SOUTH CASWELL CONCEPT PLAN





























CITY OF SASKATOON

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EXECUTIVE SUMMARY

The vision for the redevelopment of the Caswell Hill bus barns is to establish a unique mixed-use area within the city that will support the local arts community, provide additional parks and open space areas for residents, and provide affordable housing options for a range of people. The Caswell Hill neighbourhood is already respected for its diversity, heritage and community commitment and this project is expected to build on these strengths and enhance the neighbourhood further.

When the Local Area Plan (LAP) was completed in 2001, establishing a plan for the re-use of the current transit facility was identified as a priority. In 2006 a plan was developed for the construction of a new transit facility. In addition to having a plan for the new site, the City identified the need to establish a redevelopment plan for the old site to ensure that the neighbourhood is not left with a large vacant area after the transit facility is relocated.

In the Spring of 2009 MMM Group Limited (MMM) was retained by the City of Saskatoon to work with the Caswell Hill community to prepare a land use concept plan that will guide redevelopment over the next five to ten years. The intended outcomes of the project were to address several key issues including: the current land use incompatibility, the deficiency of local park space, the desire to establish a 'creative hub' for the local arts community, and the need to establish stronger linkages to downtown.

Process

The participation of community members was critical to the creation of this plan and will continue to be an important part of the implementation. Throughout the project, the community had a variety of opportunities for input on the development of the Concept Plan. Participation included:

- Two Community Representatives from the Caswell Hill Community Association participated on the Steering Committee.
- An on-line survey was conducted to solicit input from residents, property owners and other interested individuals. Links to the on-line survey were provided on the City of Saskatoon's website and the Caswell Hill Community Association website.
- Flyers were distributed to all neighbourhood residents informing them of the process and on-line survey.
- A Design Workshop was held to work directly with the community to capture their ideas for the redevelopment of the transit site on paper.

Community Values

The Land Use Concept Plan was developed with input from a variety of sources including the Steering Committee, survey results, the LAP and the Design Workshop. Specific effort was made to develop a plan that is compatible with the LAP.

The Local Area Plan identifies eight (8) Community Values that were considered when developing the Concept Plan:

- Green space and open space exist in the neighbourhood, both in the park and on the boulevards. Benefits for the neighbourhood include not only recreational enjoyment, but also environmental and aesthetic considerations as well;
- Affordable housing opportunities for all residents, but especially for seniors and students. The Caswell Hill neighbourhood location affords the opportunity to house seniors near Downtown and students close to Kelsey Institute;
- Development that respects the community heritage and refers to heritage elements in the design of infill structures;
- Low levels of crime such as nuisance and vandalism in the neighbourhood;
- Transportation networks that provide efficient movement of traffic at the neighbourhood boundary and minimizes short-cutting though the neighbourhood;
- A diverse community with a mix of residents of all ages;
- Safe pedestrian and bike passages enhanced walkability of the neighbourhood; and
- A compatible mix of land uses that accommodate living, shopping and working within the neighbourhood.

Building on the previous work done in the LAP, the Design Workshop process resulted in the identification of common physical features and planning principles that were incorporated into the Land Use Concept Plan.

Key Findings and Results

Building on the community values established in the LAP, the Design Workshop process generated a list of common physical planning features that were sought and more general planning principles, most of which were incorporated into the plan. These included:

Common Features:

- Closing of 24th Street between Avenue C and Avenue D;
- Residential use on the existing transit parking site;
- A dog park;

- Mixed Use residential on the northern half of the transit facilities;
- Traffic Calming on Avenue D and C;
- Green Space/Park Space on the southern half of the transit facilities;
- Reuse of the transit maintenance facilities on the northeast corner of Avenue D and 24th Street as a commercial retail space;
- Reuse of the transit offices on the southwest corner of Avenue C and 24th Street as a community centre or space;
- Green Space along railway tracks; and
- Green Space between residential uses on 25th Street and transit facilities.

Common Planning Principles:

- Green design opportunities including LEED standard buildings, and opportunities for alternative energy sources such as solar power;
- Improving the pedestrian environments;
- Reducing vehicular traffic volumes and/or speeds;
- Providing affordable housing;
- Providing a mix of uses; and
- Preserving historical aspects.

This process resulted in the Land Use Concept Plan that will guide future development in this area. It will establish a mixed-use area with approximately 13.5 developable acres and can achieve densities of approximately 18 units per developable acre (excludes parks and non-residential uses). This will be significantly higher than conventional developments and will be critical to the success of the commercial components.

Recommendations and Action Plan

The Land Use Concept Plan includes ten sections that describe planning considerations such as transportation and municipal servicing, as well as specific land uses such as open space/green space, multi-family and mixeduse. Each section includes several recommendations for next steps to guide the process going forward.

Next Steps

The Land Use Concept Plan is the first step in an ongoing process to redevelop the transit site. Going forward, the City will continue to work with the Caswell Hill Residents Association, local businesses and developers to receive input. It is expected that the plan will evolve over time and that full build-out will take several years. This process has provided a direction and framework for this ongoing community development project.

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1.0 INTRODUCTION

This concept plan is organized into three parts; Introduction, Community Input Process and Land Use Concept. The Introduction (1.0) provides background information on the project and an overview of the planning process. A more detailed Background Report is found in **Appendix A**. The Community Input Process (2.0) details the opportunities for public engagement and provides a summary of the results. The Land Use Concept Plan (3.0) provides details on each proposed use in the plan and makes recommendations for implementation.

The intent of the Land Use Concept Plan is to provide a general redevelopment concept plan suitable for endorsement by the Caswell Hill community and adoption by Council. The Concept Plan will guide decision-making in the area as development proposals come forward.



1.1 Background

Caswell Hill, located on the west side of Saskatoon, is a neighbourhood respected for its diversity, heritage and community commitment. In 2001, a Local Area Plan (LAP) for the neighbourhood was completed and the end result yielded a list of recommendations for improving and guiding future development in the area. To date, the majority of these suggestions have been implemented. The City of Saskatoon is continuing to address the planning recommendations from the Caswell Hill LAP by developing a plan for the re-use of the City's current transit facility.

The City of Saskatoon's current transit facility is located in the Caswell Hill neighbourhood, on sites 301 24th Street West, 230 Avenue C North, 232 Avenue C North, 240 Avenue C North and 321 Avenue C North. The area surrounding the Transit Facility will not accommodate future expansions and therefore the Transit Facility will eventually have to relocate.

The City has already begun to search for a new location for the facility. In 2006, the City of Saskatoon developed a plan for the construction of the new transit facilities to occur in three phases over the course of 10 to 15 years. However, this timeline has been advanced due to an influx in funding from the federal government for transit projects and the 25th Street extension approved by Council in March of this year. It is expected that a new facility location and concept plan will be completed by early 2010. The South Caswell Concept Plan will provide the City of Saskatoon with a Land Use Concept Plan that will guide the redevelopment of this area over the next 5 to 10 years.





1.2 South Caswell Concept Plan Process

The South Caswell Concept Plan process began in April 2009 with the formation of the Steering Committee made up of two Caswell Hill Community Association members and nine City staff representatives from various departments.

The purpose of the Steering Committee was to provide technical input and guidance from affected City departments, and to act as a liaison with the larger Caswell Hill Community Association. This structure maintained a balance between meeting the objectives and interests of the community, and ensuring that the City's interests were maintained. The Steering Committee acted as the 'checkpoint' for all of the project tasks and met at key points throughout the project.

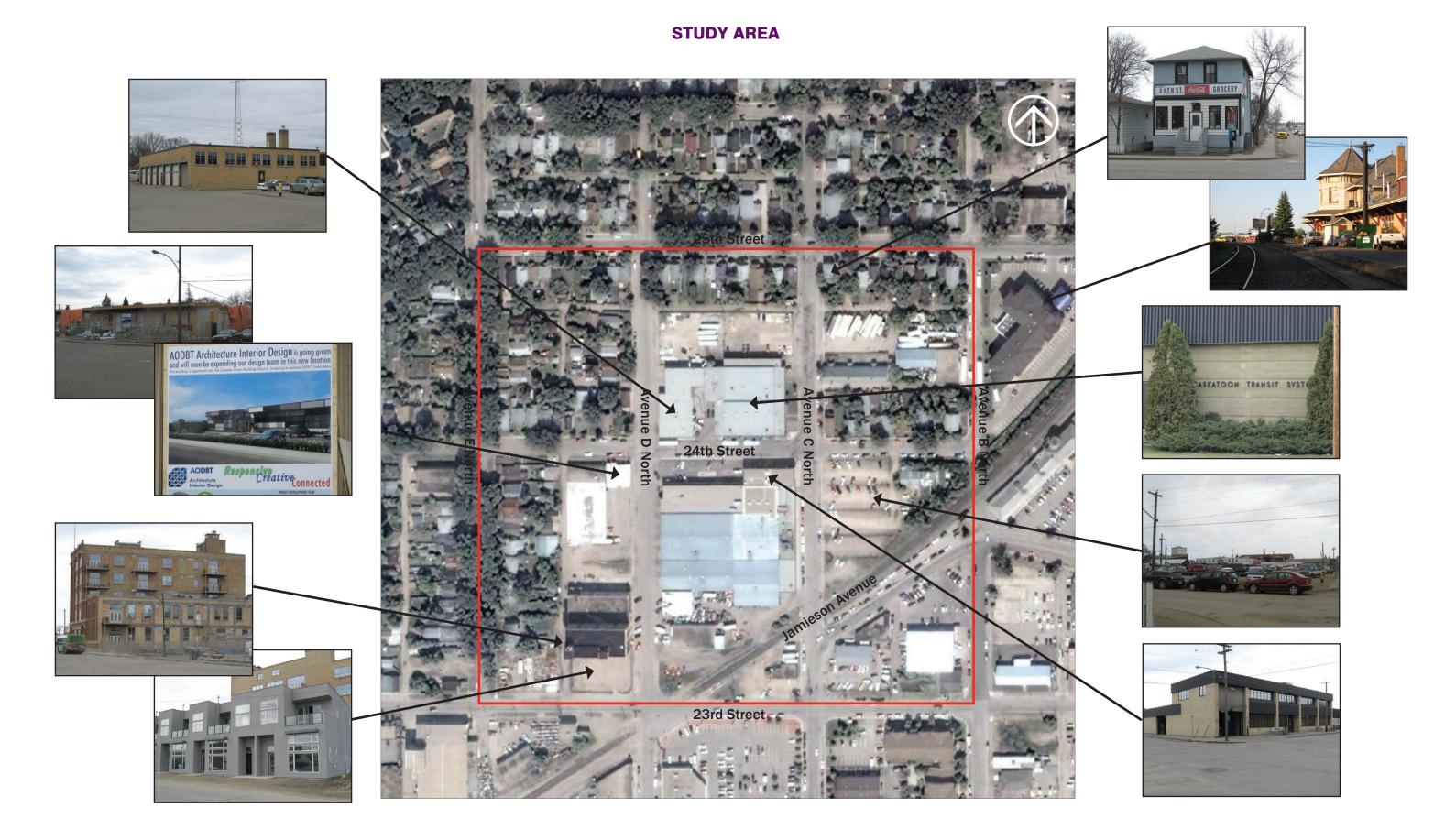
Steering Committee Members:

