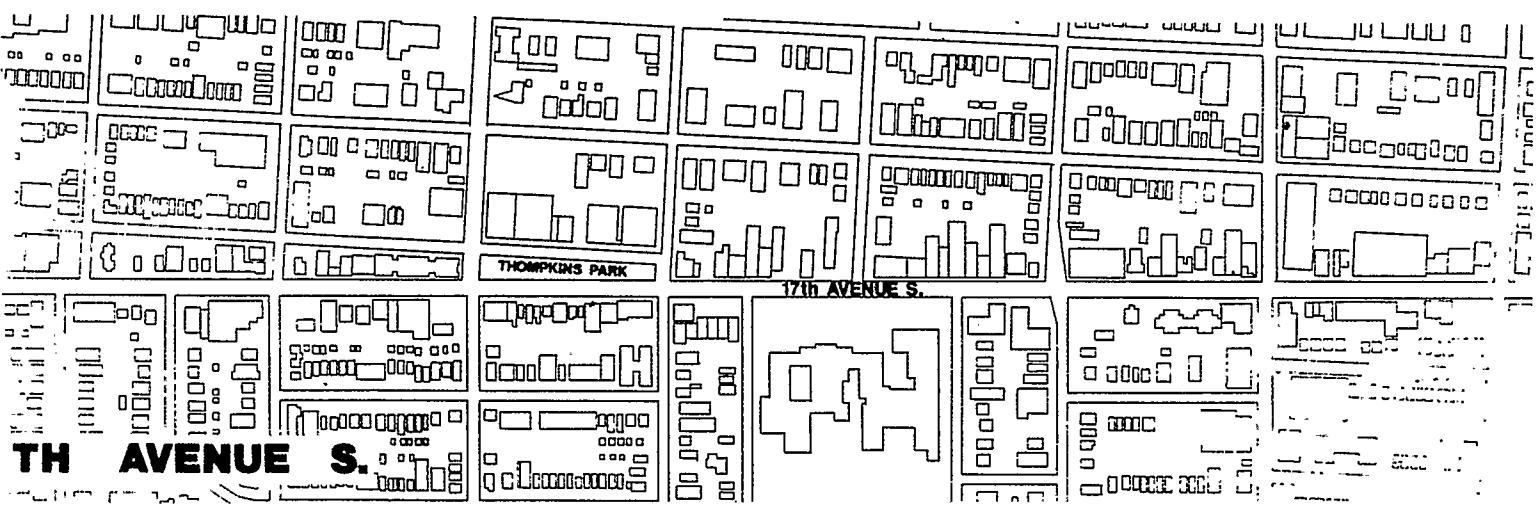
- "Answers Sought on Why People Work at Home" in The Office. vol. 103, p82, June 1986.
- Anderson, Grace. "An Urban Surprise" in Architectural Record. p 120-3, November 1983.
- Atkinson, William. Working at Home: Is It For You? Dow Jones- Irwin: Homewood, Ill., HD 62.7 A85 1985.
- Brown, Andrew. "Even Without High- Tech Help, Many Like to Work at Home" in the Calgary Herald. Thursday June 16, 1988, pE4.
- Cohl, Claudia (ed.). "The New American Dream: Working on Your Own" in Home Office Computing, vol. 6, no. 9, September 1988.
- City of Calgary. Cliff Bungalow Area Redevelopment Plan. Planning Department, City of Calgary, 1984.
- City of Calgary. Connaught/ West Victoria Area Redevelopment Plan. Planning Department, City of Calgary, 1983.
- City of Calgary. Inner City Plan. Planning Department, City of Calgary, 1979.
- City of Calgary. Lower Mount Royal Area Redevelopment Plan. Planning Department, City of Calgary, 1982.
- Contrucci, Peg. The Home Office. Prentice- Hall Inc.: Englewood Cliffs, N.J., 658.041 CON 1985.
- Crystalline Group, Faculty of Environmental Design. Calgary in Winter. The University of Calgary: Calgary, Alta., 1988.
- Down, David, et. al. The Avenue: Seventeenth Avenue BRZ Guidebook. EVDS 701 Document. Faculty of Environmental Design, The University of Calgary, 1984.
- Fenton, Joseph. Hybrid Buildings: Pamphlet Architecture No. 11. Princeton Architectural Press: Princeton, N.J., 1985.
- Fulmer, Robert. "Planning for the Future" in Managerial Planning. vol. 33, p52-3, March/ April 1985.
- Hayden, DeLores. Redesigning the Amercian Dream. Norton Books: New York, N.Y., HD 7293 H39 1984.
- Hewes, Jeremy Joan. Worksteads: Living and Working in the Same Place. Dolphin Books/ Doubleday and Co. Inc.: Garden City, N.Y., HD 2346 U5H48 1981.
- Holl, Steven. "Individual Characterizations" in Lotus International. no. 44, p44-5, (date).
- Hope, Marty. "Entrepreneuers Feel Right at Home" in the Calgary Herald. Monday April 25, 1988, pD1.
- Jacobs, Jane. The Death and Life of Great American Cities. Random House: New York, N.Y., NA 9108 J33 1961.
- Leavitt, Jacqueline. "A New American House" in Women and Environments. vol. 7, no. 1, winter 1985, p13- 15.
- MacDougall, Linda. "17th Avenue Strip" in the Calgary Herald. Saturday, October 24, 1987.
- Mumford, Lewis. The City in History. Harcourt Brace: New York, N.Y., HT 111 M8 1961.
- O'Mara, W. Paul. "Two Worlds: A Workable Subur-

