WEST SPRINGS

urban development proposal

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Table of Contents

0. Executive Summary

West Springs Urban Development Proposal (WSUDP) will serve to guide the development of the five-acre parcels present in the community of West Springs into a more integrated, connected, walkable and sustainable community.

The WSUDP was created for academic purposes, after a collaborative process between Planning students in the Faculty of Environmental Design at the University of Calgary, the instructors, representatives of the West Springs/Cougar Ridge Community Association (WSCR CA), Bri-Mor Developments and other stakeholders. The collaborative process was done in three main phases: analysis, concept development and final proposal. The process was divided in such a way to allow different scopes and elements to be evaluated according to their importance to our client (WSCR CA).

The WSUDP addresses 3 main issues within the community of West Springs:

- *Diversity*
- *Connectivity*
- *Accessibility*

The West Springs UDP recommends lot subdivision guidelines for five (5) acre parcels in the community that can be developed individually or in the recommended format of three at a time. The document also identifies open spaces and pathways/trails to create an integrated community, articulates policies and guidelines in terms of commercial development and building massing, establishes goals to meet current and future community growth strategies.

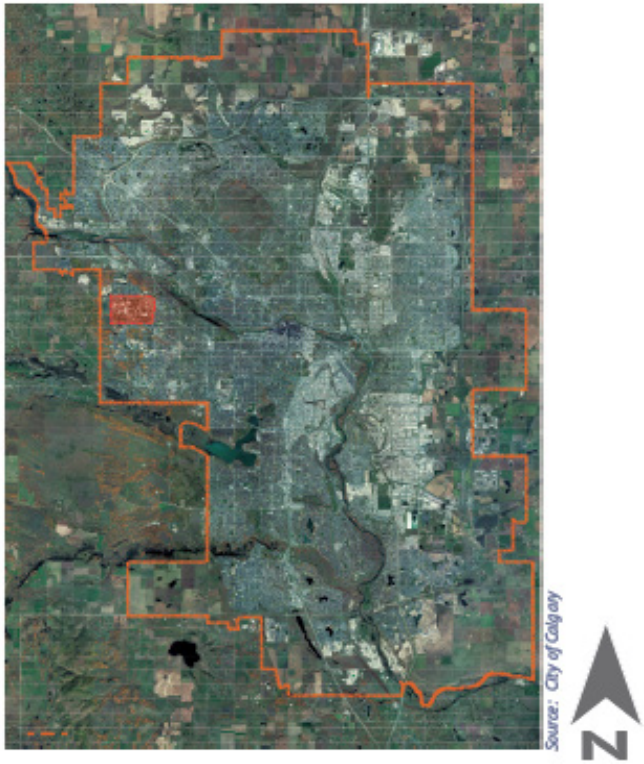
The Urban Development Proposal is based on a detailed analysis of the community and residents of West Springs. Chapter One and Two present this analysis. The analysis is comprised of the generic planning context (regional context, existing plans and policies, etc.), the present population demographics and population projections, the overall community natural features, visually significant areas, historic and cultural features, the built form and uses present. The analysis concludes by identifying issues and opportunities with the community and the comprehensive mission of the UDP.

Chapter Three addresses the land use concept of the design and the goals and vision the project team have for the community. Chapter Four addresses Urban Design Guidelines for the community and discusses specifics and how these elements will help reinforce the land use concept.

1. Introduction

1. Introduction

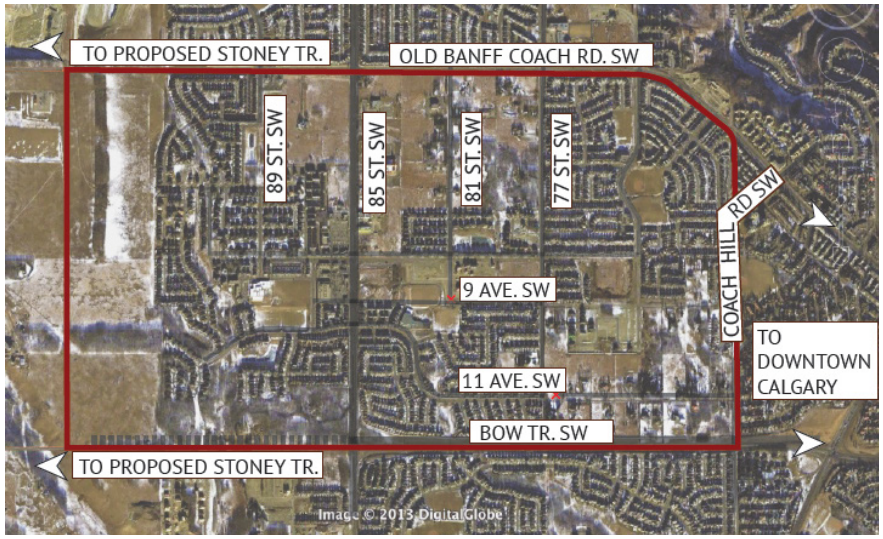
Figure 1.1 Location



1.1 Where is West Springs ?

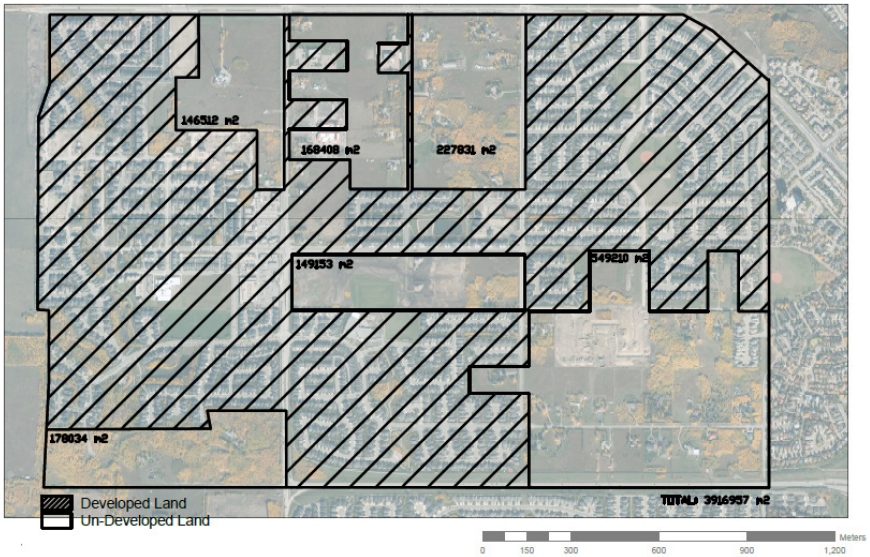
The community of West Springs is located in the southwest quadrant of the City of Calgary. It is part of Ward 6 under Alderman Richard Pootsman. The community is part of the East Springbank Area Structure Plan and West Springs Area Structure Plan (WS-ASP) adopted by Council in 1997 and 2012 respectively. Figure 1.1 addresses the location of the site in a regional context.

Figure 1.2 Boundaries



The site is bounded by Old Banff Coach Road S.W. to the north, the 69 Street S.W. road alignment to the east, Bow Trail S.W. to the south and the future Transportation Utility Corridor (TUC) to the west as shown in Figure 1.2. The community as a whole is approximately 970 acres, distributed in developed versus undeveloped land as Figure 1.3 shows.

Figure 1.3 Developed vs. undeveloped land



1.2 Background and Policies of West Springs

As the West Springs Area Structure Plan states, the West Springs Community was established through the creation of the East Springbank II Community Plan (Appendix 3) in 1998. West Springs was the third of five communities to be planned within that area of East Springbank. The community consists largely of small fragmented acreage parcels, primarily two (2) hectares (5-acres) in size, which pose a challenge to the creation of an integrated, well connected and planned community. The majority of these 5 acres parcels have redeveloped one at a time into conventional p-loops and culs-de-sac streets with single detached family homes.

The community is subject to a variety of policies, statutory documents under the City of Calgary and the Province of Alberta. The main documents are:

- Area Structure Plans: West Springs, 2012 and East Springbank II-Appendix 3, 1998
- City of Calgary 1P2007 Land Use Bylaw
- City of Calgary Municipal Development Plan
- City of Calgary Transportation Plan

Other documents not mentioned here but taken into consideration for the development of a complete and integrated community are the Roads 2012 Design Guidelines, Complete Streets Guidelines, Landscape 2012, Subdivision and Servicing Guidelines, Urban Design Guidelines and more.

1.3 Issues and Objectives

The main purpose of the West Springs Urban Development Proposal (WSUDP) is to guide the development of the community in a more sustainable and integrated way, so that the concept of an integrated urban development as outlined in the WSASP is achieved in better ways. The document addresses a variety of issues that are directly related to the urban form and quality of life of the residents of the community and look for a comprehensive solution. It was developed in accordance with the different statutory documents in place for the community, the guidance of the Faculty of Environmental Design professors and representatives from the community and Bri-Mor Developments.

The project team identified the main issues for the WSUDP to address to be connectivity and continuity. Overall, the West Springs community needs to improve and create better connections within itself and its surroundings, as well as pave the way to a future development in a manner that is consistent with the goal and objectives of the community as well as the statutory documents.

Currently there are too many blocks and poor connections that can be addressed in a better format; the status quo of the community needs to be changed so it can be improved.

Figure 1.4 Main issues

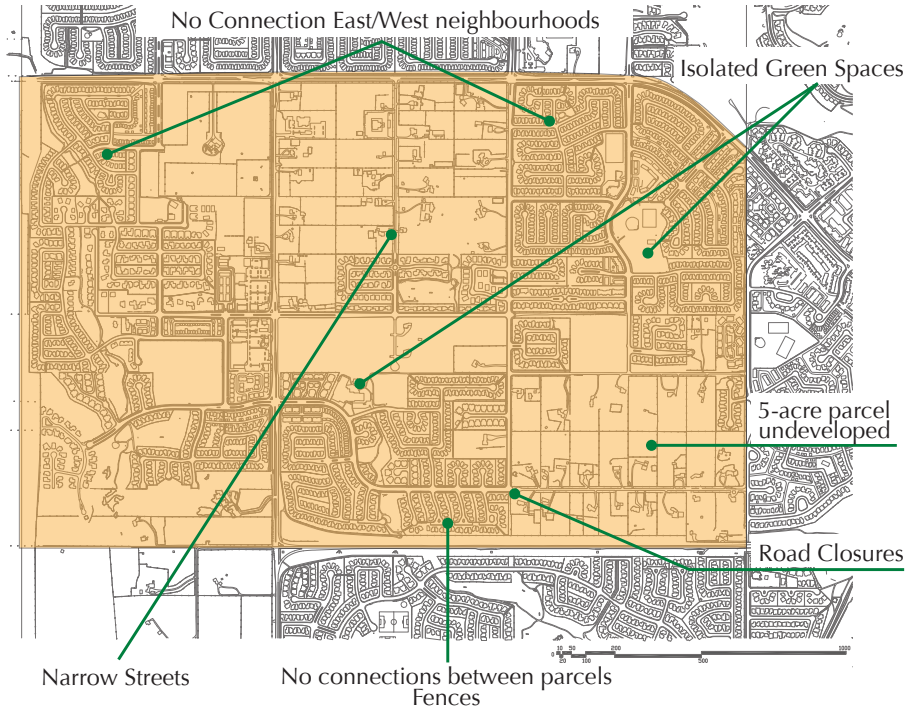
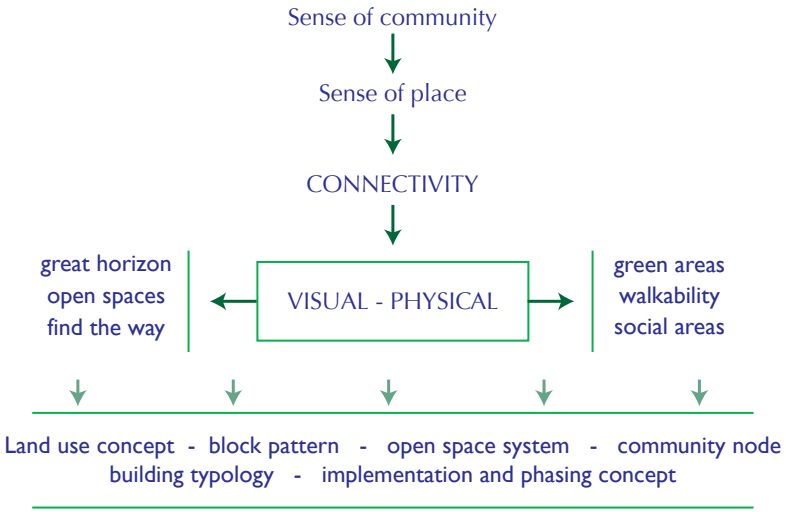


Figure 1.5 Conceptual proposal



Besides the main issues identified of connectivity and continuity, the project team also identified and created strategies to address issues such as: green pathways and open space, architectural diversity, housing diversity, and more as exemplified in Figure 1.4. All of these elements will help to create a proposal that will take into account the desire to have a healthy, connected, vibrant and green community where the natural environment (including landscapes and biodiversity) and the current built environment form a cohesive community (see Figure 1.5).

1.4 Methodology and Work Plan

The West Springs Urban Development Proposal (WSUDP) was performed in an academic setting, as part of the Advanced Professional Planning Studio (Master of Planning - Urban Design and Development stream). This project was realized in studio format, where a number of creative brainstorming/development techniques assisted the students in coming up with a wide range of ideas. During this entire process, representatives of the community and development industry as well as the professors helped guide the students into creating a concept and proposal in accordance to the desires/needs of the residents of West Springs as stated earlier in this document.

The WSUDP was performed during the course of approximately four (4) months and three (3) distinct phases. The original work plan and schedule was adjusted from four (4) phases into three (3) as the project progressed to better address the project needs and deliverables. These phases were: analysis, conceptualization and final design. During all phases, the stakeholders of the project were involved in a small or larger measure. Figure 1.6, shows the original work breakdown structure of the project.

The methodology used throughout the project was based on the systematic analysis of the context and site, creative concepts and use of successful examples of urban design, detail oriented design and others. The main steps used, as well as the stakeholder involvement and the deliverables of each step in the process are outlined in Figure 1.7.