- Courtney Johnson, Project Manager for City
- Tim Steuart, Development Review
- Alan Wallace, Neighbourhood Planning Section Manager
- Elisabeth Miller, Neighbourhood Safety Coordinator
- Daryl Sexsmith, Housing Analyst

- Mitch Riabko and Edwin Ripley, Transit Services Branch
- Marieke Knight and Jodi Aicher,
 Community Development Branch
- Tom Der and Shirley Matt,
 Infrastructure Services Branch
- Dorothy Johnstone and John Nicholson, Community Representatives

The Steering Committee met with the consultants and the following process for the development of the South Caswell Concept Plan was developed:

TIMING	Apr	May	Jun	Jul	Aug	Sept	Oct
Formation of Steering Committee							
Steering Committee Meeting #1							
Project Start-up and Background Research							
Background Study							
On-line Survey							
Design Workshop and Community Consultation			\Diamond				
Steering Committee Meeting #2			\Diamond				
Review Data Collected from Consultation							
Prepare Draft of Plan and Capital Cost Estimates							
Steering Committee Meeting #3					\Diamond		
Follow-up Open House						\Diamond	
Steering Committee Meeting #4						\Diamond	
Complete Revisions						\Diamond	
Submit Final Report							\Diamond



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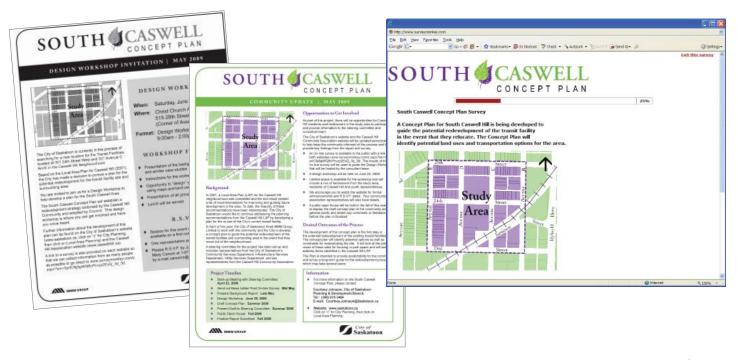
2.0 COMMUNITY INPUT PROCESS

Throughout the project, the community has had a variety of opportunities for input on the development of the Concept Plan. The participation of community members was critical to the creation of this plan and will continue to be an important part of the implementation. Participation included:

- Two Community Representatives from the Caswell Hill Community Association participated on the Steering Committee;
- An on-line survey was conducted to solicit input from residents, property owners and other interested individuals. Links to the on-line survey were provided on the City of Saskatoon's website and the Caswell Hill Community Association website;
- Flyers were distributed to all neighbourhood residents informing them of the process and on-line survey;
- A Design Workshop was held to work directly with the community to capture their ideas for the redevelopment of the transit site on paper; and
- An Open House was held in September for the public to view the proposed plan and provide comments and feedback.

2.1 Summary of Survey Results

An on-line survey was posted May 17th for approximately 1 month preceding the Design Workshop. The online survey format provided an opportunity for people to access the survey questions at any time of day. The following is a summary of the key survey results. A complete listing of the survey questions and results can be found in **Appendix B**.





On-line Survey Results

62 Responses

70% Are either Residents and/or Land owners

Top Three Uses of Site

- Park Space
- Mixed-Use (Residential Commercial)
- Restaurants

Top Three Types of Residential Uses

- Mixed-Use residential including commercial
- Low Rise Multi-Family
- Mix of Single and Multi-family dwellings



- Coffee Shop/Café
- General Retail
- Professional Offices



- Ensuring a mix of uses
- Safety
- Pedestrian amenities

Top Three Types of Desired Park Space

- Village park designed for walking, cycling and socializing
- Open green space for community gardens
- Pocket park with play structure

Preservation of buildings

- 45.8% say some of the buildings may be important and should be saved; and
- 52.5% say none of the buildings have historic significance and should be torn down.

2.2 Summary of Design Workshop



Preparation for the South Caswell Design Workshop began at the initial Steering Committee with discussions on format, time frame and number of participants. A Saturday was chosen for the event to accommodate a timeframe of approximately 5 hours in which participants would ideally not have to miss work to attend. A local community venue, Christ Church Anglican was chosen as the location to host the workshop. This venue was chosen because of its location and provisions for accessibly which included an elevator and wheelchair ramps. The Community Association also regularly uses this venue.









2.2.1 Participation

Direct invitations were sent out to all residents and property owners within the study area outlining the purpose of the design workshop and offering an opportunity to participate.

Flyers with the same information as the direct invitation were sent to all residents of the Caswell Hill Neighbourhood.

Information about the Design Workshop and contact information for participation were posted on both the City of Saskatoon's website and the Caswell Hill Community Association website.



2.2.2 Format

The workshop began at 9:00 am with opening introductions and greetings from the Ward Councillor, the City of Saskatoon Community Service Department Planning and Development Branch, the Steering Committee, the Caswell Hill Community Association and the Consultants.

A presentation was given by the Consultant's outlining the Community's vision and values previously determined by the Local Area Plan (LAP), the neighbourhood's history, population and background, and survey results.

Information regarding the existing transit facilities along with photos were presented and included the approximate year of construction, current use and height.







BUSIN



Photos (top to bottom): Wychwood Barns, Toronto; The Forks, Winnipeg; The Toccoa Station, Georgia; and Old Strathcona Farmers' Market, Edmonton.

Four case studies involving similar sites throughout North America were reviewed. These case studies included: Wychwood Barns in Toronto, The Forks in Winnipeg, The Toccoa Station in Georgia, and Old Strathcona Farmers' Market, Edmonton. These case studies were selected to illustrate similar projects where existing transit facilities have been redeveloped into a variety of uses.

Participants were then randomly seated at circular tables with the following materials: a large aerial photo of the study area, a large sheet indicating only the lot lines of the study area, scaled templates with typical neighbourhood commercial, residential, recreational uses, colored markers, tracing paper and scaled paper rulers and tape. Participants were asked to work collectively at their tables to prepare their concept plans for the development of the transit site.

Members from the Steering Committee, Consultant team and community were available to answer questions and assist with designs. Participants were given an hour and a half to complete their plans.

Once completed, a member from each table presented the plans back to the larger group. Each of the plans is featured in **Appendix C**.

A Design Workshop evaluation was given to participants before the workshop ended. This input provided information on participant's perception of the process, their prior involement in the process and how they heard about the event. The results are in **Appendix D**.

3.0 LAND USE CONCEPT PLAN GUIDING PRINCIPLES

The Land Use Concept Plan was developed with input from a variety of sources including the Steering Committee, survey results, the LAP and the Design Workshop. Sections 3.1 and 3.2 identify key principles and physical planning criteria that influenced the development of the Plan. Specific effort was made to develop a plan that is compatible with the LAP.

3.1 Community Values

The Local Area Plan identifies eight (8) Community Values that were considered when developing the Concept Plan:

- Green space and open space exist in the neighbourhood, both in the park and on the boulevards. Benefits for the neighbourhood include not only recreational enjoyment, but also environmental and aesthetic considerations as well;
- Affordable housing opportunities for all residents, but especially for seniors and students. The Caswell Hill neighbourhood location affords the opportunity to house seniors near the Downtown and students close to Kelsey Institute;
- Development that respects the community heritage and refers to heritage elements in the design of infill structures;
- Low levels of crime such as nuisance and vandalism in the neighbourhood;
- Transportation networks that provide efficient movement of traffic at the neighbourhood boundary and minimizes short-cutting through the neighbourhood;
- A diverse community with a mix of residents of all ages;
- Safe pedestrian and bike passages enhanced walkability of the neighbourhood; and
- A compatible mix of land uses that accommodate living, shopping and working within the neighbourhood.







3.2 Design Workshop Analysis



The Design Workshop generated seven separate concept plans. In order to consolidate the ideas and identify common themes, the following process of analysis was applied:

- Following the Design Workshop, the plans were digitally scanned to create 11 x 17 inch prints. Appendix C includes copies of each plan created at the Design Workshop;
- Tracing paper was laid over top of each of the plans and land uses were individually captured on separate pieces of tracing paper. At the end of this exercise, each plan had 5-7 pieces of tracing paper corresponding to different uses;
- The tracing papers were then sorted according to land use. Similarities in each of the plans were identified and noted on a compilation plan; and
- This compilation plan was then used to guide the development of the Land Use Concept Plan, taking into consideration the land uses and planning principles that appeared to rise to the top.







Tables 1 and 2 identify common elements that were evident in many of the plans created at the Design Workshop. The first table lists common physical features while the second identifies common planning principles that apply to all uses.