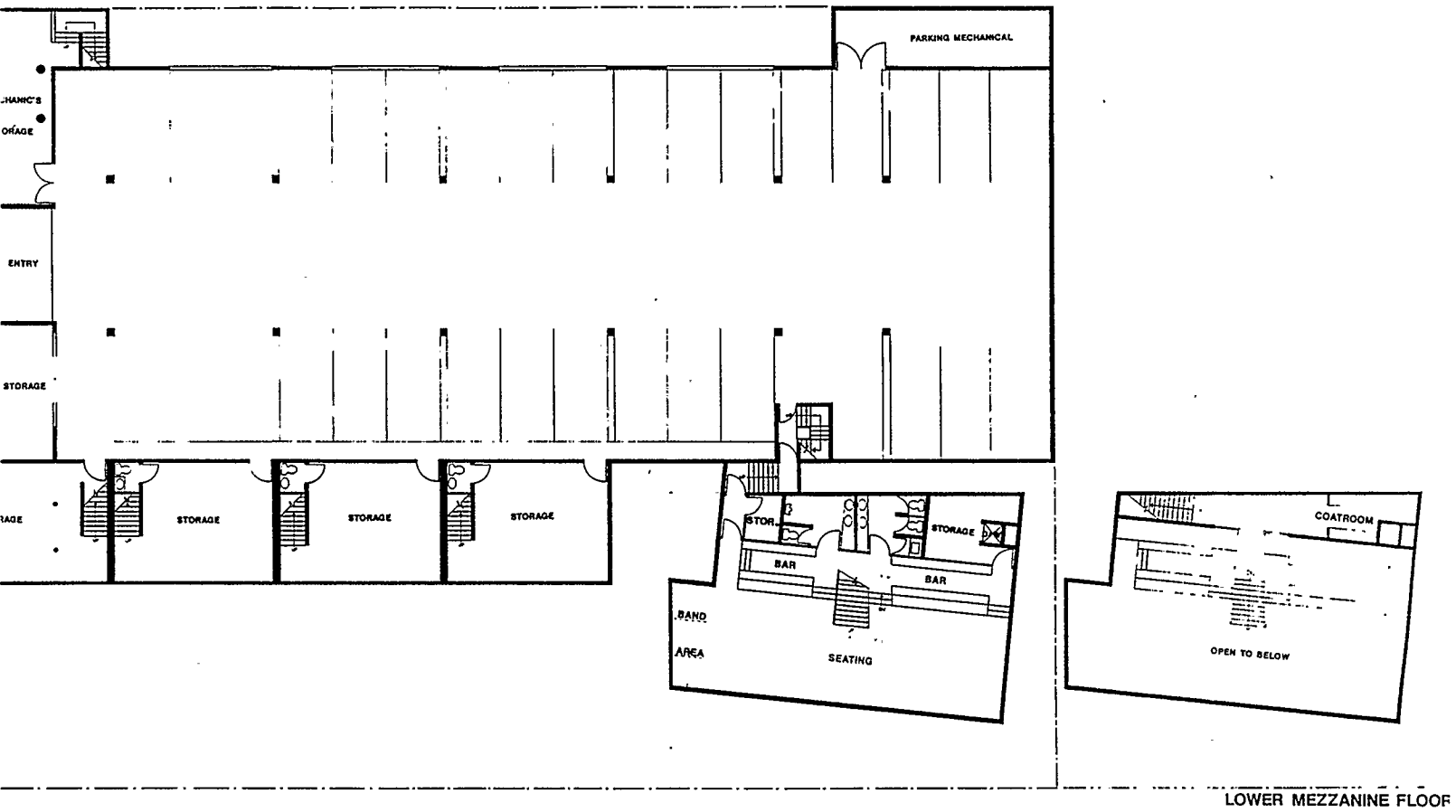
- ban Blend" in Urban Land. vol. 42, p14-7, January 1983.
- Peach, Jack. "17th Avenue Has Always Had Its Own Character" in the Calgary Herald. Saturday January 17, 1987.
- Peach, Jack. "City District Clings to Past and Distinctive Name" in the Calgary Herald. Saturday September 10, 1983.
- Pitman, Beverly. The Working Woman Factor and Urban Structure. Masters Degree Thesis. Faculty of Environmental Design, The University of Calgary, 1985.
- Salomon, I and B. Shamir. "Work At Home and the Quality of Working Life" in Academy of Management Review. vol. 10, p455-64, July 1985.
- Sawchuk, Diane. "Decades of Design Shape Modern House" in the Toronto Star. Saturday March 26, 1988, pE1 & E4.
- Shibata, Tomohiko. "IPS: Combined House and Studio for a Cartoonist" in Japan Architect. p48-52, August 1985.
- Silberstein, Judith and F.W. Benton. Bringing the High Tech Home. John Wiley and Sons: Toronto, Ontario, HD 62.7 S527 1985.
- Toffler, Alvin. The Third Wave. William Morrow and Co. Inc.: New York, N.Y., 1980.
- Uptown 17 BRZ and RW Urban Consultants. Uptown 17 Market Evaluation and Improvement Program Summary. November 1986.
- Venini, George. The Prospects for Home Based Work in Canada. Masters Degree Thesis, The University of Calgary: Calgary, Alta., April 1987.
- Zeidler, Eberhard H. Multi- Use Architecture in the Urban Context. Van Nostrand Reinhold Co. Inc.: New York, N.Y., (EVDS) NA 4177 Z431 1983.