Figure 1.6 Work breakdown structure

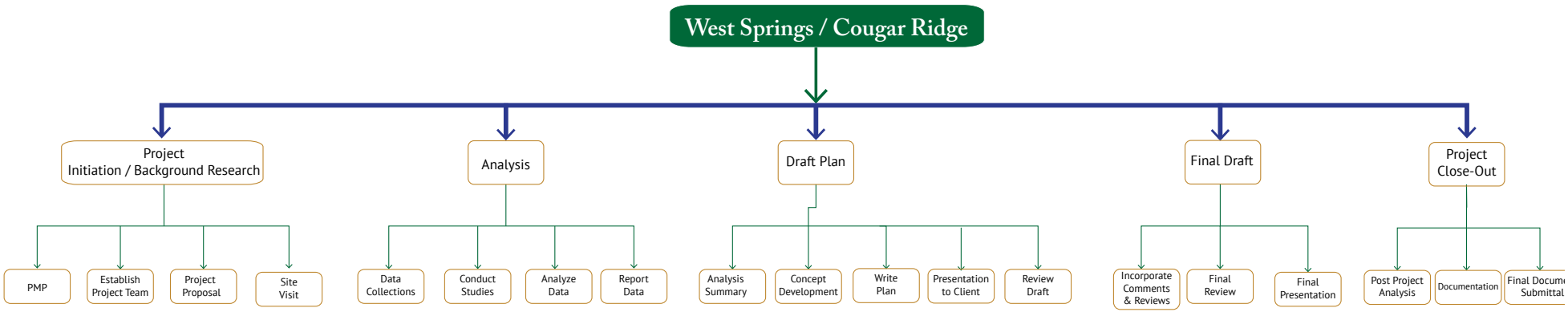
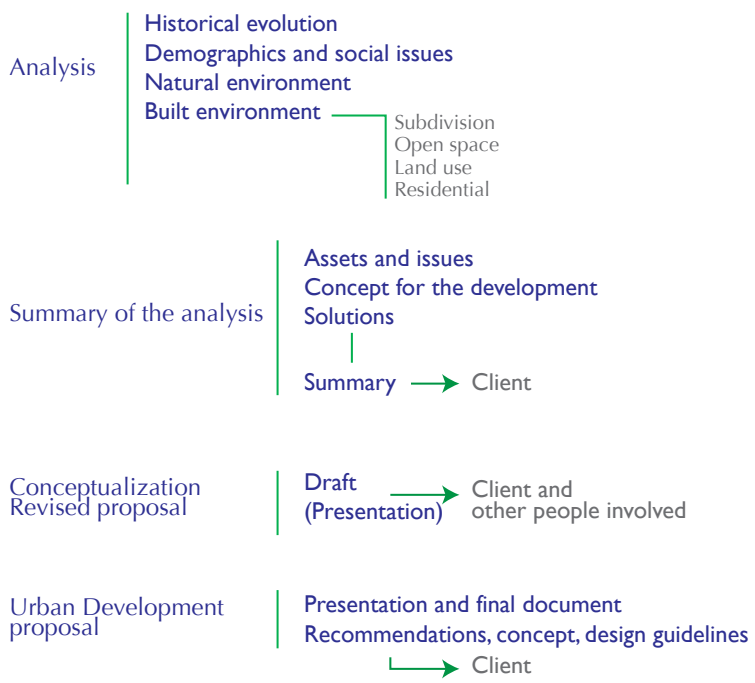


Figure 1.7 Methodology



1.5 Assumptions, Limitations and Exclusions

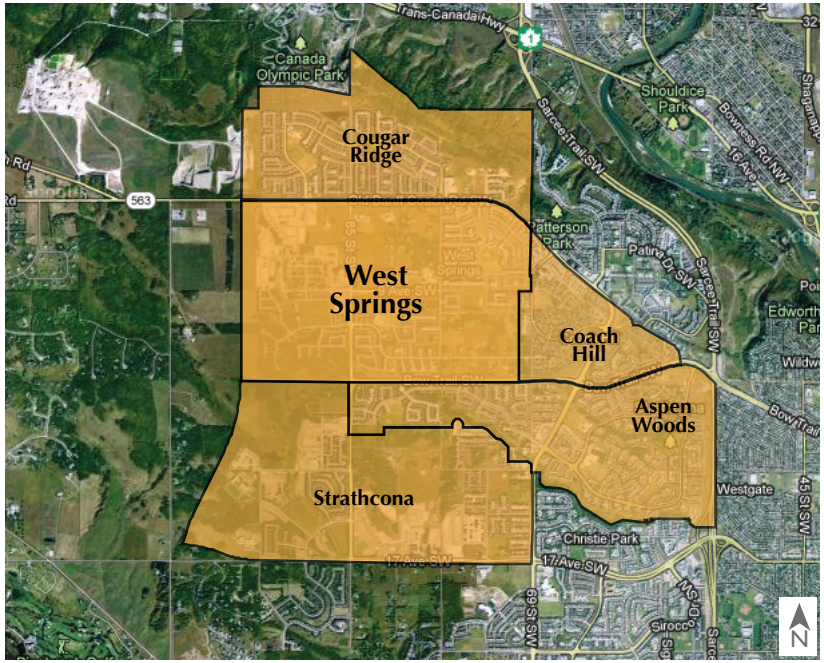
Due to limited time during this process not all aspects were covered in the detail desired or to the scale needed for development to occur in a short period of time following this submittal. The following list outlines the major assumptions/limitations/exclusions taken into account:

- The WS-ASP guided but not dictated the designs. It served as a guideline to assist the design team.
- Economic viability and demolition costs were assumed to be negligible when taking into account the development of the parcels.
- Development in progress was considered in place and taken into account in any new proposed plans
- Community Association representatives were the only form of access with the client. No access to the community members for consultation or public engagement methods took place
- One cohesive vision and collaboration at the time of development between parcel owners and different stakeholders.

2. Analysis

2. Analysis

Figure 2.1 Surrounding communities



As established in the previous section, West Springs is in the southwest quadrant of the City of Calgary with major arterial roads as its boundaries. Other important elements of the location of the community are its surrounding communities as shown in Figure 2.1.

The methodology used for the project allowed the analysis to center into three (3) major components. This was done for ease of research and data collections. The categories were: Geo-demographics (historical evolution, population, economics, etc.); Natural Environment (topography, climate, open spaces, native species and more) and Built Environments (housing typology, inventory, land uses as examples). This comprehensive analysis allowed for a true understanding of the site and its present situation and the desire of future development in a integrated manner, with solid planning principles applied.

2.1 Geo-demographics

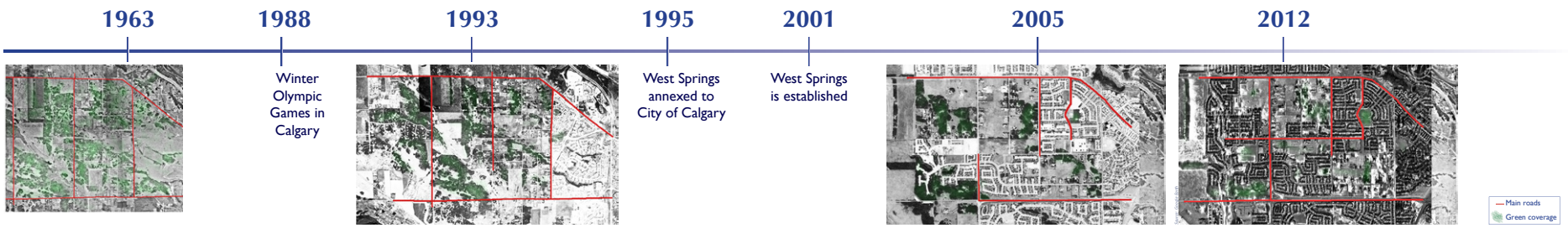
Geo-Demographics, as defined by the City of Calgary, is the locational analysis of social, economic, and demographic information for urban and regional planning. A proper geo-demographic study can help monitor the growth and change of a city for the proper management plans. It is also said that with this cluster of elements one can also grasp and properly maintain the corresponding quality of life for the population.

In urban planning and urban design and for this project, geo-demographics are/were essential to properly guide the conceptual plans. It was of utmost importance for the project team to comprehend the geo-demographic elements of the community to properly visualize the future of the same.

Historical Evolution

West Springs was annexed into the City of Calgary in 1995, and that spearheaded the development present in the community as it stands with its p-loops and cul-de-sacs. Before this time, the community was part of the Rocky Ridge Municipality. It was a place where the natural landscape was the dominant land form. Figure 2.2 shows the history of development through aerial photographs of the area.

Figure 2.2 Historical evolution

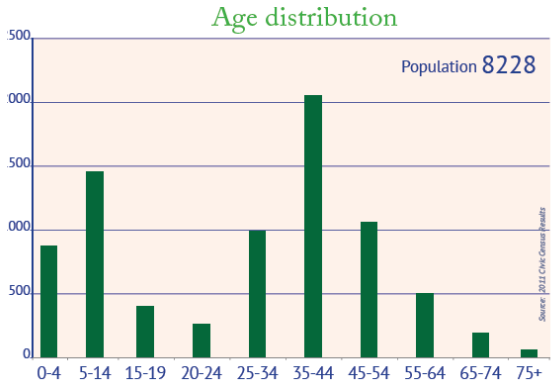


Population

West Springs Area Structure Plan expects the area to be the home of 15,000 people and 800 jobs by 2025. Some of the most pertinent questions the project team needed to answer when looking at West Springs are the following: Is this population growth even possible? What is the population reality of the West Springs area? Who is the average resident?

According to the census of 2012 taken by the City of Calgary, West Spring boasts a population of 8228 persons, distributed in 2795 dwellings. The most relevant information can be observed in Figure 2.3.

Figure 2.3 Age distribution



The population is distributed in different ways by age and by dwelling type (See Figure 2.4 - 2.5 for more details). Historically, the dwellings of the community have risen at a rate of 5%, refer

Figure 2.4 Dwelling summary

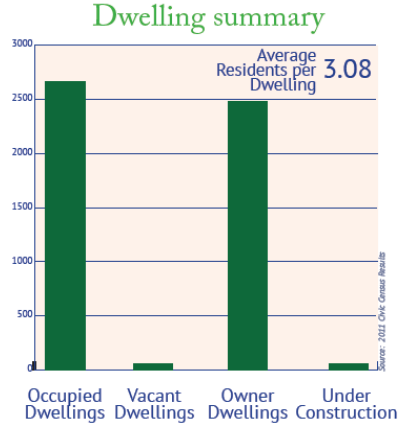
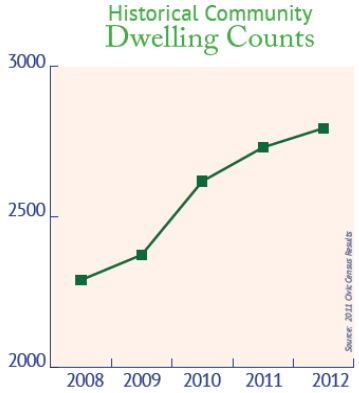


Figure 2.5 Historical community dwelling counts



to Figure 2.5 and the vacancy rate is around 2.08% and there is approximately 60 units in construction in 2012. This data indicates that the goals stated by the WS-ASP are achievable when the community is fully built out.

Some other relevant characteristics of the West Springs community, such as ethnicity, education level, preferred transportation modes are also considered relevant as they help guide concepts and wishes of the community into an appropriate urban design proposal for the community (data from Community survey and Community profile - See Appendix).

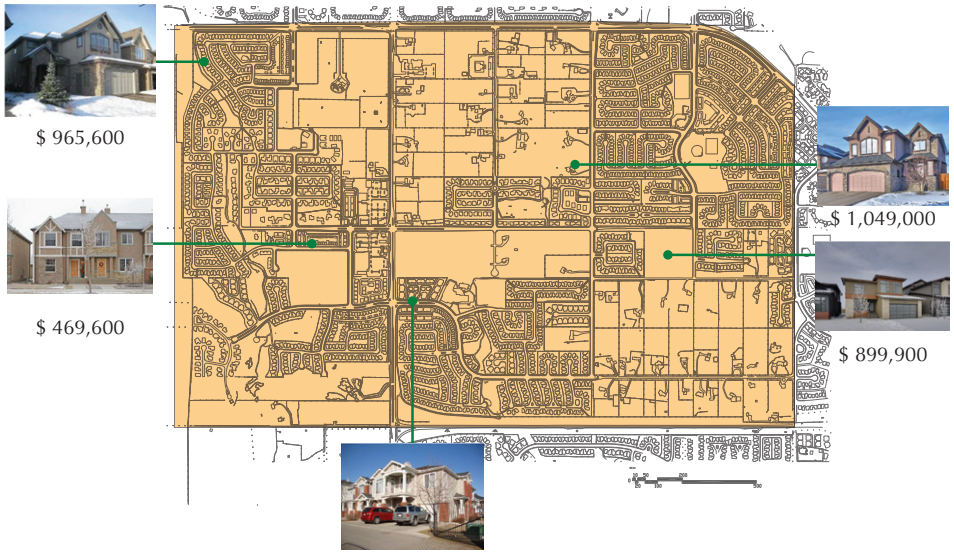
Economics

West Springs can lay claim to the pricier land costs of the City of Calgary. An analysis in terms of economic characteristics is then indispensable to be able to design and propose development in line with the realities of the city.

The average income of the community has been historically higher than the City of Calgary. In 2005, it was approximately 58% above the Calgary average and amounted to CAD $106,411. The average income of West Springs has increased 5.6% in previous years versus 1.8% that the city experienced in the same period.

The average lot price for new construction in the community of West Springs is above CAD $400,000, and the average house price

Figure 2.6 Range of housing prices



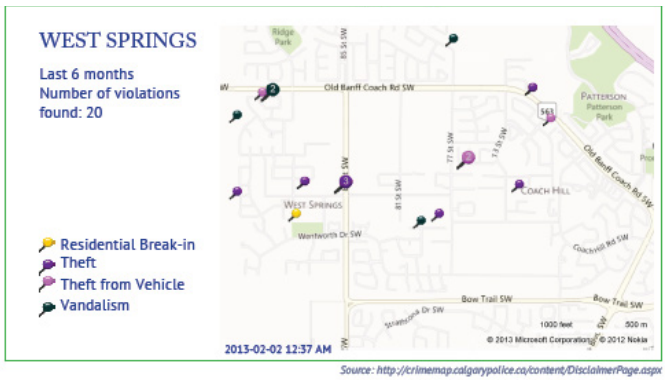
is above the CAD $600,000 mark for most single family houses and CAD $380,000 for town homes. Figure 2.6 shows a glimpse of the distribution of the different price ranges in the community.

All other economic and population information can be seen in the **Appendix 1** section of the report.

Social Issues

Part of a geo-demographic analysis is not only looking at the statistics and spatial issues but also taking into consideration some of the more social aspects of the site. In this case, the project team looked at crime mapping and behaviours survey results from the community association and other important considerations like current institutional uses and amenities.

Figure 2.7 Crime mapping



Source: http://crimemap.calgarypolice.ca/content/DisclaimerPage.aspx

Figure 2.7 is a graphic representation of the crime mapping done on the community. Overall, the community can be considered safe and the incidents reported are approximately 21 in the last six (6) months until February 2013; and the highest incidents is of vandalism reported in the northwest boundaries of the community.

The amenities of the area are mainly commercial, are varied and are concentrated in the intersection of 85th Street SW and 9th Ave SW. This includes grocery stores, coffee shops, pharmacy, restaurants and more. Other amenities include 2 schools, a variety of soccer fields and a pathway system, and places of worship for different faiths. Please refer to the *Land Use section of the Built Environment* analysis for a more complete list of institutional and commercial uses.

2.2 Natural Environment

West Springs's natural landscape and environment is of extreme importance to the community. The community is looking to maintain or enhance many of the more natural elements present in it.
West Springs is part of the Prairies zone of Alberta, in specific the community belongs to the Aspen Parkland eco-region and is bordering the Foothill area as well.
Different elements were taken into consideration when creating the concept design.

Topography

Although fairly flat, the community has significant changes of topography in the surroundings. See Figure 2.8 for a 3D topographic image.

Vegetation

The vegetation present in West Springs is abundant, and something that the design team wants to maintain and emphasize. Figure 2.9 exemplifies some of the species present in the community.