Table1: Common Features	Incorporated into the Plan
Closing of 24th Street between Avenue C and Avenue D	\checkmark
Residential use on the existing transit parking site	\checkmark
A dog park (to be considered during detailed design)	\checkmark
Mixed Use residential on the northern half of the transit facilities	✓
Traffic Calming on Avenue D and C	\checkmark
Green Space/Park Space on the southern half of the transit facilities	✓
Reuse of the transit maintenance facilities on the northeast corner of Avenue D and 24th Street as a commercial retail space	✓
Reuse of the transit offices on the southwest corner of Avenue C and 24th Street as a community centre or space	✓
Green Space along railway tracks	\checkmark
Green Space between residential uses on 25th Street and transit facilities	\checkmark

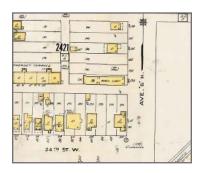




Table 2: Common Planning Principles	into the Plan
Green design opportunities including LEED standard	
buildings, and opportunities for alternative energy sources	✓
such as solar power	
Improving the pedestrian environments	✓
Reducing vehicular traffic volumes and/or speeds	✓
Providing affordable housing	✓
Providing a mix of uses	✓
Preserving historical aspects	✓

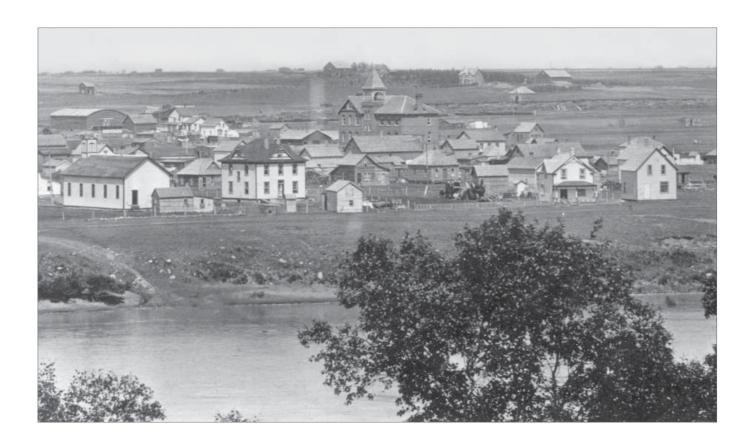


4.0 LAND USE CONCEPT PLAN

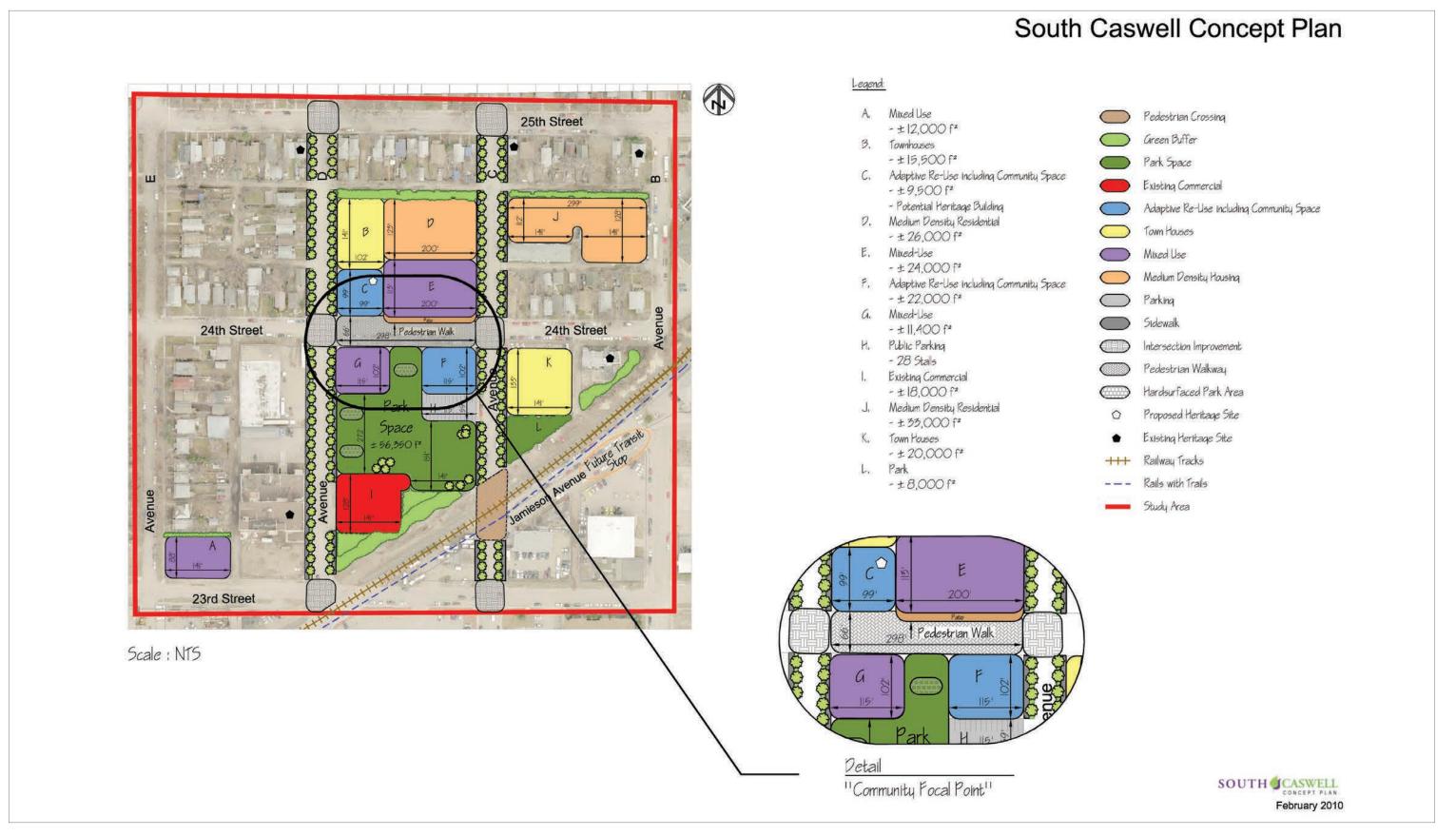


The study area includes approximately 13.5 developable acres of land. There was a desire from the start of the project to create a unique mixed-use infill development. Establishing mixed-use areas has become a more common form of development recently since it provides opportunities for people to live, work and shop in the same location. This development form is often referred to as Smart Growth and it can reduce reliance on vehicular traffic and facilitates walking and cycling options, as well as public transit use.

Assuming the area is redeveloped as per the Concept Plan, the density achieved will be significantly higher than a conventional suburban development and will be much higher than it is today since there are very few residential uses within the study area. While the gross density will be approximately 8 units per acre, the potential density in this area could be as a high as 18 units per developable acre (excludes parks and non-residentail uses) given the existing and potential residential units. Achieving this density will be critical to the market viability of the proposed commercial uses. It also has the benefit of creating a neighbourhood that is active throughout the day and evening and which increases safety and enhances the intangible quality of life that people look for in a neighbourhood.



MAP 1: LAND USE CONCEPT PLAN



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4.1 Urban Design and Neighbourhood Identity

There are numerous urban design related principles that have been identified in the LAP and through the Design Workshop concepts. Each of these has either been considered in the current Land Use Concept Plan, or should be incorporated into the detailed design of individual buildings or sites in the future. In particular, establishing a unique identity for the area was a recurring theme throughout the consultation process.

4.1.1 Heritage Buildings

The LAP identifies existing heritage buildings as an important aspect of the neighborhood's character. In addition, architecturally sympathetic development of new buildings is identified as an important component for infill development. This theme was also evident in the Design Workshop and is reflected in the designation of several heritage buildings in the area.

There are four existing buildings in the area that have heritage value interest:

- Bus Barn (1913);
- T.E. Eaton Warehouse;
- RCMP Barracks; and
- The War Barracks.

4.1.2 Adaptive Re-Use

The Land Use Concept Plan maintains two of the existing transit buildings, one of which may be considered to be historically significant. The redevelopment of the 1913 transit building forms a key component of the overall redevelopment plan. This building has the potential to be highlighted as a focal point and symbol for the redeveloped area. It is also strategically located at one end of the proposed pedestrian walkway with the other building proposed for re-use on the opposite side of the street at the east end of the pedestrian walkway.



4.1.3 Landscaping



The Design Workshop Concepts incorporate extensive landscaping and the LAP also identifies green space and boulevard landscaping as a core value. In order to fulfill this goal, a master plan for landscaping within the study area will serve to create a cohesive theme that identifies the study area as a unique place within Saskatoon. The redevelopment of each site should incorporate a detailed landscape plan that is compatible with the master plan.

4.1.4 Accessibility

Integrating accessibility is critical to the success and long-term viability of the area. The Land Use Concept Plan proposes the redevelopment of sidewalks within the study area that will include para ramps that accommodate wheelchairs, walkers, scooters and strollers.

4.1.5 Safety

Safety was identified as one of the top three concerns in the on-line survey, while low levels of crime was identified as a core value in the LAP. In order to ensure the continued safety of the area, elements of Crime Prevention Through Environmental Design (CPTED) have been incorporated into the Land Use Concept Plan and should be considered in the detailed design of individual sites. This includes maintaining sightlines, installing adequate lighting, and defining public and private spaces.

The City of Saskatoon CPTED Review Committee reviewed this plan in October 2009. The Committee is comprised of administration from all departments within the City of Saskatoon.



4.1.6 Identity

Creating a unique identity for this area was a theme of the Design Workshop. This goal can be achieved by defining a unique mix of uses, as well as through visual cues that signal people that this is an area that is special.

In terms of use, the community has articulated a vision for establishing a neighourhood that will become a hub for the arts and creative industries. In terms of establishing a visual identity, there are several opportunities to create a cohesive theme that connects with the proposed uses. A master urban design and landscaping plan for the area that includes signage, street lighting, garbage receptacles, bike racks, decorative paving and landscaping elements can establish a neighbourhood theme. Developing a formal entry point into the neighbourhood also provides an opportunity to reinforce the notion that this is a special place.