DESIGN DRAWINGS



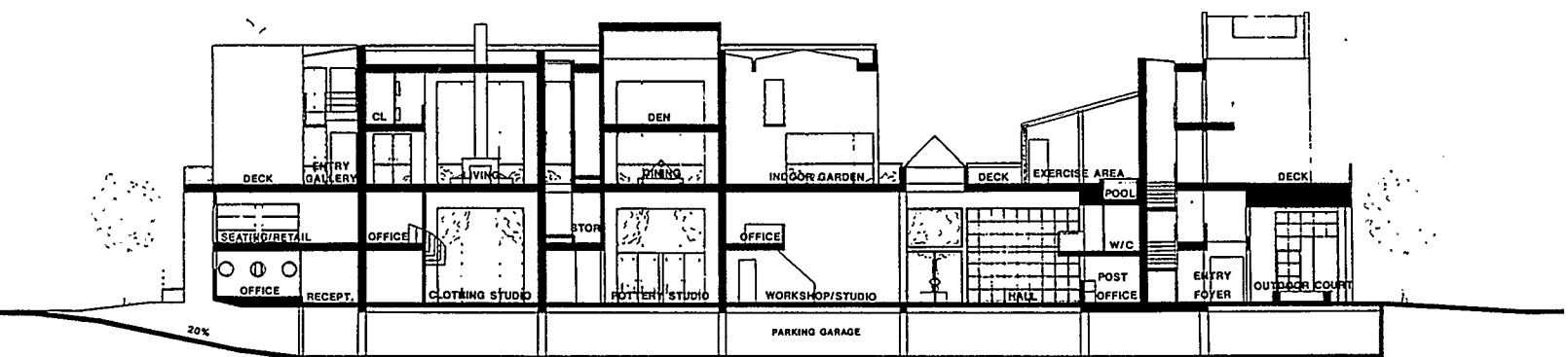
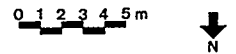
TEXT