Figure 2.8 Topography

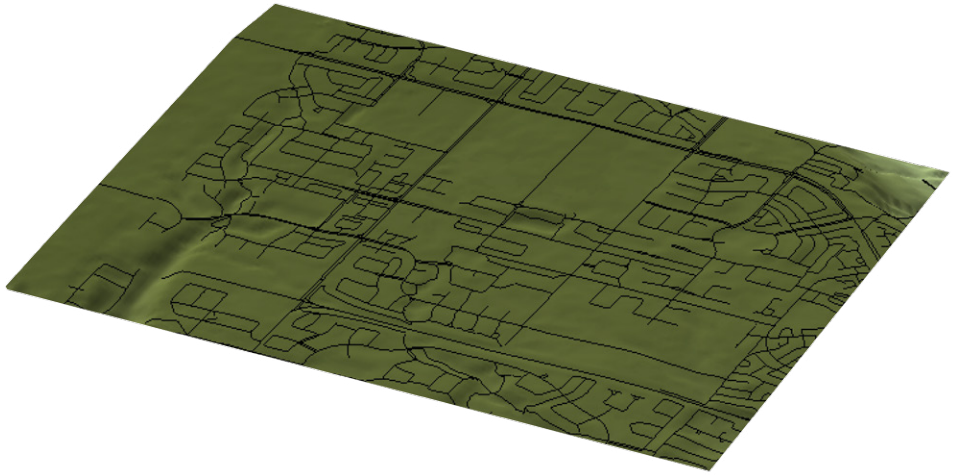


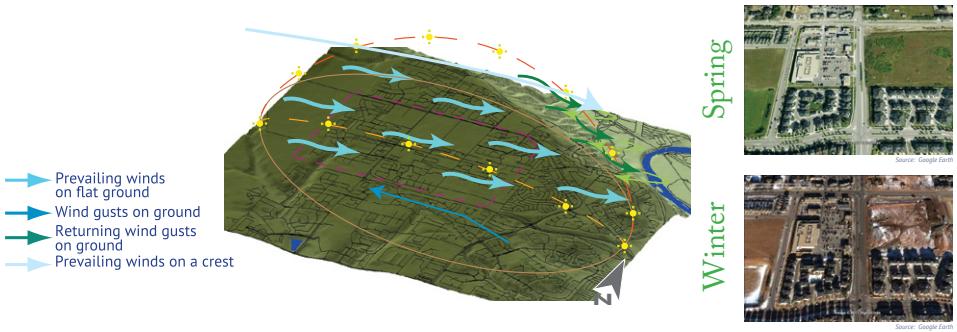
Figure 2.9 Vegetation

Fescue grass

Poplar trees

Coniferous and decidious

Figure 2.10 Sun and wind study



Climate

Part of the charm of the community of West Springs is that its location allows for certain climatic advantages. Figures 2.10 refers to the weather characteristics of the community.

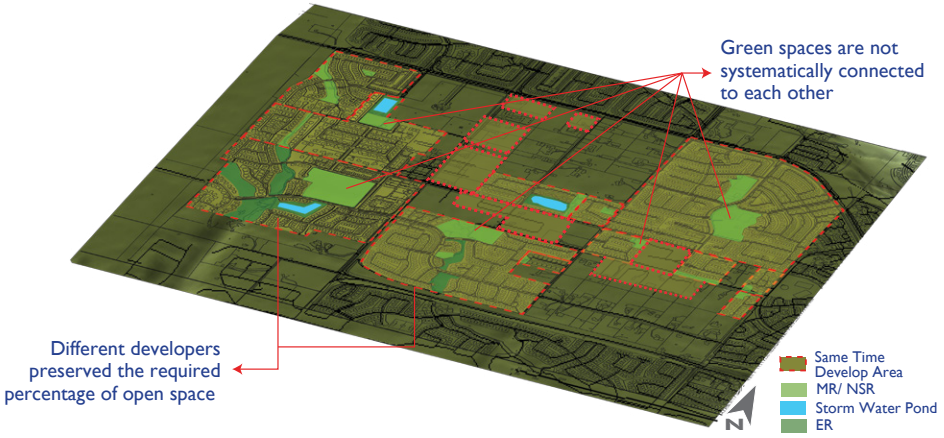
The main issue to be considered in terms of weather is related to the shadows during the Winter season. Future buildings may consider the relationship between their heights and the open space left on the ground level so that the separation between them allows enough sunlight for the surrounding built environment.

Open Spaces

Open Space is an important element in any city. In this case, the City of Calgary has established two broad categories of open space, one called Environmental Reserve (ER) which serves the purpose of reserved land for environmental purposes such as drainage, conservation and the like; this classification of land is a creation of the Province of Alberta. The other category is called Municipal Reserve (MR) which is utilized for parks, schools and other such sites; it is a way for the city to make sure that the residents of community have appropriate amenities for their homes. The MR should be at least 10% of any development undertaken.

Figure 2.11 are more detailed analysis of the open spaces and their connections with the community at large.

Figure 2.11 Open spaces and connections



2.3 Built Environment

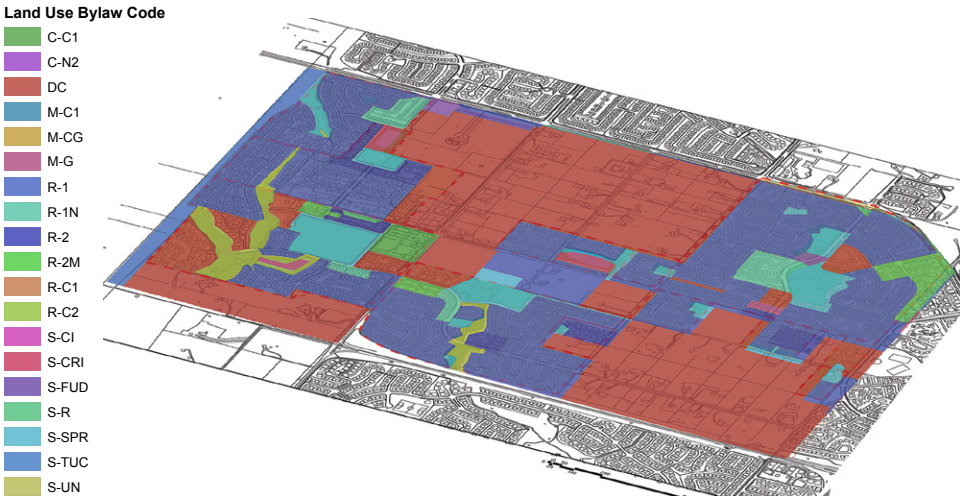
The built environment is the material, spatial and cultural product of mankind that combines physical elements and energy in forms for living, working and playing. The built environment is one of the principal factors where urban planning is applied, as it brings many interdisciplinary elements to it, so it becomes an important source of information gathering.

Several elements can be evaluated under the built environment umbrella for the purpose of this project. Only a handful was taken into account.

Land Uses

Urban Design and Land Use Planning are directly related, in many cases you cannot talk of one without the other. As stated previously, the site has a number of commercial and institutional amenities as well as variety of housing types present which dictates different codes of the Land Use Bylaw 1P2007. Figure 2.12 provides more detailed information of the different land uses.

Figure 2.12 Land Use Bylaw



Housing Inventory and Typology

West Spring while not extremely diverse in housing options, it does present some variety. As a design team the goal is to increase that diversity and create forms that will be well suited for the undeveloped parcels. A typology and an inventory were created as to provide the most complete information of the current situation and be able to only add amenities and housing elements that would complement existing conditions and not create an unbalanced situation.

The different housing types created the following typology: single detached house, townhouse, duplex, and low apartments. Figure 2.13 represent the percentage the previous types are in West Springs and Figure 2.14 shows the location of these types.

Figure 2.13 Types and percentage

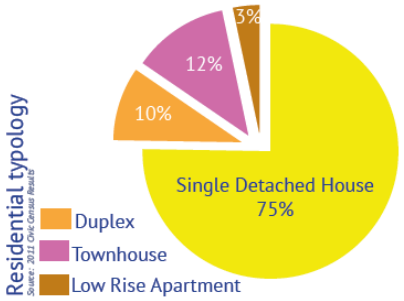


Figure 2.14 Location of housing types

Subdivision Style

The dominant style of land subdivision in the community of West Springs is cul-de-sacs and curvilinear roads. This type of subdivision emphasizes urban sprawl, poor connections and under the urban planning lens they are simply labeled as terribly inefficient for most lifestyles. Figure 2.15 highlights the main cul-de-sacs in West Springs, and Figure 2.16 shows a 5 minute walk from commercial and school sites and the limitations to increase this area due to the use of fences and lack of destinations.

Also, another staple of the subdivision style of West Springs is the different parcels developed at different times, and as completely separate entities from one another. See Figure 2.11 for the groups of same-time developments that the project team identified. This was an important observation as it created a dis-connected network of open space and street.

Figure 2.15 Cul-de-sacs

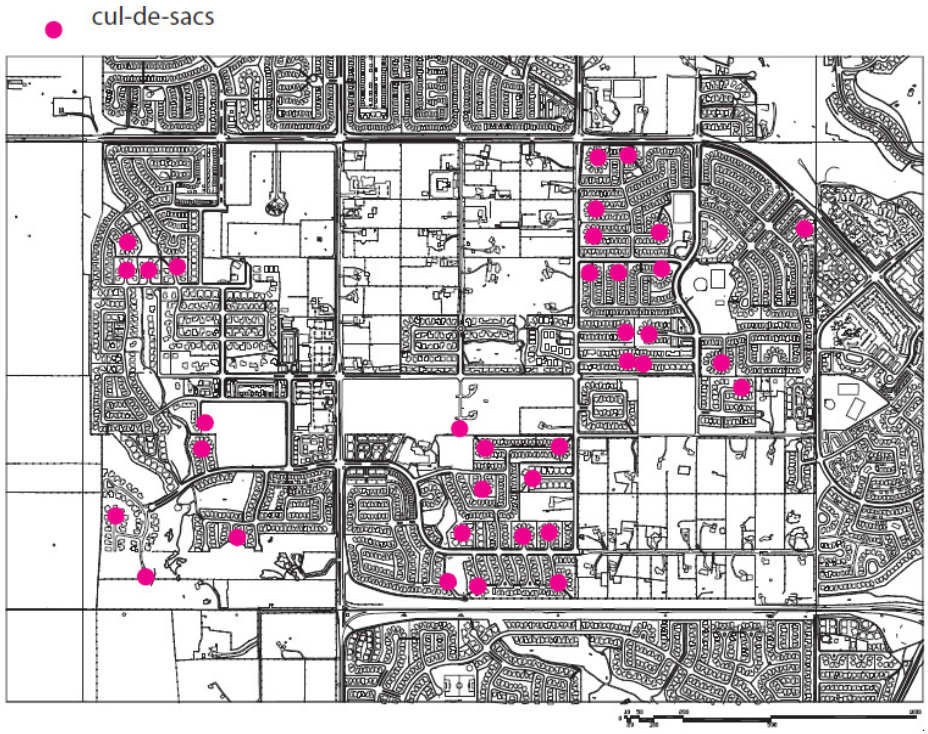
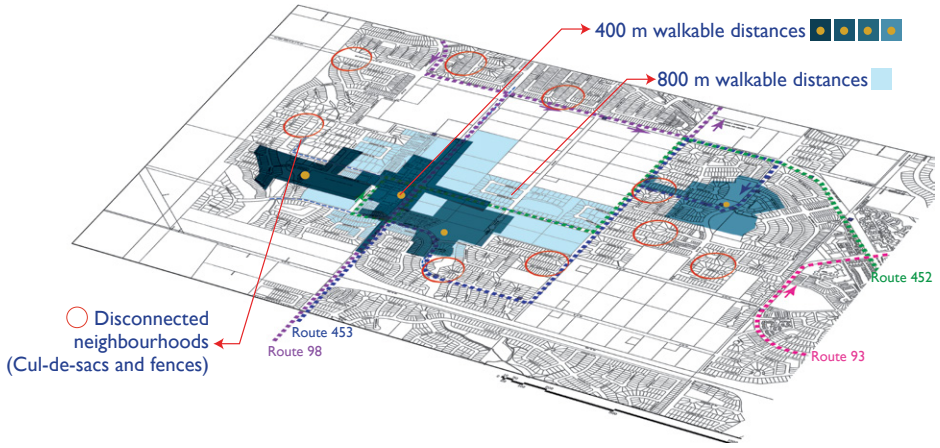


Figure 2.16 Walkable distances



2.4 Summary

All of the analysis presented will form the basis for the urban development proposal. The most important findings of the design team can be summarized using Figure 2.17 and Figure 2.18 word cloud of concepts and goals, and the following list:

- Disconnection of housing sections
- Safety and Lighting concerns
- Poor walking paths
- Vegetation and open spaces as essential
- Single Family Detached homes are predominant, with estate style homes very frequent in the area
- Land prices are very high
- Desire for multigenerational community
- Age and income gaps
- Transit Opportunities
- Community Identity is more country and rural with urban tones

Figure 2.17 Issues to address

Figure 2.18 Concepts and goals

3. Concept

3. Concept

After the analysis was completed, the project team moved forward to create the urban development concept for the community of West Springs. The first step was to produce a cohesive vision and goals that the concept should address. The idea was to use the recurring themes found in the analysis and create a priority list of items, and further developed key concepts and keywords related to them. Afterwards, create the different elements that would contribute to the proposal.

3.1 Vision

The vision established for the urban development of the five (5) acre lots of West Springs is based on three (3) goals and reads as follows:

"West Springs is a diverse, connected and accesible urban development with a strong identity of its urban and country characters. The community is a place where residents enjoy all types of amenities within walking distance; it is a place to live, work and play surrounded by a healthy environment with native species of flora and fauna."

This vision follows the goal established in the MDP to *" Create great communities by maintaining quality living and working environments, improving housing diversity and choice, enhancing community character and distinctiveness and providing vibrant public places."*

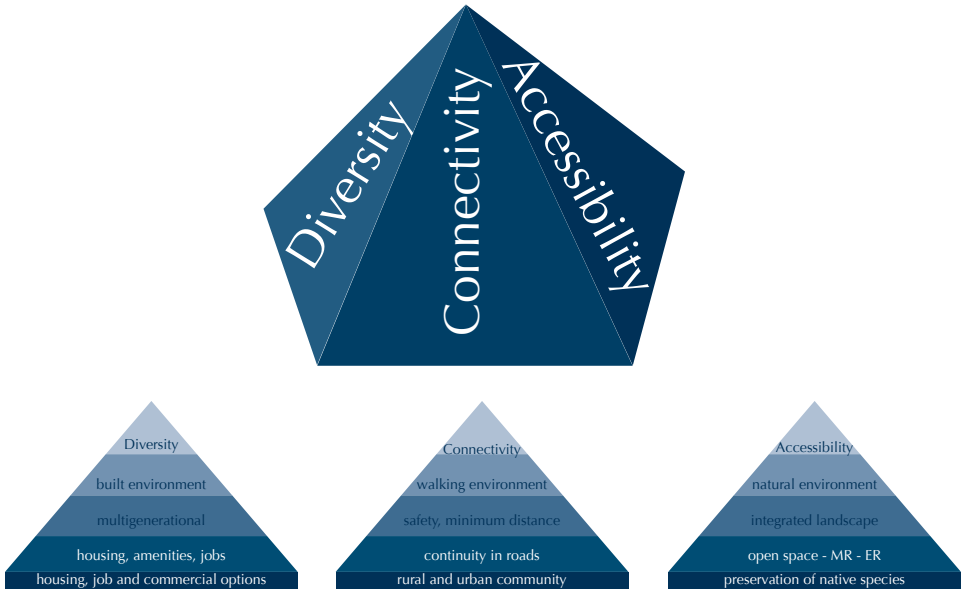
3.2 Goals

The three (3) overarching goals that will help accomplish the vision for West Springs are:

- Connectivity
- Accessibility
- Diversity

These goals will include various elements that are essential in good urban design and planning, and can be broken down further in terms of concepts and approaches. Refer to Figure 3.1 for the basis in which they were formed.

