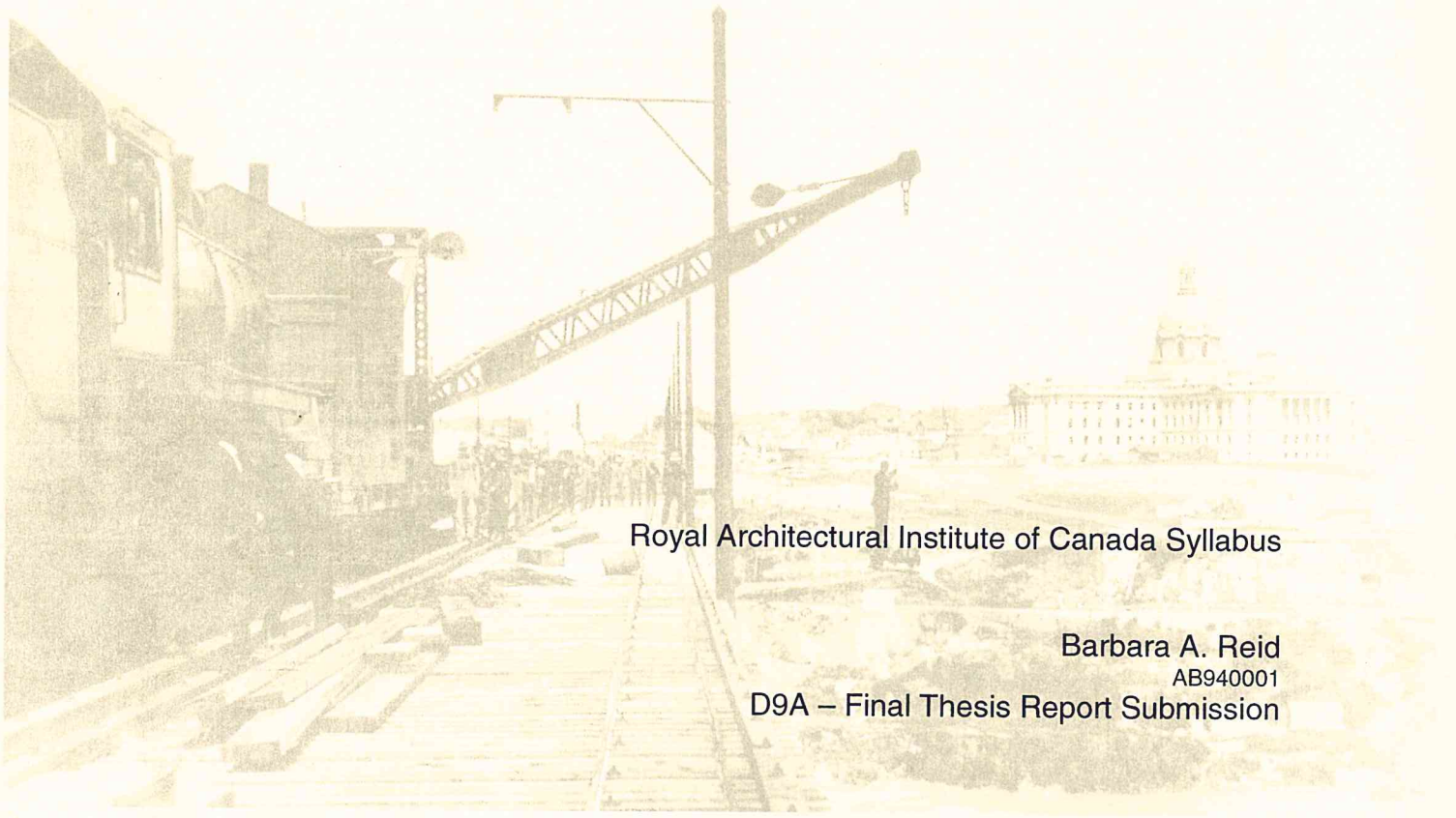
The Technology Revolution – "Back to the Future"

Transforming The Retail Power Center in Today's Digital Age



Royal Architectural Institute of Canada Syllabus

Barbara A. Reid
AB940001

D9A – Final Thesis Report Submission

Submitted to:
Advisor - Marty Hodgson, MAAA, MAIBC, MAA, MRAIC, LEED ACC. Professional
Mentor – Kees Prins, MAAA, FRAIC, LEED ACC. Professional
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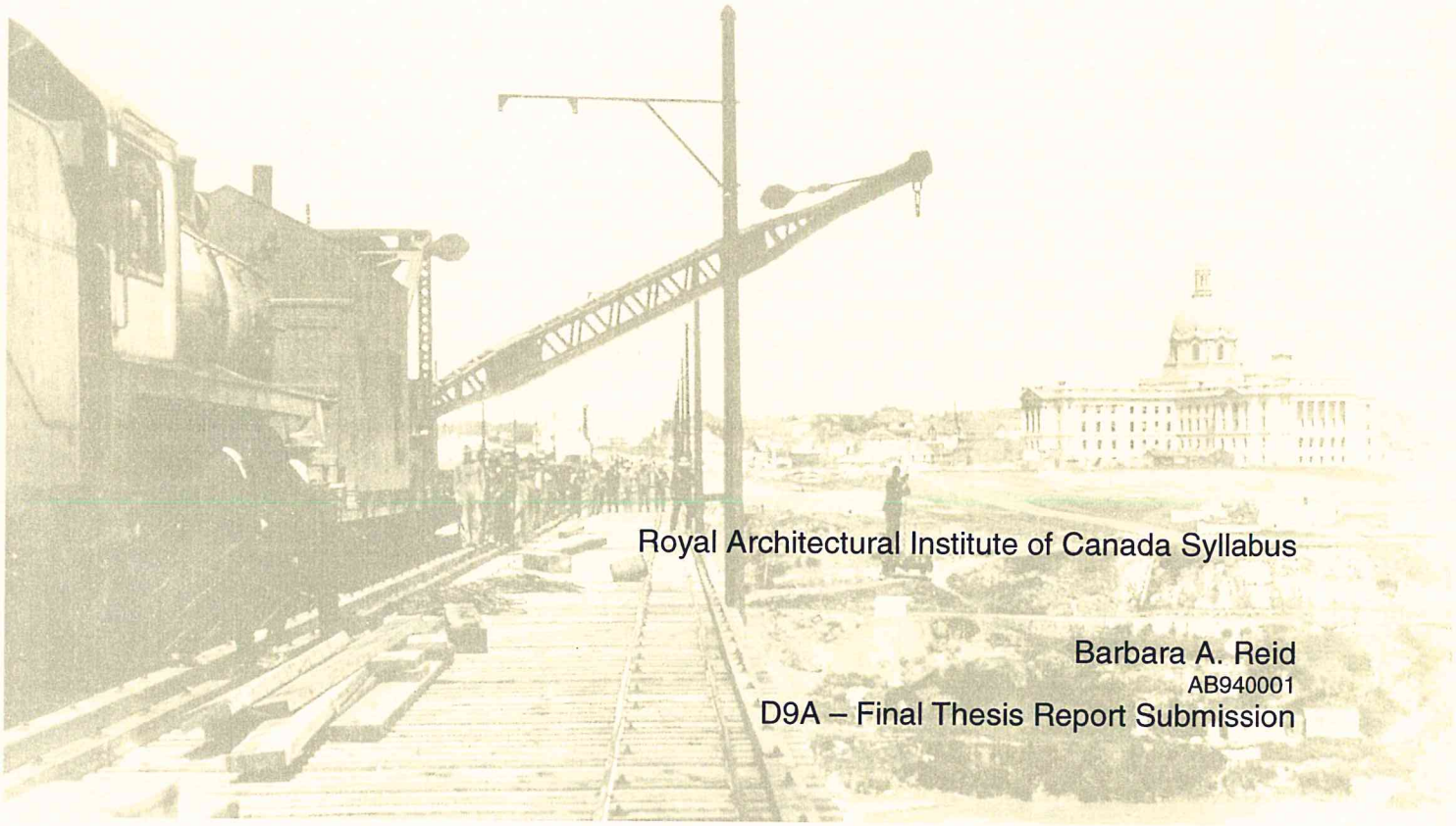

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RAIC Syllabus Thesis D9

Barbara Reid
AB940001
Fall 2005
Edmonton chapter

The Technology Revolution – "Back to the Future"

Transforming The Retail Power Center in Today's Digital Age

Introduction

Technology has created the Digital World that we now live in. The Digital World is what society has evolved into from the repercussions of technological influences. As a result, cities are changing in response to the needs of it's' citizens. Historically, North American cities in the nineteenth century had emerged along routes of transportation. These locations were destinations for people to conduct commerce, create industry, and interact with one another. As time went on, technology progressed and cities continued to change in order to suit society's needs. Now, we are on the brink of great changes in urban planning due to the demands of the Digital World.

Illustration 1, City of Edmonton Archives
Main Street Edmonton Jasper Avenue, 1910
Reference: EA10-1010

Thesis Statement

Technology and its effects on social values in our "Digital World" are causing a shift in today's retail developments where consumers are placing importance on living, working, and shopping in an environment that emulates neo-traditional reflections of early 20th century town centers.

Thesis Abstract

The purpose of this paper is to understand the influence technology has had on the city, specifically the Retail Power Center. An anaylsis will begin with a review of how technology has shaped suburbia and the retail power center, followed by the transformation of the retail power center into a community.

The design component will consist of an urban intensification study of Edmonton's largest retail power center, South Edmonton Common, into a new community with neo traditional ideals. The components of this urban type will be taken from the research paper and implemented into a "new" SEC design study. Currently, South Edmonton Common is congested with vehicles and "big box" superstores and retail units. These issues will be analyzed and re-modeled into a community formulated by the values of today's Digital World.

Presentation Format

Upon completion of the research component, a master plan of the site will be developed. An area of approximately +/- 5 acres will be selected from the master plan. Within this area, a new big box building type will be programmed and designed that will introduce residential and parking use.

Illustration 2, South Edmonton Common today as a retail hub.

Submissions: (all dates are approximate and subject to change)

Draft Report Submitted – February 2006

Final Report and Program Submitted – December 2006

Presentation #1 (Initial Presentation) – April 2007

Presentation #2 (Interim Presentation) – June 2007

Presentation #3 (Interim Presentation) – September 2007

Final Presentation – December 2007

Thesis Committee:

Advisor: Marty Hodgson MAAA, MAIBC, MAA, MRAIC

Mentor: Kees Prins MAAA, FRAIC

Studio Coordinator: Grant Moore MAAA, MRAIC
Avery Temofychuk MAAA, MRAIC

Alberta Regional Coordinator: Garry D. Milton FRAIC

National Director: Jay Hiscox MRAIC

1.0

Introduction

1.0 Introduction

Technological influences are having profound repercussions on the evolution of our society. As a result, Cities are changing in response to the needs of it's' citizens. In the 19th century, cities, towns, and rural hamlets evolved due to the onset of the industrial revolution. With the technical innovations of rail, automobile, steam shipping, telegraph, came a change in the social and economic reality of these cities. "Telegraphs dubbed "the Victorian Internet" allowed a multiplicity of places by removing the monopoly on information from the unique center (and) allowing news, fashions, and trends to flow far more quickly from place to place."[1] Following the industrial revolution, two models of urban growth emerged that are distinctly different from one another. The first model termed "the traditional neighbourhood" is recognized by its "mixed use, pedestrian friendly communities of varied population, either standing free as villages or grouped into towns and cities."[2] The second model, known as "suburban sprawl", is "the standard North American pattern of growth, (which) ignores historical precedent and human experience. It is rational, consistent, and comprehensive. It is an outgrowth of modern problem solving: a system for living."[3] Suburban sprawl was a result of individuals obtaining cheap new homes that cost less than paying rent, and highway programs that made automotive commuting affordable and convenient for the average citizen. As suburban sprawl evolved in North America, so did retail. The retail power center became the bi-product of an auto dependent society. Today, there is a revival of neo-traditional standards in metropolitan communities. Sub-urban areas are

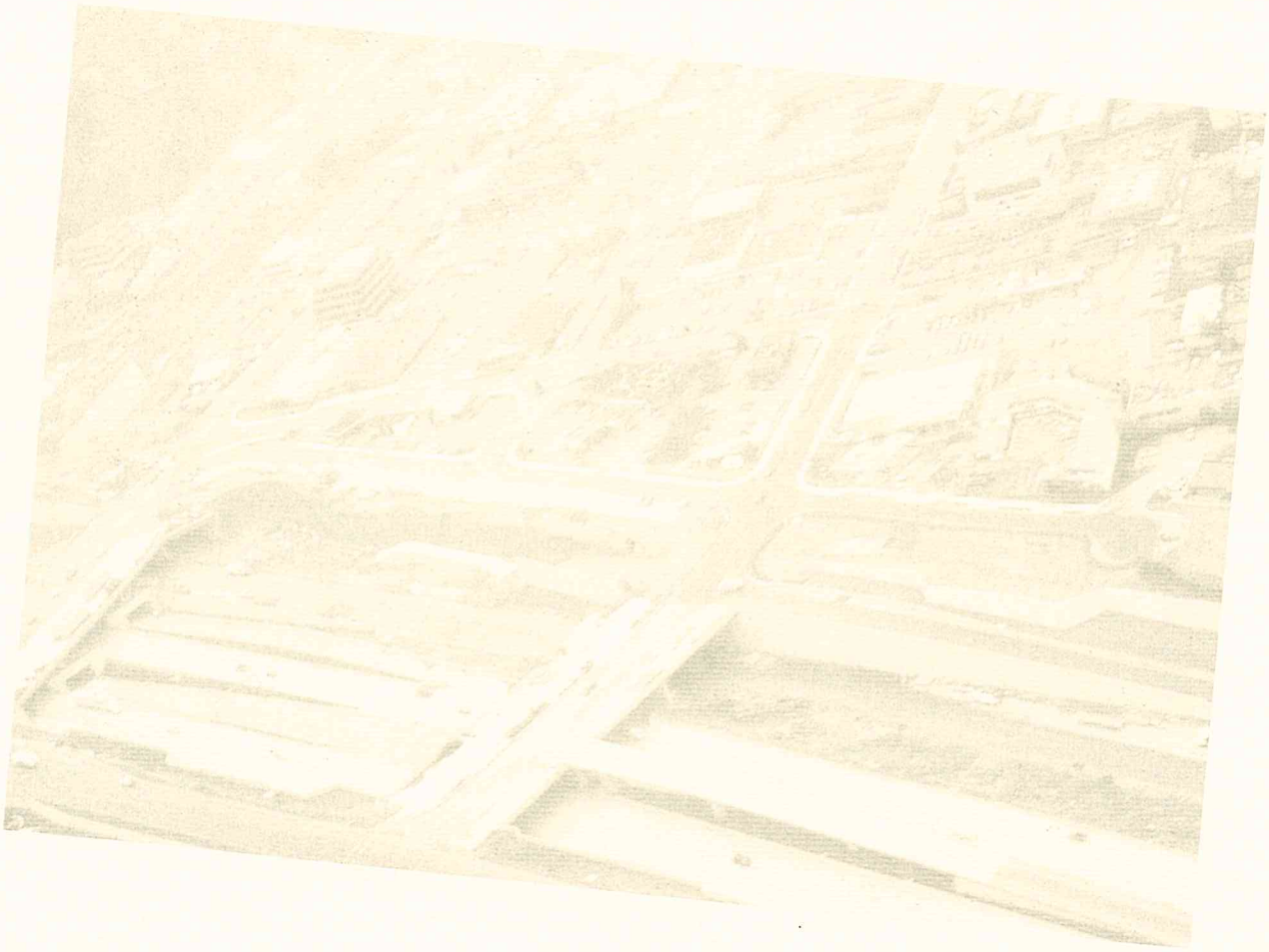
finding themselves faced with the dilemma where because of technology, they are now becoming independent from their transportation linkages. Citizens in today's Digital World are looking at changing their built environment to reflect design principles found in traditional neighbourhood planning so that they may re-connect with one another and still have access to all that technology has to offer without leaving their locale. ***Technology and its effects on social values in our "Digital World" are causing a shift in today's retail developments where consumers are placing importance on living, working, and shopping in an environment that emulates neo-traditional reflections of early 20th century town centers.*** Technology is now effecting ones decision of where to live, the purpose of ones industry, and revising their skills to focus more on processing information in high density locales. The retail power center, which has been shaped by technology, is to be redeveloped to reflect this new social trend. "The world is essentially a vast smorgasbord in which various locales compete for (consumers) affections and attention."[4]

Part 1 – Theory

2.0

The Effects Technology has had on Shaping our Suburban Landscape -

"Highlights of the Perils Associated With Suburban living"



2.1 Technologies Influence on Sprawl

If we had the opportunity to create our own utopian community, many of us would build a place that has work, shops, and amenities within walking distance from where we live, a place with a strong neighbourhood network that has public spaces that encourage social interaction, a place that put simply, focuses on people. Historically technology has shaped our urban landscape. We have lost focus and have planned urban areas to support technology rather than using technology to enhance and support our urban spaces. As cliché as it may sound, our urban planning has become encumbered by technology. Individuals should be reaping from the benefits of technology rather than being dictated by it. It may seem absurd to think of a place that can abate our desires for a peaceful country home with city amenities within walking distance but it is possible. Ironically pre-war era views of suburban living supported this thesis. Suburbia was once revered as an idealistic way of life while city living was condemned. Technological innovations helped bring suburban living to the masses. Technological innovations have lead to successive changes in modes of public and private transportation. Starting with the horse-drawn omnibus in the 1820's to electrified streetcars and subway trains, to high-speed suburban railways and most overwhelmingly the automobile and its paraphernalia of highways, expressways, bridges and interchanges. "Simultaneously, a 41,000 mile interstate highway program, coupled with federal and local subsidies for road improvement and the neglect of mass transit, helped make automotive commuting affordable and convenient for the average citizen."[5] Suburban living

encouraged home-life and work to be carried out in two distinct places great distances from one another. Culturally, it enabled social classes of people to be tidily sorted into its own homogeneous neighbourhood.

Each year new cities or communities, referred to as edge cities, are created by technologies most popular contribution, the automobile. There is a lack of sense of place with little pedestrian life and even less civic identification in these communities that are connected by overtaxed networks of roadways. In North American cities, the worst traffic is not found downtown, but rather in the surrounding suburbs where "an edge city chokes highways that were originally built for lighter loads."[6] "The car and the freeway have become the essence of the regional city."[7] The automobile has devastated older cities by destroying streets that were originally designed to serve streetcars. These streets provided sidewalks for window shopping and elaborate entrances that were scaled for the pedestrian. Buildings had once defined streets and public spaces. Today, streets now are the definitive factor in misplacing pedestrians underground or in overhead walkways by the widening of streets and the placement of traffic arteries through cohesive neighbourhoods. "As highways have taken over, the tightly woven fabric of urban streets has been progressively destroyed."[8]

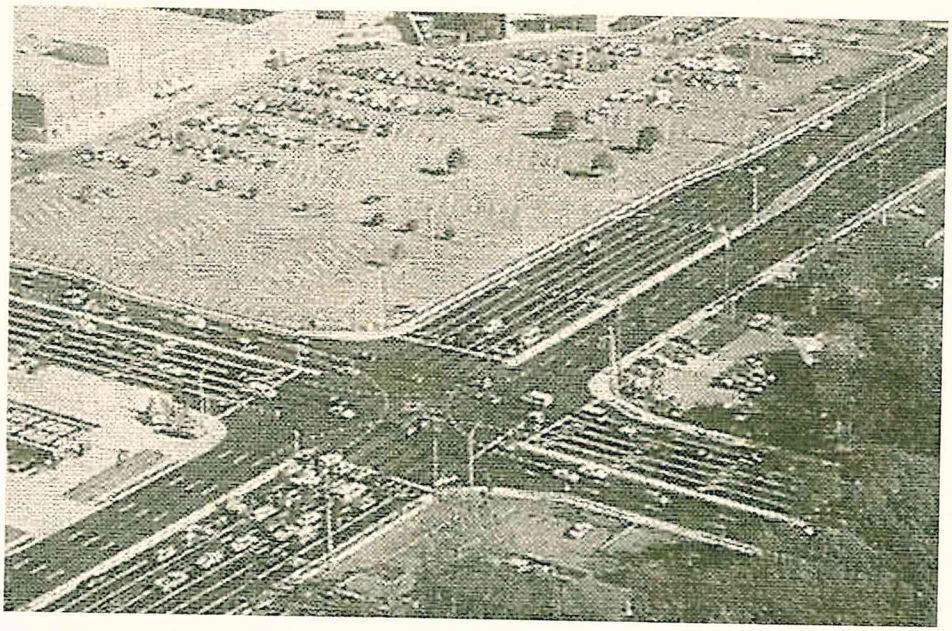


Illustration 1[9], segregated zoning has increased our dependency on the automobile leading to larger and more diverse roadways and arterials. The thesis is not to abolish the car, which mixed use zoning will not do, but rather decrease our dependency on the car and re-focus our priorities towards creating and developing vibrant communities.