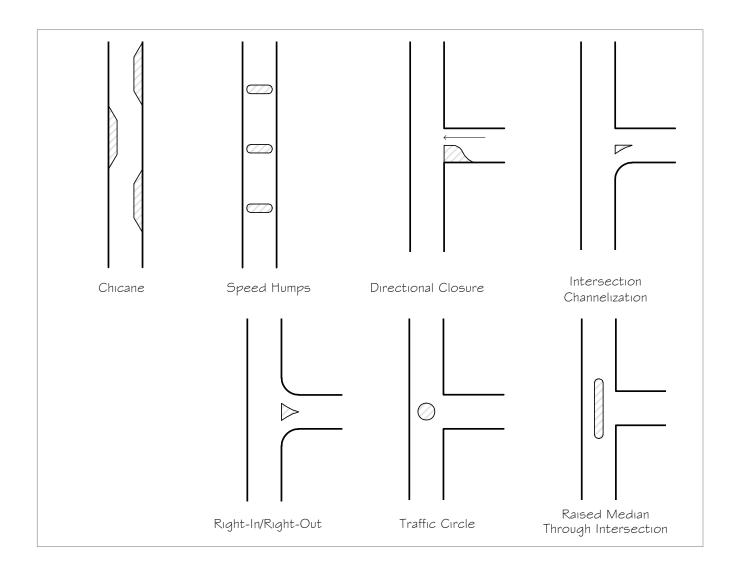
In addition to a visual identity, establishing an identifiable name for the area will highlight its status as a unique place, rather than being simply a location. The Design Workshop generated suggestions including:

- CAVES "Caswell Hill Artisan Village Eco-space";
- The Barns; and
- SoCa or SoCHa "South Caswell Hill Area".
 - 4.1.7 Urban Design and Neighbourhood Identity Recommendations:
 - a. Initiate the process to establish the 1913 transit building as a heritage property.
 - b. Request that the landscaping and urban design upgrades on 25th Street be extended to Avenue E to tie into this area.
 - c. Establish a master landscaping plan for the area (including soft and hard elements).
 - d. Require detailed site landscaping plans at the site development stage.
 - e. Incorporate accessibility into both public and private spaces.
 - f. Establish design guidelines for infill development to maintain the character of the existing neighbourhood.
 - g. Establish architectural guidelines for new development to ensure consistency.
 - h. Initiate a process to establish a marketable name for the area that includes community input.

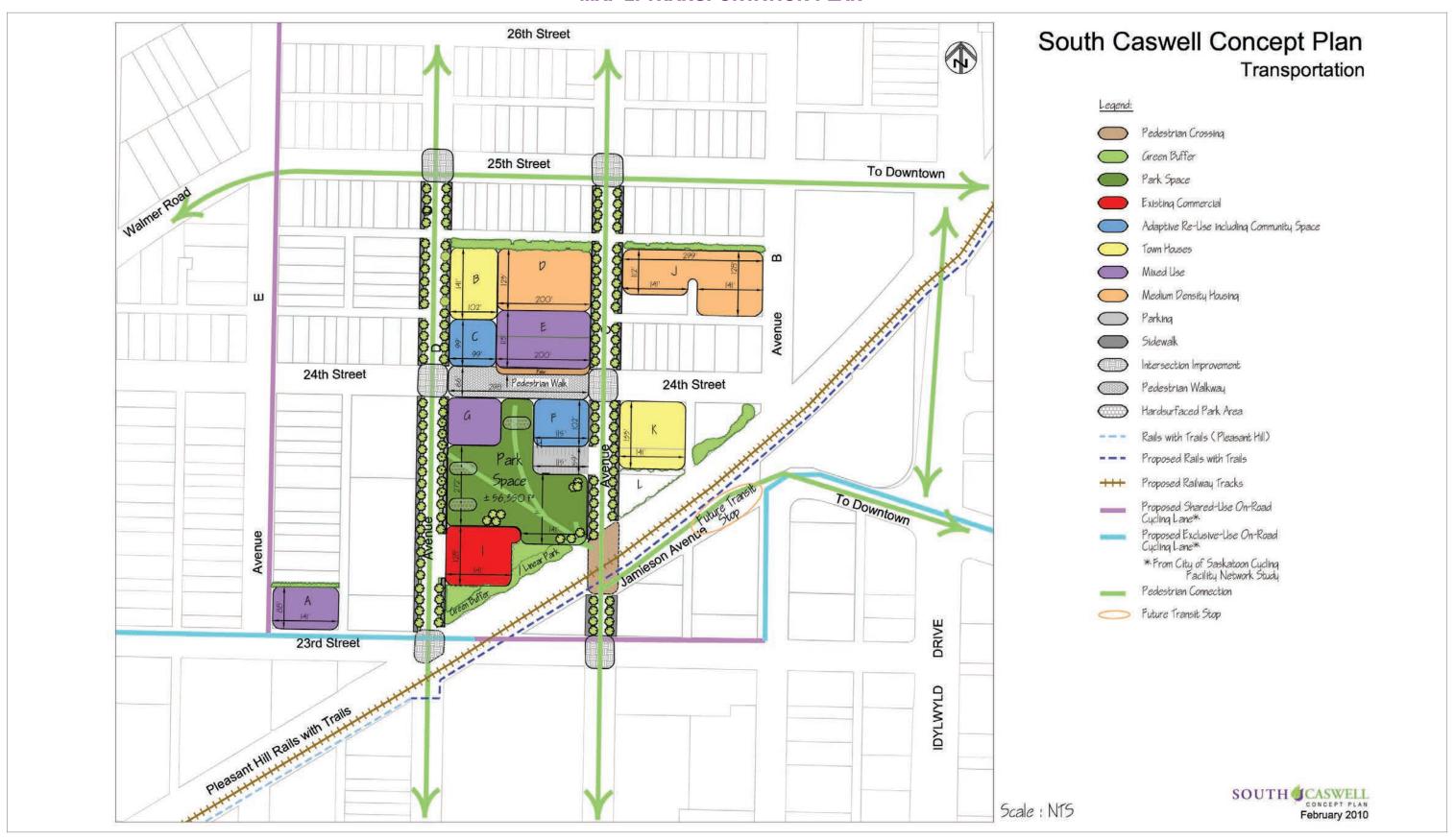
4.2 Transportation

The transportation system in the study area is a significant consideration in the Land Use Concept Plan. The LAP identifies 25th Street and Avenue C as a concern with respect to traffic volumes and speeds. In addition, the extension of 25th Street is a major concern when 25th Street is extended from Downtown to Idylwyld Drive. From a pedestrian perspective, establishing a more efficient system that is wheelchair accessible is also a priority.

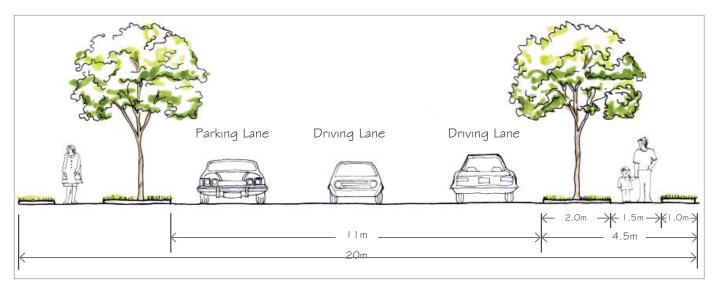
The Land Use Concept Plan (Map #1) identifies several transportation improvements. These are aimed at addressing traffic concerns while simultaneously enhancing the pedestrian environment. A Transportation Plan (Map #2) is also provided to identify key transportation connections and potential future linkages.



MAP 2: TRANSPORTATION PLAN



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4.2.1 Traffic Calming

There are several options available for traffic calming including reducing the street right-of-way; creating bulb-outs, adding intersection decorative paving, and dead-ending select streets.

The Land Use Concept Plan identifies an alternative cross-section for the street right-of-way on Avenues C and D between 25th Street and 23rd Street. The existing right-of-way is currently 20 metres in width. Redeveloping this right-of-way to reduce the pavement width to 11m will narrow the space while still accommodating two travel lanes and a parking lane. The balance of the right-of-way is then available for a 1.5 metre sidewalk on each side of the street and a 2 metre planting area between the sidewalk and the street. This configuration will cue drivers to reduce speeds and also provides an improved pedestrian environment.

Decorative paving is also proposed at key intersections to provide a visual cue to drivers and also to identify this as a unique area within the neighbourhood. Intersection paving is proposed at six locations:

- Avenue C at 23rd Street, 24th Street, and 25th Street; and
- Avenue D at 23rd Street, 24th Street, and 25th Street.

4.2.2 Pedestrian Improvements

The Land Use Concept Plan identifies several pedestrian improvements.

First, reducing the width of the vehicular travel lanes on Avenue C and D serves the dual purpose of calming traffic and improving pedestrian amenities. Second, closing 24th Street between Avenue C and D will create a pedestrian-only zone that will knit together the mixed-use, community facilities and park spaces to create an active public space.





Pedestrian crossing improvements are identified to serve a dual purpose of slowing traffic and providing a formal pedestrian crossing. A formal location for crossing the railway tracks is identified to increase safety and direct pedestrians to the appropriate location.

Lastly, implementing the Rails with Trails concept in this area will help to create connectivity with adjacent neighbourhoods. The Rails with Trails Concept essentially establishes a pedestrian corridor within the railway right-of-way. It provides for a unique location for active transportation since railways generally cut through cities in different ways than roads.

There is an existing RWT in the adjacent Pleasant Hill neighbourhood that will connect to the proposed RWT in this Concept Plan. This will enhance the connectivity between neighbourhoods which will increase as other neighbourhoods establish their own RWTs. In this neighbourhood, the RWT will also improve the connectivity to downtown.

4.2.3 Parking

The redevelopment of this area for community uses, retail, and multi-family will generate the need for additional parking in the area. The Land Use Concept Plan identifies a parking area that is associated with the community space.