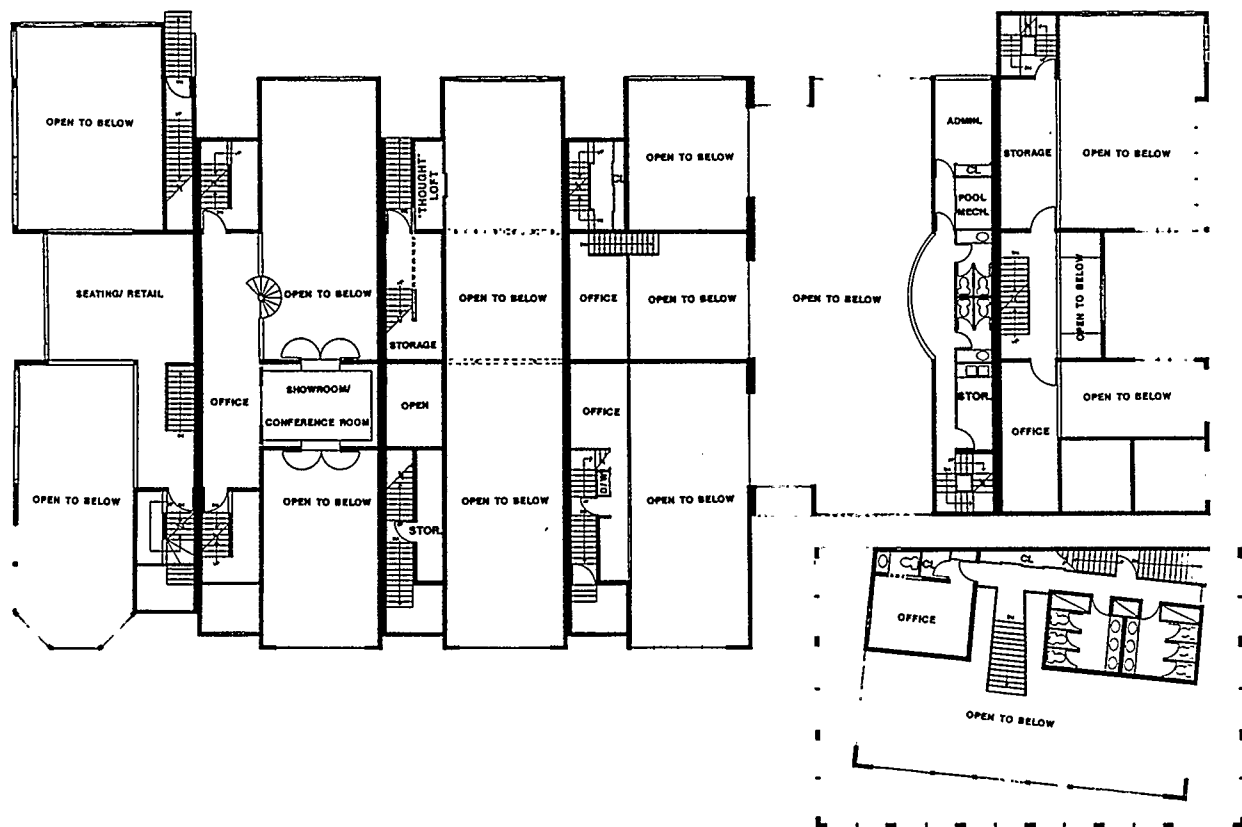


LOWER MEZZANINE FLOOR

OWER FLOOR



SECTION A-A