2.2 Sprawl Changing Retail

Technological advances in the twentieth century caused dramatic changes for retail and its role in the city. Due to technology and its influence on transportation, new commercial hubs were able to multiply across the country. Stores started to help "define the geographic hearts of the towns and cities."[10] In the late nineteenth century the department store acted as a social theatre where all technological innovations took place in the store itself rather than on the street. "Such 'urban cathedrals of commerce' attracted crowds of shoppers by setting up brilliantly lit display windows with artfully decorated mannequins. It was street theatre of a new kind and anyone could attend."[11] Eventually, as technology progressed and the population moved to the suburbs, department

stores and other retail establishments expanded their operations from central city business districts to suburbia. As shoppers relocated to suburbia, merchants followed and established their shops in the suburbs.

Unlike their predecessors that had planned and set aside sites for corner "mom and pop stores", the new suburbs excluded incorporating stores into their residential planning. Stores were therefore required to develop in their own locations. They placed themselves adjacent to the automobile, along wide high-speed collector roads that ran between housing clusters. They pulled back from the street and constructed large freestanding signage to draw people in off of the high-speed interstates. The now ubiquitous strip shopping center continued to evolve its format of grouping and scale, and finally bringing rise to today's retail power center. The Wal-Mart's and other mass discounters have arranged themselves into anonymous power centers. People are price conscious in their shopping which has encouraged huge stand-alone warehouse stores, such as Costco, to prosper. Labour costs in the warehouse stores are "roughly 5 percent of sales, compared with 8 to 10 percent in a supermarket and 14 to 18 percent for a conventional department store."[12] With the help of technology, specialty chains that include restaurants, are multiplying in their faux environments, ranging from Italian pizzerias to Wild Western towns. The "themeing industry" is gaining momentum where retailers try to up the ante on one another. Merchants try to falsify a sense of place by creating an experience that is completely detached from the surrounding geography. These themes soon become predictable places that offer comfort to a customer that is seeking a sense of

place. They are rapidly duplicated nationally, Starbucks, Boston Pizza, East Side Mario's. "Nothing remains authentic for too long-our efficiency drive leads us to duplicate them, and eliminate the authenticity."[13]

Illustration 2 and 3. An example of the Restaurant themeing industry that is duplicated nationally in Mega Power Centers. Compare the similarities between the illustration above of the Boston Pizza Restaurant in Camrose, Alberta to the Boston Pizza Restaurant below in Fort Saskatchewan, Alberta.

2.3 Urban Zoning Nightmare

Suburban planning has metaphorically 'backed itself into a corner' and has chosen to ignore the problems associated with single use land zoning. We are currently in a restrictive state where we have to drive our car to get to any destination outside of our residential umbrella. Land use-zoning needs to be modified to support alternatives to the automobile. Single zoned districts are the result of a car-orientated society. Cars are the by-products of technology and with technology naturally progressing and producing more and more cars it has become standard practice to continually plan developments the same way as one has done for decades. Residential areas, business parks, commercial retail centers have traditionally been isolated from one another due to segregated zoning, linked only by strips of arterial roadways and highways. "A typical contemporary zoning code has several dozen land-use designations; not only is housing separated from industry, but low-density housing is separated from medium-density housing, which is separated from high density housing. Medical offices are separated from general offices, which are in turn separated from restaurants and shopping."[14] Segregated zoning is considered unnecessary by some because the evolution of the manufacturing process and the control of pollution that have made industry zones safe areas to have neighbourhoods. Up until the 1930's, North American town planning was based upon history, aesthetics, and culture.

As technology has continued to advance, it has created the era that we are now in, the digital age. We are evolving to a point where our ability to

function during the day does not depend solely on the automobile. People want to be presented with a choice to choose whether they want to walk, bike, use a transit system, or drive their car. A way to achieve this is to introduce mixed-use zoning into existing single zoned districts.

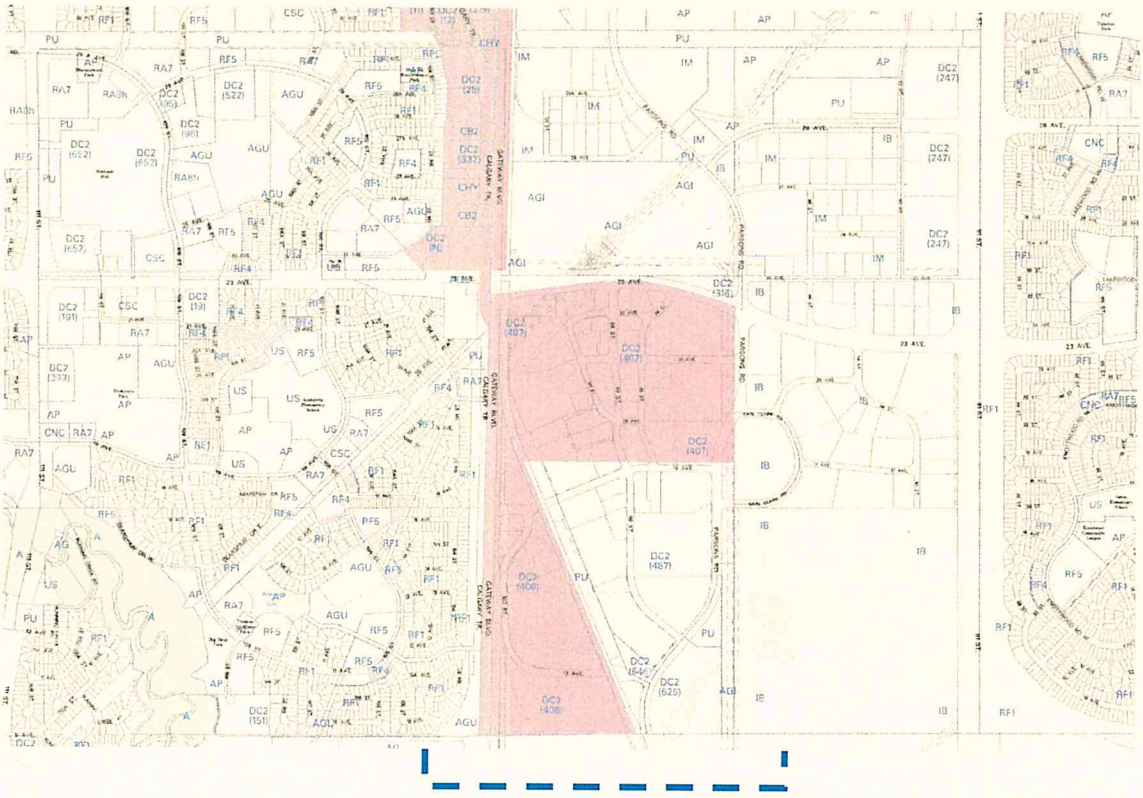


Illustration 4[15]. City of Edmonton Land Use Zoning map, north is upward, which depicts single use zoning restrictions at South Edmonton Common, Edmonton, Alberta, and at its periphery. SEC is denoted as a site-specific development control provision that is primarily commercial use. To the West of SEC, parallel to Calgary Trail, is a high concentration of single detached residential housing. To the East of SEC is the Alberta Research Park noted as an industrial business zone and to the North of SEC is an industrial reserve zone. Each area is highly segregated offering single use designations. The research parks, business enterprise zones, industrial reserves, and commercial centers are not contusive to the pedestrian. They have been shaped and manufactured by technology, the automobile.

3.0

Living Digitally in Suburbia –
"Back to the Future"

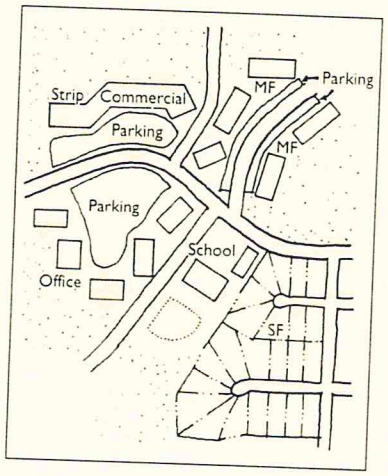
3.1 Digital Living Offering an Opportunity to Change

Technology today is obscuring ones sense of reality, place, and geography. It is allowing individuals the flexibility to locate themselves and their companies anywhere. The development of a region has become increasingly dependent on the decisions of the persons who want to locate there. People are becoming what one analyst has called very sophisticated consumers of place.[16] Distinctions between places are becoming more important than ever. Technology is freeing us from our confines. People who were once unable to work out of the home now can due to digital transmitting. Individuals can now interact in 'real time' with persons thousands of miles away. Distances set by our geography are increasingly becoming blurred. Places are evolving into areas that have to essentially sell and promote their districts with the hope of finding a buyer.

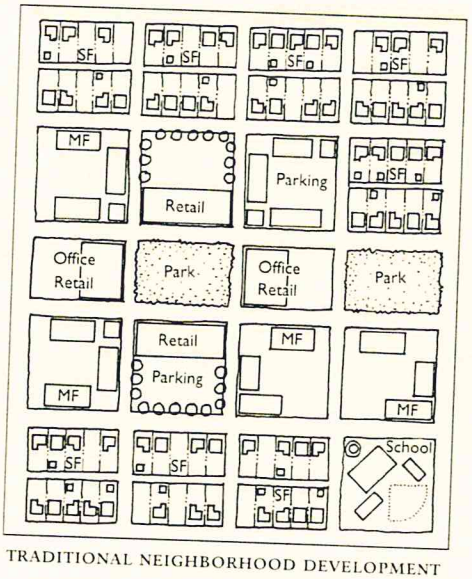
The era of single zoned districting has reached its end. Regions that have been strictly singularly zoned for decades have to start catching up with technology and begin offering opportunities that will make places more attractive to people in today's digital era. We need to revisit commercial power centers and learn how to infuse them into our suburban communities. They need to be integrated into everyday commonalities, combining shopping with our work and leisure time. Today's digital work force "encompasses a whole host of more subjective skills more suited to the natural advantages of dense urban areas."[17] Technology has reinvented past job environments into lifestyles that allow greater flexibilities. Riding a bike or walking to work enables a natural

engagement in recreational activities. "In the twenty-first century, and even beyond, communities can only survive and prosper by being something more than soulless zip codes of brick and glass interconnected by fiber optic cables. And they can be more only by fostering a sense of connectivity-in human bonds, not just electronic links-between the various communities, businesses, and neighbourhoods."[18] Human behaviour is complex and unpredictable therefore planning for a successful social environment may be more difficult than planning for a physical one.

It is important to start intensifying suburban land uses. Technology will set the scale of our communities as they evolve into places that are not dependent on the automobile. The most obvious place to start is in retail power centers since retail has been historically proven to constantly change with societies needs. The argument that an individual's space and privacy would be encumbered is false. Integrating greenbelts would bring country living to residences complete with amenities. The recent multiplying of home-based businesses is changing the suburban work pattern and the meaning of the suburban residence. "The real challenge is not to do away with suburbs, but to adapt them more effectively to changing needs and circumstances and to changing public attitudes and expectations about suburban development, suburban environment, and the suburban way of life."[19]



CONVENTIONAL SUBURBAN DEVELOPMENT



TRADITIONAL NEIGHBORHOOD DEVELOPMENT

Illustration 5[20]. Land diversity is a common characteristic often found in traditional town planning that is absent in conventional suburban developments today. Traditional town planning has common land separations that act as connections between uses that are common and direct.

3.2 Why Retail? Retail = Change

Retail traditionally has changed to reflect the needs and trends of society. Currently, North America is in a technological influenced era aptly named the

Digital Age. We are evolving into a culture that is becoming dependant on ones personal computer. The personal computer for many is now competing with our automobile dependency. As technology rapidly progresses and re-defines society's values, retail responds by reflecting the change and revising their retail type. Technology has set retail in a state of quandary where presently there are three trends in mass retailing, the power center, the street-retail experience, and the virtual mall or e tailing. These three trends are synonymously competing for our cultures affections.

It is estimated that in the United States and Canada, 20 million people buy products and services on the Internet. This group can afford the technology and does not represent the remaining 280 million people in both countries combined who don't use e tailing. Use is growing steadily as more retailers convert to e tailing as a means of conducting their business. The prime factors that have limited the popularity of e-tailing is ones natural desire to see and feel the merchandise, the social experience and entertainment value, and the reality that many low-income families that shop at warehouse stores, e-tailing's strict competition, do not have Internet access. The solution is to evolve the current power center into an assimilation of the three retail types integrating mixed use. The dissemination of retail today is stigmatizing cultures into categories that are separating one economic group from another.

Retail power centers today are in their hyper-suburban form. They offer 100 percent auto orientated accessibility, are mega-scaled, single use, and remote. Their massive size draws from a market area as large as seven miles.

Their value pricing and convenience, automobile orientated, has cannibalized the locale hardware, grocery, drug stores that offer death to historic Main Streets and older local stores. It is important to recognize that these large centers popularity is due to their low-income family clientele. Most of the lower-income households that now shop at the power centers are not on the Internet. When they do get there, a redevelopment of the power center will need to occur.

3.3 Back to The Future

The traditional American town will likely never resurge. We cannot simply return to a time where people walked, the shopkeepers lived upstairs, and neighbours were all on first-name basis. But by integrating historical planning principles such as walkable communities where there is a strong local identity and festive public places are possible. These are design principles that are both timeless and contemporary in traditional American town planning and create a sense of place citizens in today's digital age are striving for. One must remember that only certain traditional ideologies apply to today's digital age. Focus must be made on factors such as transit, bike routes, allowing car access, mixing commercial, institutional, civic, and residential. A local example of a community that offers a walkable neighbourhood is Terwillegar Town, Edmonton, Alberta. It is undeniably a step in the right direction with regards to traditional neighbour hood planning. Its primary focus is on residential single family housing units that have been scaled to the pedestrian. They offer front porches and place vehicles in back alley garages, incorporate parks, and strip mall shopping

accessible by foot. This development has forgone the opportunity to create a truly mixed-use environment. Single use zoning restrictions have manipulated this development into a hybrid of suburbia. It began to recognize the need for human scale, but it forgot to encapsulate human needs and the characteristics of place and culture that has not changed with technology.

Accurate traditional urban planning principles consist of mixed-use, walkable neighbourhoods with the scale of the street and building recreated into places for the pedestrian. We need to modify these planning principles to suit the needs of today's digital age. The automobile, which has been technologies biggest contribution to shaping suburban communities, will always be a part people's life, but it will be constrained and balanced by changing street patterns and land use alternatives. The traditional walkable street would be a practical solution for people who require walkable mobility. These individuals are typically parents with their children, the elderly who don't have a car license, the single person looking for accessibility, and the working family looking for a stronger community attachment. Streets are places where you meet people. It is a place where there is movement: "to watch, to pass, movement especially of people: of fleeting faces and forms, changing postures and dress."[21] Pedestrian friendly streets that lead to close and useful destinations such as the Neighbourhood Park, day-care, or elementary school would be a cheaper pattern to build and result in shorter trip distances.

Planning for neo-traditional street patterns that are narrow, lined with trees, have sidewalks, and parking provided at the rear is achievable. The result

would be slower traffic because of frequent intersections and moderate dimensions. A main street that offers a community a "back-bone" with a commercial core, complete with connector streets. The traditional main street would not be literally imitated from its historical predecessor, instead a new configuration is possible that could incorporate today's functional needs while at the same time respecting pedestrian space. Privacy will be created by spaces that have been divided by street patterning. Neighbourhood watches rather than manned gates and patrols would achieve security. Sociability is also "a large part of why cities exist and streets are a major if not the only public place for that sociability to develop."[22]

3.4 Turning The Power Center into a Community

A community is defined as "all persons living in a particular locality. A group having interests or religion in common, joint sharing."[23] Working and living in one area can offer an architectural nostalgia that is commonly missing in communities today. Places where transactions of commerce take place have historically been shown to establish itself as a market place. "Communities in which families are close to shops, jobs, and services will provide a more affordable lifestyle and therefore a more competitive local economy."[24] Whether it was in early Ancient Mesopotamian, Middle Age, or in today's Digital World, town centers linked to bustling main streets and their shops will attract citizens in the community and encourage interactions with one another to select goods, enjoy cultural activities, conduct civic duties, what ever is deemed viable at the time. We are engaged in a time where the fabric of our communities are held

together by threads and the retail power center is contributing to this dissemination. Edmonton's largest retail power center, South Edmonton Common, is located in Edmonton's southern suburbs.

Illustration 6. South Edmonton Common, Edmonton, Alberta master commercial plan. This 320 acre site represents the prototypical retail power center on a grand scale.

These retail giants have displaced many small town communities by disrupting traditional main street patterning and their businesses by re-directing customers to their centers. Examples of community main streets that have been obliterated by the Power Center are: Camrose Power Center - Camrose, Okotoks Power Center - Okotoks, Lloydminster Power Center – Lloydminster. Smaller communities like Lacombe, Alberta have either resisted or have not been able to support the retail power center due to demographics or economic support. Because of this, they have been experiencing a bustling main street that offers an intimacy and historical context that power centers lack. With Lacombe's close proximity to Red Deer, Alberta, Lacombian's are able to satisfy their bargain shopping needs while still maintaining their specialty shops on main-street. Canmore is another example of a city that has disassociated itself from the retail power center. They have maintained their architectural nostalgia by maintaining the character and intimacy that has been achieved by incorporating pedestrian friendly design principles.

Retail anchors must be assimilated into Main Street planning. The intent is to re-configure sizeable retail centers into mixed-use developments. The ideal is to create a new architecture that integrates traditional planning without nostalgically imitating the scale and diversity of older towns. Powers centers do not hold any traditional principles, they have been fabricated as building shells that replicate past forms without encapsulating any cultural or personal values. Retail Power Centers should be redeveloped into compact forms. They should focus on three key elements; the walkable neighbourhood with special districts of

blocks or streets that offer a place for modern businesses or retail, the residential neighbourhood, and corridors of natural greenbelts with automobile and transit routes acting as connectors to the neighbourhoods and the special districts. The new power center should be an attraction for all incomes through means of residential, retail, and industry. Everyone has to shop. The idea is to re-configure the power center into a community that provides people with choices.