Figure 3.1 The concept



When we talk about connectivity, it is defined as better continuity of roads, creating safe and walkable spaces. This goal will then allow pedestrians from different parts of the neighbourhood to enjoy different amenities, not necessarily those in their immediate vicinity. This is an important step towards making West Springs as a truly complete community.

Accessibility refers to all aspects of the neighbourhood gaining access to the different types of amenities. It goes hand in hand with the goal of connectivity. More specifically accessibility for the project team deals with creating accessible amenities of open spaces and making sure that each resident has adequate access and connections to different spaces.

Diversity is a very charged word and can mean many things. For West Springs, the goal of diversity means: diversity of housing options; generation and age; of amenities; of its built environment. Diversity can be easily achieved, as long as good planning practices are in place.

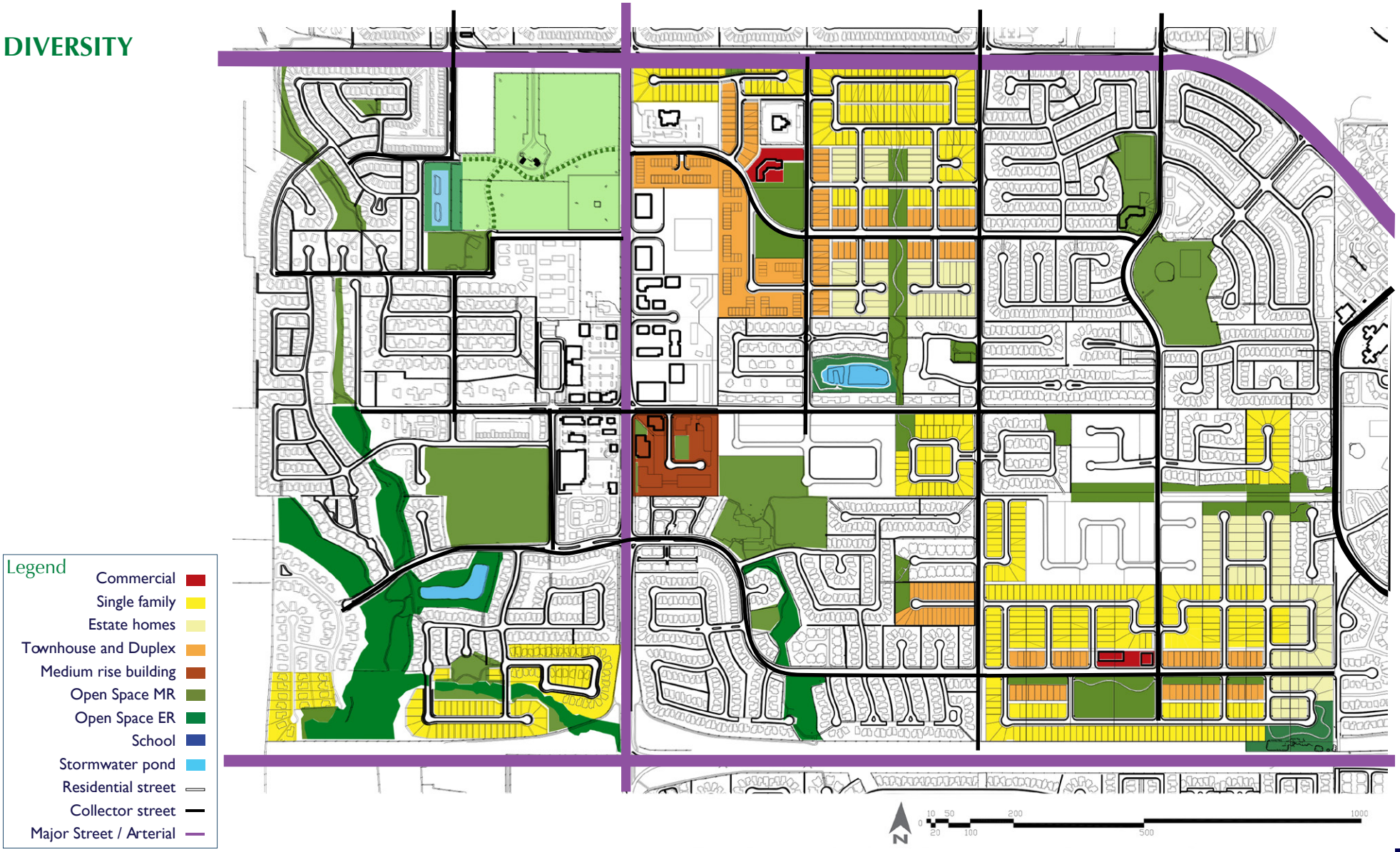
3.3 Land Use Concept

Figure 3.2 showcases the complete land use map of West Springs, as defined by the design team. The Land Use concept plan is the essential piece of the Urban Design Proposal. It clearly establishes zones and goals to be met on a spatial basis. The land use concept can divided into different elements as to highlight the three (3) overarching goals of **Diversity**, **Connectivity** and **Accessibility** (refer to Figure 3.2-3.4).

The land use concept relies heavily on good planning principles and guidance from the City of Calgary approved documents (such as

Figure 3.2 Land use - Diversity

DIVERSITY



Municipal Development Plan, ASP,etc.). Each section that conforms the land use concept will try to fulfill the goals of the City, the community and the design team, which are inter-dependant on each other.

The sections that this land use concept will cover are: Precedents, Residential Development, Commercial Development, Open Space and Transportation. Further detailed will be explored in the Urban Design Guidelines.

Figure 3.3 Land use - Connectivity

CONNECTIVITY

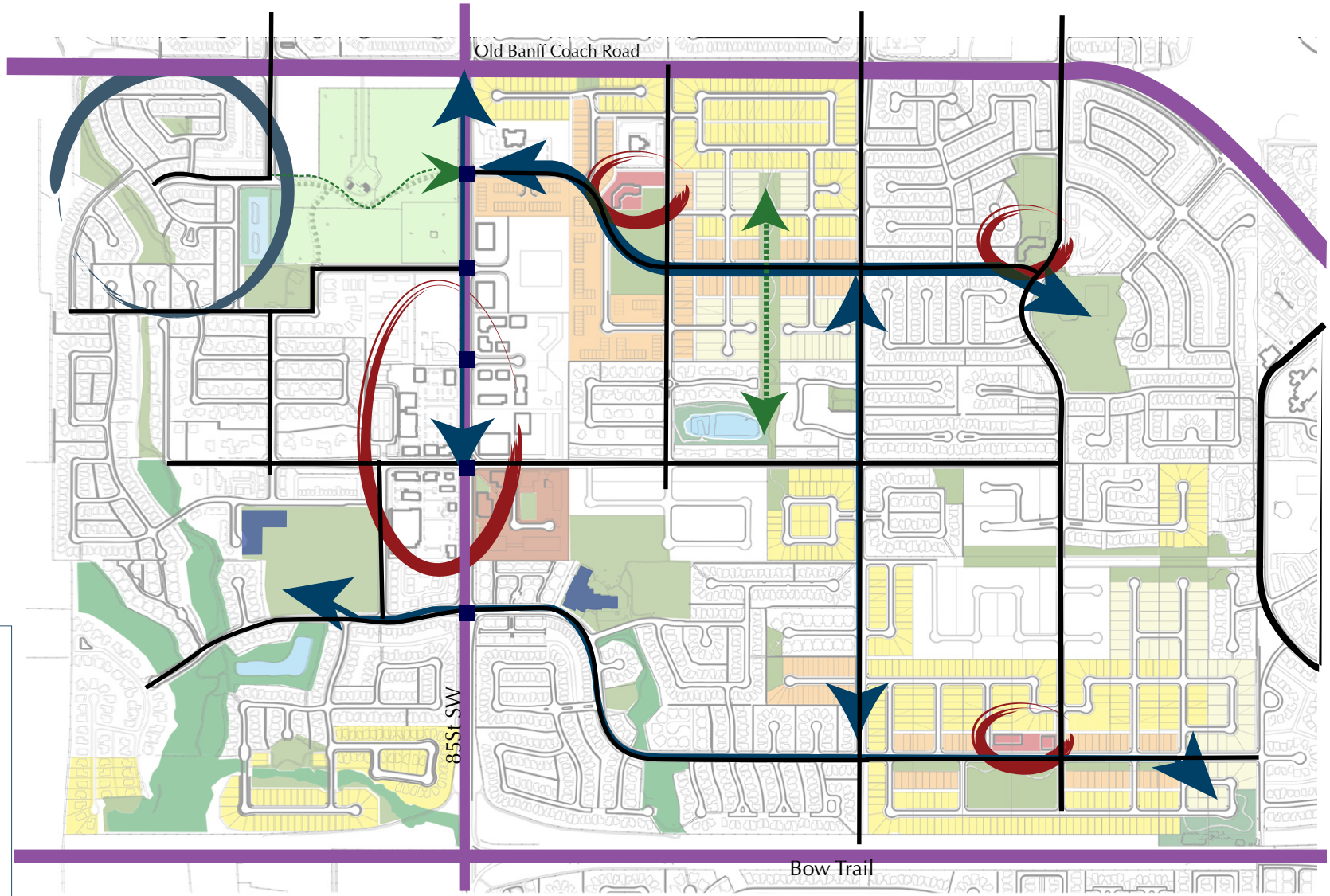
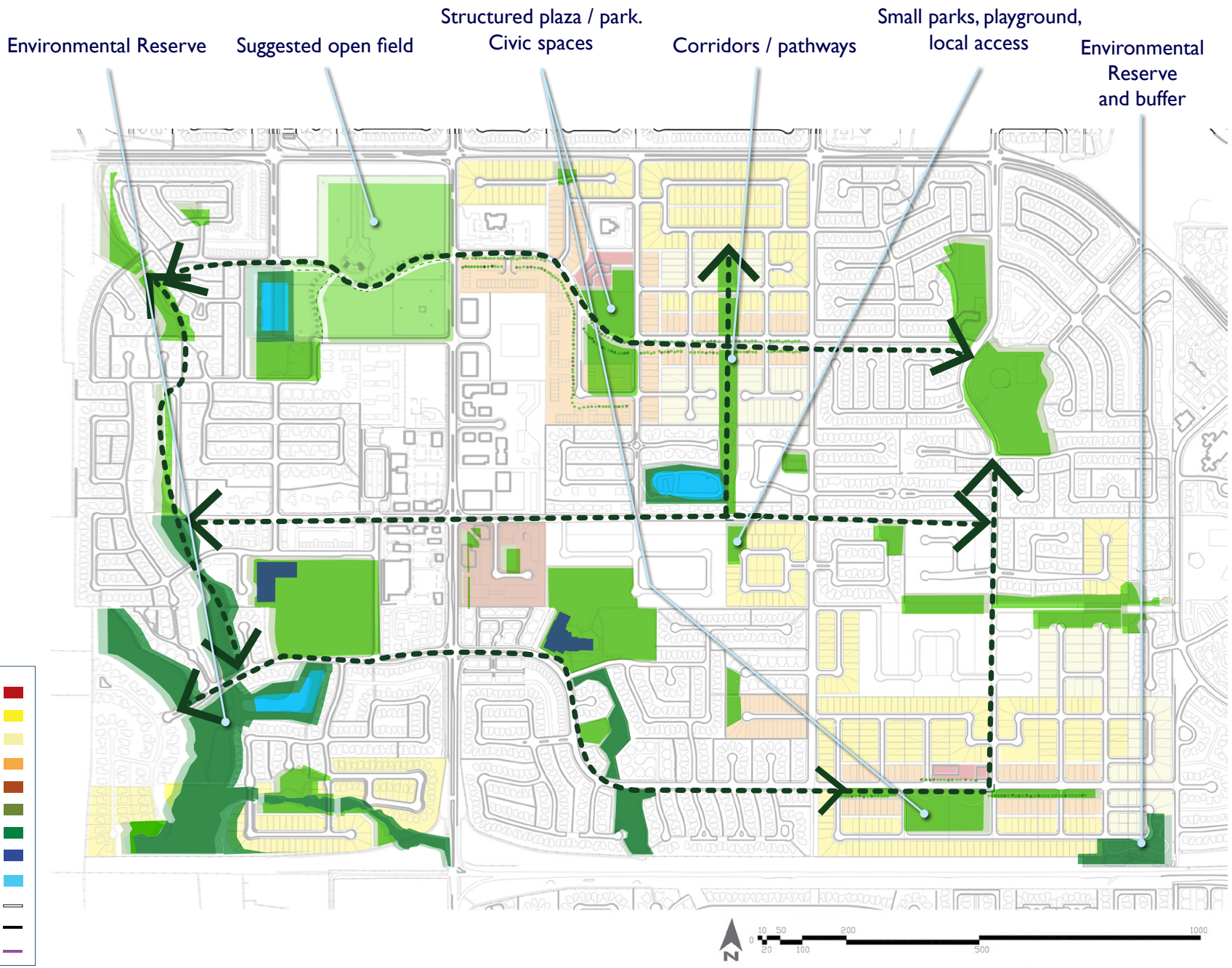


Figure 3.4 Land use - Accessibility

ACCESSIBILITY



Precedents

Urban design and Planning relies heavily on the use of precedents. Overall, precedents are used to understand shapes and functions of a plaza, a landscape, city grids and characters. Precedents help convey successful examples of urban design that with the right context can be successfully applied in other situations.

The main precedents used for the community of West Springs are based on grid street patterns, mix of country and urban identity, commercial developments as their main qualities. These precedents are:

Grand Forks, ND, USA

Grand Forks is a small town in North Dakota, United States that has a good mix of urban and country identities. Many of its neighbourhoods and communities have a housing typology very similar to West Springs. Grand Fork successfully uses a very formal grid pattern with some cul-de-sacs and curvilinear streets. The city also has quite different intensity of uses and housing options. Decidedly urban features are well integrated with the more country, sprawling states and landscape features. Many of its communities were developed in five (5) acre parcels and with serious considerations for green spaces, buffers between areas, pathways and many other elements that the design team is looking to introduce in West Springs. It also has a very similar climatic situation and vegetation (Figure 3.5).

Brisbane, Australia

Brisbane, Australia is similar to West Springs in terms of its lots sizes in residential areas and its grid like patterns throughout the city. Brisbane shows also a strong presence of green spaces, pathways and good urban design theory. The communities of the city have a variety of paths, entry and exits access and mix of different street patterns and community styles (Figure 3.6).

Kensington Neighbourhood in Calgary, Canada

The neighbourhood of Kensington in Calgary is a local precedent that is a great example of commercial and residential areas intermixing together in a successful format. Kensington has active streets for everyone's enjoyment, and it has a diversity of housing options and amenities that can be copied in a smaller, more appropriate scale to West Springs. Kensington also shows interesting combination of grid patterns and pathways for a variety of issues (Figure 3.7).