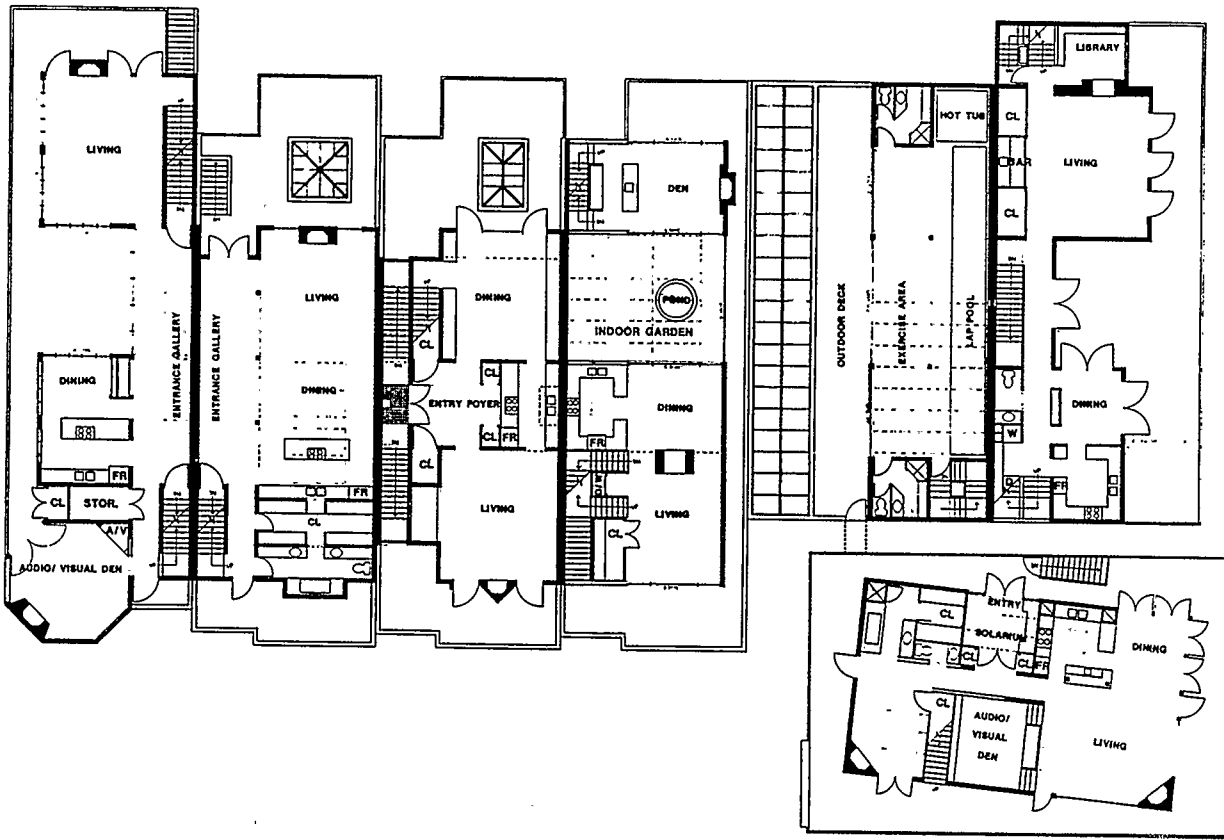
MEZZANINE

0 1 2 3 4 5m



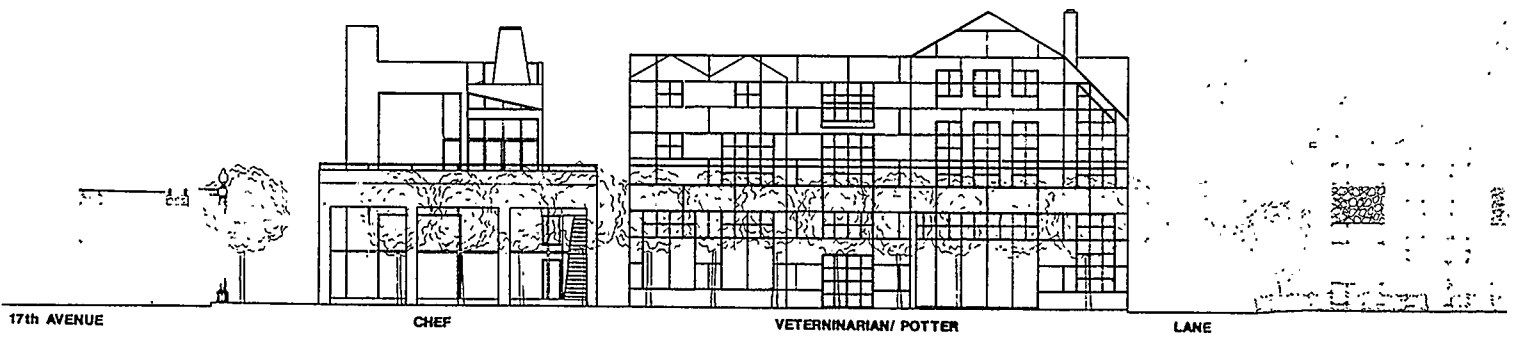