4.2.4 Transportation Recommendations:

- a. Reduce right-of-way widths for vehicular traffic on Avenue C and D
- b. Construct intersection improvements on Avenue C and D at 24th Street and 25th Street.
- c. Adjust the traffic control devices at 24th Street and Avenues C and D to reflect the pedestrian walkway.
- d. Establish a safe railway crossing point for pedestrians.
- e. Liaise with C.P. Rail to determine a safe pedestrian crossing location.
- f. Develop a Rails with Trails connection.
- g. Prepare a landscape plan incorporating the Rails with Trails standards and rail crossing.
- h. Develop public parking areas in conjunction with the redevelopment of the community spaces.

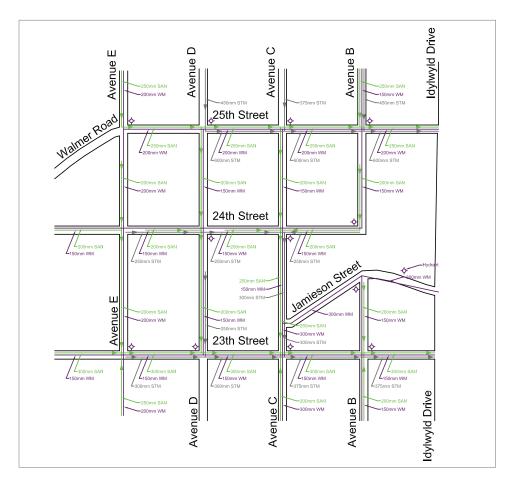
4.3 Municipal Servicing

The Caswell Hill neighborhood primarily consists of a grid network of local roads, with water, sanitary and storm sewers within the road right-of-ways. The neighborhood was established about one hundred years ago with a majority of the original water and sewer pipes still in use today. The watermains are located in each of the road sections throughout the neighborhood, with adequate fire hydrant spacing. Both the sanitary and the stormwater sewer systems are located appropriately to service all of the existing lots. No major trunk systems run through the redevelopment area, with a majority of pipes at appropriate sizes for a single family residential zone. (See pipe location/size figure).



Based on the South Caswell Concept Plan, various changes to the lot use and configuration affect the municipal services. By subdividing the large existing lot for the transit facility, the new lots B, D and K will not have direct access to a storm main. As stormwater management is a requirement for all new re-developments, storm mains must be built in the road right-of-ways to provide access to the storm system. A comparison of the existing land use to the proposed plan indicates a slight increase in the demand on the water and sanitary systems, but with the addition of park space and required stormwater management controls, there would be a decrease in the demand





on the storm system. The impact on pipe size requirements for the increased demand for the sanitary and water systems require a detailed study on pipe flow capacity and design flow requirements specific to the proposed zoning. The proposed zoning is primarily a mixture of low to medium density residential, so the minimum pipe size requirements in the City Standards are unchanged. Confirmation of actual pipe size requirements must be determined through a detailed study.

As almost all of the pipes in the area are close to one hundred years old, the structural condition of the pipes is questionable. The proposed concept plan indicates areas where street improvements are recommended. As the likelihood of problems with the municipal services increases with the age of the pipes, it is common to undertake a thorough evaluation when significant road improvements are planned. The evaluation should determine specific rehabilitation requirements for the individual municipal systems, such as sewer relining or pipe replacement in part or in full.

4.3.1 Municipal Servicing Recommendations:

- a. Undertake detailed network analyses and pipe condition evaluations to determine level of work required for redevelopment.
- b. Establish levy requirements for development within the proposed re-zoning.
- c. Provide detailed design for the municipal servicing upgrade requirements.
- d. Prepare and execute a construction plan incorporating municipal improvements with surface improvements.

4.4 Environmental Considerations

There are two distinct environmental considerations in the study area: addressing past uses and potential site contamination, and implementing sustainable and green development options for future uses.

4.4.1 Environmental Contamination

Addressing the potential site contamination from the transit facility is the most immediate issue. The results of detailed environmental testing will determine the feasibility of building re-use and the potential costs. In terms of potential environmental contamination, the Land Use Concept Plan recommends that detailed testing be undertaken for the site, particularly related to the buildings that are proposed for adaptive re-use.

4.4.2 Green Design

In terms of implementing green design elements into new development, several of the Design Workshop concepts identified reusable energy generation, LEED Standard buildings, and a general "greening" through landscape improvements as key objectives or principal.

With respect to implementing green building options, the City may require buildings in the study area to conform to LEED standards. Opportunities to incorporate alternative energy sources, install energy efficient fixtures, and reduce stormwater runoff through the use of bioswales and green roofs may form an integral part of the evaluation of development proposals.

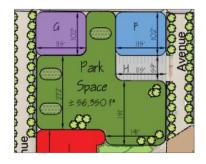
The Canada Green Building Council (CaGBC) is expected to adopt a LEED-ND (Neighbourhood Development) designation in 2010. There is currently a LEED-ND designation in the United States that incorporates sustainable principles and includes credits for items such as smart location, brownfield redevelopment, housing and jobs proximity, bicycle networks, among others. There may be an opportunity to establish this redevelopment area as a LEED-ND certified project which would enhance its character as a unique location within the City, and provide a model for future infill development.

4.4.3 Environmental Consideration Recommendations:

- a. Contract for a Phase I \$ 2 Environmental Assessment of the City-owned lands.
- b. Incorporate sustainable elements into the redevelopment of the existing City buildings such as low flow faucets and toilet fixtures, smart lighting, recycled materials, high efficiency mechanical systems, solar capture systems and similar features.
- c. Implement sustainable landscape features such as xeriscaping, natural weed control and alternative trees species. Include green building options as an important evaluation criteria in Expressions of Interest.
- d. Establish design and evaluation criteria for developer-lead proposals.
- e. Establish design criteria for City-lead redevelopment plans.







4.5 Park Spaces

The lack of park space was identified as a potential concern at the beginning of this project. The Caswell Hill neighborhood has approximately 10.5 acres of park space located on the Ashworth – Homes Park in the northern portion of Caswell Hill. The 2001 LAP identified the lack of park space as a concern for residents, both in terms of total acreage and geographical distribution. The redevelopment of the southern portion of Caswell Hill has provided an opportunity to address this concern.

The LAP indicated that approximately 0.9 acres of additional park space is required for the neighborhood. Using this indicator in conjunction with the concepts from the Design Workshop, the land use concept plan proposes park space on a portion of the city owned land (approx. 1.0 acres). This location was identified in several of the Design Workshop concepts and may include uses such as:



- plaza for activities, events, displays and patios which may require a combination of hard and soft surfaces:
- children's play area;
- picnic / seating areas;
- off-leash recreation area (dog park); and
- passive green space.



The design of the park will be critical in relation to the larger neighbourhood since it will be central to the redevelopment. Ensuring that the park interfaces with the proposed development site should be a key principle of the park's design. In addition, reflecting the former use of the site should also be incorporated into the design. This can be achieved in a variety of ways including incorporating components of the bus barn framing into the park, and reflecting the former streetcar tracks in representative paving patterns. This approach has been used on similar sites with success.



4.5.1 Park Spaces Recommendations:

- a. Convert a portion of the city owned land south of 24th Street to a park space.
- b. Prepare a detailed design for the park that is compatible with the master landscaping plan for the area.
- c. Provide a connection from the park to the railway right-of-way for a Rails with Trails path.
- d. Demolish portions of the existing bus barns to accommodate park redevelopment.

4.6 Adaptive Re-Use Including Community Space

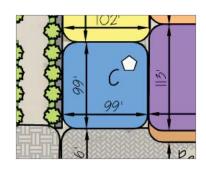
The concept of re-using some of the existing city-owned buildings for community space was identified on several of the Design Workshop Concept plans. In particular, the office space in the southwest corner of the 24th Street and Avenue C, and the original transit building (c.1913) in the northeast corner of 24th Street and Avenue D were mentioned.

The Land Use Concept Plan incorporates the adaptive re-use of both these buildings for a variety of uses including community space. Proposed uses may include:

- a daycare centre;
- office and meeting space for various community groups and organizations;
- kitchen facilities for community groups;
- arts facilities:
- retail space; and
- commercial market for local artisans and / or food producers.

4.6.1 Adaptive Re-use Recommendations:

- a. Maintain the 1913 building at the corner of 24th Street and Avenue C.
- b. Maintain the 1984 office building and garage space at the south corner of 24th Street and Avenue C.
- c. Evaluate the 1974 portion of the transit facility located on 24th Street and Avenue C for potential future uses.
- d. Identify appropriate community users and determine space and facility requirements.
- e. Identify opportunities for market-based commercial uses.
- f. Issue Expression of Interest for market-based redevelopment if determined to be feasible.
- g. Prepare redevelopment plans for the existing buildings.
- h. Redevelop both buildings with community-oriented uses such as retail spaces, daycare, local artisan areas, local food producers, pedestrian market area, etc.
- I. Incorporate an arts-focused public market facility into the redevelopment plans.

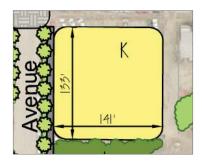


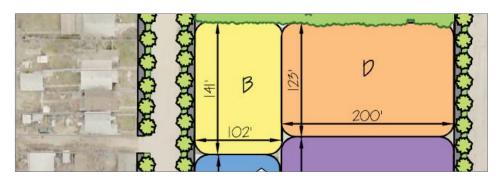






4.7 Townhouses





Providing for a variety of housing options within the study area was identified as a priority in both the LAP and the Design Workshop. These options included both a mix of housing types and tenures, combining market and "affordable" housing. Affordable housing opportunities may be achieved through creative market-based options or through subsidized development opportunities.

The City of Saskatoon offers a number of incentives to encourage the construction of affordable housing. Current incentives include a cash grant of 10% of the capital cost of building affordable housing, as well as a five-year incremental tax abatement. These apply to both affordable rental and affordable homeownership projects. Affordable housing projects may also qualify for federal or provincial assistance.