Figure 3.5 Grand Forks, ND, USA

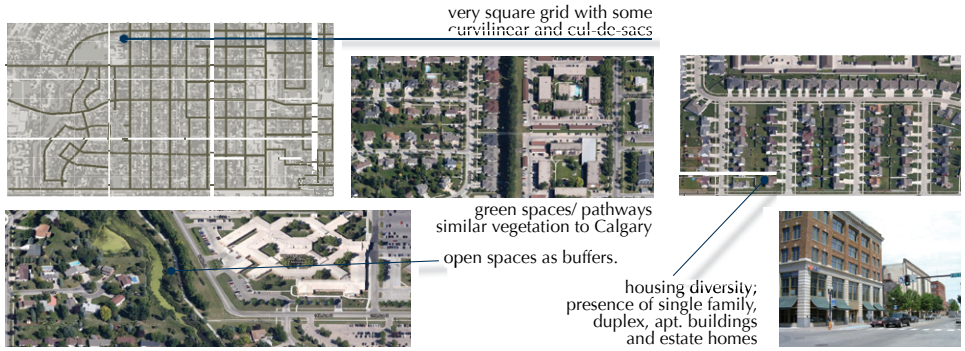


Figure 3.6 Brisbane, Australia

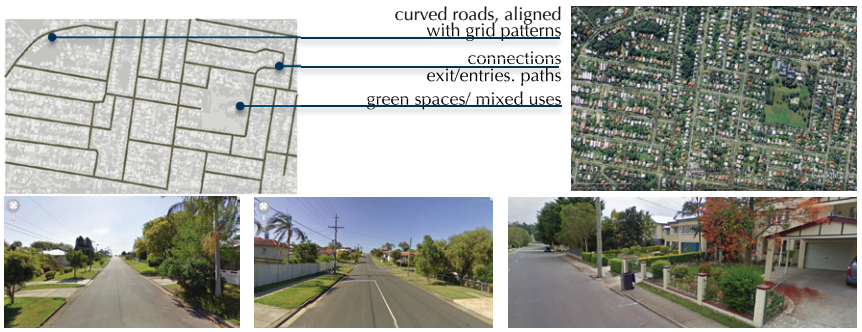
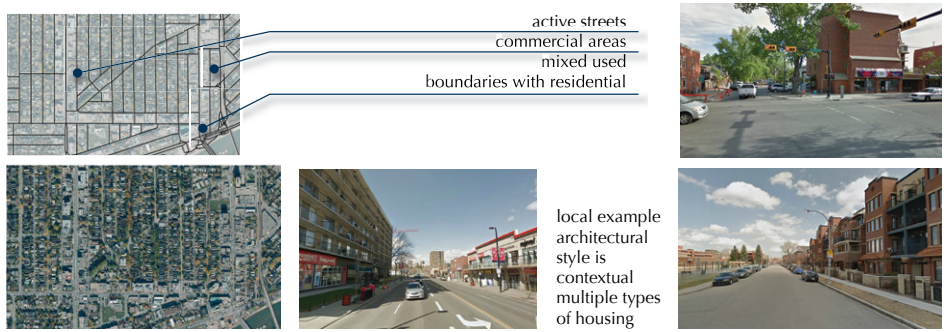


Figure 3.7 Kensigton, Calgary



Residential Developments

As a residential community, the primary object of the West Springs Urban Design Proposal is to create opportunities for better development of the five (5) acre parcels for the current and the future residents. Many things are evaluated in this section, the most important being those related to the typology, lots and density of the community.

Residential Density

Table 3.1 Densities

	Before	After
Units	2795	3890
Land Area (acre)	967.9	967.9
Residents	8226	11449*

*projected population, maintaining average residents per dwellings

Density		
people/acre	8.49881	11.8284
units/acre	2.8877	4.01901

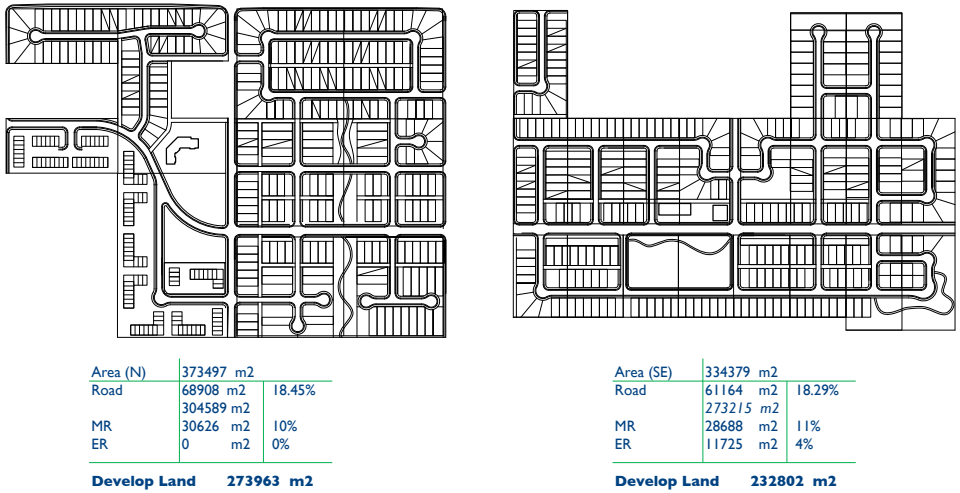
▲ 39.18%
change from the status quo

As established by the analysis and the vision, West Spring is a community in need of an introduction of diverse elements, one such element is the density factor for residential areas. The dominant residence type of the community allows for a very low overall density, one that certainly is not in accordance with the MDP thresholds established for the future of a more compact Calgary. Table 3.1 showcases the current and proposed densities that the community can achieve by following the guidelines so established in this document.

Figure 3.8 showcases the current densities in certain sections of the communities and overall and Figure 3.9 establishes how these densities are changed in similar land areas with the new proposed developments.

The importance of the density for West Springs is not just a population factor and achieving city guidelines, it's about creating the amenities and achieving complete community status. With higher overall densities, better services can be provided to new and current residents. It will help with things such as transit routes, type of commercial uses, school spaces and more.

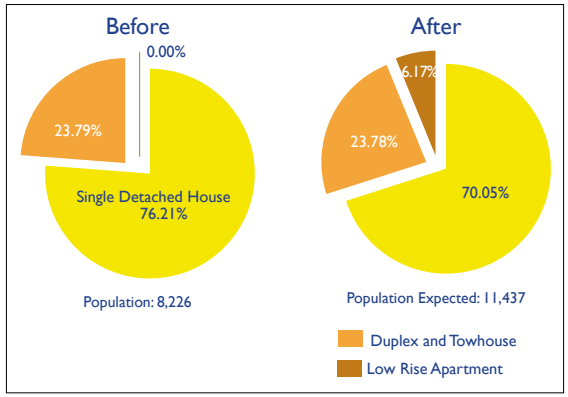
Figure 3.8 Proposed densities



Area (N)	373497 m2	
Road	68908 m2	18.45%
	304589 m2	
MR	30626 m2	10%
ER	0 m2	0%
Develop Land	**273963 m2**	

Area (SE)	334379 m2	
Road	61164 m2	18.29%
	273215 m2	
MR	28688 m2	11%
ER	11725 m2	4%
Develop Land	**232802 m2**	

Figure 3.9 Change in densities



Residential Zones

Figure 3.2 (on page 16) showcases the different areas of the community that are designated as residential and the proposed density. Densification for the community is proposed in a sustainable, sensitive manner to accommodate the current identity.

The concept plan tries to address many considerations in terms of housing options, it looked for guidance in the community representatives, the faculty at the University of Calgary and at the different statutory documents. The WSUDP in the end addresses the following MDP and West Springs-ASP goals:

- Reinforce the stability of Calgary's neighbourhoods and ensure housing quality and vitality of its residential areas (MDP)
- Ensure a choice of housing forms, tenures and affordability to accommodate the needs of current and future Calgarians and create sustainable local communities (MDP)
- Create a range of housing options (WS-ASP)

Housing Typology

In the analysis, a housing typology was established for the community and the design team looked at the best ways to complement the different types of housing with new ideas and ways to subdivide lots.

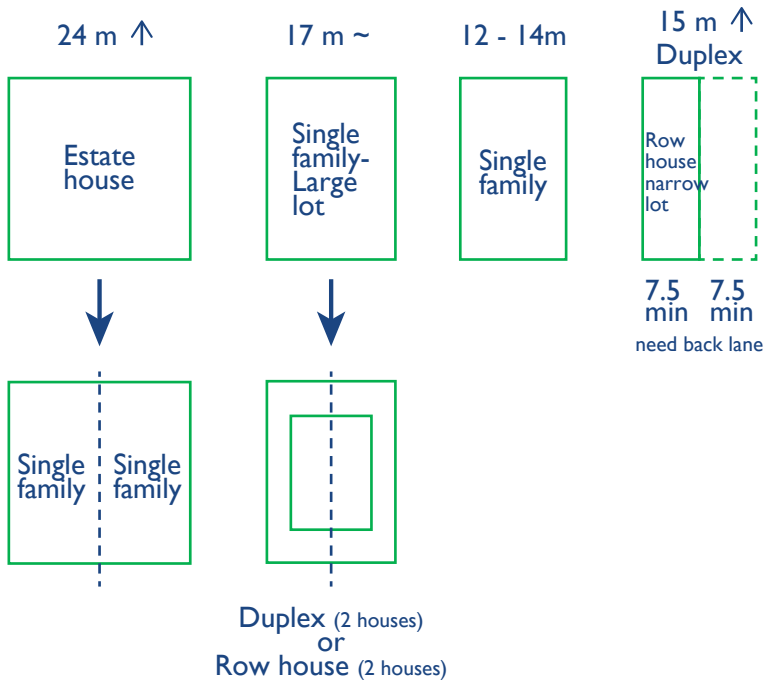
Figure 3.10 establishes the different lot sizes for the different housing options presented. These options were created along with the different options of subdivision for the parcels taken into account.

The three (3) main types of housing options that the WSUDP establishes are:

- Single Family Detached– Estate Houses
- Single Family Detached
- Single Family Semi-Detached – Townhomes/Duplex

In the Urban Corridor of West Springs, a small cluster of medium rise buildings is being proposed that will be able to house approximately

Figure 3.10 Lot sizes



6-7 buildings of a maximum height of 5 floors and a range of units. This also goes with the proposed style that Bri-Mor Developments is proposing on the intersection of 85th Street SW and 9th Ave SW

Overall, the recommended amendments/changes in terms of the City of Calgary Land Use Bylaw 1P2007 are to go from a DC (direct control) site to two (2) different types of low density residential for most parcels. These types of residential uses are the R2 and R2M. These uses would allow not only for single detached and semi detached housing, but also secondary suites as well as assisted living and other discretionary uses. The intended intensity of the land in this code is also appropriate for the entire proposal.

Many of the precedents for the type of housing option are taken from the Calgary context, and are considered a good fit for the West Springs contexts. The different housing options, building massing and architectural styles can be seen in the Urban Design Guidelines chapter as it will include setback and heights, and more detailed information.

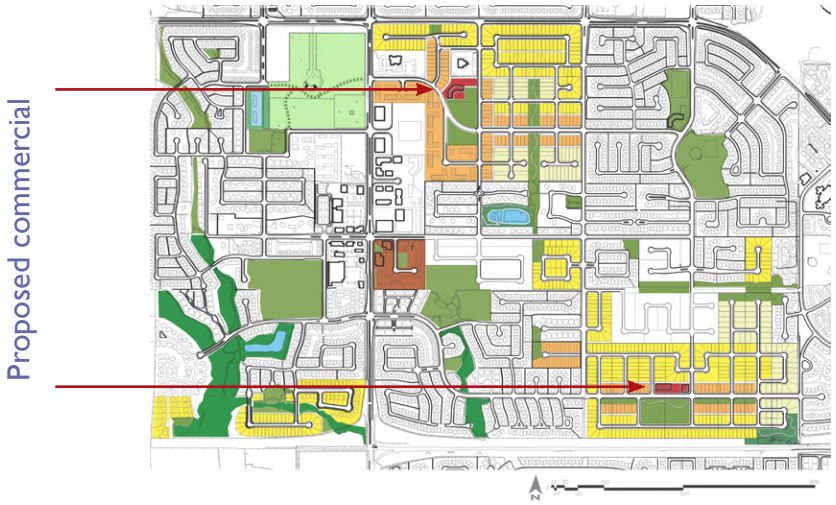
Commercial Developments

An important part of any community is the amenities which it hosts. Commercial services and Institutional elements are then an essential element of the land use concept. Figure 3.11 showcases the commercial areas proposed for West Springs.

The purpose of the two (2) highlighted sectors for commercial uses are to provide a small neighbourhood activity centers for the residents farthest from the urban corridor that is 85th Street SW. The commercial development would be small, no larger that 0.5 hectares (approximately 1.23 acres). This would allow for a land use amendment of the areas from DC (Direct Control) to C-N1 (Commercial – Neighbourhood 1). These type of amendment will support the preferred intended uses of the space to be a local convenience store, an office, a takeout or specialty food store among others.

These areas are consistent with current policy documents such as the West Springs ASP and the Calgary MDP. They help shape better amenities and activity centres for the community. They are placed near major connections and in places where higher density is required. In the long run, these are places that will have adequate transit, provide employment and amenities and help shape the character of the streets and housing nearby. It all boils down to a question of connection and accessibility for the different residents.

Figure 3.11 Commercial sites



3.4 Open Space

Open Space and its implementation is an essential part of creating the desired urban/country characteristics that the design team is looking for the community. Figure 3.12 highlights the different spaces and intended uses the design team is looking to implement.

An open space network is far more useful than isolated and disconnected landscape elements; which is why this is a major element of the proposal. As there is a direct and fundamental relationship between the open space elements of a community and its livability, health and function. Accessibility for these kind of spaces can then be recognized then as an essential community service.

Because these community assets provide vital benefits to both the

Figure 3.12 Open spaces and intended uses

Type	Characteristics
Greenway	A network of spaces encompassing cycle and footpath routes, but also acting as 'wildlife corridors'. Typically these follow streams or disused railways, for example, with green fingers penetrating from the countryside, through the town/city edge and into the urban core
Waterways	Includes lakes, ponds, rivers, canals and streams, which provide rich wildlife habitats, offer recreational value and can be used as movement corridors.
Meadow	A public space for informal recreation, located on the edge of a neighbourhood. Often part of a flood plain comprising natural grasses and wildflowers.
Wooded/Natural Reserve	A wood or coppice of trees left in the natural state, interlaced with internal footpaths, sometimes designated as a nature reserve, with restricted access to areas rich in wildlife.
Playing Fields	Open spaces formally laid out for active recreation, such as football or rugby- including golf courses. Management/ownership can be shared between schools, clubs and the wider community to ensure facilities are well used.
Churchyards/ Cementeries	Located adjacent to a church and often providing a green oasis at the heart of a community
Allotments	A semi-public agglomeration of gardening plots rented to individuals by the local authority
Parks	Dependant on Scale
Green	An informal grassed public space associated with the focal point of village life, that sometimes incorporates a football or cricket pitch.
Square	A formal public space, no larger than a block and located at focal points of civic importance fronted by key buildings, usually hard paved and providing passive recreation.
Plaza	A public space associated with the extended forecourt of commercial (office / retail) buildings, with formal landscaping.
Communal Garden	A semi-private space not accessible to the general public, usually located within the interior of a perimeter block, providing a centrally managed green space for residents.
Private Garden	A private space located within the plot of an adjacent building.
Playground	A small area dedicated for child's play, that is fenced and located within close walking distance to nearby houses, overlooked by residents.
Courtyard	A private open space often for vehicular servicing/parking
Atrium	A glass covered semi-public or private space serving as a thoroughfare, seating area and sun trap for building occupants or visitors.

individuals who actively enjoy these spaces and those who benefit from their existence, the goal of accessibility of open space is not only limited to a question of access, but also in creating a system of well throughout spaces that connect within the community and allow for multiple recreational opportunities.