SOUTH ELEVATION

COLLEGE LA

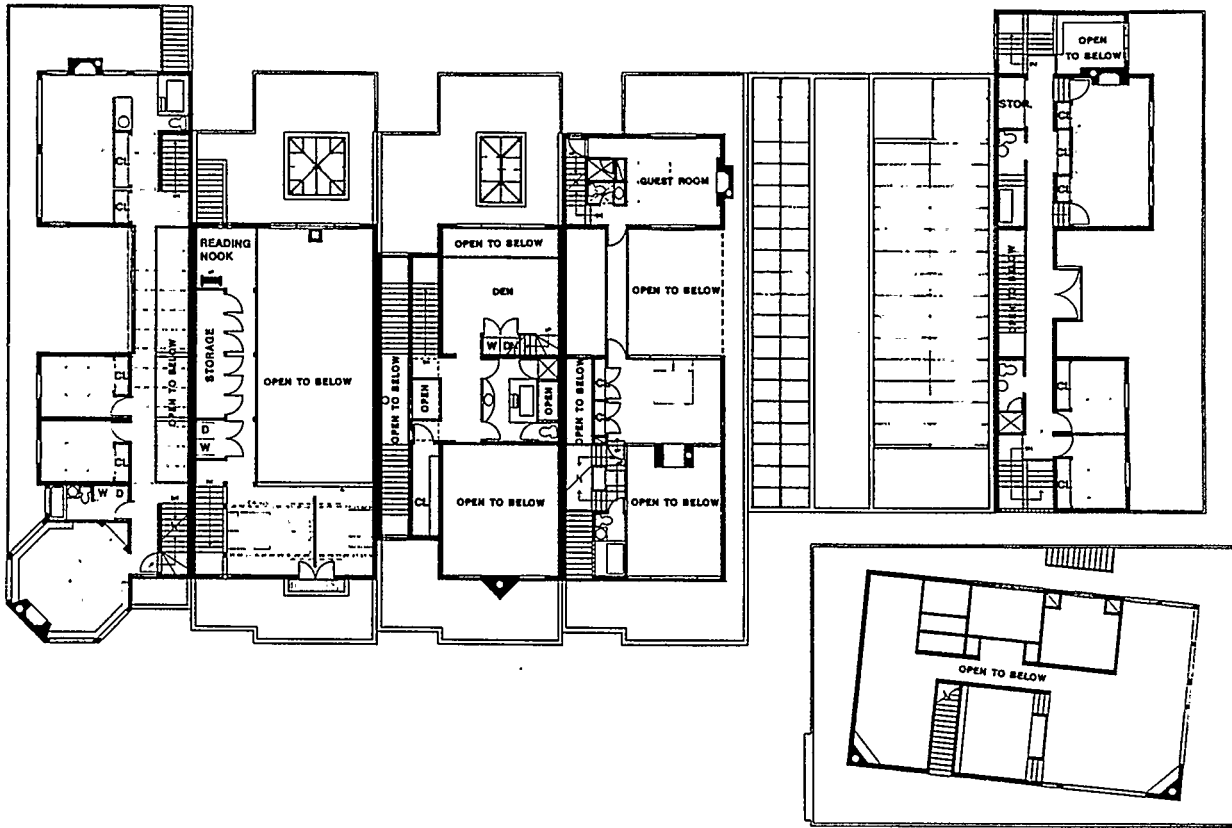


1ST FLOOR