The Land Use Concept Plan identifies two locations for townhouses and stacked development. Both sites are located on city-owned land. This scenario provides several options for consideration including the sale of the land to developers at market value, and the development of affordable housing units by the city.

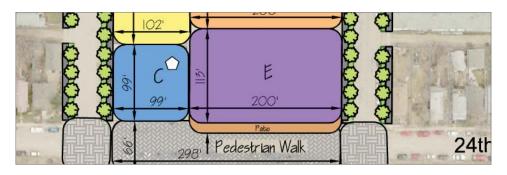


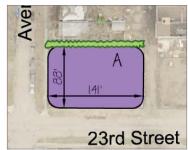
4.7.1 Townhouses Recommendations:

- a. Establish two townhouse sites in the study area.
- b. Pursue public-private opportunities for redevelopment focused on developer-driven projects facilitated by existing City programs such as cash grants and tax abatements.
- c. Issue an Expression of Interest to developers for housing projects.
- d. Select a development proposal.
- e. Work in co-operation with the developer to create affordable or entry-level townhouse units.



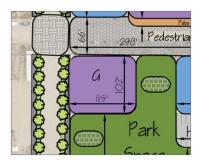
4.8 Mixed-Use





The concept of providing mixed-use sites within the study area was identified on almost all of the Design Workshop concept plans. A recently developed mixed-use building is located in the southwest corner of the study area and includes ground floor commercial with residential units above.

The Land Use Concept Plan identifies three mixed-use sites. The first fronts onto 24th Street between Avenue C and D. A three to four story building would allow for street-level commercial and residential units above. The proposed location provides an appropriate separation between the adjacent lower density uses. It also takes advantage of the pedestrian walkway where there are opportunities for sidewalk cafes and restaurant patios. The second site is located in the southwest corner of the study area. This site is currently identified for Mixed-Use within the Official Community Plan and mirrors the existing mixed-use building to the east. The third is located at the corner of 24th Street and Avenue D adjacent to the proposed park area.



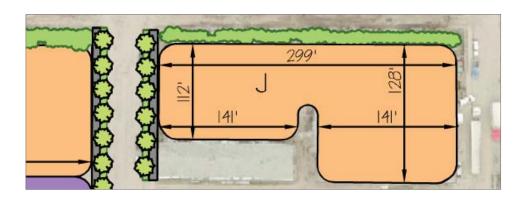
4.8.1 Mixed-use Recommendations:

- a. Establish a mixed-use site adjacent to the pedestrian walkway.
- b. Identify the second site as a potential future mixed-use site.
- c. Pursue private development of the site.
- d. Issue an Expression of Interest to develop the mixed-use site.
- e. Formalize sale of City-owned land.





4.9 Multi-Family Residential (Site J)





The LAP identifies a mix of housing options for a variety of residents as a key objective. Currently, the neighborhood includes approximately 75% single family and two-family dwellings and 25% multi-family. While the need for additional single-family sites was not identified as a high priority in The Design Workshop Concepts, the study area presents some opportunities to add to the single-family housing inventory, or to create multi-family units that are compact and small-scale.

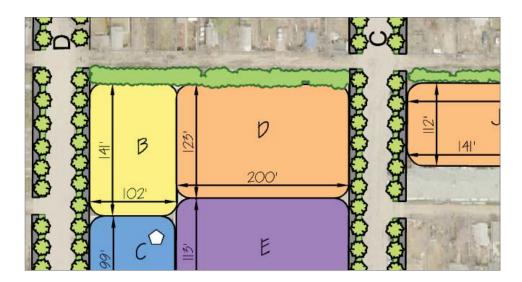
The Land Use Concept identifies an infill area at the southeast corner of 23rd Street and Avenue C, extending through to Avenue B. Small-scale multi-family units in the form of 'Pocket House' studio apartments would provide additional affordable housing geared toward students and would be of a compatible scale with the adjacent single-family units to the north. Alternatively, this site could be developed for single-family housing.

Several financial models are available for this site including market rate housing, developer-driven affordable housing, government supported affordable housing, or subsidized housing. This site also provides an opportunity to explore options for creating a community land trust that would maintain ownership of the land and develop housing units for sale to candidate families.



- 4.9.1 Multi-Family Residential Recommendations:
- a. Determine the priority needs for housing types within the larger neighbourhood.
- b. Prepare an action plan based on the needed housing types.
- c. The City of Saskatoon will work with the current landowner to facilate relocation to a more suitable location.

4.10 Multi-Family Residential (Site D)



The development of multi-family housing as a component of the redevelopment plan was identified in The Design Workshop Concepts and reflects the interest in housing options and affordability that are highlighted in the LAP. The Caswell Hill neighborhood includes a high proportion of single-parent and one person households. The development of multi-family housing provides an opportunity to address the housing needs of this group, as well as students and seniors.

The Land Use Concept identifies a multi-family site to the north of the mixeduse site. A three-storey (12m) height building maintains the scale of the neighborhood while providing a critical mass of dwelling units to support market feasibility.



4.10.1 Multi-Family Residential Recommendations:

- a. Develop this City-owned land as multi-family residential apartment-style units.
- b. Issue an Expression of Interest to developers.
- c. Formalize sale of City-owned land.



5.0 PHASING

Development Phasing

The development phasing of this project will coincide with the phasing determined by the transit operations relocation plan that will be presented to Council in 2010. The Planning and Development Branch and Transit Services Branch will work together to identify the future project phasing and funding strategies for the area.

Community Design

Prior to any construction, the City of Saskatoon will establish design guidelines and a master landscape plan (including a detailed plan for the park). This will help ensure that the identity of the neighbourhood remains consistent as construction occurs over time, and will ensure that the intent of the redevelopment project is maintained. There will be consultation with local stakeholders and the Community Association as these project components move forward.

Official Community Plan and Zoning By-Law

The majority of the Study Area is currently designated "Public Utility" in the OCP. As development proposals come forward for the City-owned land, the City will work with the developer to identify an appropriate designation and will bring applications forward at the appropriate time. Similarly, appropriate zoning will be identified based on individual proposals and the City will proceed with the necessary applications.

Expressions of Interest

As the redevelopment of this area moves into the planning stages, Expressions of Interest will be issued for development proposals. The City will continue to work cooperatively with the Caswell Hill Community Association to receive input and suggestions on these proposals. Establishing a Community Review Committee for ongoing involvement is recommended.

Budget

In order to avoid a period of stagnation between the exit of the transit facility and the start of the redevelopment, it is recommended that a budget be identified for the initial project phases, which coincides with the timing of the transit facility relocation.

SOUTH CASWELL CONCEPT PLAN

APPENDIX A - BACKGROUND STUDY

SOUTH CASWELL CONCEPT PLAN BACKGROUND REVIEW

Prepared for:

City of Saskatoon

Submitted by:

MMM Group Limited

June 2009

5509031.101

EXECUTIVE SUMMARY

In 2001, a Local Area Plan (LAP) for the neighbourhood was completed and the end result yielded a list of recommendations for improving and guiding future development in the area. To date, the majority of these suggestions have been implemented. The City of Saskatoon would like to continue addressing the planning recommendations from the Caswell Hill LAP by developing a plan for the re-use of the City's current transit facility.

The purpose of this background review is to provide information on the general Caswell Hill Community, and the existing transit facilities and surrounding area, to guide the development of a comprehensive concept plan for enhancing the transit facility site and the surrounding area in the event that the transit facility moves out of the neighbourhood.

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STANDARD LIMITATIONS

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1.0 INTRODUCTION

The City of Saskatoon's current transit facility is located in the Caswell Hill neighbourhood, on sites 301 24th Street West, 230 Avenue C North, 232 Avenue C North, 240 Avenue C North and 321 Avenue C North. The area surrounding the Transit Facility will not accommodate future expansions and therefore the Transit Facility will eventually have to relocate.



Figure 1: Study Area Map

In 2001, a Local Area Plan (LAP) for the neighbourhood was completed and the end result yielded a list of recommendations for improving and guiding future development in the area. To date, the majority of these suggestions have been implemented. The City of Saskatoon would like to continue addressing the planning recommendations from the Caswell Hill LAP by developing a plan for the re-use of the City's current transit facility.

The City has already begun to search for a new location for the facility. In 2006, the City of Saskatoon developed a plan for the construction of the new transit facilities to occur in three phases over the course of 10 to 15 years. However, this timeline has been advanced due to an influx in funding from the federal government for transit projects and the 25th Street extension approved by Council in March of this year. The new intersection at Idylwyld Drive and 25th Street

would see the closing off of the left turns for northbound traffic onto 25th Street, potentially pushing more buses into the Caswell Hill neighbourhood. It is expected that a new facility location and concept plan will be drafted by the end of 2009. The purpose of this background review is to gather information on the Caswell Hill neighbourhood, the existing transit facility and the neighbourhood surrounding the facility to inform the drafting of a concept plan that will be used for the redevelopment of the existing transit site.

This background study will summarize a variety of topics that will be used to inform the public consultation sessions and design of the concept plan for the redevelopment of transit facilities. The following sections provide background information on population, land use, current park capacities, infrastructure and service capacities, transportation, culture and heritage, environmental issues and neighbourhood safety.

2.0 POPULATION AND LAND USE

Caswell Hill is a diverse residential community located northwest of Saskatoon's Central Business District. It is bounded on the west by Avenue H, on the east by Idylwyld Drive, to the north by 33rd Street and on the south by 22nd Street. Caswell Hill is considered one of Saskatoon's oldest residential neighbourhoods with the majority of the housing stock having been constructed before 1946. Approximately 3,632 people reside in Caswell Hill with the majority living in single family homes. Notably, 17.4% of the neighbourhood's population between the ages of 0-14.