3.5 The Future of Transportation and Its' Effect on Shaping the Power Center

In today's digital economy with the improvement in telecommunications technology, an "awesome destruction of distance"[25] has occurred. This distance breakdown is gaining momentum socially, but it is mutually agreed that we are in the early stages of seeing its complete influence on our automobile dependency. Planners are still struggling with the inability to design and build enough roads to reduce automobile congestion. We are self-desecrating if we continue to create single use zoned areas such as the retail power center. Locally, groups within the City of Edmonton are trying to solve the traffic congestion problem that has been influenced by the rapid development of South Edmonton Common power center and single home residential developments by building a 150 million dollar overpass. "We cannot fool ourselves-or the public-any longer; we can no longer build our way out of our highway congestion problems. It is not an environmentally or financially feasible solution."[26]

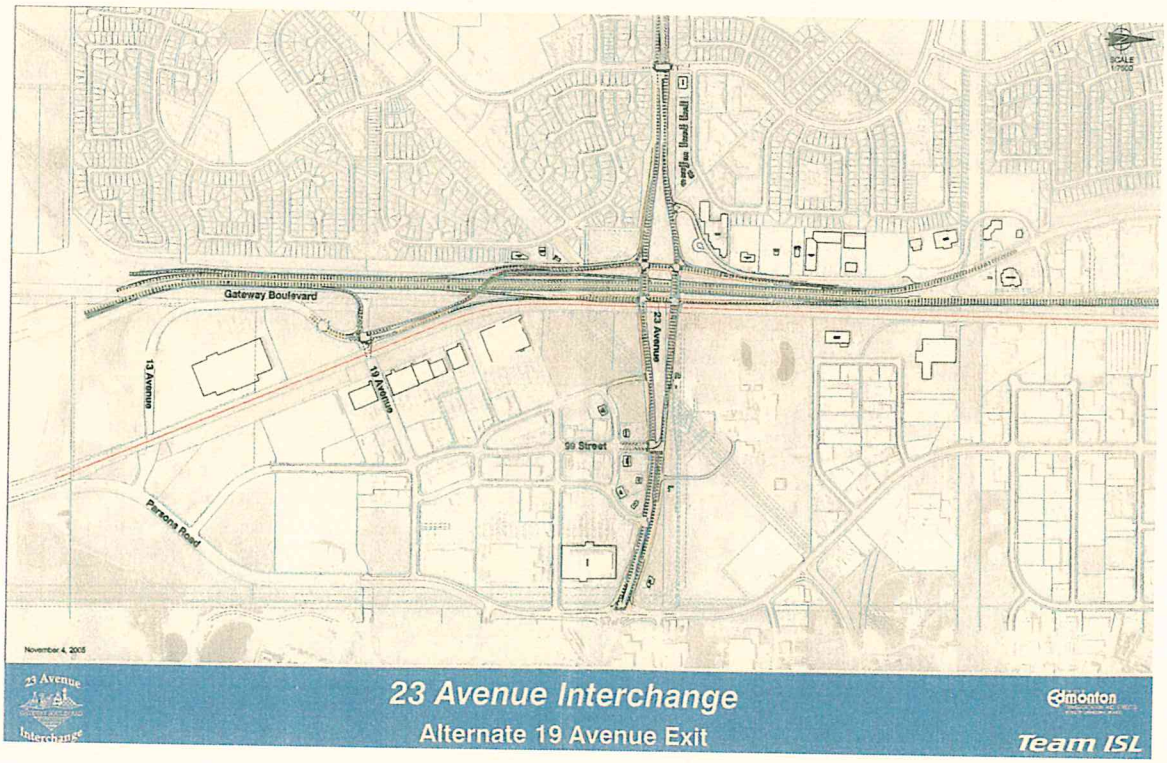


Illustration 7. A massive interchange slated for completion in 2008. The interchange is a result of 10 years of explosive growth to this area. South Edmonton Common being a tremendous contributor to the current traffic conditions as well as neighbouring residential development. The interchange proposes to increase traffic lanes along 23rd avenue and re-direct southbound Gateway Boulevard traffic (Calgary Trail) onto an overpass and into South Edmonton Common. The overpass will be absent of lights except for 1 set at SEC's site entrance at 19th avenue. There are approximately 60,000 cars that travel pass SEC on Gateway Boulevard per day and 30,000 to 40,000 cars that travel on 23rd avenue.

Traffic congestion must be alleviated. We can start by planning suburban transit centers linked with multi-centered communities. Transit centers must be secondary, not the primary focus in communities. A transit hierarchy needs to be established starting with walkable and bike able streets that support local bus routes followed by trunk transit lines with dedicated rights-of-way. Incorporating light rail into this transit hierarchy encourages bus rider ship and increases the convenience for the transit rider. Transit routes should have dedicated rights of

way that allow transit riders to move more quickly when cars may be stuck in traffic. Rail and bus lines must be co-ordinated to combine feeder buses, express buses, and trunk-line rails. Monorails and rapid-transit systems are the next generation of transit, but in today's digital era, the streetcar or light-rail trains of the past that may utilize existing abandoned rail lines or bus ways may be more viable to re-shaping the traffic problems created by suburb power centers.

Today, the city of Edmonton has a dispersed pattern of urban development that makes the rigidity of rail technology impractical. Bus ways have been developed which are essentially a rubber-tire high-speed transit system that travels along dedicated roadways. South Edmonton Common is currently sandwiched between a future light rail transit extension from Heritage Mall and a future high-speed transit development. A bus way system would be able to link South Edmonton Common to the peripheral future transit destinations. Successful implementation of bus way systems are created by providing dedicated, segregated, high speed, conflict free bus operation and service. Bus ways offer less transfers and greater flexibility to accommodate travel patterns than light rail transit. People are more likely to use transit if it is reachable by walking rather than driving to a 'park and ride'.

3.6 Main Street Thriving in an E-tailing Community

Main Street shopping is currently gaining momentum in popularity even when faced with the threat of shopping on the Internet and power center retailing.

It is speculated that retail is revolving back to its place on main-street. These new hybrid main streets are lacking the central location of historical main streets. Generators are required such as cinema complexes, large grocery stores, and clusters of lifestyle shops to attract the people. A balance must be made to mix the auto-orientated anchor and pedestrian-orientated main street with a mixture of office, civic, and residential use. By developing this formula, the new main street will thrive.

The main street lifestyle in today's digital age has drawn sustenance from an increased growth and affluence of a large childless generation. This generation is developing a market for specialized goods, real and virtual, and an interest for different places to visit, shop, and live in. Main street developments attract "not only suburban shoppers, but also a number of affluent singles, retirees, and empty-nesters who may be willing to inhabit the new apartments and condominiums planned for the area around Main Street."[27] A unique characteristic of the retail power center is that it offers a combination of the anchor and strip mall. These elements of retail are not pedestrian friendly and are completely auto orientated. As our dependency on the car continues to decrease, retail will reflect this shift in technology. The main street is an important ingredient to the power center re-use formula. Santa Monica, California, has successfully integrated a bustling main street, a covered mall, and pedestrian promenade. At first analysis one would assume that its success stems from Santa Monica Beach's pedestrian traffic, but the reality is opposite, it

has become its own attraction. Mixing retail types and re-shaping auto dependent retail centers into pedestrian friendly centers create desirable places.

Illustration 8. Santa Monica, California is a successful example of a bustling retail street. Walk-able from Santa Monica beach, this street has developed its own identity.

3.7 Mega Mall Re-Use – TOD's (Transit Orientated Developments)

Old abandoned strip and interior shopping malls are prominent fixtures in suburban developments. These old malls have become popular areas for urban revitalization.

Illustration 9[28]. An underutilized, abandoned grocery store along Toronto's Dundas Street.

It is becoming a commonality to transform the character of an arterial roadway that had once displayed the countless acres of asphalt parking lots of mega malls into transit orientated developments, TOD's. These areas are often designed as compact regions that supply high-density apartment living in combination with retail speciality shops all planned around a transit sub station. Successful TOD's plan an average of a 2000 foot walking distance (+/- 10 minutes) to a transit stop or core commercial area. The outcome of an auto-reduced lifestyle would improve air quality, reduce health costs, costs reduced for road and highway developments, reduced energy consumption and greenhouse effect, and the dependency on foreign oil. In comparison, European communities are generally pedestrian friendly and gas prices are approximately three times more than in North America, therefore "auto constitutes 30% and 48% of all trips; transit 11% and 26%, pedestrian/bike 33% to 50%."[29] Amsterdam has created a better mix of transportation: boat, train, car, bicycle, and walking are all used. In Canada, auto is 74%, walking 8%, bike 3%, and transit 15% while in the United States

auto is up at 86%. It has been shown that people are more likely to use transit if it is reachable by walking rather than driving to a 'park and ride'. With high density planning in TOD's, there will be retail, recreation, civic, residential, and entertainment that could combine trips and encourage people to run errands on foot. By comparing a mixed-use traditional street grid pattern with local street connections and arterials located at the perimeter to a suburban street configuration, local vehicle trips were reduced by 33% and arterial trips by 75%.[30]

3.8 Corporate Influence on the Power Center

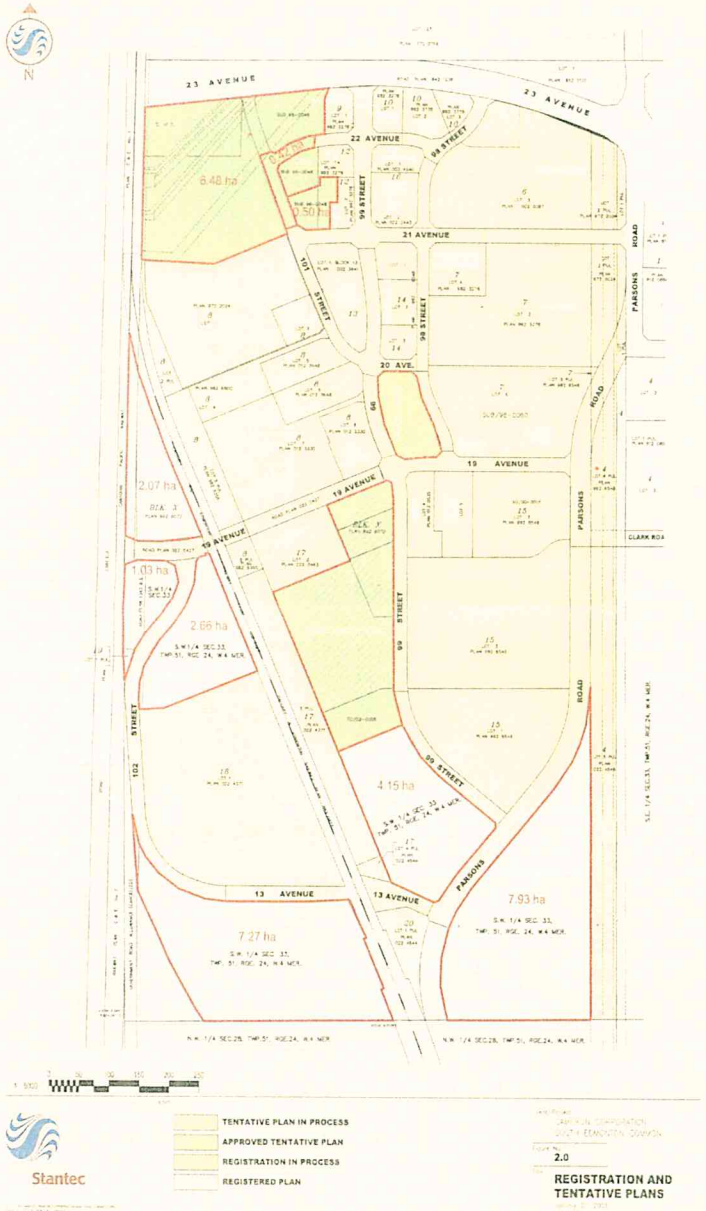
In today's digital environment, high-technology firms are locating to places that offer a high quality of life for their skilled workers. They are moving to the suburbs where there is the promise to create a lifestyle that offers qualities that are appealing to both executives and their workers. The dynamics of the old suburban model is changing. This change is affecting mostly peripheral communities. The older suburbs, referred to by many as the "donut", and the hole being the traditional city, is evolving. They are less attractive than the newer suburbs because many of them offer "aging infrastructure, declining schools, and increased pollution."[31] Peripheral communities are metamorphosing around the original "donut" and are developing into communities housing high technology industries, their workers, and often retail power centers. They are expanding into prime agricultural land districts that are preferable because of cheap land, low taxes, and low crime. They become disjointed communities that are "connected" by asphalt arterials. Southern Edmonton has an interesting situation where a

business park has been sandwiched between South Edmonton Common retail power center on one side and single-family residential units on the other. All three are separate entities with no form of integration. The business park houses high technology firms such as Dell Computers but currently many of the employees do not live in this area. There is no relationship between the three zones. It is lacking a core, an axis, and a support network that could make this district into a community. This area's planning has been neglected. Our digital dependent environment is evolving into a place where citizens prefer to work closely to where they live. They want to live in communities that offer the amenities that are important to them. Approximately ninety percent of new office development and roughly eighty percent of demand for office space and new jobs is now occurring in this new suburbia.

Part 2 – Analysis

4.0

Re-Inventing the Power Center – Design Standards That Need to be Met in the New Power Center



4.1 History – A Point of Reference

Every place has a story. Whether it stems from an event that took place 59 years ago, or a properties developmental strategy during the last 10 years, a place always has a reason as to why it exists. All power center developments exist and are situated where they are because of the automobile. Massive amounts of agricultural land purchased at inexpensive prices on the outskirts of cities have allowed the retail power center to multiply. While they grew, the city grew as well. Many power centers are now sandwiched in residential developments. The retail power center is a bi-product of technology. Technology's biggest resource is oil, which in Alberta was first discovered at the Leduc #1 Oil Well February 13, 1947. The discovery changed Alberta's economy forever, supplying oil on an international scale, and contributing to technological growth. Power centers should be redefined to focus on their historical preference. There should be recognition of the importance of technology. This may be communicated in the design of the "new" power center, using innovative means of using technology to transform the power center into a sustainable community. Master plans should be proposed that would encourage the manifestation of technological advances by sustainable measures, and by placing the pedestrian first rather than technology.

The historical context of South Edmonton Common, for example, originated from land developers purchasing the agricultural parcel from CP rail in 1996. The purchase agreement was originally a joint venture with CP rail but this was soon abolished and a new partner joined the ownership. The 320-acre site

was originally planned to be part of the Research Park that is west of SEC. Following the purchase of the site in 1996, the land developer brought on board a local Edmonton engineering firm that sub-divided the property into parcels and a local Edmonton architectural firm that created a master plan. The master planning was based on the premise of locating anchors around the perimeter of the site and infilling the center with smaller strip malls, refer to illustration 6. The complete site is 320 acres with 210 net acres of development area. The remaining 110 acres of the site is designated as 'loose' land for storm ponds, roadways, and railway right of ways. The retail density today is 1.3 million ft/2 of developed space, the maximum retail density is set at 25%. Parking allotment is 5 stalls per 1000 ft/2, greater for restaurants, and future retail developments will be 4 stalls per 1000 ft/2. Parking has also been based on tenant restrictions. 800 thousand to 1 million square feet is the leaseable area that is remaining to be built and is planned for completion within 5 to 7 years. Underground pipelines located in the North East corner of the site will be relocated underneath existing roadways that will make available another 16 acres of land that will be used as prime retail space because of optimum sightlines, refer to Illustration 10. Illustration 10 identifies the staging of development in SEC starting in 1997. SEC today is in its 24th stage for 2006 growth. Illustration 11 to 19 depicts the retail evolution of SEC. This is the typical growth pattern for most retail power centers. Aerial photographs display SEC's growth beginning with SEC as an agricultural Greenfield to where it was in 2004. Prior to re-defining the retail power center, it is important to understand how the development had originated. All power

centers differ from one another in their sources of origin. In order to promote and plan a re-adaptable and re-usable "new" power center, one must first understand its historical preference.

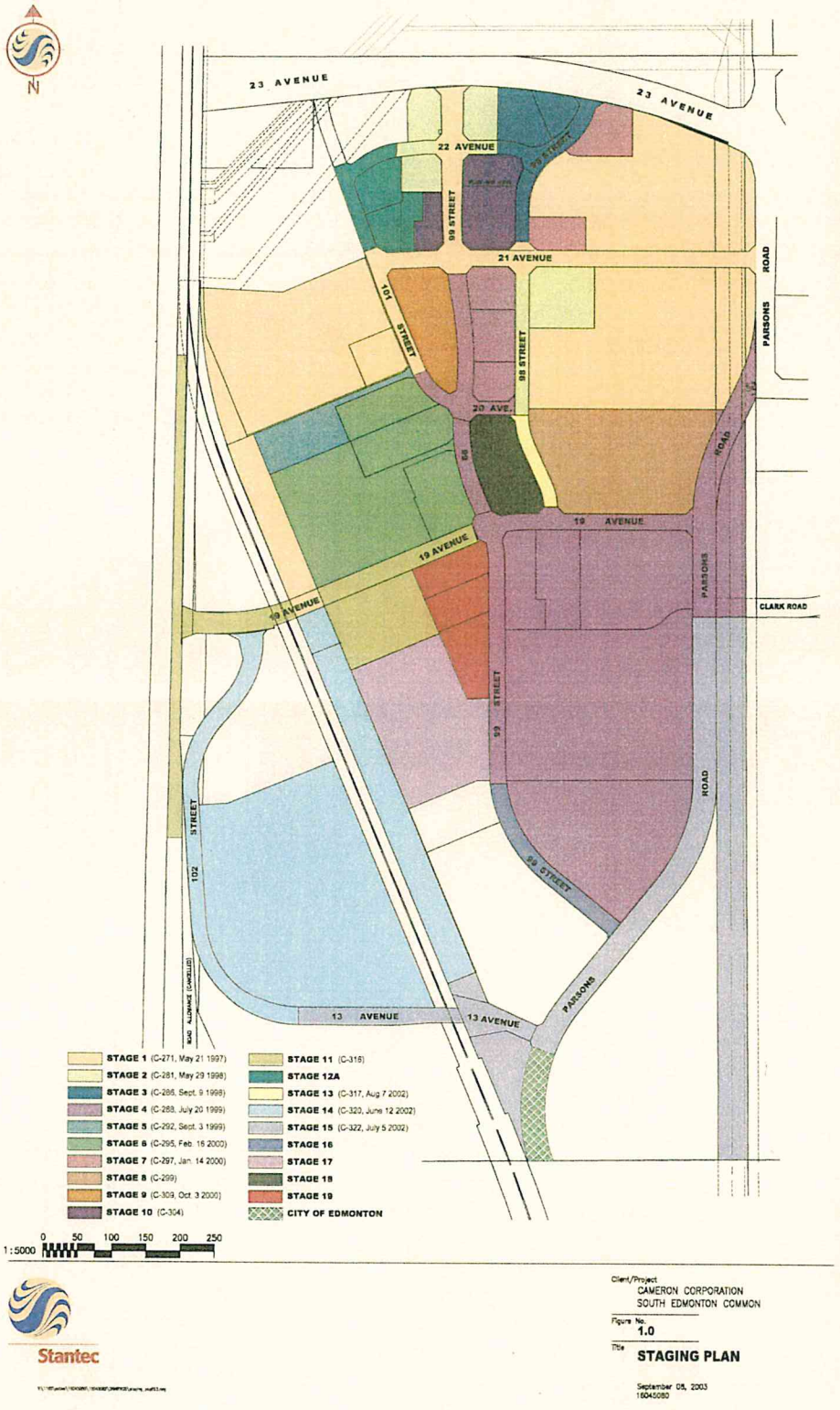


Illustration 10 depicts stages of growth in South Edmonton Common, Edmonton, Alberta starting in 1997.

Illustration 11 displays South Edmonton Common in 1995 when it was used for agricultural purposes.

Illustration 12 displays South Edmonton Common in 1997 with its first anchor superstructure, Home Depot.

Illustration 13 displays South Edmonton Common in 1998 with Wal-Mart joining Home Depot.

Illustration 14 displays South Edmonton Common in 1999 with a total of three major anchors at the sites perimeter, Home Depot, Wal-Mart, and Cineplex Theatres.