The open space network proposed is based on the concept that a 400m walkable catchment radii focussed on neighbourhood focal points forms the starting principle. The aim is for major open spaces to intersect at least in one point with this radii of a 5 minute walk. This helps avoid isolation between developments and allows linear networks to be provided that are no more than 1.2 km (15 minutes walk) away from the majority of people.

Networks may join up linear parks, playing fields, parks, private gardens, or buffer planting and surface drainage corridors. In the end, all the different typologies of open space proposed (see Urban Design Guidelines) are complementary with the current uses and the profile of the residents of the community; and overall a well planned and executed open space and pathway system will generate significant social, environmental and economic benefits, outline in Table 3.2.

Table 3.2 Benefits of open spaces

Environment	Protect important wildlife habitats within the community, and provide connectivity beyond it Provide green infrastructure ensuring the sustained flow of ecosystem services and reducing need for costly built infrastructure Mitigate air pollution and reduce carbon benefits Connect children, families and individuals to nature
Quality of Life and Comunnity Development	Provide a diverse range of programmed/unprogrammed recreatioal opportunities Preserve the Community distinct sense of place, community, character, history and more Facilitate community involvement, creativity and connectedness
Health	Enable residents to engage in active lifestyles Support and facilitate early childhood development and socialization Provide spaces that can be used for community gardens, so that nutritional lifestyles are encouraged and taught
Economic	Attract new, as well as retain, existing residents to the community Increase property values and tax revenues Inspire increased visitation to the area, and increased profits for commercial areas around it

The formal and informal programming of these spaces will be directly related to the wishes of the community but aided with landscape design decisions promoted in the Urban Design Guidelines.

3.5 Transportation

Under City of Calgary documentation and guidelines, there are a variety of types of streets available to use in land subdivisions. These types vary according to the different site requirements. The streets have varying capacities and road widths. The different streets used throughout the land use concept (refer to Figure 3.2 - 3.3 for locations) are:

Residential Streets

The residential streets have a right of way of approximately 18.50m. The road width is 9.00m and there are options for lane and laneless development within that range of right of way. This due to a desire to maintain the same width when connecting residential streets between each other.

Residential Streets are for traffic counts in the 1,500 vehicles a day. While other street designs follow the subdivision servicing guidelines, the design of this streets are based on the new November 2012 guideline for street designs. The changes taken into account from one document to another are a question of bigger pathways, tree lined streets and other urban design elements.

Collectors

The collectors in the proposal are the main streets assisting the urban boulevards to collect, as it names indicates, the majority of the traffic and distribute it accordingly into the residential streets. The right of ways used for this type of street in the proposal is to be 21.00m and a road width of 11.50m. The idea is that these types of road will allow either parking or separated bikelanes according to the situation. This type of street is normally designed for capacities of around 5,500 vehicles a day and speeds of 50 kilometers per hour.

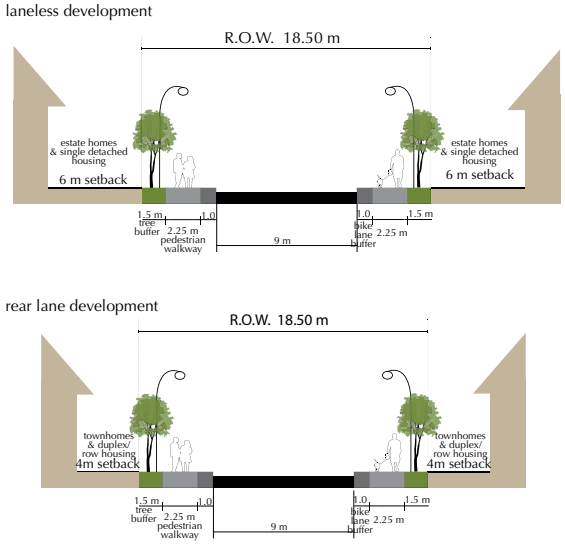
Urban Boulevards or Major Streets

The Urban Boulevards or Major Streets are identified for this proposal to be 85th Street SW, Old Banff Coach Road, Bow Trail SW. These streets are to be left mainly unchanged as they are already designed to appropriate right of way measurements, and speed and traffic counts. In the case that another road needs to become of a higher hierarchy road, then a right of way of 36.00 meters and divided lanes should be taken into account. Room for pedestrian, vehicles, bicycles should be taken into account at all times.

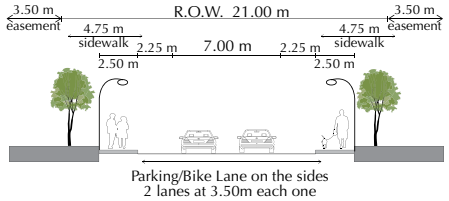
Overall, these streets were picked because of their road width characteristic, ability to sustain traffic counts, and specified speeds. The cross section and dimensions of them can be seen in Figure 3.13.

Figure 3.13 Cross sections of the streets

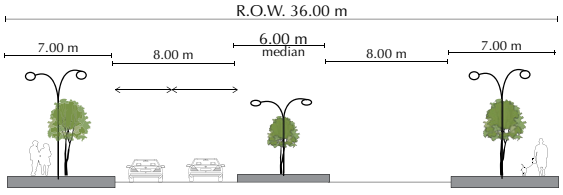
Residential Streets



Collector Streets



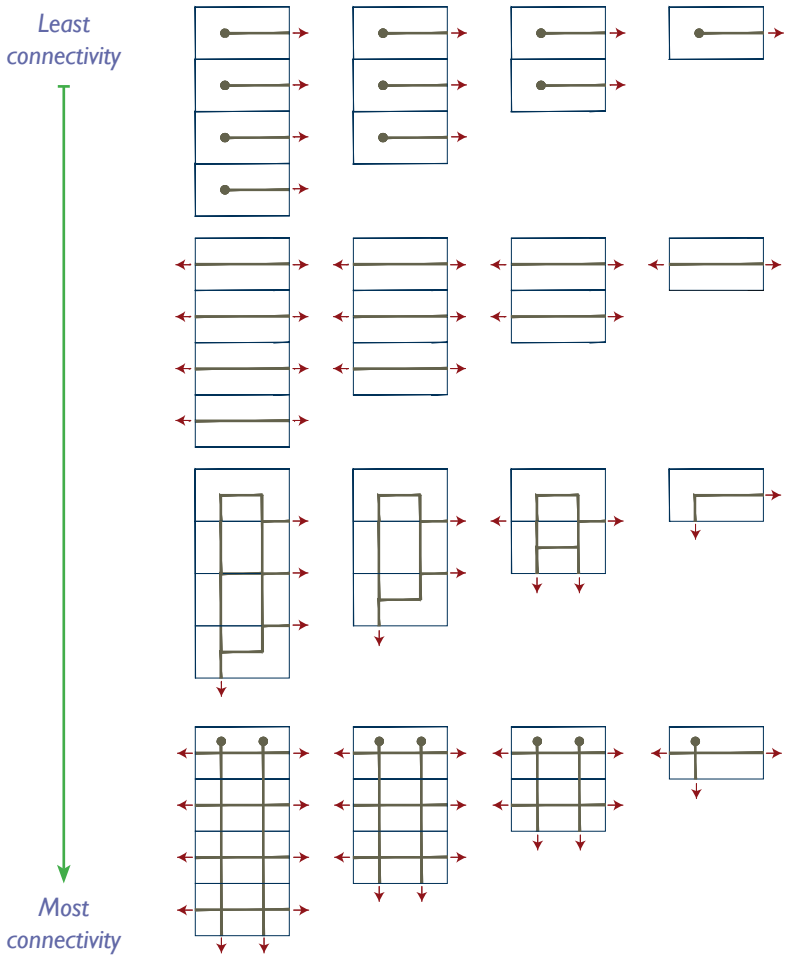
Major Streets / Arterial



3.6 Lot Development

Figure 3.14 establishes the basic matrix in which the development of the different sectors of the land use concept are developed below.

Figure 3.14 Lots study



This figure was the starting point into creating adequate connections and networks for the five (5) acre parcels. The parcel configuration established here was created with connectivity between parcel as priority. As seen in the Figure, most lots are thought in terms of number of access points. For this study most of the lots were assumed to be the standard measurements, as shown in Figure 3.15.

Each lot was developed in terms of a piece meal development, that while is not ideal is the most likely scenario that the community will see. This meant creating a configuration of roads, housing options, open space that will have independent access and yet be part of a cohesive whole.

Figure 3.16 showcase the proposed lot development in the north area of the community where new growth is set to come in the future. This figure showcases the connections between five (5) acre parcels, the road hierarchy, the Municipal Reserve (Open Space) and the general lot configuration desired.

Overall, cul-de-sacs were avoided and in the cases they were implemented it became a matter of integrating the landscape and making sure that we had proper cul-de-sac development.

Figure 3.15 Lot measurements

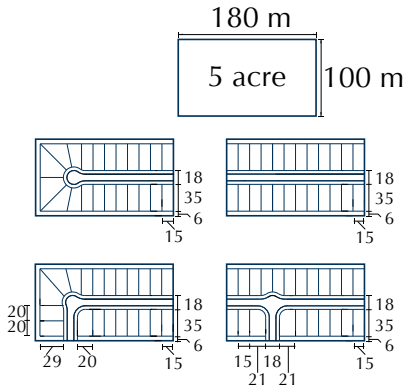
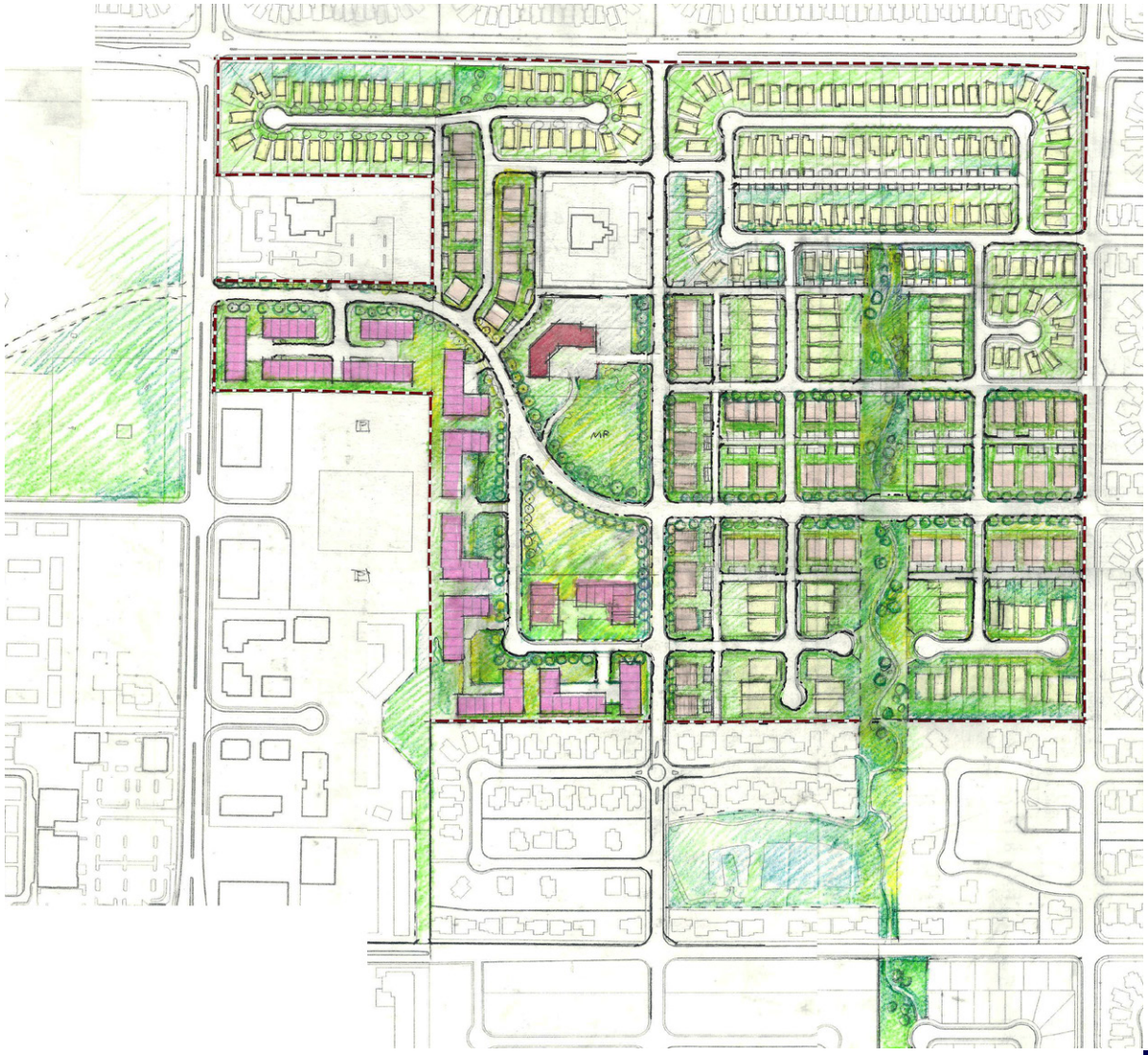


Figure 3.16 Concept and connections



4. Urban Design Guidelines

4. Urban Design Guidelines

The definition of Urban Design for the West Springs Proposal is about creative design of the different interfaces (building, street, people, spaces) by following sound planning concepts and ideas. In this proposal, urban design will make the ideas tangible; it will allow for details to give shape and support the land use concept.

It is understood that the land use concept of the West Springs Urban Design Proposal is the basis and most important element of the document because it addresses fundamental planning concepts and concerns. It paves the way for the detailed elements to be considered. Urban Design Guidelines will help bring the details for the implementation and success of the community of West Springs.

The biggest considerations for urban design guidelines were given to elements that will complement the land use concept in broad ways such as laneways, landscaping rather than architecture of places and specific designs of open spaces.

4.1 Phasing and Implementation

The overall land use and urban design concept was developed and created under the assumptions of collaborations between parcel owners and that one cohesive vision was adopted for all undeveloped land, as stated in the Land Use Concept chapter. It is naïve of the project team to take that as the way things will happen so alternate access and roads were developed in parcels where the proposed plan makes one parcel dependant of another one. Figure 4.1 establishes the areas where such plans and phasing need to be taken into consideration. Figure 4.2 establishes the alternate design for those parcels in the event of one by one development.

Implementation of the design will require collaboration of the different stakeholders (developers, residents) as well as the City and its different departments.