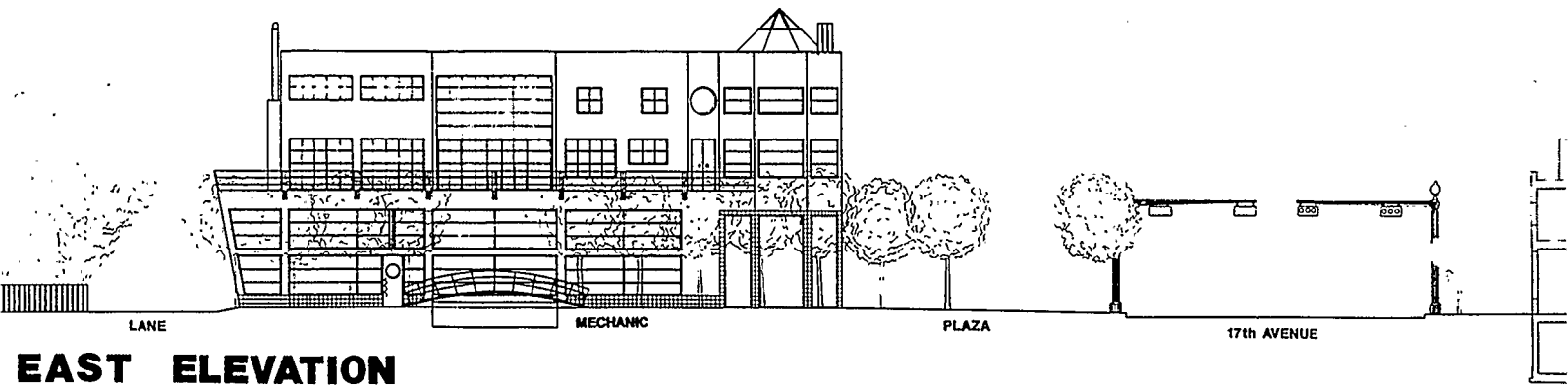
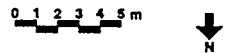
0 1 2 3 4 5 m