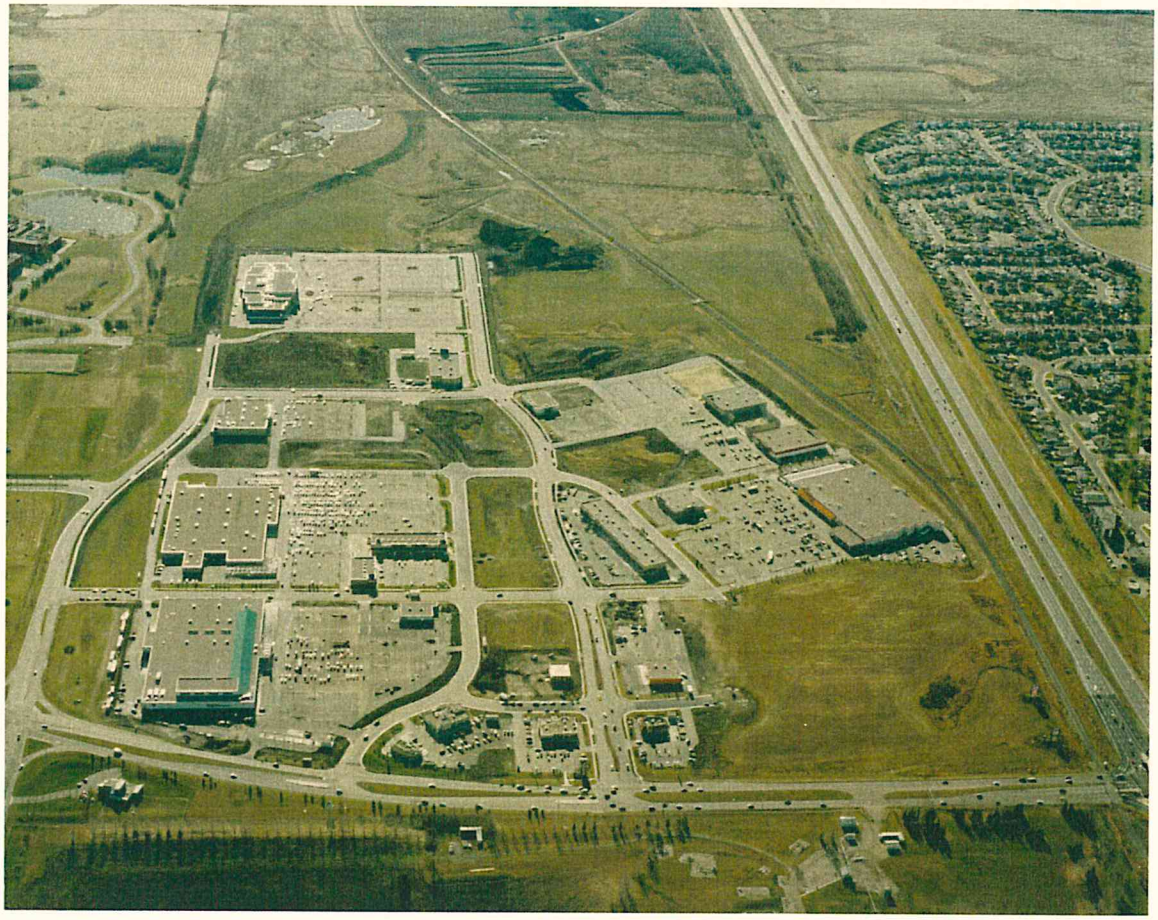


Illustration 15 displays South Edmonton Common in 2000 with now four major anchors, Home Depot, Wal-Mart, Cineplex Theatres, and Superstore. Smaller strip retail units are beginning to infill the interior.

Illustration 16 displays South Edmonton Common in 2001 aggressively developing the interior with strip retail units.

Illustration 17 displays South Edmonton Common in 2002 now expanding to the South East to include IKEA.

Illustration 18 displays South Edmonton Common in 2003 with smaller anchor stores, Michaels and Sears Home that is directly North West of IKEA.

Illustration 19 displays South Edmonton Common in 2004 with further infill development.

4.2 Self Contained Center, Water and Waste Reclamation – A Model Worth Striving For

The retail Power center is in itself a destination. People go there to shop. It is accessible only by automobile, with freeways making passage by foot impassable. Today, power centers like SEC are separated from the rest of the urban fabric by asphalt boundaries of highways and arterials. The existing boundary that separates the 320-acre retail power center from the urban fabric is Highway 2 (West), 99th Street (East), 23rd Avenue (North) and Ellerslie road (South). The "new" power center should address current boundaries that prevent future urban growth. Edge conditions may be addressed to propose ways of meshing the power center with the current surrounding urban landscape. The "new" power centers primary goal would be to create a community not through isolation, but rather through integration.

Design strategies should strive towards promoting integration, but site services should be addressed through means of promoting self containment. A reserve for an on-site wastewater treatment facility that uses a biological system to filter contaminated water will allow future developments to be self supporting. The biological filtering system consists of a staged process that uses botanical organisms to 'clean' the water. The system will visually communicate to the user and visitor of the power center that sustainable measures are being introduced to conserve the environment rather than obliterate it. Heating and cooling loads may be adapted into existing and new building types by geothermal engineering. Bore holes will be grouped throughout the site forming small clusters under

parking pads and underneath storm retention ponds where water will be used as a thermal conductor.

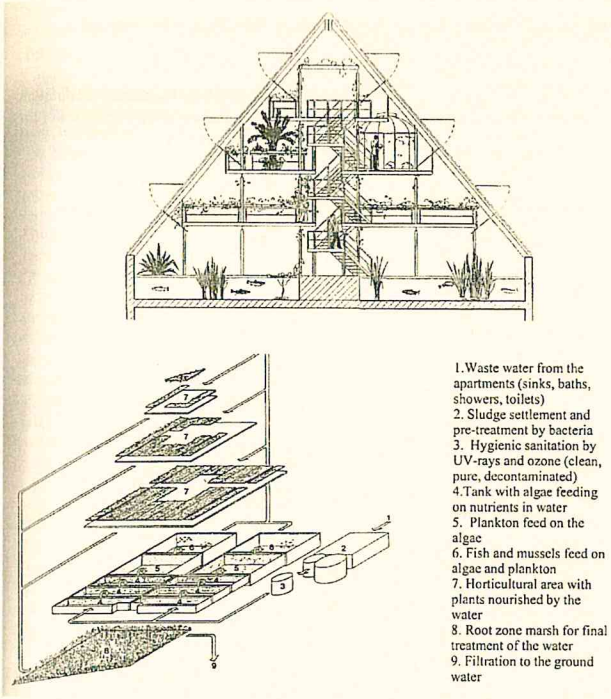
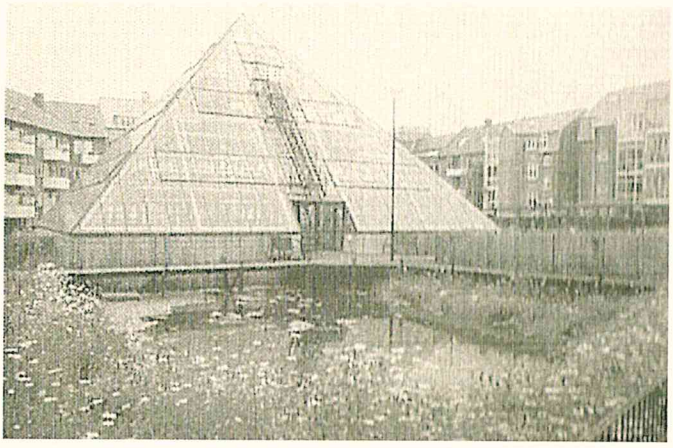


Illustration 20 and 21[32]. An example of working towards achieving a self contained center. The illustration shows wastewater that is treated by a biological filtering process. Wastewater from sinks, baths, showers, and toilets is directed to underground septic tanks where sludge settlement occurs. Bacteria decompose nutrients, and germs and pathogens are killed by using ultraviolet and ozone. The water then passes into a series of tanks above ground inside the contained structure. The first tank contains algae, the second plankton, third mussels, and the fourth fish. The water is circulated to an outside root marsh where the water is further filtered and either absorbed by plants or trees or runs into the groundwater. From the groundwater the purified water is collected in a rainwater pond. This system of filtration is not new, what is revolutionary is its urban proximity.



4.3 Big Box Adaptability – Re-inventing the Big Box, an Integral Component of the Power Center

The big box superstore is the backbone of all retail power centers. Without these inexpensive buildings that offer value priced products, the power center would not exist. The big box store has materialized into what it is today because it has put profit ahead of the good of the community. The idea is not to abolish the anchor superstores, but rather re-use the structures, and change their relationship with the urban fabric. These mega structures have been blamed for destroying and disfiguring towns across the country. Efforts are now being made where big box retailers are enhancing their designs to yield a building that offers a more positive approach to its integration into surrounding urban areas. Examples of integration techniques are "glass facades, integral landscaping, varied massing, natural lighting, easily navigated interiors, stacked parking, facades that abut the street, and sustainable features like photovoltaic panels."[33] The offset is that these extremely cost effective warehouse boxes would now become less cost effective in order to please the customer. Retailers however,

are discovering that cheap prices are not the only element that shoppers look for. In conjunction with bargain prices, big box superstores are evolving their facades to express regional differences.

Illustration 22[34] illustrates a Target store in Bronx, New York. In order to integrate the store into the area that is next to railroad tracks, a river, elevated trains and expressway, parking has been stacked on the building's roof and the front façade is comprised of glass that effectively breaks down the stores scale.

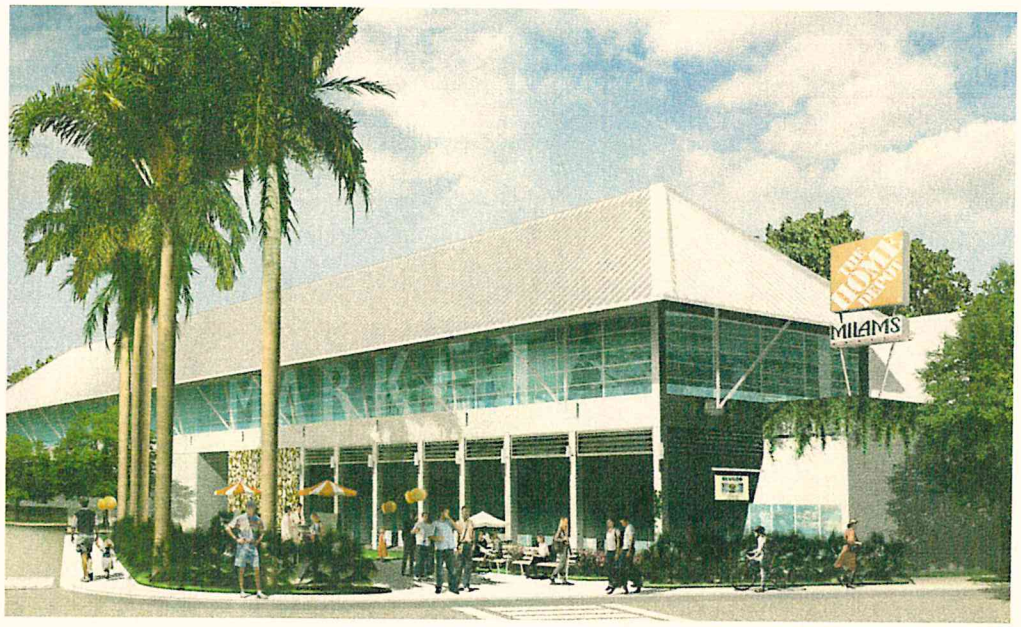


Illustration 23[35] depicts a Home Depot in Coral Gables, Florida. The architect describes the façade as a living façade which is made up of metal louvers and glass. The façade is tropical in design and is adjacent to a 1-acre park filled with native vegetation. Parking is stacked in a 2 level parking deck on top of the structure to minimize surface parking.

Illustration 24[36], a Wal-Mart and Home Depot in Avon, Colorado that has used a 600-foot long wood and steel canopy to help conceal the box appearance of the 2 stores. The scale helps encourage pedestrian activity.

Wal-marts serve a purpose that is confirmed by their prevalence in today's suburbs. Canadian architect Peter Busby has recognized this fact, and made attempts at re-designing the retail giants big box concept. He designed a "green" Wal-mart in Southeast Marine Drive, Vancouver. It has been forecasted that the energy consumption will be reduced by 37 percent through using windmills for power, trees for shading, skylights for natural ambient lighting, and roof top water collection for store use. This savings unfortunately will be counteracted by the 6,000 cars travelling to and from the store while consuming oil and distributing pollution. The intent for the "new" power center box stores is to adapt the mega structures into a higher density, pedestrian friendly, mixed-use development. This will be achieved by; minimizing surface parking, planning stackable and underground parking to promote open green spaces, walkable neighbourhoods with accessible vantage points, assimilating the anchors into open public markets, speciality grocery stores, and residential developments. Strategies will be undertaken that will offer energy efficient systems through earth source energy, photo voltaics, and rainwater collection designs.

4.4 Maintaining Existing Retail Densities

Existing retail concentrations should be maintained in the "new" power centers. Currently in SEC there is 1.3 million square feet of developed space. The projected future retail development is an additional 1 million square feet that is scheduled for completion within the next 5 to 7 years. The design intent should be to increase the density in the "new" power centers, and maintain the

use of the existing stores. The premise is to evolve the power center into a sustainable mixed-use development. Retail will act as a resource, by means of population and local employment. The existing retail in many ways will be the "work engine" for the whole design study. In SEC, for example, retail density is set at 25% with a parking allotment of 5 per 1000 ft/2. It would be ideal to integrate these commercial areas with public, industry, residential, and institutional uses. Employees will be able to walk or ride their bike while conducting daily tasks. A local Edmonton architect applied a residential urban infill intervention and revitalization in Edmonton, Alberta winning the 2006 Award of Excellence at the 2006 Prairie Design Awards. The 7th Street Lofts project introduces low-rise and medium density residential in three forms.[37] The appeal of this project and its relation to the "new" power center is the innovative way that an addition of 36 unit loft apartments was made to join two existing buildings, a 1929 timber and brick John Deere warehouse, and a 1950 yellow brick and concrete structure, both residential use. This is a successful example of working with what exists and applying ground orientated residential to a high-density area. It exemplifies prairie design, which tends to be in a sprawling form, keeping the height and scale of the project low, even when faced with the opportunity to increase the building's height. The Shaw Building and Brewery in Edmonton, Alberta is another example of a building infill project completed by the same architect. The structure was added onto the 1913 Shaw Building over an existing surface parking lot. The addition has a similar transparent aspect that the 7th Street lofts have and also breaks down any barrier between the street and

pedestrian. The building's details display relationships between new and existing cornices, and has maintained existing main and basement floor slab elevations. The existing retail anchors and strip malls are to maintain their retail uses, and be intensified by infill design solutions in the "new" power center.

Illustration 25[38]. Seventh Street Lofts, 10309 – 107th Street, Edmonton, Alberta. New loft apartments of exposed steel, concrete, and glass which encourages pedestrian movement at ground level apartments that allow direct access to the street and lane. Parking is underground. Similar design strategies are to be applied to the "new" power center.

Illustration 26[39]. Shaw Building and Brewery, 10229 – 105th Street, Edmonton, Alberta. A new addition onto the 1913 Shaw Building.

4.5 Addressing Existing Industry Densities

Power centers typically abut to single zoned land parcels. Using SEC as an example, the Edmonton Research and Development Park is located to the east of South Edmonton Common. What currently divides SEC and the existing Research Park is a four-lane roadway, Parsons Road. In the fall of 2006, there will be 3000 employees working in this Research Park. The biggest contributor to this population count is Dell Computers that will house 1500 employees. In conjunction with utilizing existing retail employee densities, the master plan of the "new" power centers should include local populations, such as the Research

Park's population count, as a base for determining new residential counts. Current relationships of roadway separators such as Parsons Road separating the Alberta Research Park and SEC should be further explored.

4.6 New Residential Densities

Ease of accessibility to a core market place from residential, business, and leisure activity areas are also to be explored. A 10-minute walk or a 2 000 foot radius will be the maximum travel distance from a dwelling unit to the core market place. Residential densities will consist of 25 dwelling units per acre for medium concentrations such as apartment buildings, 15 dwelling units per acre for 2 story duplexes or quad-plexes, and 12 dwelling units per acre for single - family homes. 30% of medium income neighbourhoods will account for affordable housing units. The "new" power center should strive to be a center that addresses the housing needs of all individuals and their differing socio-economic backgrounds, ranging from single moms to the elderly.

4.7 New Institutional Densities

Census studies have shown, that on a national scale, families are not having as many children as they did 25 to 50 years ago. In response to the population decrease, and unstable growth in residential districts, public and Catholic school boards have planned new primary and secondary schools as core facilities with provisions for future expansion and future portable designations. Based on the Municipal Government Act, approximately 10 m/2

(12 ft/2) is to be allocated for each student. Demographics determine which area is in need of a primary or secondary school. Due to the influx of residential developments, it has been difficult to plan schools that will completely support a communities needs. Primary schools in the last 25 years have typically been built to hold 350 to 400 students (4000 m/2) while junior schools support 500 students (5000 m/2). Approximately 50% of children do not go to their neighbourhood schools since in families where both parents are working, it is more convenient to drop and pick up their children at a school that is close to their work or baby sitter. In the "new" power center, planning should account for a K to 9 school that will support 1,000 students (10,000 m/2). The school will have an expanded library that will include adult reading levels therefore addressing the community's needs. Adjacent to the school there will be provisions made for pre-school and day-care facilities 6,000 (560 m/2). Population counts will be stable enough to act as a source to base new school and pre-school occupancy counts. Because of the "new" power centers mixed use, families will work, play, and live in one area. All of these activities will contribute to building a stronger sense of community, a prevalent value that is important in today's digital age.

4.8 New Public Service Densities

i) Co-located Fire Station and Ambulance Center

When the population of an area exceeds 20,000, fire stations and ambulance centers must be considered to support the residences needs. The

response time that the City of Edmonton has set for Fire equipment deployment from their stations is 4 minutes. As outlined in the NFPA guidelines (National Fire Prevention Association), a 4-minute response is equivalent to 1 captain and 3 firefighters while an 8-minute response time is equivalent to 14 firefighters. Ambulances roam the city therefore their response time is 10 minutes. Because of the shorter required response time by fire fighters, there are typically more fire stations than ambulance centers. It is becoming common practice to combine ambulance and fire uses into one station. The design intent for the "new" power center should be to introduce a co-located fire and ambulance center to meet the needs of the residences. By introducing a high density, mixed use development with minimum spatial separation between buildings in the "new" power center, common factors that are evident in SEC for example; emergency vehicle street accessibility, (currently there are only 2 access routes into SEC), an existing petroleum chemical industry to the north with associated underground pipelines, green-belt wild land fires, trucking that hauls dangerous goods, location under a major flight path; are all features that support the introduction of a new co-fire and ambulance center. When manoeuvring and site accessibility are not planned for, 17 – 20% of response time is lost due to backtracking of fire fighting equipment.

ii) Police Community Station

In the City of Edmonton, police stations are divided into two groups, divisional stations, and community stations. There are currently four divisional stations that address North, South, West and Downtown Edmonton. The

Downtown divisional station is the headquarters for all of the divisions and is also used for administration. A community station is located based on the population, layout of a community, and number of 911 calls that come from the area. They are approximately 3,000 ft/2 (280 m/2), unobtrusive and user friendly in design, and do not contain holding cells. Their use is designated as a support for the community. They provide a place for residents to communicate with City of Edmonton Police service. Stricter functions like booking, shift changing, holding cells, occur in the divisional stations. New power centers should plan for standard community stations approximately 3,000 ft/2 (280m/2) in floor area.

iii) Medical Care

A 15,000 ft/2 (1400 m/2) medical center should be planned for in the "new" power center that will address the community's needs for chiropractic, physiotherapy, dentistry, and Medi-center. Designations for an Extendicare facility that will address the elderly who are too sick to take care of themselves should also be addressed. The Extendicare would consist of a 5,000 ft/2 (465 m/2) core with 2 wings that are 5,000 ft/2 (465 m/2) each.