Figure 4.1 Areas to be considered for phasing

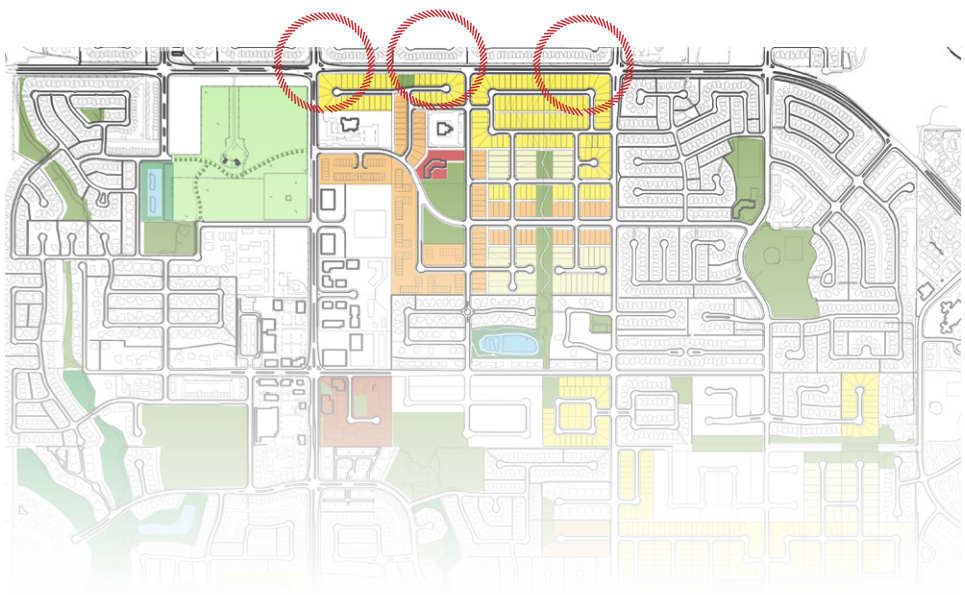
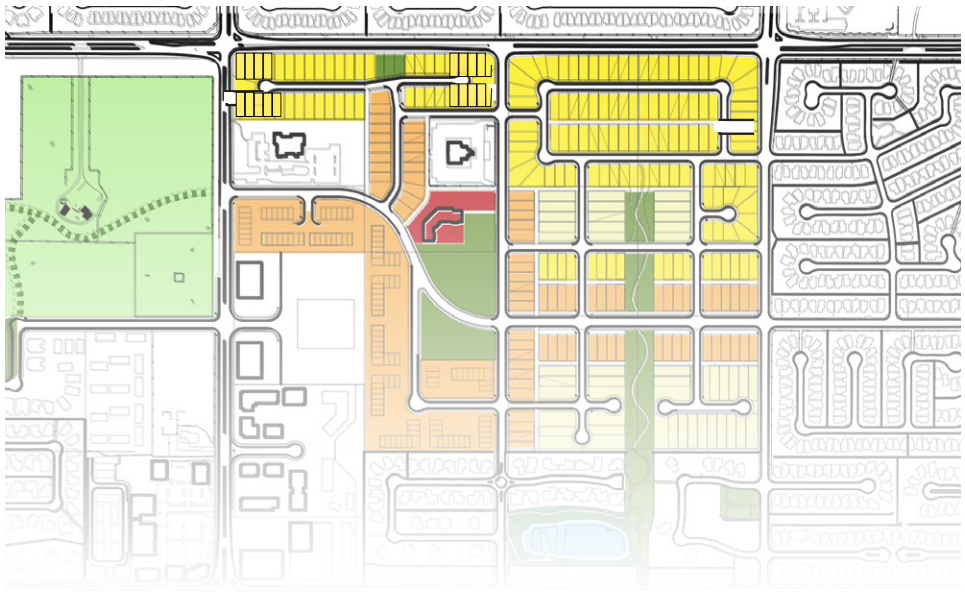


Figure 4.2 Alternative design



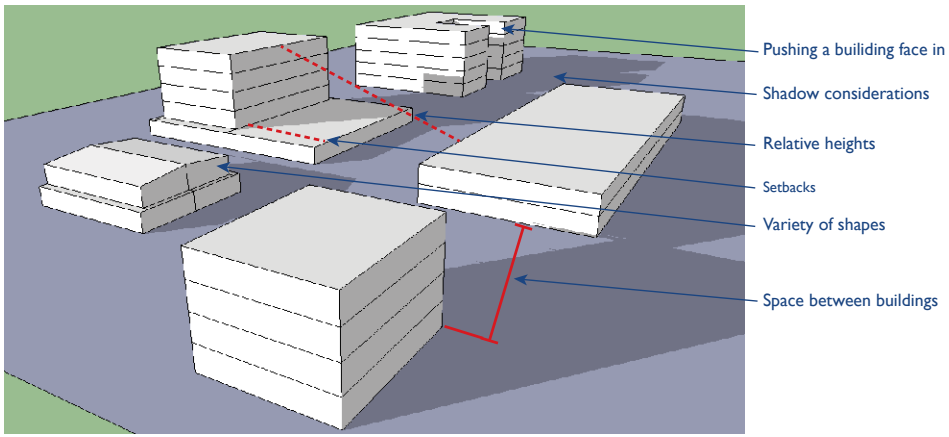
4.2 Building Massing

Building massing or architectural massing is the volumetric analysis of building. It is simply considered as the study of the shape/form of the building and how it affects the different elements around it. Building massing in West Spring is important as there is previous development and the buildings coming in should be appropriate to the context and the uses. Through a successful building massing study, site conditions can be taken advantage of. Some of these site conditions can help the building contribute to the health and vitality of the surrounding ecological, social, and economic communities. For instance, it can be massed to connect its social spaces with street life, or avoid shading nearby wild lands, or could steer foot traffic away from ecologically sensitive areas.

The overall guidelines for building massing, in both commercial and residential areas, are as follows:

- All buildings should consider human scale.
- Buildings should articulate creativity, harmony, interest with their architecture. Keeping it contextual at all times
- In the case of roofscapes, they can be designed to provide usable space through dormers and gables.
- Street frontage facades can be articulated in the horizontal and vertical planes.

Figure 4.3 General massing considerations



- Buildings can have multiple storefronts with independent entrances.
- The architecture shall retain a residential and human scale in massing. Simplicity in façade design and roof design is important.
- Look for opportunities to orient roofs for passive solar and proposed or future photovoltaic installations to encourage sustainability.

The more specific massing details will go according to guidelines established for the preferred land uses in the City of Calgary Land Use Bylaw 1P2007. In the land use bylaws, minimum (and thresholds) heights, sizes and setbacks are established, something that was touched briefly in the Land Use Concept. The more specific guidelines taken from the Land Use Bylaw 1P2007 are:

Residential

- Minimum parcel widths for detached units (single) is to be between 7.5 – 10.0 meters dependant on the land use bylaw established and the inclusion of secondary suites or other inclusions like a attached rear garage.
- Semi-detached units shall have a minimum parcel widths of 13.00 meters in all residential areas.
- Depth of parcels will vary according to the building in use (townhomes, single detached,etc), but the range should be between 22.0-30.0 meters.
- Parcel should be between 330 m2 and 400 m2, where no more of 60% of the parcel shall be covered by the dwelling (dependant on building type).
- No building shall exceed 10.0 meters in height.
- Setbacks will vary in residential streets (established in the street cross section, Land Use Concept section). For laned streets are to be 4.00 meters to allow a greater separation of public and private (established in the Street cross section). Lane-less streets will have 6.00 meters as setbacks. Both setbacks are larger than established in the bylaw as to promote an active streets with a separation of public and private.

Commercial

(for the two commercial nodes established in this proposal):

- Floor Area ratio shall be at all times 1.0.
- Maximum heights is to be 10.0 meters for any building.
- Maximum setback from a street front is 3.0 meters, and 3.0 meters from the rear if adjacent to a residential area.
- The façade of the building shall cover 80% of the property lines
- Maximum single area is 300 m2.
- Parking for vehicles shall be approximate 3 stalls for every 100m2, and for 2.0 bike stalls for the same.

4.3 Architectural Styles

While not a major part of the proposal and something that will depend heavily on the developer's style and the surrounding context some minor considerations are outlined for the different types of housing options (See Figure 4.4 for examples).

The following broad guidelines will help achieve higher standards of sustainability and an integrated look:

- The use of materials for facade should be environmentally sensitive and appropriate to the location of the buildings.
- Modern style of architecture is encouraged within the context.
- Colors should be kept neutral to promote the more country look but variance between facades and contrasting combinations will not be discouraged.
- When possible use vegetations as buffers and as part of the landscape.
- Use of windows is encouraged in all major streets to promote permeability and visual aesthetics.
- Side by side fronts should be varied within their context to promote an interactive street elevation.
- Introduce elevated porches for a distinction between private and public without the use of physical or visual obstacles.

Figure 4.4 Architectural styles examples

Doors of different colors try to introduce variance between buildings, this is an example of the minimum variation expected within a street elevation of townhomes (Walden Community, SE Calgary)

Modern look with constrasting color sensitive to the environment (Los Angeles, USA).

Source: http://www.modative.com/cullen-street-small-lot-subdivision-los-angeles/

Notice the clear differentiation of the public and private space by the use of a few feet of difference between the sidewalk (public) and the townhome entrances(private).This a measure commonly used in new LEED, sustainable communities.

4.4 Laneways

Laneways are present in sections of the both south and north development, in the vicinity of semi-detached housing. As briefly mentioned, when different types of residential streets exit, there is a need for laneways. These laneways are to provide another access to the houses without front facing garages and provide an area for services to come in without disrupting the quality of the streets. Alleys/Laneways can be a great asset, and it is the job of the designers and residents to help them reach their full potential.

Alley guidelines are inspired by the Green Alley handbook of Chicago but these techniques have been successful in many places, for example in Detroit, Baltimore and the different boroughs of Montreal. A number of the techniques mentioned in this document can be easily applied to Calgary. These are, but not limited to:

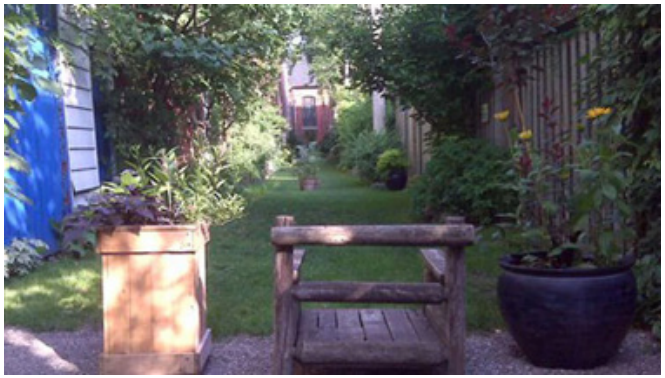
- Permeable pavements when possible, if not the use of recycled materials as a pavement is highly encouraged.
- Proper grading and pitching of alley is essential to avoid accumulation of water and maintain a certain service level
- Green techniques of composting, planting trees, using native vegetation as landscape between houses are ways to improve aesthetics
- Plan street events, make them a social place.

Most of these techniques, can be applied at a smaller scale with little or no cost to owners. The more green techniques of planting trees and composting can be around $50 to $250 dollars.

http://www.urbanphoto.net/ blog/ 2009/09 /03/laneway - observations/

Figure 4.5 Examples of laneways

Baltimore
http://www.metropolismag.com/pov/20080509/green-alleys-are-the-place-to-be



Montreal
http://www.cbc.ca/news/canada/montreal/story/2011/07/07/mon treal-green-borough.html

Detroit
http://mindthegapdetroit.blogspot.ca/p/example-projects.html

Varsity, Calgary
Green pathways.
Photo by Project team

4.5 Bikeway

An essential component of the connectivity, transportation and open space plan are bikeways. In the proposal, bikeways are included as part of all streets. They are part of the roads in major boulevards and collectors; and are part of the sidewalks space in the residential streets. The separation proposed in the major streets/collectors is on the sides of the lanes, and approximately 2.25 meters wide. This lane would be clearly marked and allow for cyclist to have their own lane as to minimize the chance of injuries or accidents.

In terms of the bikeways in residential streets, they would be accommodated in the sidewalks on each side. Extra space was designated in the sidewalks just for this reason, it would be clearly marked with a different type of pavement. All of this can be seen in the cross section of streets in Figure 3.13 (page 24).

The detailed elements of the bikeways are not set in stone, as this is being put in place to encourage the mode of transportation in the community and in the city. The importance of bikeways into the community is that it encourages sustainability, a healthy living style and connectivity within a wider range of areas.

Figure 4.6 Bikeways

Connecticut River Walk and Bikeway
http://www.masslive.com/news/index.ssf/2008/09/springfield_residents_call_for.html.

Portland's protected bikeways
bikeportland.org

4.6 Public Realm

Lighting

Lighting plays important role in the Urban Design these days. It is not only useful to attract more people to places, creates ambient atmosphere but it is also an important safety measure and it is normally placed where it is needed the most to protect the public. Part of the work that the design team worked through is to create a safe and walkable community, and as stated lighting is an essential element.

Lighting is to be placed in major streets and collector roads at intervals of maximum 120 meters. For best results, a recommended distance of 50 meters and staggered positions on both sides of the roads is recommended. The lamps should be in accordance to City of Calgary policies and with the contextual and previous style in place.

Lighting along residential streets, paths and open spaces is to be at regular intervals. The distance should not exceed 100 meters. In cases of streets, light poles should be place on both sides of the road and in a staggered format. For paths, lights on one side of the path are recommended and the use of smaller (i.e: garden style low lights) is also recommended. Open spaces should have illumination

at all access points and be distributed accordingly depending on the space. In general, the light poles in these areas are to be of a smaller size than those in the major streets/collectors. They can be of a more decorative style and some variance between the different areas of the neighbourhood is recommended.

To promote sustainability, the preferred lighting system is that of photovoltaic nature. This system is currently in place in many parts of the city. It is not only useful in terms of lights for the streets but also in STOP signs and other traffic related signage.

Figure 4.7 Lighting options

Parque Caneguin, Mexico City, Solar LED Outdoor Streetlight
http://carmanah.com/company/news-and-updates/news-release/mexico-city-illuminates-heritage-park-carmanah-technologys

Calgary lighting
Photos by Project team

Furnishings

An essential part of the public realm is the street furniture. Under street furniture, it is understood that is defined or composed by transit shelters, benches, trash cans, and all other furnishings.

Figure 4.8 Furnishing and public realm

Designer Dominik Schwarz at the Piazza-Tribunale in Bolzano, Italy for the Time Code Festival.
http://weburbanist.com/2012/03/12/city-seats-14-examples-of-unconventional-urban-furniture/

ParaSeating – 2011 (Victoria Park, Calgary, AB) Victoria Park/ makeCalgary-EVDS
http://minusarchitecture.files.wordpress.com/2012/10/paraseating.jpg

Munich, Germany
http://europaconcorsi.com/projects/198351-Urbanstra-e-11

The basic goals of the furnishings are:

- To provide street and open space furnishings that unify and add character to the community and enhance the pedestrian environment.
- To encourage pedestrians to inhabit and engage the streetscape and open spaces through activities such as relaxing, eating, gathering and passive activity.
- To provide site furnishings that are durable, attractive, comfortable and low maintenance.
- To provide comfortable transit stops in coordination with Calgary Transit.