Table 1: Caswell Hill 2006 Census Data				
Average housing costs for home owners	\$835.00/month			
Average gross rent	\$619.00/month			
Percentage of dwelling units owned	60%			
Percentage of dwelling units rented	40%			
Number of apartments less than 5 stories.	360			
Number of detached duplexes	120			
Average price for a single detached home in 2007	\$180,000			
Average single family home selling price in 2008	\$209,351			
Average household income	\$42,689			
Average household size of people per dwelling unit.	2.1			

According to 2006 Census data, Caswell Hill is considered to be an affordable, mixed tenure neighbourhood with the average housing costs for home owners at \$835.00/month and the average gross rent at \$619.00/month, and tenure split with 60% of the dwelling units owned and 40% rented. Caswell Hill features 360 apartments less than 5 stories and 120 detached duplexes. The average price for a single detached home in 2007 was \$180,000. This figure increased substantiality in 2008 with the average single family home selling for \$209,351. The average household income based on 2006 Census data was \$42,689 with an average household size of 2.1 people per dwelling unit.

The study area surrounding the transit facilities has been identified as the area within the boundaries of 25th Street West to the north, 23rd Street West to the south, and Avenue B North to Avenue E North to the east and west. This area features the following land uses:

- Commercial uses along Jamieson Street;
- Mixed use Commercial and Residential buildings along 23 Street North and Avenue D;
- > A multi-story condominium conversion on Avenue D North;
- A warehouse to office conversion on the corner of Avenue D North and 24th Street West;
- Single family residential dwellings throughout the study area and surrounding the existing transit facility;
- ➤ Railway lines that diagonally bisect the neighbourhood from the corner of Avenue D North and 23rd Street West to Avenue B North and 24th Street West;
- Industrial semi-trailer storage;
- Medium Density Residential dwelling on Avenue C N and 24th Street west; and
- Transit Facilities between Avenue C North and Avenue D North.

The majority of Caswell Hill is zoned R2 and R2A for low density residential dwellings. However the identified study area and properties located south of Walmer Road and 25th Street contain a wider variety of zoning districts which include: medium density multiple-unit dwellings, Community Institutional Services, Core Area Institutional Services, Core Area Institutional Services, Medium Density Arterial Commercial, Inner-City Commercial Corridor, General light industrial, and mixed-use zoning. The creation of the Mixed Use Zoning District evolved out of the Caswell Hill LAP through the community's desire to facilitate the creation of unique development opportunities that encourage flexibility and reinvestment. Currently, the transit facilities within the study are zoned General Light Industrial. It is likely that any redevelopment would trigger a rezoning of the property.

25th

Figure 2: Zoning Map of South Caswell

Source: City of Saskatoon, December 2008

3.0 CURRENT NEIGHBOURHOOD AND SURROUNDING PARK CAPACITIES

The Caswell Hill Local Area Plan (LAP) Report identifies that the neighbourhood has a total of 10.5 acres of park space. This park space is entirely located within one area, Ashworth Holmes Park. Ashworth Holmes Park is located 5 blocks north of the transit facilities and is bounded by 31st Street, 30th Street and Avenues D and F. Park features include a playground, paddling pool and lawn bowling club. The need for park space in the southern half of the portion of the neighbourhood was identified as a major concern to the Planning Group during the development of the Caswell Hill LAP.

Ashworth Holmes Park

Study

LArea

Figure 3: Ashworth Holmes Park

Source: City of Saskatoon

The City of Saskatoon currently averages 82.2 people per acre of park space. This park space includes neighbourhood, district, multi-district and special use parks. The Caswell Hill neighbourhood averages about 320.2 people per acre of park space which is significantly higher than the City collectively. Ashworth Holmes Park is designated as a neighbourhood park which is defined as a centrally located park within neighbourhood, designed for families, young children and informal use such as picnics. Any sports fields are free to users and may accommodate some intra-neighbourhood league play.

3.1 Park Classifications

The City of Saskatoon plans for the provision of parks according to a hierarchy corresponding to the residential development units outlined in the City's Development Plan. The hierarchy is based on the neighbourhood as the central core and radiates to larger units and special uses. The park hierarchy consists of Neighbourhood Pocket Park, Neighbourhood Core Park, Linear Park, Village Square Park, District Park, Multi-District Parks and Industrial Parks. The system also includes Special Use Park categories which are intended to provide city-wide recreation and unique programming opportunities but are outside of the hierarchy. The following outlines the

City of Saskatoon's definitions of the various parks in the hierarchy, the intended purpose, function, location and other design aspects.

3.1.1 Neighbourhood Pocket Parks

Neighbourhood Pocket Parks provide green space for residences close to the periphery of a neighbourhood. The character of Pocket Parks is intended to be small-scale, focusing on passive recreation and aesthetic appeal. Programming could include creative play apparatus.

Purpose:

- To optimize the distribution of open space within easy walking distance (approximately 400m) for all neighbourhood residents.
- Particularly intended to serve dwellings near the periphery of the neighbourhood.

Function:

- Primarily passive recreation for all age groups.
- Creative play, play structure intended for pre-school age children.
- Specific programming in response to Community Services Department's public consultation.

Size

• Minimum 0.25 ha, maximum 0.8 ha, maximum two per neighbourhood.

Location

- Not less than 400 m from Core Park.
- Not more than 400 m from nearest point of neighbourhood periphery.
- Located on local or collector streets, not arterial.
- Pocket parks to be located in different parts of the neighbourhood from each other, and from Core Park, to achieve optimal distribution of open space in the neighbourhood.

Site Access, Visibility and Frontage

- 100% visibility of site interior from street.
- Site boundaries to have minimum 25% street frontage.

3.1.2 Neighbourhood Core Parks

Neighbourhood Core Parks are intended to serve the active and passive recreation needs of its catchment population of approximately five to eight thousand people. Sports fields accommodate intra-neighbourhood league play for youth 13 years of age and under. They are also intended for families, children of elementary school age, and for informal use. Structures to accommodate active leisure programs are located in a neighbourhood core park (e.g. paddling pool).

Purpose:

- To serve outdoor recreational needs of neighbourhood residents.
- To serve as expanded play area for neighbourhood elementary schools.
- To serve as a central gathering place for event programming and destination for the neighbourhood residents to meet and socialize. A Neighbourhood Core Park may include a Village Square Park to serve as the passive recreation component for the neighbourhood.

Function:

- Organized sports for children aged 13 and under.
- General active and passive recreation for all ages.
- Specific programming in response to Community Services Department's public consultation.

Size:

Minimum 5.7 ha.

Location:

- Centrally located in neighbourhood, not combined with District Park.
- Located on local or collector streets, not arterial.
- Within 1.2km walk of one and two unit dwellings in neighbourhood.

Site Access, Visibility and Frontage

- 100 percent visibility of site interior from park/street boundaries, but not necessarily from any one point on the boundary.
- Site boundaries not abutting school property to have 25 percent continuous street frontage (primary collector street), not including school frontage.
- Minimum 20 metres run of street frontage (secondary local street), in addition to the 25 percent, located on a side of the park away from the principal run of frontage, in order to ensure 100 percent visibility.
- The City shall accept frontage above 25 percent. If excess frontage is accepted above 40 percent, the City may impose off site levy charges based upon the excess frontage and incorporate such charges within a servicing agreement with the developer.

3.1.3 Linear Parks

Linear parks are part of the overall linkage concept of communities that are intended to provide a safe and aesthetically pleasing connection between parks and other destinations through non-motorized means of travel. They also allow for preservation of both heritage features and natural features.

Purpose:

- To serve as a component of the linkage concept to achieve one or more of the following:
- To provide non-vehicular travel routes to the neighbourhood's focal points and to nodal destination outside the neighbourhood.
- To provide recreational opportunities.
- To allow protection of natural and heritage features.

Function:

- To provide recreational and non-recreational walking, running, bicycling, skiing and wheelchair travel.
- To provide opportunities for appreciation of natural features.
- To provide opportunities for sitting and picnicking.
- Specific programming in response to Community Services Department's public consultation.

Size

- Municipal reserve contribution to linear park will be distributed entirely within the neighbourhood unit.
- Maximum distance of segment of park between service vehicle and/or pedestrian access points, not including pedestrian walkways, to be 200 metres.
- Width to vary, minimum 20 metres and an average width of 30 metres.

Access, Visibility and Safety:

- All access points, except walkways, to have a minimum width of 15 metres.
- Access points to be sited so as to discourage uncontrolled mid-block crossings of collector or arterial roads.
- Where a linear park or segment thereof serves as a non-vehicular travel route, lighting is to be provided to City of Saskatoon standards at the developer's expense.

3.1.4 Village Square Park

Village Square Parks are an urban open space which is centrally located in the neighbourhood and contains primarily soft landscape with some hard surface elements. Its primary purpose is to serve as an informal and formal meeting place, by providing a community focal point and destination for passive recreation including socialization and event programming.

Purpose:

- To provide a destination point for passive recreation (a place to walk or cycle to) where residents can meet and socialize.
- To provide both formal and informal neighbourhood meeting place.
- To provide a visual focal or termination point in the design of the neighbourhood.

Function:

- To provide opportunities for meeting.
- To provide opportunities for sitting, socializing.
- To provide a destination for walkers, cyclists.
- To provide for neighbourhood event programming (e.g. Festivals, rallies, community garage sales).
- Approximately 75 percent of total area is soft landscape.

Size:

• Minimum of 0.3 to maximum of 0.5 ha (0.75 acres to 1.25 acres).

Location:

- Centrally located in neighbourhood.
- Located at the termination point or intersection of collector and local streets of the neighbourhood.
- Adjacent to neighbourhood commercial property.
- Adjacent to neighbourhood core park.

Site Access, Visibility and Frontage:

- 100 percent visibility of site interior from surrounding streets.
- 100 percent street frontage.

3.1.5 District Parks

District Parks are intended to serve four or five neighbourhoods. They accommodate both active and passive recreation, and may have a particular emphasis on the athletic needs of high school students. The structured city-wide sports activities intended for District Parks will typically result in a high proportion of space required for active rather than passive recreation. Structures to accommodate active leisure programs are located in a District Park (e.g. tennis courts).

Purpose:

- To serve active and passive recreational needs of residents of four to five neighbourhoods.
- May serve athletic needs of high schools.