4.9 Creating Places – Parks and Plazas

Incorporated into the streets of the future power centers will be breaks, other than intersections, of secondary areas consisting of small plazas or parks to create open spaces. These areas will provide stopping places to pause and reflect, or provide a reference point along ones path of travel. Nodes for pedestrians will allow interaction with one another through activities such as

sitting, eating, playing, or performing. Secondary areas will strengthen community-building efforts, while at the same time help define an areas beginning and end. An allocation of approximately 3.5 acres of park per 1000 people, or 15% of the total site area will be made. There will be a market place composed of mixed uses located in the core of the center that will be the major focal point for community activities. Associated with the market place will be a main street that will be announced by gateways, denoting the beginning, and the end. Main-street will link the core to the surrounding connector streets. Models of open Farmer Markets and their relationship to Main Streets are evident in Edmonton, Alberta. Located in Edmonton's Whyte Avenue or Old Strathcona district is the historical Bus Barn building. This building is an example of a re-use project that has converted an existing warehouse into an open Farmers Market. The market, 1 block north of Whyte Avenue, is open on Saturday mornings and attracts people from all areas of Edmonton. It utilizes existing overhead garage doors that when are open remove the barrier between the building and the street. Street performers are often found performing in the Bus Barn warehouse because of the lack of barrier between the street and building. A similar situation exists 1 block north of Edmonton's Jasper Avenue. Aptly named the Fourth Street Promenade because of its location on 104th street, an active street closes down on the weekend to incorporate an outdoor Farmers Market. This Promenade is located in Edmonton's warehouse district where improvements have been made to rehabilitate Edmonton's historical warehouses and

streetscapes. Where the promenade closes 104th street, 83rd Avenue remains as a functional street.

Illustration 27, Bus Barn warehouse located 1 block north of Whyte Avenue, Edmonton, Alberta, functions as one of Edmonton's Farmer's Market on Saturday's.

Illustration 28, a park adjacent to the historic bus barn building. A place for people to reflect.

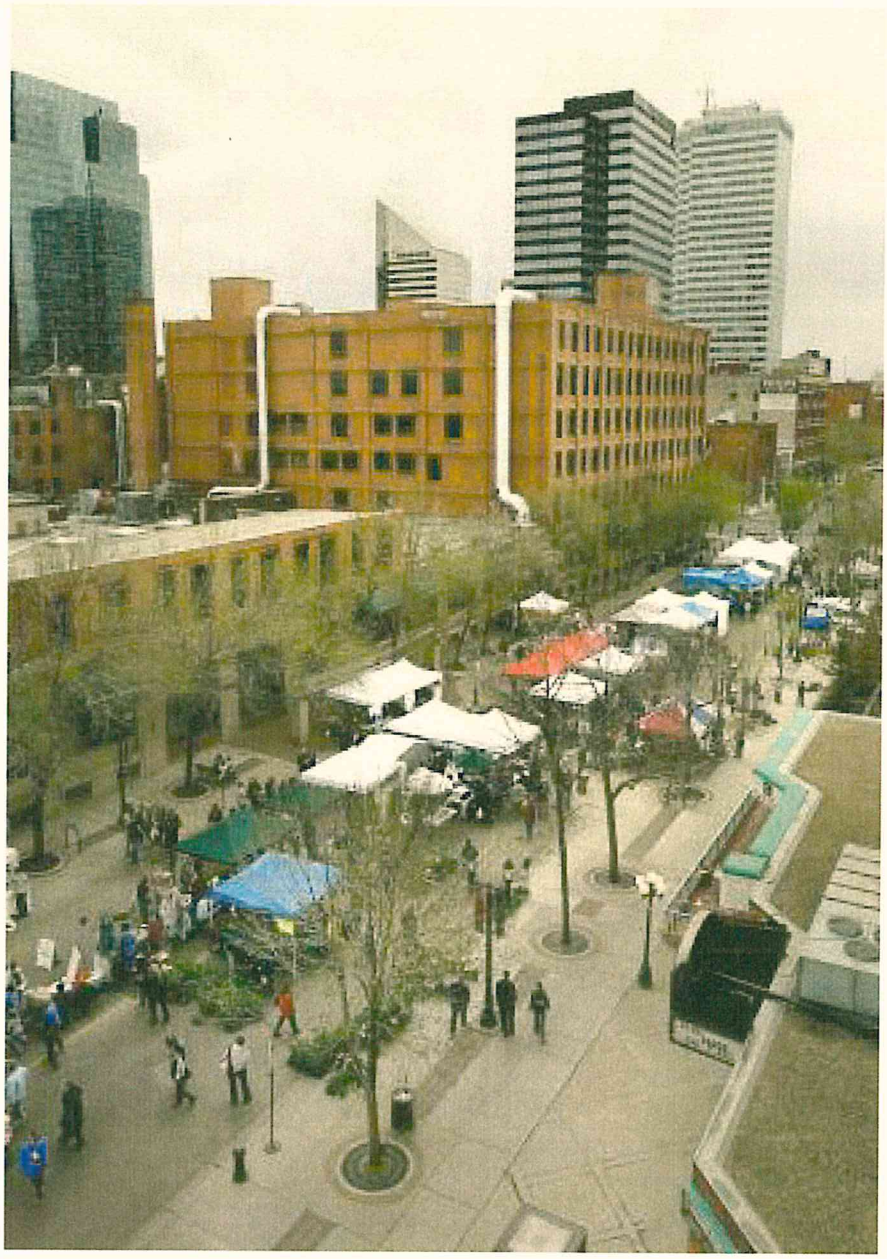


Illustration 29[40], Edmonton's Fourth Street Promenade.

4.10 Sreet Links– The Connectors of Power Centers

A Street is deemed successful when it can be categorized as a destination or place, rather than a simple form of circulation. "The best (streets) are as joyful as they are utilitarian. They are entertaining and they are open to all. They permit anonymity at the same time as individual recognition. They are symbols

of a community and of its history; they represent a public memory. They are places for escape and for romance, places to act and to dream."[41] The intent in the "new" power center is to create eventful streets that lead to a common market place. The challenge will be to find physical elements on corridor streets and turn them into urban street places. There are four essential elements that are critical in the making of a successful street. 1) Places need to be created for people to walk at leisure, where they can socially interact. At busy corridors, there will be curbs, sidewalks, trees that are close together at the curb line, to create a pedestrian zone. An auto-parking lane will also be added to further the sense of separation. At streets that will be integrated into the market and residential areas, there will be minimal separation allowing cars and people to be mixed. This will encourage traffic to move at the pedestrians pace. There will be multiple routes to local destinations. The underlying factor is to create a street where one may walk easily and safely on. 2) The streets will also offer physical comfort. They will offer warmth from the sun when it is cool and protection when it is too hot. Shelter from the elements will be integrated into the pedestrian zones. It is far too often that one gets drenched from rain when walking on a street, blown over by gusts of wind, or baked from the hot summer sun. Climate related characteristics will be justified in order to offer greater physical comfort on streets. 3) The new power center will incorporate streets that are well defined so that they provide boundaries. Building facades will be addressed vertically and horizontally. The buildings will be remodelled to complement each other. They will respect one another in height and how they look. Wider streets require more

height in the architecture. A maximum vertical to horizontal ratio of 1:4 will be achieved at a 30 degree site angle translating into a design ratio of one height to two widths. This will allow for a strong street definition. Where ratios exceed 1:4, trees and wall elements will be used to define the pedestrian boundary with trees not exceeding 30 feet apart. 4) The last element will be to design qualities in the street that will engage one's eye. Visual complexity will be used, but not as much where it will create a street that is chaotic or disorientating. This will be achieved through the architecture; uneven textured surfaces, trees, and people. The streets will also have transparency at points where the public realm of the street crosses over to the private realm of the building. An invitation will be made to view or possibly know what is behind the wall that is defining the street.

4.11 Inter Mobile Transportation – Bicycle Support System

Witnessed by all of us during our urban experiences on busy streets are bicyclists weaving in and out of auto lanes or pedestrian designated sidewalks. People want to cycle to their destinations, but many do not because the areas they want to go to are either too far away, too treacherous to get there, or because of climate conditions. Mother Nature cannot be wielded, but by including bicycling when considering weather conditions and planning urban spaces cycling can be successfully implemented. In the proposed "new" power center, cycling will be recognized as a means of transportation and therefore be given the same importance as other modes of transportation; walking, transit and automobile. Designated bike roadways will manoeuvre locals through the re-

planned power center by offering multiple routes to local destinations. Fort Saskatchewan, Alberta is an example of a partially integrated bicycle system that has worked well for the city. It forms a complete ring around the town. The ring includes a scenic route along the North Saskatchewan River, runs through a biological storm water purification system that filters storm water prior to entering the North Saskatchewan River and educates the public of the benefits, and at areas runs parallel to Highway 21. It embraces the cities perimeter in the older residential and new commercial areas and has been planned for full integration in the city's new residential districts. Mixed- use developments are emerging in Fort Saskatchewan south of highway 21 with the bicycle transportation system included in its plans. This city is making great strides in recognizing the benefits of cycling and walking. A greater sense of community is the result.

4.12 Transit Support System and Parking Requirements

It has often been naively stated that if transit were introduced to auto orientated developments, then all the problems associated with the car would be solved. Choosing to plan developments around transit facilities may result in underutilized stations. Transit must be supported, rather than become the primary driver in a development. We still need our cars. How we use them, is what the "new" power center's urban revitalization should address. There will not be a transit facility planned for the "new" power center development, but rather transit stops that will utilize rapid transit express routes and trunk transit lines. Due to our climate, a successful transit stop walkable radius will be planned for

approximately 2000 feet or 10 minutes. A compact and walkable environment will be planned, and stops will be located every 2-3 miles. Surface parking will be minimized and replaced with under and above ground-structured parking. Parking ratios will consist of; Offices 2 to 4 spaces per 1000 square feet, Commercial 3 to 5 spaces per 1000 square feet, and Light Industrial 1 to 3 spaces per 1000 square feet. Surface parking will be placed at the rear of buildings or in the interior of blocks. There will also be bike lockers provided for bike parking. They will be incorporated with the transit stop shelters.

5.0

Case Studies

5.1 Case Study Introduction

With every new decade, there seems to be a new retail type that reflects societies changing shopping habits. Following World War 2, downtown department stores and old town center Main Streets were replaced by suburban malls, strip commercial stores, and grocery anchored neighbourhood centers. As housing shifted to the suburbs, retail followed and changed dramatically. The format, grouping, and scale, evolved into larger formats with more focused industries. This list of groupings includes "convenience centers, festival market centers, entertainment centers, community centers, neighbourhood centers, outlet centers, power centers, discount centers, and malls."[42] The old centers are gradually becoming vacated as new centers gain their clientele. The result is underutilized shopping areas that, due to lost taxes, contribute to the decay of a neighbourhood or town. There are three retail formats that are displacing these groupings. The first one is the power center, which has been forecast by many to have almost reached its pinnacle. E-tailing, the second retail format, is not an affordable alternative to many, and does not allow one to "touch and feel" the merchandise. The third type, is the re emergence of Main street. The retail format that will emerge successfully, is the one focused on shopping, a sense of place, entertainment, and the aspect of going out. With the coming of a new decade, it will be of great interest to see which new retail format will materialize. The following 5 Case Studies are "new" retail centers that have evolved the former retail formats. These past retail types are often identified as Suburban Grey fields. They are low-density suburban commercial zones that are

categorized as; major shopping malls that have turned into dead-malls sites, strip malls that are small individual parcels, and surplused military bases with underutilized institutional areas. The purpose of studying the following Case Studies is to analyze the idea of transforming an existing retail development, that was previously auto orientated, into one that is pedestrian friendly. The Power Center is on the brink of reaching its pinnacle. It is therefore important to analyze the effects these giant retail centers have on society today in order to under stand what must be accomplished in the Power Center of tomorrow.

5.2 Century Park, Edmonton – Underutilized Heritage Shopping Mall – TOD - High Density Residential Use

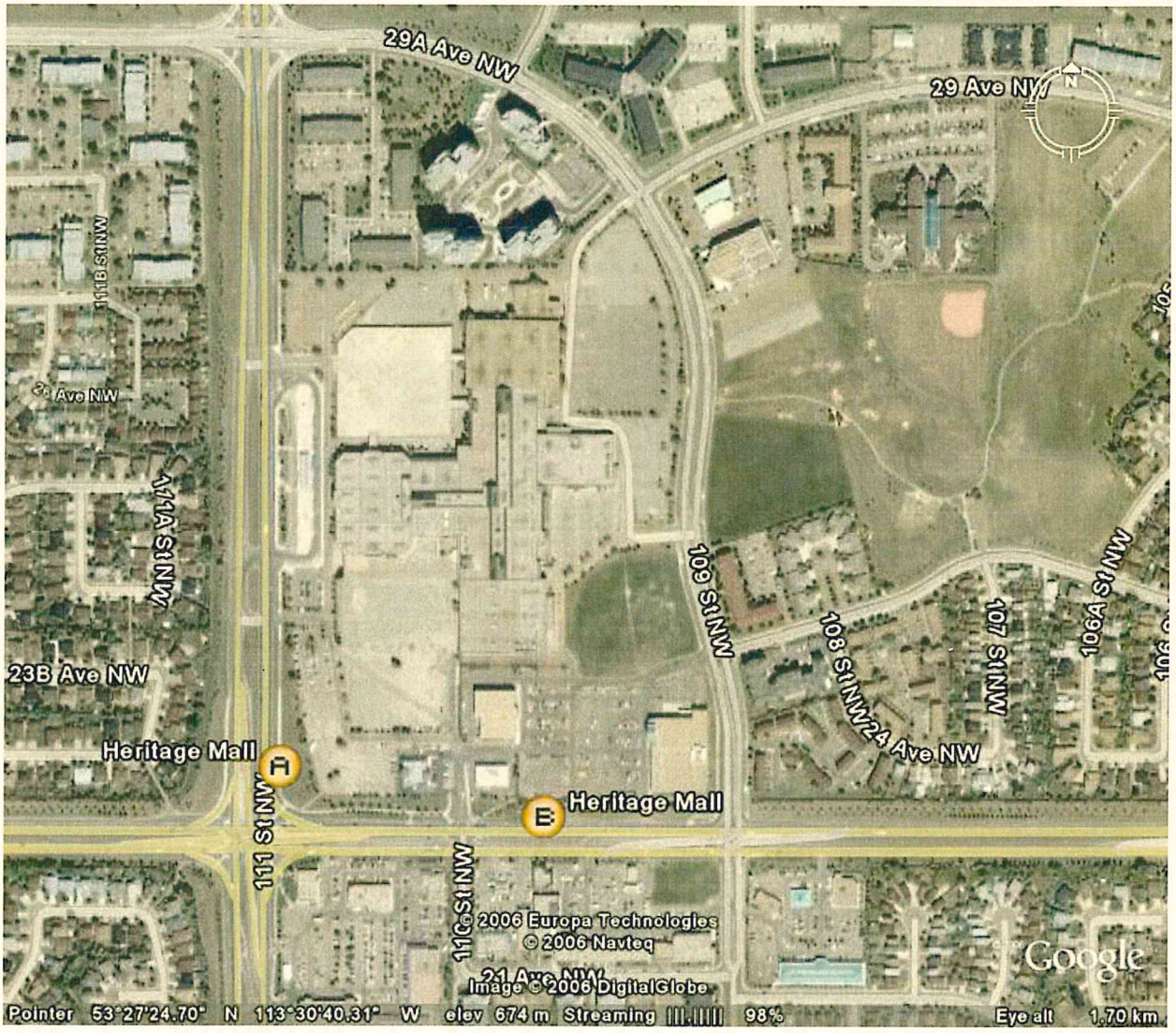


Illustration 30, aerial view of Heritage Mall as a suburban Grey Field.

Century Park, Edmonton, Alberta, is an example of a Transit Orientated Development. With a projected population of 4,000 – 5,000; it will have approximately 2,800 residential units, 160,000 ft/2 of commercial space, 200,000 ft/2 of office space, and an indoor recreation space of 35,000 ft/2. Century Park's

goal is to successfully capture the intimacy and pedestrian friendly scale that is lacking in the newer single zoned suburbs. To the west of the property will be a transit station, an extension of the light rail system already planned for, from South Gate Mall. In conjunction with light rail, this station will also be the stopping center for 'rolling' transit. To the north of the transit center there is a park and ride for those who live "off site". The transit amenity is completely on site, allowing for a reduction in auto dependency of residents. Residents that do have cars will be able to keep them in underground structured parking facilities. The underground parking has allowed for 18 acres of public open spaces above grade, 42% of the sites overall 43 acres. The development has few streets that run completely through the site. They are consistently located in a continuous loop around the periphery of the residential blocks. This permits pocket parks to act as courtyards in the center of the neighbourhood blocks. Adjacent to the Transit Center are street level shops and offices. This is an advantageous location for the shops due to the pedestrian activity that will be generated by the transit station.

Century Park has planned for 12 residential towers that vary in stories from low, mid, to high rise buildings. There is a high concentration of residential planned for the development with a projected population of 5,000. The high density residential towers consist of condominiums that are available to middle income earners. These towers straddle a scenic lake that will allow for skating during the winter months. Properly placed adjacent to the lake is a indoor recreation amenity center. Moving away from the center of the development where the lake

is located, the residential densities decrease in size from high rise, mid rise, and to low rise units. Senior residences are located at the north east, on a corner of the site, off of a pocket park. The allocation of the senior apartment block tends to be isolated from the rest of the sites higher activity areas. It would have been more effective to have incorporated the seniors closer to the transit and shopping district to allow for social interaction or to provide the opportunity to impassively 'watch the day go by'. Century park is a development that has unfortunately pre-selected its residences by providing condominiums affordable to only middle or high income earners. Gated residential communities in suburban districts were once largely criticized because of the segregation of class that they have created. Unfortunately, due to mis-planning, this TOD has created their own version of an isolated home for the middle class.

Century Park is proposing a complete demolition of the existing Heritage mall, therefore the development planned is a completely 'new' center. It is non-sustainable, and is regrettably taking a step backwards with regards to re-use possibilities. The proposed design has removed all possibilities of any re-vitalization strategizing. Many of the residents of Century Park will have to leave their homes to go to work since work is out of their center. A 'dead time zone' will be created between 8:00am and 5:00pm where the development will be a 'ghost town'.

Illustration 31[43] displays an architectural model of Century Park, Edmonton. The view is from the west where the transit center and retail will be located.