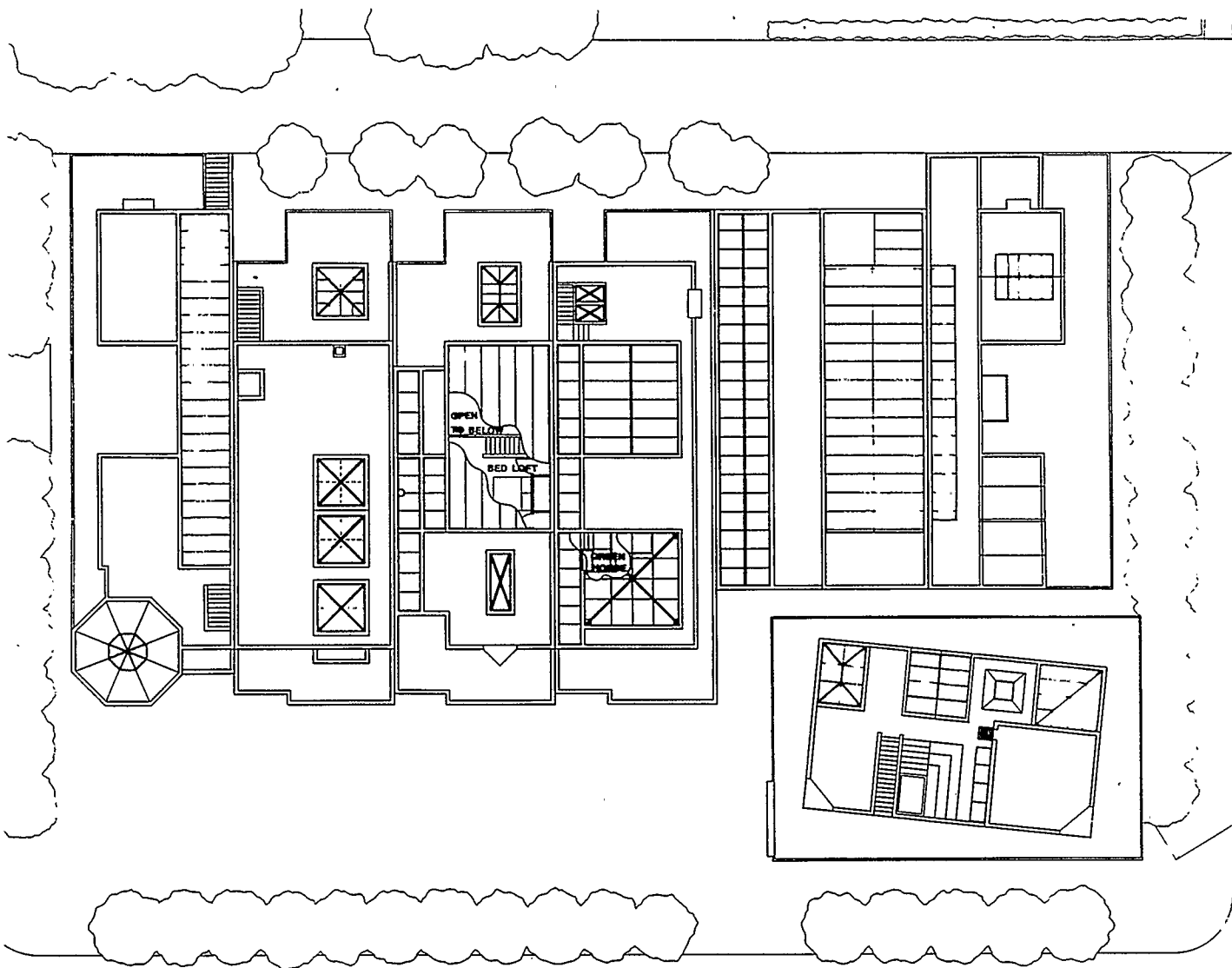
ST ELEVATION



FOURTH FLOOR



EAST ELEVATION



TH / ROOF PLAN

0 1 2 3 4 5 m



ROSS FLOOR AREAS:

ER	1542 m2	
N	1488 m2	
Z.	477 m2	
LRD	938 m2	
URTH	365 m2	
FTH	23 m2	
TAL	4833 m2	(52,000 ft2)
TE	2416 m2	
A.R.	1.4	