The design guidelines suggested are:

- All site furnishings and amenities shall not impede the pedestrian walking zone.
- Permanent seating shall be placed to serve bus stops, plazas and other open spaces.
- Plazas and aggregated open spaces shall be required to have a minimum amount of seating.
- Street furnishings shall be uniform.
- Site furnishings within aggregated open spaces, plazas or gardens shall express a sense of place and aid in wayfinding
- Transit stops shall include comfortable and inviting furniture and amenities and meet all standards and requirements of Calgary Transit.
- When possible, recycled materials shall be used.

Landscaping

The major element of the landscaping component of the proposal is the desire to have tree lines streets throughout the community. As, exemplified in Figure 4.9 (Dalian, China), tree lined streets help create an active environment and can be used for different purposes besides aesthetics. Tree lined streets are an essential element of any good urban design plan.

There are several guidelines for the community to follow such as Landscape 2012, Complete Streets, Urban Design Framework. Some of the more important guidelines desired for West Springs are:

- For every commercial street and commercial buildings there should be a 1 tree for every 30 m2 of buildings.
- Large shade trees planted in the public right-of-way shall be planted in a uniform patterns, spaced equally in linear formality to create a relatively continuous canopy upon maturity and contain four or fewer individual adjacent trees of the same species. Minor adjustments in spacing are allowed to respond to existing conditions, curb cuts or light pole spacing.
- Vegetation should be from natural species to the area, and have diversity of them to avoid monocultures.
- Mix of deciduous and coniferous should be present as to be able to enjoy trees in all seasons.
- Empty spaces should be landscaped when possible to create a sense of place aided with the surrounding architecture.
- The landscape shall be used as an unifying element.
- Landscape should foster water quality and water conservation.
- Sun orientation and exposure should be maximized.
- Existing trees and vegetation should be left undisturbed when possible, if not in most cases.
- Landscaping shall not encroach into the unobstructed pedestrian walking zone, including branching and limbs.

Wayfinding

Wayfinding, as the word itself suggests is a means of finding one's way. Wayfinding can be a very important tool in helping shape the identity of the community. It is often closely associated with the branding and marketing of a particular district/community of a city.

Wayfinding can be a powerful way for the community of West Springs to brand their neighbourhood. It can help solidify the desired image/identity of the community.

Figure 4.9 Landscaping

NSE Kitakyushu Technology Center, Fukoaka, Japan
http://landscapearchitecture.tumblr.com/post/44699720896/catastrophe-urben-conceptlandscape-landscape

Boston Children's Museum
http://www.bustler.net/index.php/article/asla_2008_professional_award_winners_announced/

High School Campus for the Cultural Institute in Tamaulipas, Mexico
http://www10.aeccafe.com/blogs/arch-showcase/files/2013/02/14 Cobblestone_Esplanade.jpg

Dalian, China.
Photo by Eva Rojas.

Since this can become a very personal and unique element for the community, this proposal limits itself to the ideal location of a wayfinding item and of basic guidelines that will help guide the community in the right direction.

The wayfinding guidelines that the design team proposes are:

- Signs should be posted in English and French.
- Signs should be visible from all points in ideal locations.
- Avoid obstructions when possible, i.e: place in corners with no trees blocking the way or at appropriate heights where in the case of accumulation of snow it is not covered.
- Uniformity on all signs is a must, keep similar fonts and colors throughout.
- Must attract attention but not distract from Traffic or City Signs.
- When possible combine with light posts or other street furniture.
- Sizes of sign plates should be when possible in multiples of 150mm (approximately 6 inches).
- Rule of thumb is to have signs with a lettering height of no more than 25 mm for every 15 meters of desired visibility.

Figure 4.10 Wayfinding systems

http://farm5.static.flickr.com/4007/4301053907_ce4eb4be10_o.jpg

http://www.viawayfinding.com/images/gallery/ValpoWayfindingSignage003.jpg

http://www.jonessign.com/imgs/gallery/wayfinding/Wayfinding30.jpg

4.7 Open Space Programming

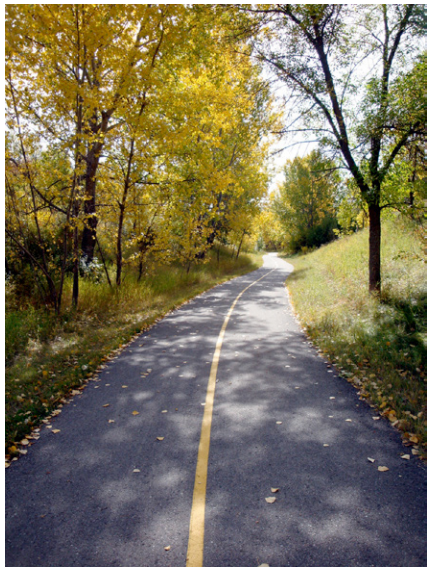
As the proposal continues to emphasize throughout this document, a variety of open spaces are extremely important. These spaces must be distributed within a community area to ensure a range of recreational needs within close proximity to homes and workplaces. It is important that these spaces, such as children's play, nature conservation and sports are provided within short walking distance of the majority of homes. This distance is ideally placed within 3-5 minutes walk (250 - 400m) of the majority of homes.

Some ideas that were touched briefly in the Concept section included that the network of open spaces is diverse and can have multitude of elements. For example, Greenways can be created to run through or alongside linear elements such as natural streams, wooded belts or canals and connect with parks and footpaths in nearby neighbourhoods. There are a number of elements to be added; Figure 3.12 establishes the design team's ideas for complementary uses. Below some examples of open spaces.

Figure 4.11 Open space examples

Grand Park, Los Angeles, USA
http://la.curbed.com/archives/2012/07/take_a_tour_around_the_civic_centers_huge_new_grand_park.php

Strathcona Community micro gardens - Vancouver
http://frogbox.com/blog/2010/12/5-reasons-to-vote-for-strathcona-gardens



Silver Springs - Bowmont Park, Calgary
Photo by Ana Hidalgo

Playground
http://www.lathebarn.co.uk/Playground.jpg

4.8 Fences

Figure 4.12 Photomontage of West Springs landscape

The overall guidelines for fences in West Spring, as recommended are:

- Fences should only be used to conceal visually unappealing places and to separate when necessary public and private spaces.
- Fences for noise reduction should also follow these guidelines.
- Durable, safe and aesthetically pleasing materials should take precedence as materials.
- Chain links fences are NOT permitted.
- When possible fences should be combined with vegetation, especially those separating residences from major roads.
- Decorative should be the principal purpose of any fence.
- Fences should facilitate a great horizon from a street view both in commercial and residential environments.

Fences inside the community, looking for transparency and visual commections

Fences proposed for the boudaries of the community, use of vegetation

Conclusions and Recommendations

The aim of this proposal is to guide future developments in West Springs Community by taking into account the different aspects related to Urban Design and Planning processes.

The development of a community may fundamentally consider current and future residents that will live, work and play in the community area not only in the short but in the long term. Having this in mind, planning projects should consider urban design guidelines and the quality of the public realm to be offered.

From our perspective, as the project team, we hope that this proposal will become a conceptual support for the Community when making choices about the type of community they want to live in and leave to their children.

ETA urban design & development

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Appendix

Population and Number of Dwellings by Select Structure Type

Community	Single Family		Duplex		Apartments		Townhouses		CNV	
	Population	Dwellings	Population	Dwellings	Population	Dwellings	Population	Dwellings	Population	Dwellings
ASPEN WOODS	4,405	1,503	31	11	259	271	564	355	10	4
COACH HILL	1,721	633	226	104	332	237	1,000	506		
COUGAR RIDGE	5,356	1,676	245	92			270	139	0	1
STRATHCONA PARK	5,956	1,937	480	224			593	273	0	2
WEST SPRINGS	6,899	2,129	383	182			944	483	0	1
RESIDUAL WARD 6	37	13							11	0

2011 Age Distribution

Community	0-4	5-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75+	Total Population
ASPEN WOODS	464	663	280	218	885	959	661	219	87	33	4,469
COACH HILL	151	287	184	193	459	476	520	495	267	162	3,194
COUGAR RIDGE	796	946	307	187	981	1527	685	260	99	25	5,813
STRATHCONA PARK	415	1055	592	469	516	1008	1368	987	389	240	7,039
WEST SPRINGS	873	1457	400	264	992	2051	1058	501	189	64	7,849
RESIDUAL WARD 6	0	3	2	9	1	0	14	4	1	2	36

2011 Female Age Distribution

Community	0-4	5-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75+
ASPEN WOODS	226	336	140	122	481	492	318	102	43	16
COACH HILL	67	140	86	98	245	256	274	250	145	81
COUGAR RIDGE	370	487	143	86	551	772	329	130	47	8
STRATHCONA PARK	207	515	294	207	264	539	742	486	189	120
WEST SPRINGS	435	705	202	138	561	1,060	512	252	96	30
RESIDUAL WARD 6	0	0	0	4	0	0	9	0	0	1

Home Ownership by Structure Type

				SF		DUP		MUP		APT		TWN		MF	
Community	Total Occupied	Total Owned	% Total Owned	Occupied	Owned	Occupied	Owned	Occupied	Owned	Occupied	Owned	Occupied	Owned	Occupied	Owned
ASPEN WOODS	1,511	1,329	87.95%	1,117	1,040	10	8	1	0	147	78	233	203		
COACH HILL	1,417	1,231	86.87%	623	599	103	92			202	167	489	373		
COUGAR RIDGE	1,874	1,683	89.81%	1,645	1,525	91	74					138	84		
STRATHCONA PARK	2,373	2,181	91.91%	1	0									2	0
WEST SPRINGS	2,558	2,354	92.03%	1,423	1,022	465	319	25	0	305	54	150	89		
RESIDUAL WARD 6	12	16	133.33%	6	3	0	5							1	0

2011 Population of Dwellings by Structure Type

	SF	DUP	MUP	APT	TWN	MF	CNV	COM	RCS	OTH	NUR	INS	HTL	Total Population
ASPEN WOODS	3,761	30	0	235	436		0							4,462
COACH HILL	1,719	204		299	972									3,194
COUGAR RIDGE	5,297	254			262									5,813
STRATHCONA PARK	5,996	476			564		0							7,036
WEST SPRINGS	6,624	354			870		0							7,848
RESIDUAL WARD 6	36		6				9			5		2		58

2011 Average Number of Residents in Dwellings by Structure Type

	SF	DUP	MUP	APT	TWN	MF	CNV	COM	RCS	OTH	NUR	INS	HTL
ASPEN WOODS	3.37	3	0	1.6	1.87		0						
COACH HILL	2.76	1.98		1.48	1.99								
COUGAR RIDGE	3.22	2.79			1.9								
STRATHCONA PARK	3.16	2.17			2.2		0						
WEST SPRINGS	3.37	2.07			2.08		0						
RESIDUAL WARD 6	3		0				0			0		0	

2012 Population and Dwelling Counts by Community

Community Name	Ward	Population	Dwellings
ASPEN WOODS	6	5,271	2,281
COACH HILL	6	3,279	1,480
COUGAR RIDGE	1/6	5,874	1,908
STRATHCONA PARK	6	7,033	2,436
WEST SPRINGS	6	8,228	2,795
RESIDUAL WARD 6	6	37	13

Community	2008	2009	2010	2011	2012
ASPEN WOODS	1,087	1,211	1,499	1,738	2,281
COACH HILL	1,481	1,480	1,480	1,480	1,480
COUGAR RIDGE	1,897	1,897	1,897	1,898	1,908
STRATHCONA PARK	2,418	2,420	2,435	2,435	2,436
WEST SPRINGS	2,289	2,373	2,618	2,731	2,795
RESIDUAL WARD 6	12	13	13	13	13

5 Year Historical Community Population

Community	2008	2009	2010	2011	2012
ASPEN WOODS	2,048	2,830	3,565	4,469	5,271
COACH HILL	3,240	3,226	3,236	3,194	3,279
COUGAR RIDGE	5,233	5,525	5,656	5,813	5,874
STRATHCONA PARK	7,201	7,207	7,122	7,039	7,033
WEST SPRINGS	6,184	6,654	7,204	7,849	8,228
RESIDUAL WARD 6	41	34	27	36	37

Dwelling Summary by Community

Community	Dwellings	Occupied Dwellings	Vacant Dwellings	Owner Occupied	Under Construction	Average Residents per Dwelling
ASPEN WOODS	2,281	1,751	51	1,553	439	3.01
COACH HILL	1,480	1,422	44	1,220	0	2.31
COUGAR RIDGE	1,908	1,878	19	1,703	7	3.13
STRATHCONA PARK	2,436	2,399	26	2,185	2	2.93
WEST SPRINGS	2,795	2,668	58	2,483	58	3.08
RESIDUAL WARD 6	13	12	0	16	1	5

2011 Vacany Rate (% Vacancy) by Structure Type

	SF	DUP	MUP	APT	TWN	MF	CNV	COM	RCS	OTH	NUR	INS	HTL
ASPEN WOODS	2.7	0	0	2	1.27		0						
COACH HILL	1.27	0.96		14.41	3.17								
COUGAR RIDGE	0.96	1.09			0.72								
STRATHCONA PARK	1.71	1.35			5.88		0						
WEST SPRINGS	1.85	4.47			4.77		0						
RESIDUAL WARD 6	0		0				0			0		0	

2011 Number of Vacant Dwellings by Structure Type

	SF	DUP	MUP	APT	TWN	MF	CNV	COM	RCS	OTH	NUR	INS	HTL	Total Vacant Dwellings
ASPEN WOODS	31	0	0	3	3		0							37
COACH HILL	8	1		34	16									59
COUGAR RIDGE	16	1			1									18
STRATHCONA PARK	33	3			16		0							52
WEST SPRINGS	37	8			21		0							
RESIDUAL WARD 6	0		0				0			0		0		0

2011 Average Number of Residents in Dwellings by Structure Type

	SF	DUP	MUP	APT	TWN	MF	CNV	COM	RCS	OTH	NUR	INS	HTL
ASPEN WOODS	3.37	3	0	1.6	1.87		0						
COACH HILL	2.76	1.98		1.48	1.99								
COUGAR RIDGE	3.22	2.79			1.9								
STRATHCONA PARK	3.16	2.17			2.2		0						
WEST SPRINGS	3.37	2.07			2.08		0						
RESIDUAL WARD 6	3		0				0			0		0	

Number and Percentage Employed

Community	Population 15 or older	Number Employed	Percent Employed
ASPEN WOODS	3,342	2,389	71.48%
COACH HILL	2,756	1,743	63.24%
COUGAR RIDGE	4,071	2,940	72.22%
STRATHCONA PARK	5,569	3,478	62.45%
WEST SPRINGS	5,519	3,898	70.63%
RESIDUAL WARD 6	33	19	57.58%

Mode of Transportation to Work

	Bicycle	Carpool, as driver	Carpool or taxi, as passenger	Drove Alone	Motorcycle	Transit	Walk	Work from home	Other
ASPEN WOODS	7	70	25	1143		124	9	26	12
COACH HILL	16	23	3	779		202	7	30	3
COUGAR RIDGE	21	60	43	1261		215	6	78	4
STRATHCONA PARK	42	52	53	1396		306	14	85	2
WEST SPRINGS	35	99	28	1697	1	266	15	102	7
RESIDUAL WARD 6				8				1	