Illustration 32[44], site plan of Century Park, Edmonton with areas as noted:

1 – Shops and Services, 2 – Townhouses, 3 – Low rise residences, 4 – Mid-rise residences, 5 – High-rise residences, 6 – pedestrian mews, 7 – park spaces, 8 – tree-lined streets, 9 – water features, 10 – office spaces, 11 – restaurants and bistros, 12 – street level shops, 13 – senior residences, 14 – lake/skating pond, 15 – indoor amenity center, 16 – transit center

5.3 North Hill Center, Calgary – TOD – Commercial, Medical, and Residential Mixed Use

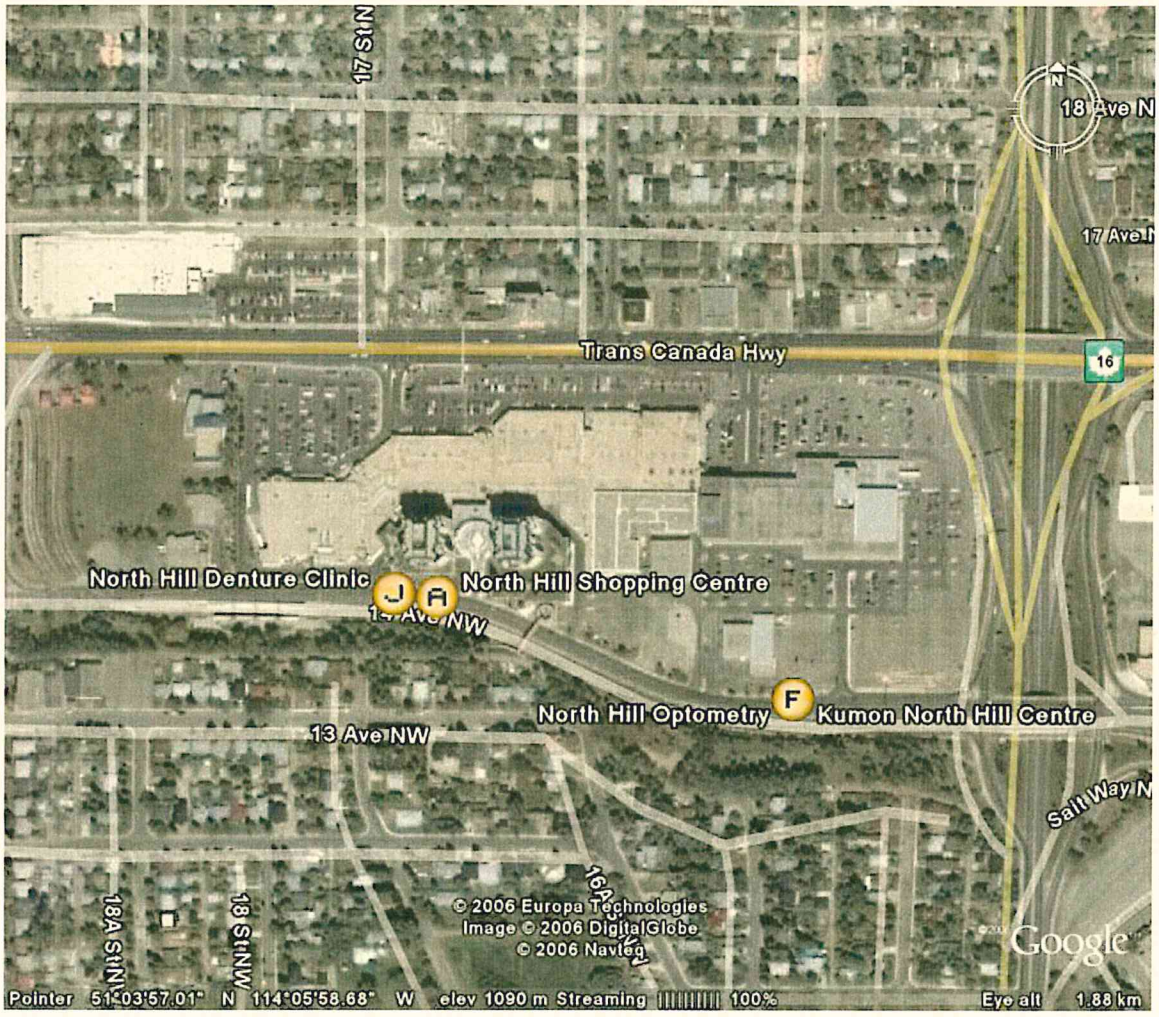


Illustration 33[45], aerial view of North Hill Center.

North Hill Center was Calgary's first shopping mall. Built in 1958 it was initially designed as a strip mall with an open sided covered canopy and a stand alone anchor, the Sears department store, at its east end. In 1973 it underwent its first renovation that included an expansion and addition resulting in a new mall completely enclosing the existing mall. In 2000, a major renovation turned the debilitating mall into a transit orientated, mixed use, and pedestrian

friendly development. The development now pays home age to 95 shops and services in the shopping center, professional offices on the 2nd level, free standing medical facilities, and a condominium complex.

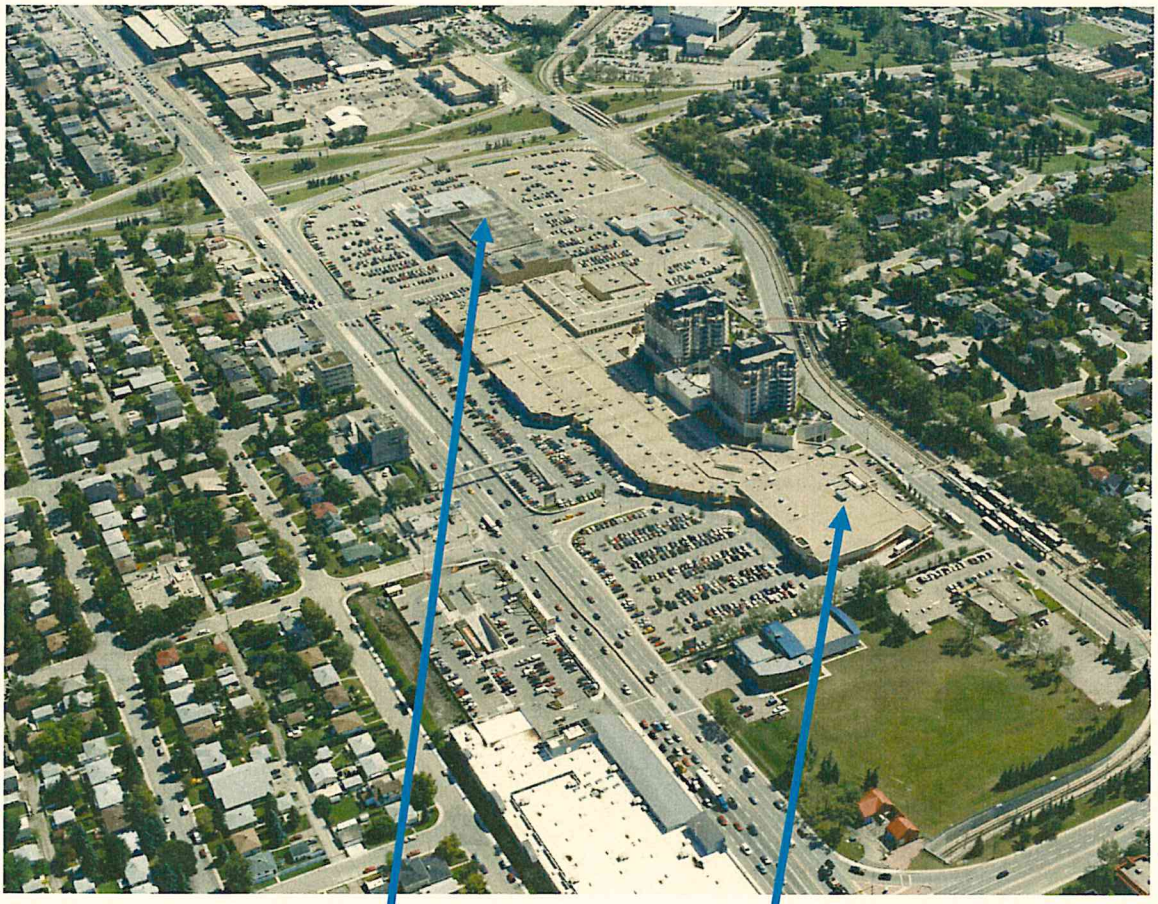


Illustration 34[46]

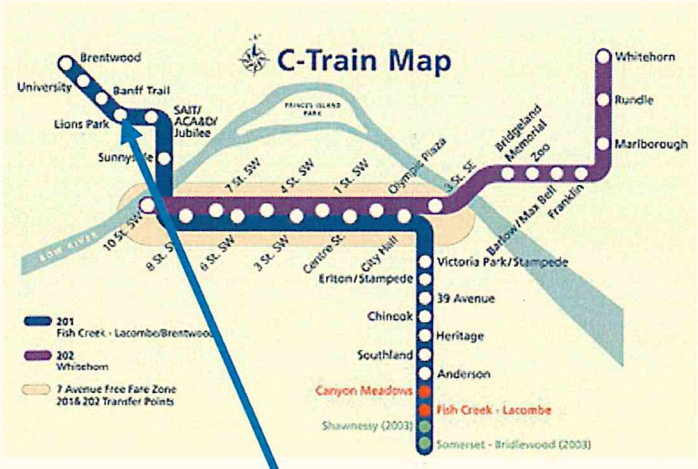


Illustration 35[47]

Lions Park LRT station

Calgary's light rail transit, the 'C' train, stops at North Hill Center along 14th Avenue south of the site. Adjacent to the development is the Lions Park LRT station, in the south west corner, where pedestrian crossings have been integrated into 14th avenue to provide pedestrian access to the North Hills retail development. Pedestrians walk across the avenue and gain access into the development by the Safeway anchor. The doors for this access remain open until 11:00 pm. In conjunction with the C-train stop are bus stops next to the Lions Park LRT station. This allows riders to transfer easily from rail to rubber. Rolling transits take riders into the local suburban neighbourhoods. Adjacent to the 'C' train and approximately in the middle of the covered retail mall on the sites south face are two 16 story condominium towers for middle to high income families. This location is immediately opposite of the mid-size box stores on the north side that require the higher visibility then the Trans Canada highway offers. The condo towers are immediately adjacent to the light rail and bus stops therefore giving the residents a means of transportation other than the automobile. This alternate form of travel encourages walk ability, and fewer cars, in an area where the highest concentration of the developments residents live. A common base shared between the condominiums has been designated for office use. Due to the mid-size box tenants; Marks's Work Wearhouse, Moores, Petcetera, located on the north side and the covered mall sandwiched in between, the view from the condo suites is less than amiable.

North Hill Center has been an amalgamation of separate properties into the mixed use development that we see today. It has been a development that

has grown from its original strip center that was constructed in 1958. The original strip mall formed its north – south axis. The retail development continued to evolve to meet the needs of each decade. The retail component today has a gross lease able area of 523,988 ft/2 with major anchors located at its north and south ends. In addition to the 2 major anchors, there are further major retail developments in mid-box stores facing the trans Canada highway. Behind the major mid box stores are ancillary retail tenants in the covered mall; Please Mum, Ricki's, HMV. Adverse areas for retail are replaced with medical centers; University of Calgary Medical Clinic, Calgary Health Region, and transportation support; Registry Express Inc. There is an appropriate combination of new commercial developments, high density residential, and office developments. A population within a 1 kilometer radius of 7,656; total households 3,584 contribute to the center's business. The average household income in the surrounding neighbourhoods is $63,821. The market is considered mature with young families on the rise.

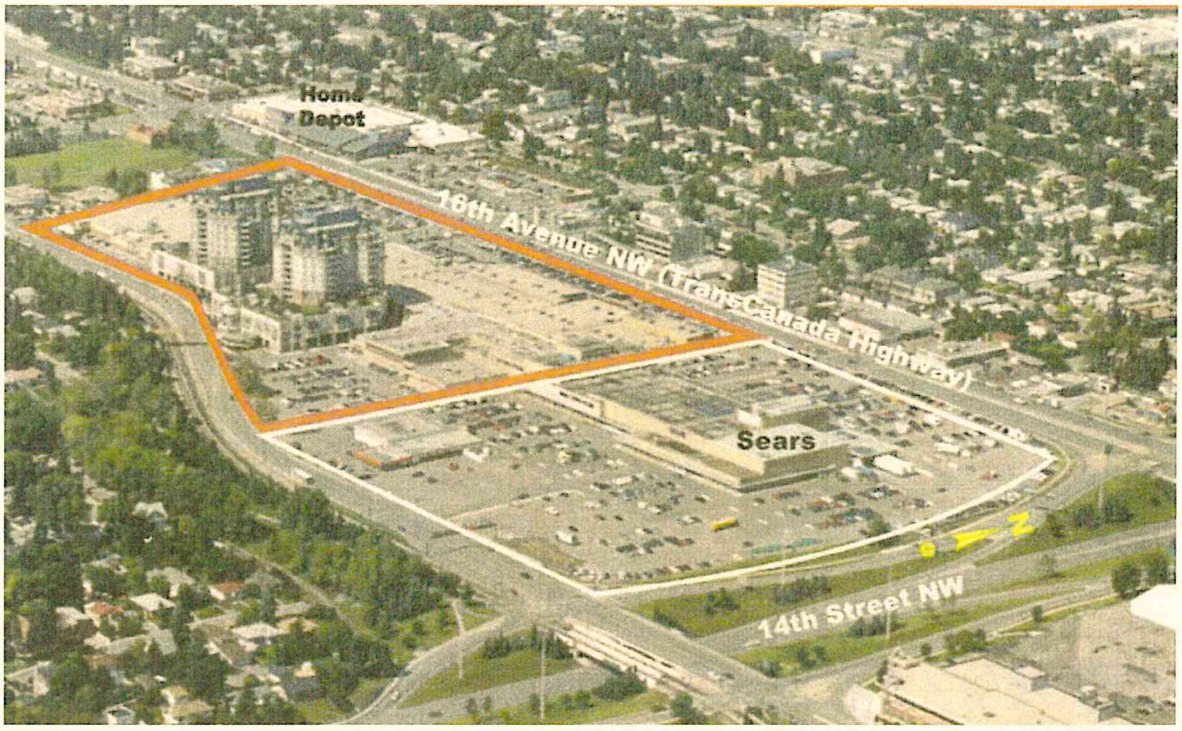


Illustration 36[48], view from the South East.

Unit	Tenant	Square Feet
K1	Infoplace Ticket Centres	80
K2	Island Ink Jet	200
K4	Bell Distribution Inc.	150
1633	Calgary Health Region	6,391
1634	Highlander	1,450
1635	University of Calgary Medical	2,113
1644	Angles Hair Salon	4,784
1645	Delmar Dry Cleaner	1,361
1649	Crown Optical	1,326
1650	Vacant	2,128
1652	Chili's	5,794
1654	Moore's The Suit People Inc.	6,808
1657	Vacant	2,204
1658	Mark's Work Wearhouse	8,149
1659	Hallmark	2,527
1662	Kinko's	3,650
1663	Payless Shoe Source	2,538
1665	Management Services Office	1,653
1666	Petcetera	10,209
1667A	Telus	547
1667B	Vacant	375
1668	Ricky's Grill	4,450
1669	Raydiance Suntan Studio Inc.	1,241
1671	North Hill Alterations	385
1677	International Fitness Inc.	21,142
1678	Stitches	3,401
1679	Vacant	1,868
1680	Reitmans	3,043
1683	Vacant	2,345
1684	Cotton Ginny	2,608
1687	Bentley	1,268
1688	The General Store	4,210
1691	Shopper's Optical	1,391
1692	Daniadown Quilts	1,897
1695	Dentrix Dental Care	1,743
1696	Extreme North Hill Ltd.	1,455
1699	Calgary Centre Barber	817
1707	University of Calgary Medical Clinic	12,831
1717	Dynasty Jewellers	978
1725	Loonie Store North Hill Corp.	3,142
1729	Tan Jay / Alia	2,010
1730	Ricki's / Cleo	4,704
1734	The Source by Circuit City	2,000
1737	Naturalizer	885
1740	Salon One	4,439

Unit	Tenant	Square Feet
1741	Ardene	1,000
1742	Please Mum	1,418
1745	Vacant	855
1746	Aldila Boutique	1,309
1747	Step Ahead Footwear	751
1749	Mister Keys	885
1749A	Sole to Soul Footwear	854
1750	Suzanne's	1,962
1751	Sunglass Plus	591
1753	San Francisco Gifts	877
1755	Rogers AT & T	953
1757	Itinerante Flower Boutique	717
1758	HMV Canada	2,918
1762	Purdy's Chocolates	608
1764	Cutting Edge Cutlery	697
1766	Chiropractor	663
1768	Games People Play	850
1774	Intersport	6,062
1775	Flight Centre	625
1777	Vacant	1,011
1779	Timeco Watch & Clock	940
1781	MG Leather	1,012
1783	Nutrition House	895
1787	Maple Country	1,030
1790	Shoppers Drug Mart	10,560
1791	Coles	1,355
1794	Electronics Boutique	1,178
1795	Hair Mix	1,224
1798	Paris Jewellers	1,050
1799	Opa! Souvlaki	681
1801	Panini Pizza Pasta	343
1802	Black Photo Corporation	905
1803	Taco Time	369
1805	EDO Japan	335
1806	Shefield & Sons	354
1807	Quizno's	332
1809	Tiki Ming	436
1810	Toronto Dominion Bank	4,091
1812	Liquor Barn	3,209
1813	KORYO Barbecue	506
1816	Timothy's	937
1817	Dairy Queen/Orange Julius	356
1820	A & W	399
1841	Registry Express Inc.	1,136
1846	Safeway	46,939
1850	Realty World	1,473

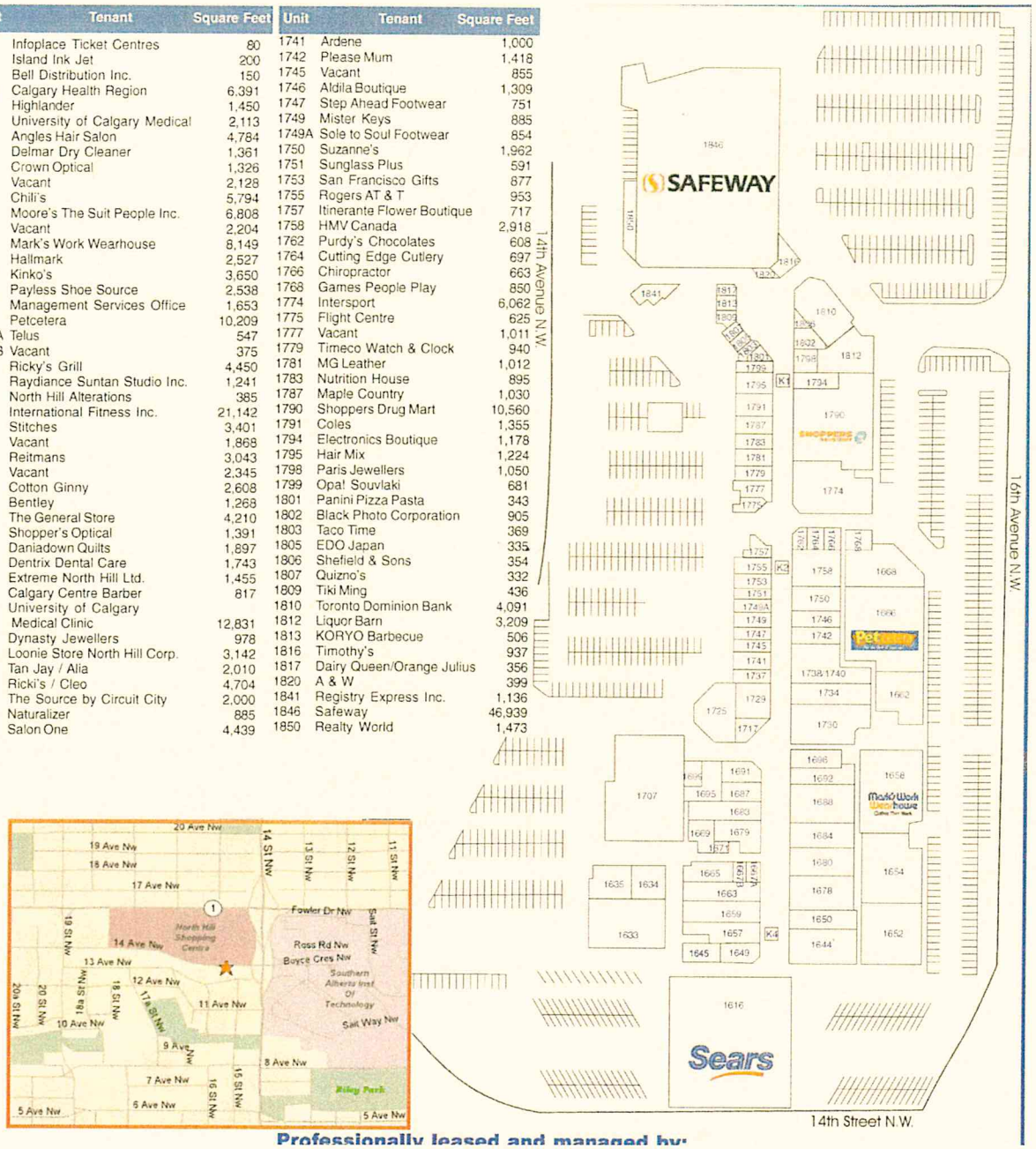


Illustration 37[49], North Hill retail tenant designations, right is north orientation.

5.4 Wasatch Region, Utah – TOD's – Regional Scale Plan 2040

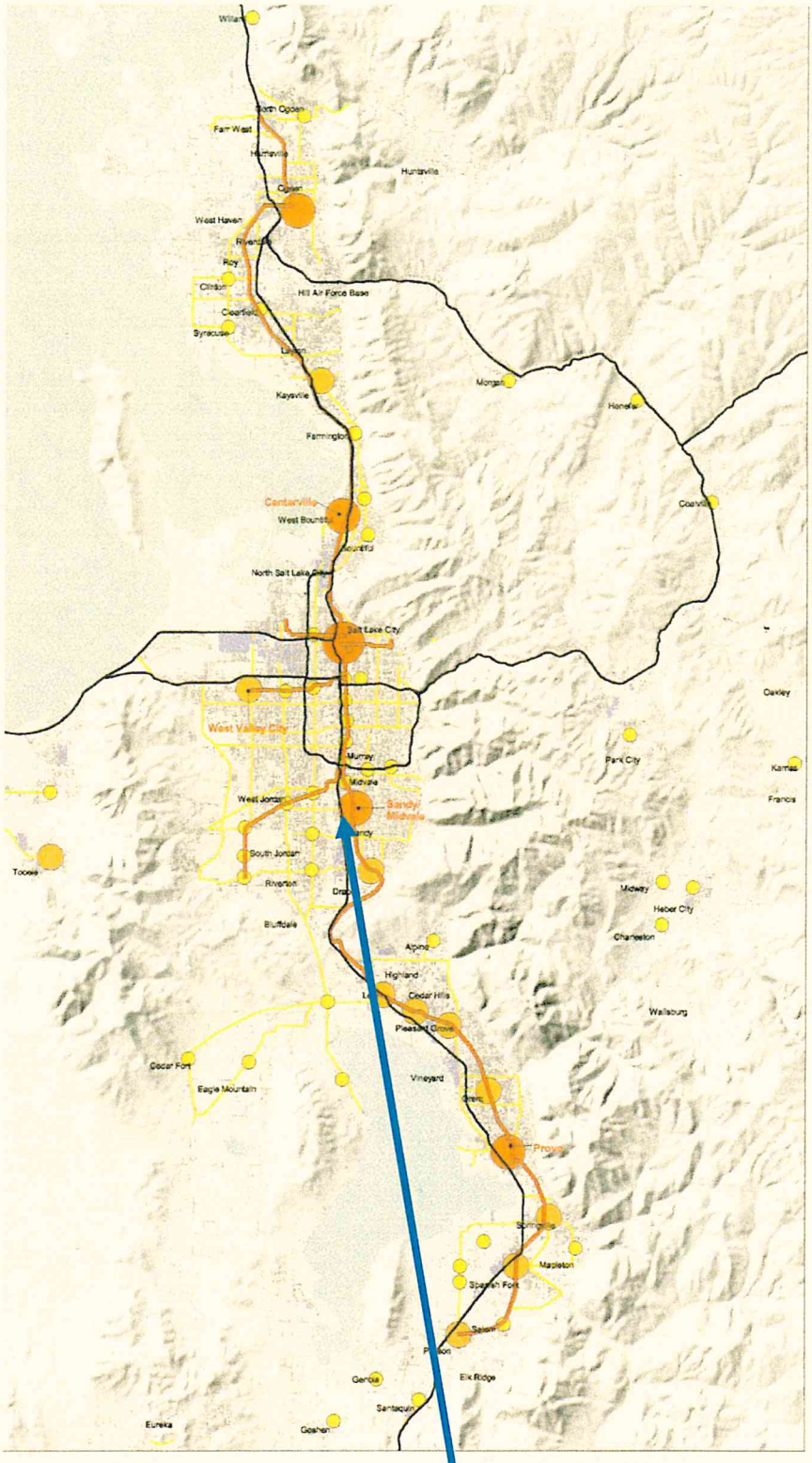


Illustration 38[50], Regional Plan 2040 Sandy/Midvale

Region planning studies are unfolding across the United State to address the negative effects that massive urban growth; particularly urban sprawl and auto-orientated communities have on an area. Many of these regions are made up of sub-centers that were once historically old mining towns. As the communities grew, rather than infill and re-develop the historical centers, they spread to cheaper agricultural areas. The purpose of analyzing these studies is to understand how long-term visions have been formed to prevent sprawl, and address increasing the density of towns and cities into compact transit orientated communities.

The Wasatch Region in Utah consists of a narrow stretch of land that is approximately a hundred miles in length and located between mountains and lakes. It runs primarily along a north and south axis and is made up of regional sub-centers. These regional sub-centers offer employment to the areas population. They have an underutilized rail infrastructure that offers opportunity for transit to connect to the linear alignment of the historic towns, while the mountains and lakes form natural growth boundaries. The sub-centers re-development relies heavily on the infill and re-formatting of the historic town centers. There is also an expansion of rail transit along existing tracks, infill development, transit corridors, and mixed-use centers. The mixed use centers will account for approximately 52% of future housing for the region, and 57% of the jobs. The regions linear structure is a bi-product of the areas topography and linear rail line. These underutilized tracks run through the centers of most of the

towns. The current low density, 'hop-scotch' approach to urban planning offer prime infill strategies to endless strip and commercial areas.

i) Sandy/Midvale, Utah – TOD – Underutilized Land Mass

An example of assimilating and increasing the density of two diverse centers into one community by addressing underutilized land around an already existing light rail track are in Sandy and Midvale, Utah. Because of the existing light rail track, it has been proposed to apply TOD design principles to the under utilized agricultural landmass by planning an intensive mixed-use development reliant on transit for circulation. A new transit station will be supported by residential, business and commercial uses. A park boulevard leads from the highway into the site and through to the station area which is surrounded by higher density areas. Planning of this site has allowed for progression from auto-orientated uses at the edge, to pedestrian and transit orientation within.

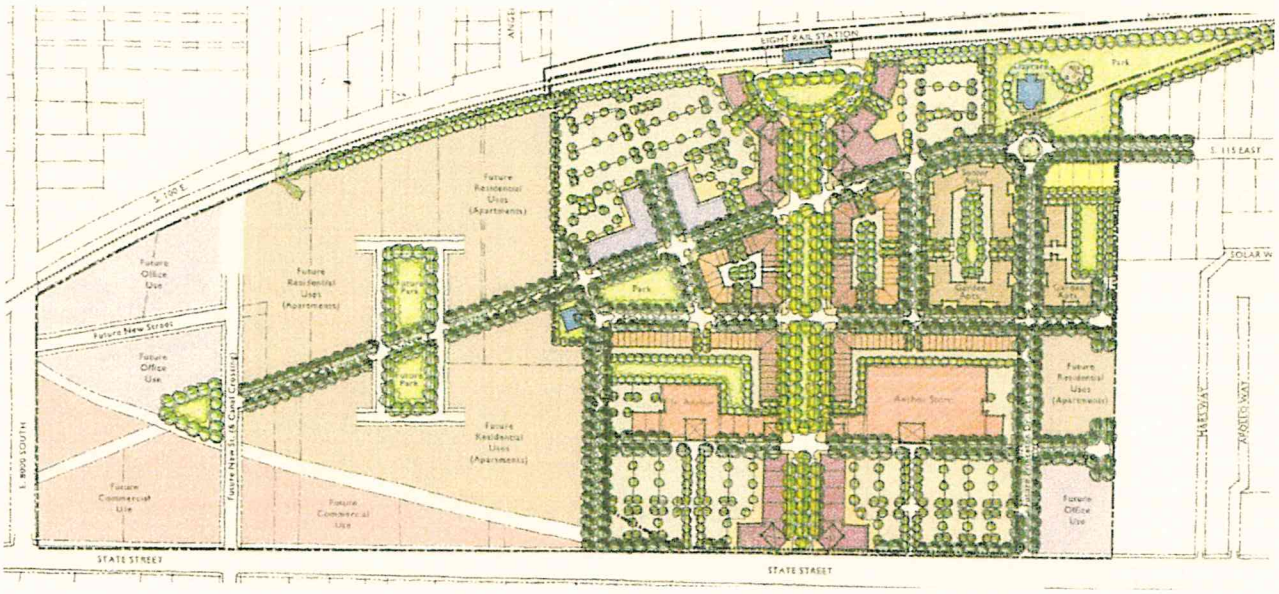


Illustration 39[51], Sandy/Midvale plan illustrating a new transit station with adjoining mix uses.

Concerning oneself about farmland preservation has been overruled. Instead, urban reconstruction is applied, considering that the existing light rail track has been misplaced and mis-planned. This plan exemplifies and strongly supports the idea of mixed-use, walk able neighbourhoods. The scale of the street and placement of buildings recreate places that allow continuity of public space for the pedestrian. A commercial strip mall, smaller in scale, and auto orientated, is located adjacent to State Street, complete with surface parking that allows ease of manoeuvring vehicles. Behind the strip mall, there are the large anchor stores. This placement allows maximum visibility into the site from the street. Residential use has been located to support the commercial developments and commercial walk able promenade. The residential apartments have been placed nearer to the core of the development since they are not car dependent. This placement strongly supports the thesis of a progression from auto-orientated uses at the edge to pedestrian uses in the

center. What is not obvious to this scheme, is the implementation of live-work units that support apartment living above workspace. This plan would easily support this new trend that provides a natural buffer between the commercial and residential areas. The work- spaces could easily be integrated with the public spaces. Instead, this plan seems to support isolated office spaces rather than integrating them into the live-work units. Main commercial / retail streets require special attention to encourage a pedestrian friendly environment. In this scheme, they have been considered as boulevards rather than traffic arterials. Further use of widened sidewalks, street trees, furniture, projecting canopies and signage, and large shop windows would further encourage strolling along this boulevard. The public parks encourage community life and awareness, as well as civic pride. The public open spaces are appropriately scaled; residential areas have small pocket parks while the transit stop has a large public park.

Illustration 40[52]

5.5 Portland, Oregon – TOD's – Regional Scale Plan 2040

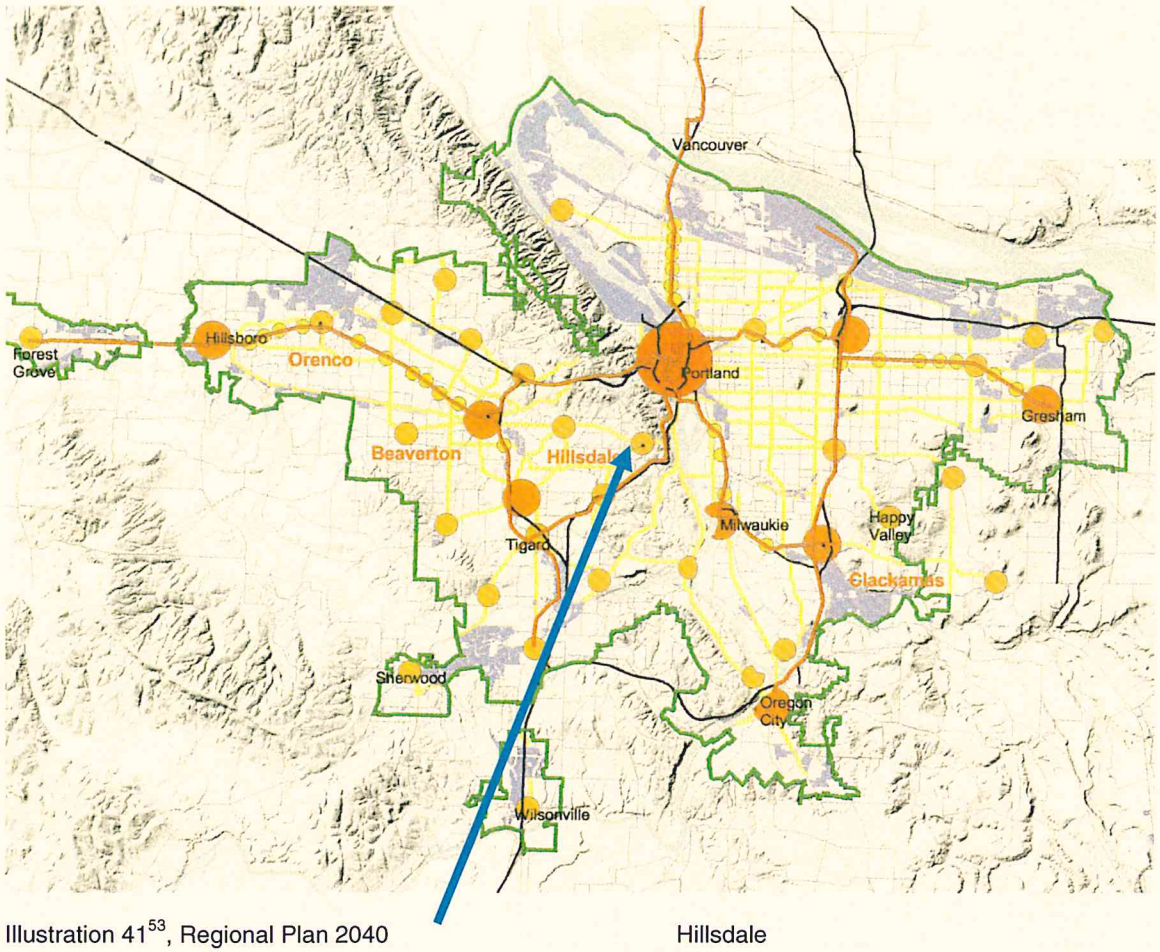


Illustration 41[53], Regional Plan 2040 Hillsdale

A 2040 plan of the Portland Metro area in Oregon depicts a hierarchy of centers; the Central City, six Regional Centers and numerous Town Centers which are supported with TOD's. The Town Centers, similar to Hillsdale, will be TOD's that incorporate light rail use with mixed us developments. In addition to light rail, transit corridors, shown in yellow lines, will also support express bus routes, car-pooling and historic Main Streets. The region has a linear structure that has been shaped part by topography in conjunction with historic rail lines. The old rail right-of-ways are well positioned because they run through the center of many larger towns and may be converted for transit.

Villages will also be clustered between major Regional Centers that further enhance the areas density. It is estimated that this dense, regional form of centers and corridors will quadruple transit rider ship. Neighbourhoods are to be converted to walk able mixed-use plans that place importance on diversity and pedestrian quality. Residential neighbourhoods would provide a mix of housing opportunities, from multi-family, through to single-family homes. They would be further mixed with commercial and retail developments all within walking distance to the homes. The homes are laid out on streets that invite walking to local commercial destinations and parks. Walk able developments are more compact than standard suburban layouts, but offer variations in gross land area, and in the mix of housing types used. Suburban planning had historically deviated from preserving the natural lands and farmlands between existing communities. Mixed residential planning prevents the spread of wall-to-wall suburban development that allows communities to loss their individual identities. For people who want to maintain there rural lifestyle, rather than 5-acre lots surrounded around a cul-de-sac, subdivide the parcels into half-acre sites that leave open space for farmland. An open area between communities would be created. People who prefer the rural estate lifestyle would be satisfied since their home would still be connected to permanent open space. "Although 70 percent preferred single-family homes, 79 percent agreed that housing within a neighbourhood should be designed for a mix of ages and incomes, and only 7 percent felt that neighbourhoods should have exclusively single-family homes and open space."[54]

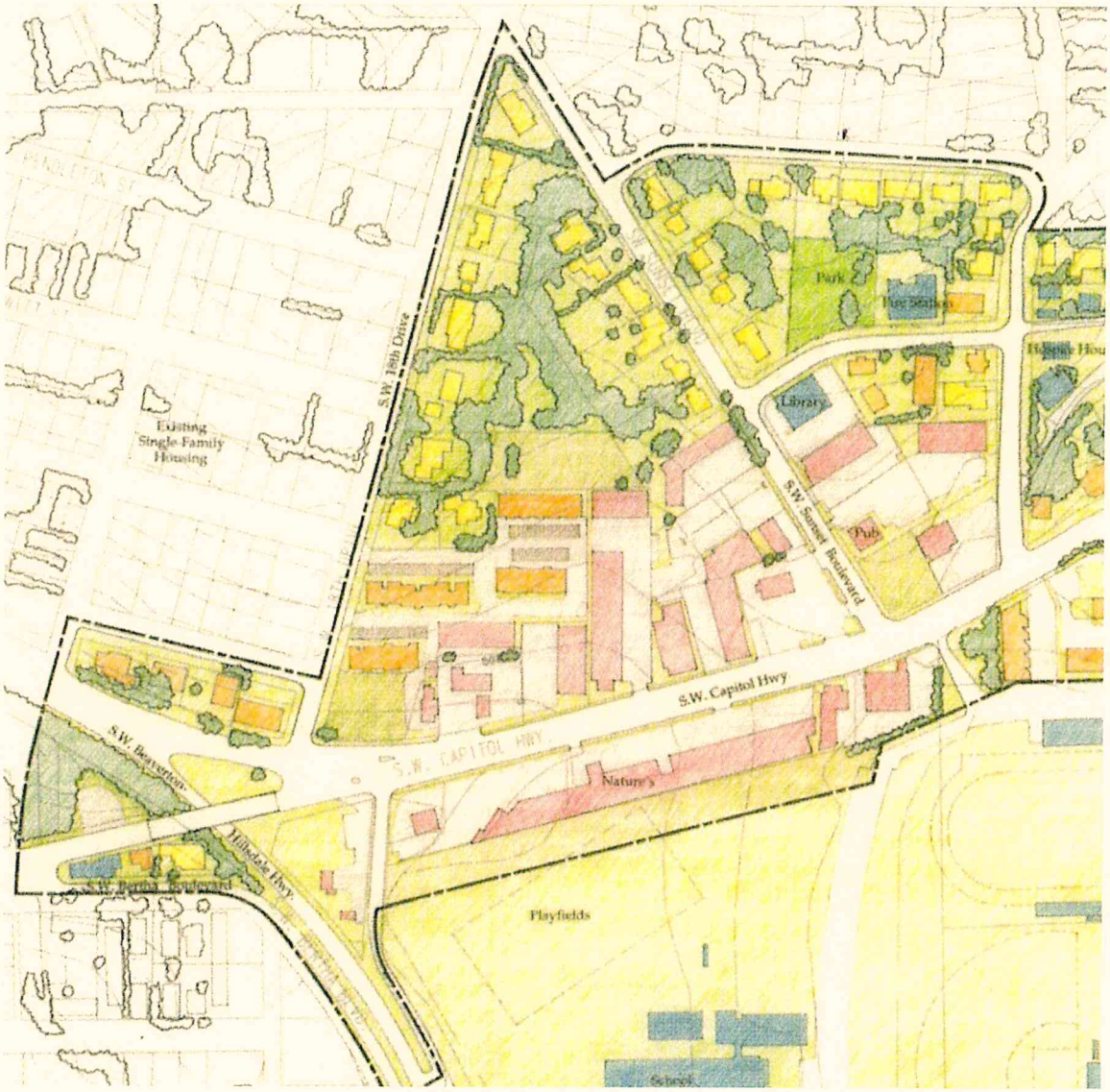


Illustration 42[55], Hillsdale, Oregon as an underutilized strip mall.

i) Hillsdale, Oregon – TOD – Underutilized Strip Mall

A center that is currently dominated by strip-commercial and historical buildings, Hillsdale is a study of infill in an underutilized commercial site. The primary objective is to transform the character of a community without changing its scale. Traffic calming principles have been incorporated and achieved by re-building the southern commercial area where the existing highway is converted into a Main Street environment. A pedestrian street and crossing has been

incorporated into the existing highway to link the retail strip that has been previously divided by the existing highway to the rest of the site. The major pedestrian street further directs residences to an existing school and playfields behind the strip commercial. This promenade runs north to south and has divided the commercial area, resulting in better pedestrian access to its shops. The commercial section now directly faces a street. The pedestrian street in this development has been used successfully by encouraging the community to walk. It has made this means of transportation workable by proper placement and by acting as a link to daily visited destinations. Existing single family residential located at the northern tip of the property density has been increased. Additional streets, alleys, and lots have been added that shape the character, scale, and ownership of the neighbourhood. A more continuous suburban fabric has resulted. There is a comfortable interface and transition in scale between the areas of the retail strip mall, and the detached single-family dwelling units. The increase in street and walkway connections for vehicles and pedestrians, between the site and surrounding neighbourhoods, has made the northern residential tip easily accessible. The rural village atmosphere has been recreated successfully by incorporating this pedestrian friendly scale. It is further enhanced by placing town homes and apartments over the shops that are located in the center of the large triangle block. These units could easily be adapted to Live-Work units, where the ground floor is the business, and the upper floor is the studio apartment. A complex mix of uses is easily integrated into this scheme.

Illustration 43[56], Hillsdale as a mixed-use, walk able neighbourhood.

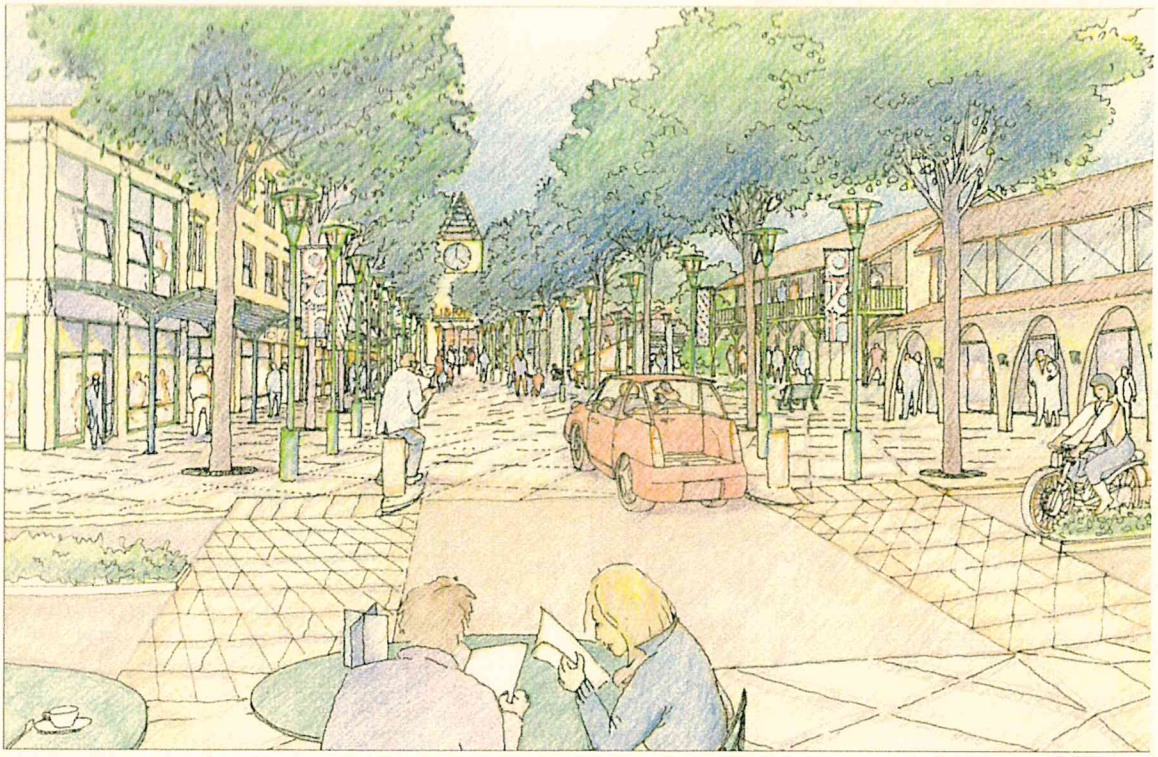


Illustration 44 [57]

5.6 Mountain View, California – TOD – Underutilized Mall

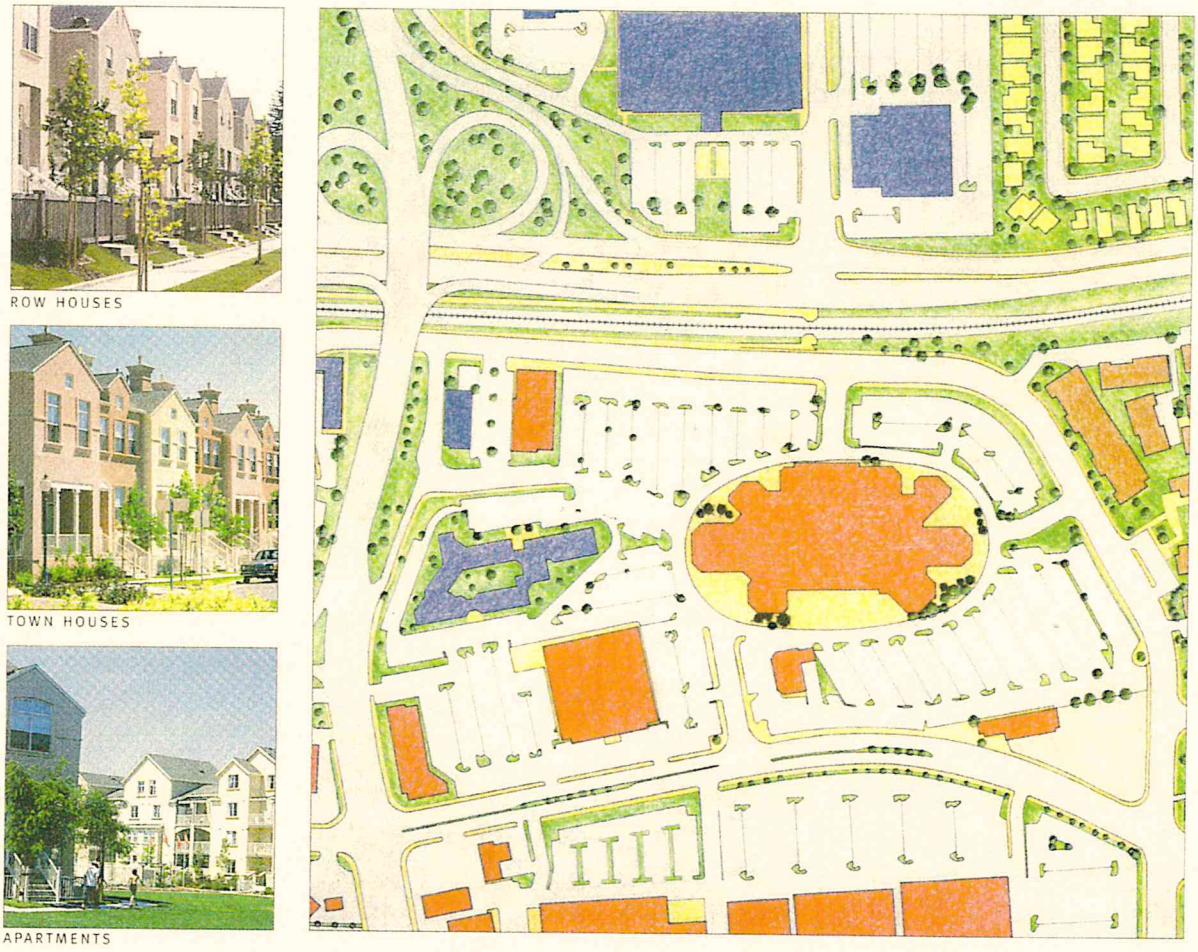


Illustration 45[58], Mountain View, California, The Crossings Shopping Mall as a Suburban Grey Field

Mountain View is an underutilized major shopping mall that has been re-developed as a new village with a complete mix of retail, employment, and housing. The goal in this type of development is to provide infill that will create a greater range of housing and services for the area. Adding jobs, civic facilities, and multifamily and senior housing to an area that is predominately surrounded by single-family homes is a way to balance the neighbourhood, and create more choice, both in housing and commuting patterns. Creating a pedestrian friendly focus to an existing auto orientated environment, generates a new center for the

neighbourhood that was once isolated by unwelcoming streets. Mountain view, because of its size, allows for whole neighbourhoods and commercial districts to be developed. Major shopping malls are prime areas for redevelopment because they are centrally located allowing for market support of a greater variety of housing and retail. They have superior access to transit; therefore in addition to be centrally located, their locations alone give them strength, which increases their success. Dead mall sites are also not directly in the neighbourhood that they serve. Most of them have become eyesores that many residents would like to see transformed. Retail is the fastest changing use of the development industry, therefore transforming these 'dead' sites with positive initiatives is achievable.

Mountain view's redevelopment has transformed its asphalt parking lot into an extension of residential units. These units consist of senior housing and apartment blocks that serve the adjacent neighbourhood. The neighbourhood north to the site is primarily single-family housing. Mountain View has become a bi-product of overbuilding and changing retail types. A new retail center and transit stop located to the north had become Mountain View's strict competition. Mountain View's site is 20 acres, which could have easily become a gated condominium project, but instead it further compliments the development north of the property by extending a mix of residential use.

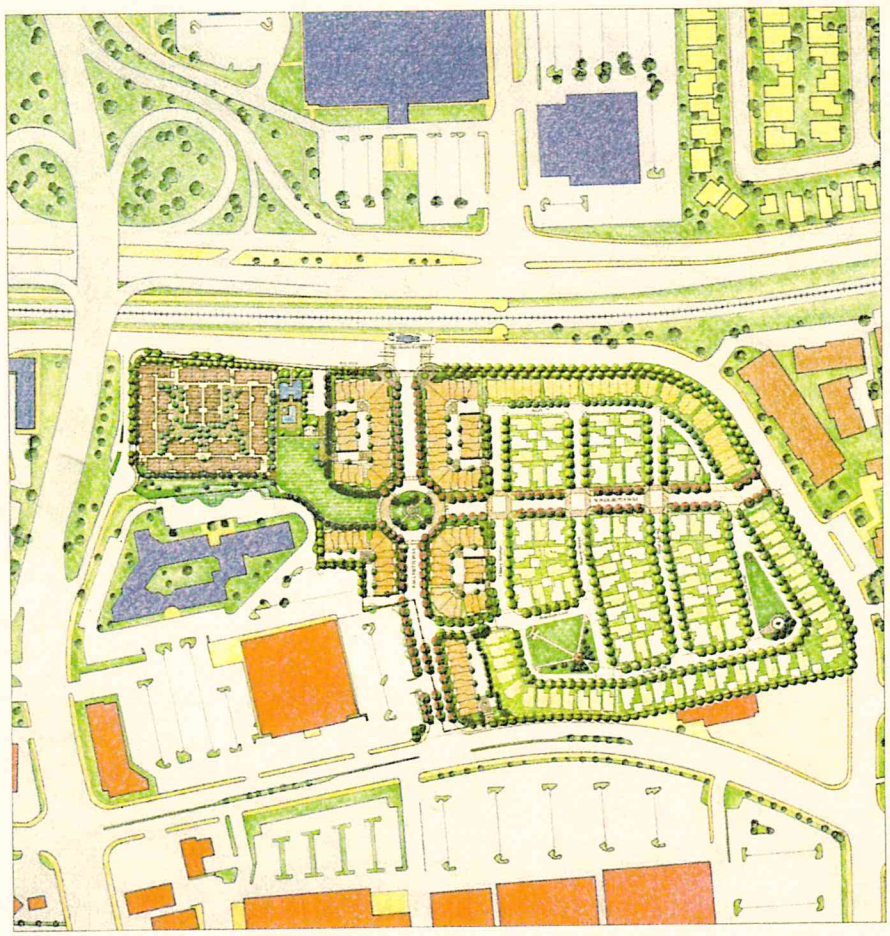
Its main street is lined with multi-family apartment blocks that could have been further enhanced by ground floor shops. It would have encouraged pedestrian densities and movement from the transit stop. The minimum street

setback in front of the multi-family units allow for this integration. Main streets typically require a 14 to 16 foot base story frontage of retail with enclosed parking behind, accessible by alley. Above the retail frontage are typically two stories of residential/office use.

A transit center is located at the northern most edge and is connected to the main street that is currently lined with multi-family apartment blocks. The transit center should have been further developed as the entrance to the site by incorporating the ground floor retail shops at the existing multi-family blocks along the main street. It has been appropriately scaled to the neighbourhood as a whole.

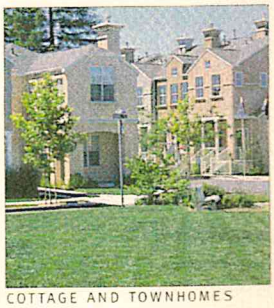
Intersecting the main street's north and south axis is an intersection that has been turned into a pocket park. Symbolically, this area can be viewed as the neighbourhood's heart because of its central location in the community, but functionally it acts as a transitional element that allows an additional street to run east to west, physically connecting the residential neighbourhood with main-street. This secondary street has several pedestrian crossings that allow slower traffic movement and promotes pedestrian flow. Within the residential neighbourhood are two additional pocket parks. These parks promote gathering places for the residents and enhance a sense of community. A larger park has been extended from the main streets intersection park, and is sandwiched by office and apartment blocks. It provides recreational opportunities for office employees as well as a pleasant area for lunch breaks. This secondary street,

and large park extension, are examples of urban planning techniques used to knit the fabric of a community together.



COTTAGES

POCKET PARK



COTTAGE AND TOWNHOMES

Illustration 46[59], the Crossings Mall redevelopment as a new Residential Neighbourhood.

6.0

Conclusion

6.0 Conclusion

Citizens today are redefining their built environment to suit the opportunities technology has created in today's digital world. We live with a "diverse population of singles, the working poor, the elderly, and the pressed middle-class families who can no longer afford the "Ozzie and Harriet" version of the good life."[60] What still remains intact are the values associated with traditional living. What has been deemed as important to the planning of communities in society today, "diversity, community, frugality, and human scale",[61] are aspects commonly recognized in traditional planning. It is important to understand how to merge these timeless traditional principles into today's urban environment. Technology's major contribution to the shaping of our urban fabric was the automobile. The automobile brought along with it today's retail power center. Currently, technology has evolved to a point where we are now faced with digital anonymity. Because of this, citizens are regressing to the importance of living in communities that contain "neighbourhoods of housing, parks, and schools placed within walking distance of shops, civic services, jobs, and transit."[62] This "strategy could preserve open space, support transit, reduce auto traffic, and create affordable neighbourhoods."[63] By re-planning the power center to suit the needs of today's citizen, a community would be created that would be environmentally efficient, affordable for working families, and cost-effective for business.

At the nucleus of neo-traditional ideals is the pedestrian, and what is important to them, both socially and practically. The citizen is what makes places

into communities. The power center has forgotten the citizen in the process of perfecting its model to accommodate the automobile. North Americans love their cars and everything that they represent, to most, privacy and independence. The goal is not to forget about the automobile, but to provide a balance for the pedestrian, transit, and car. When this unbalance exists, a region's focus can be easily lost. With segregated zoning for the automobile, retail chain stores, jobs, and homes are isolated in subdivisions and office parks. Large businesses are realizing how important it is to be part of a neighbourhood rather than part of a business park. By locating in mixed-use communities, they are providing an opportunity for their workers to partake in the sharing of amenities. It is important to include the pedestrian once again in the formula of urban planning. "To plan as if there were pedestrians will turn suburbs into towns, projects into neighbourhoods, and networks into communities."[64] Creative combinations of community and privacy, auto and pedestrian, large institution and small business, suburban and urban, are solutions that the Digital World is looking for.

7.0 Endnotes

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[2] Andres Duany, Suburban Nation. (New York: North Point Press, 2000), p.4.
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[7] Moshe Safdie, The City after the Automobile. (Toronto, Canada: Stoddart Publishing Co., 1997), p.4.
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[9] Douglas Kelbaugh, Common Place, (Washington: University of Washington Press, 1997), p. 291.
[10] Joel Kotkin, The New Geography, (New York: Random House, 2000), p. 146.
[11] Ibid., p. 146.
[12] Ibid., p. 149.
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[14] Andres Duany, Suburban Nation. (New York: North Point Press, 2000), p.10.
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[17] Ibid., p. 16.
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[19] Trudy Bunting and Pierre Filion, Canadian Cities in Transition, (New York: Oxford University Press, 1991), p.325.
[20] Peter Calthorpe, The Next American Metropolis. (New York: Princeton Architectural Press, 1993), p.49.
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[24] Peter Calthorpe, The Next American Metropolis. (New York: Princeton Architectural Press, 1993), p.29.
[25] Joel Kotkin, The New Geography, (New York: Random House, 2000), p. 31.
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[27] Joel Kotkin, The New Geography, (New York: Random House, 2000), p. 143.
[28] Ian Chodikoff. "Viewpoint." Canadian Architect, May 2006, pp. 10.
[29] Ibid., p.46.
[30] Ibid., p.49.
[31] Ibid., p. 10.
[32] Katie Williams, Achieving Sustainable Urban Form. (New York: Routledge, 2001), p. 312.
[33] Sam Lubell. "Is there hope for the Big Box?" Architectural Record, August 2005, pp. 68-76.
[34] Ibid., p. 74.
[35] Ibid., p. 70.
[36] Ibid., p.72.
[37] www.edmonton.ca
[38] "Awards" Canadian Architect, May 2006, pp. 15.
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[41] Allan B. Jacobs, Great Streets. (Massachusetts: MIT Press, 1995), p.11.
[42] Peter Calthorpe, The Regional City. (Washington: Island Press, 2001), p.206.
[43] Century Park Sales Brochure-Edmonton, AB
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[45] Bentall Retail
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[48] Bentall Retail
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[50] Peter Calthorpe, The Regional City. (Washington: Island Press, 2001), p.153.
[51] Ibid., p.158.
[52] Ibid., p.158.
[53] Ibid., p.141.
[54] Ibid., p.130.
[55] Ibid., p.145.
[56] Ibid., p.145.
[57] Ibid., p.145.
[58] Ibid., p.230.
[59] Ibid., p.231.
[60] Peter Calthorpe, The Next American Metropolis. (New York: Princeton Architectural Press, 1993), p.16.
[61] Ibid., p.16.
[62] Ibid., p.16.
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[64] Ibid., p.17.

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Interview: Ray Fleetwood, City of Edmonton Fire Chief, ph# (780)496-3656

Interview: Jerry Juzwa, City of Edmonton Police, ph# (780)421-2264

Interview: Cindy Skolski, Edmonton Public Schools, ph# (780)429-8339

Interview: Kim Agar, City of Edmonton Planner, ph# (780)496-2939

Interview: John Anderson, Edmonton Economic Development, ph# (780)462-2121 Ext. 222

Interview: Harold Hudson, Cameron Development Corporation, ph# (780)424-8008

Interview: Steve Martin, Bentall Retail, ph# (403)303-2412

Guest Advisor: Carol Belanger M. Architect, MAAA, MRAIC, LEED ACC. Professional, City of Edmonton Project Manager / Planner