Function:

- To accommodate inter-neighbourhood sports leagues for youth and adults. Specific programming in response to Community Services Department's sports facility inventory requirements and public consultation with user groups and general public (e.g. soccer, ball, tennis, football and lacrosse).
- To accommodate community-wide events, (e.g. outdoor concerts).
- To accommodate informal active recreational activities.
- To accommodate passive recreational activities.
- To accommodate structures for active recreational activities not found in the neighbourhood core park (e.g. tennis courts).

Size:

• Average dedication of 5.2 ha per neighbourhood served. A District park typically serves 4 neighbourhoods, giving a total of 20.8 ha.

Location:

- Located close to centre of catchment's area served.
- District and Neighbourhood park sites to be separate from each other.
- Located on arterial or collector streets with City transit service.

Site Access, Visibility and Frontage

- 100 percent visibility of site interior from park-street boundaries, but not necessarily from any one point on the boundary.
- Site boundaries not abutting school property to have 50 percent street exposure. Parking to be provided, quantities according to programming, with access from a collector street.

3.1.6 Multi-District Parks

Multi-District Park is intended to accommodate both active and passive recreation. There is an emphasis on structured sports. Dimensions of sports fields shall be suitable for international level of competition (e.g. floodlighting sports fields). Suburban community centres are located in multi-district parks.

Purpose:

- To serve the complementary activities associated with a suburban recreation complex.
- To serve leisure requirements not otherwise served by Neighbourhood and District parks.

Function:

- To provide a variety of active and passive recreation activities at all seasons of the year.
- To provide siting for a suburban recreation complex.
- To provide siting for official competition sized sports fields and facilities adequate for national/international athletic events.
- To accommodate sports spectators.
- To allow programming for uses not found in neighbourhood or district parks, (e.g. cultural facilities, multi-purpose leisure centre).

Size

 Minimum 16 ha, minimum one per suburban development area, may be dispersed over more than one site.

Location

- Multi-District land associated with a suburban recreation complex to be in close proximity to the commercial portion of the suburban centre, to minimize traffic disruptions in residential neighbourhoods and create the opportunity for joint-use of parking facilities.
- Multi-District land associated with active recreation uses to be in close proximity of the suburban centre, or in an industrial area, or in a parcel surrounded by arterial roads and/or non-residential use, to minimize traffic disruptions in residential neighbourhoods and allow for elements not suitable for residential areas (e.g. floodlighting sports fields).
- Location of Multi-District land associated with passive uses is discretionary.

Site, Access, Visibility and Frontage

- 100 percent visibility of site interior from park/street boundaries, but not necessarily from any one point of the boundary.
- Site boundaries to have 50 percent street exposure.
- Parking to be provided, quantities according to programming, with access from a collector street.

3.1.7 Industrial Parks

Industrial Park is intended as a city-wide resource. Each park responds to the unique site circumstances or provides unique programming opportunities. The location in industrial areas allows for recreational elements which are not suitable for residential neighbourhoods. This type of park can also facilitate the needs of employees working in the industrial area (e.g. landscaping, outdoor furniture).

3.1.8 Special Use Parks

The Special Use Park is a City-wide resource. Each park responds to unique site circumstances and/or provides unique programming opportunities. This park type, therefore, will be subject to less detailed development guidelines than the others in the hierarchy. The Forestry Farm Park, the Gordon Howe Complex and Diefenbaker Park are examples of Special Use Parks.

3.1.9 General Standards for Park Development

When developing parks the City of Saskatoon takes the following general standards into consideration:

Public Safety:

- Park boundaries are to be configured in such a way as to optimize visual access into the site. A compact, rectangular shape is preferred. Configurations which will result in hidden corners are not acceptable.
- Placement of planting and land forms must allow for play structures, paddling pools and walkways to be visible from a passing vehicle.
- All play equipment and other supplied recreational components must have current approval from the City of Saskatoon, Infrastructure Services Department.
- Principles of crime prevention are to be applied throughout the park planning and design process with the intent to minimize the opportunity for crime and nuisance behaviour, and to create acceptable levels of actual and perceived public safety.

Environmental Conditions:

- Park design should recognize and, where possible, take advantage of natural site features including sloping land, existing vegetation, riverbank areas and water bodies.
- Parks may contain recreational lakes.

Structures:

• Structures should be designed to resist vandalism and may be developed in the various types of parks provided they are consistent with the park's programming objectives.

Parking:

 The provision of appropriate parking for the neighbourhood parks shall be a combined objective of the neighbourhood concept plan process, the neighbourhood park planning process, and the school site design process to create the opportunity for joint-use of parking facilities.

3.2 Existing Parks

Currently there are 4 different district parks that service the Caswell Neighborhood: Industrial Park, Henry Kelsey Park, Pierre Radisson Park, and Scott Park. Caswell Hill is also located approximately the same distance from 4 different multi-district parks: Charlottetown Park, William A. Reid Park, Umea Vast Park and Umea Park. (Please see the table below for the list of amenities). As with District Parks, there is an emphasis on structured sports. Sports fields within these parks are suitable for international competitions and there are booking charges associated with using these fields.

Residents also identified the following neighbourhood parks and schools which provide additional green space and recreational areas: Westmount Park, Bedford Road Collegiate, Caswell School and Princess Alexander School. However, it is likely that residents would only uses these spaces on a casual basis as there is not any neighbourhood programming available in these sites.

Taking into account current neighbourhood and surrounding park space capacities, the study area appears to be in need of both active and passive green space. The Community Consultant who liaises with the neighbourhood indicated that the current neighbourhood park in Caswell Hill is active.

Notwithstanding the proposed redevelopment of the transit facilities, the City of Saskatoon has identified the following parks and open space projects underway in adjacent areas that have the potential to be used by residents in the study area:

- River Landing Riverfront The redevelopment of the south downtown and AL Cole sites along the riverbank will provide urban park space within walking distance of South Caswell. Improvements include play areas, paths, interpretive elements, outdoor amphitheatre/special events space.
- River Landing Isinger Park A pocket park adjacent to the riverfront and the Farmer's Market, this small greenspace includes playgrounds, paths, plantings and open turf.
- Victoria Park (existing park) This park is in the planning stages for upgrades. This park
 is directly adjacent to River Landing riverfront and includes passive greenspace that is
 used for special events and programming. It includes paths, tennis courts, skatepark,
 boat launch, outdoor pool. Upgrades will include path and linkage improvements, new
 infrastructure for special events programming, and other improvements based on
 community input.
- Pleasant Hill Revitalization/Grace Adams Park This is a project involving a new elementary school, park development, and multi-family housing. It is located south of 20th street (to the tracks) from Avenue P to Avenue N. It will be approximately 3.0 acres of park and adjacent school grounds. The City is currently collecting community input for the project.

3.3 Rails with Trails

In August of 2007, the City of Saskatoon completed a feasibility study regarding the design and construction of a multi-user bicycle path and pedestrian linkage facilities within the right-of-way (ROW) of a multi-line railway in the Pleasant Hill neighbourhood. The feasibility study assessed design and implementation practices, both proposed and currently used, for the design and construction of trails along railroad right-of-ways (ROW), otherwise known as Rails-with-Trails (RWT). The study generated a recommendation for a facility design by addressing potential issues that could arise regarding the allocation of railroad ROW these issues included safety, legal, environmental, and project implementation.

In Caswell Hill, the same rail line and ROW that was reviewed for the feasibility study also runs along the southern border of the neighbourhood. This rail line consists of a grouping of lines that belong to CPR. Each line accommodates light to moderate train traffic at all times of the day, every day of the week. However, there is a possibility of railroad infrastructure revisions occurring throughout the City that would lead to a dramatic increase in rail traffic through this corridor. The existing ROW is slightly more than 30 m wide in total, for approximately 15 m of

ROW to either side of the tracks. A proposed multi-use pathway could also be located on the north side of the railway within the boundaries of Caswell Hill as it is proposed for the Pleasant Hill neighbourhood. Based on this alignment, the southernmost tip of the trail will commence at Fred Mendel Park near the intersection of 17th Street West and Avenue S South. The pathway continues in a north-easterly direction, extending through a residential district consisting of one and two unit dwellings where it ties into the 18th Street West on-street bicycle facility.

S / Study Area
WESTWOLA

Giant Tiger

Giant Tiger

Princes
Alexandra
School

Rails with Trails Pathway
Neighbourhood Boundary

Figure 4: Rails with Trails: Pleasant Hill Feasibility Study

Source: City of Saskatoon, September 2007

4.0 EXISTING INFRASTRUCTURE AND SERVICING CAPACITIES

4.1 Municipal Infrastructure

The Caswell Hill neighborhood primarily consists of a grid network of local roads, with water, sanitary and storm sewers within the road right-of-ways. The neighborhood was established about one hundred years ago with much of the original water and sewer pipes still in use today. The watermains are located in each of the road sections throughout the neighborhood, with adequate fire hydrant spacing. Both the sanitary and the stormwater sewer systems are located appropriately to service all of the existing lots.

For the existing neighborhood, it is presumed that the current level of service is adequate for both sanitary sewer and water distribution purposes. Should significant increases in density to

the area be recommended, a separate study of water supply pressure and sewer capacity should be undertaken. Increased population density affects both the need for available water pressure and sanitary sewer pipe capacity. As the neighborhood was originally built primarily for single family residential, an increase to a higher density population would most likely result in a need to upgrade the local sewer and water pipe sizes.

These upgrades would be determined through a detailed study of the existing system capacities and the needs of the proposed re-development. According to the City of Saskatoon New Neighbourhood Design and Development Standards Manual, the existing neighbourhood water and sanitary sewer pipe sizes meet the current minimum size requirements for a low to medium density neighbourhood. Some storm pipes in the proposed re-development area are slightly undersized according to the minimum size requirements for residential neighborhoods. Development fees and levies for cost recovery of the sewer and water upgrades would be required from the developer.

Medium and high density residential, as well as various commercial and industrial proposed redevelopments in the area may all require the municipal infrastructure upgrades for certain sanitary sewers and watermains. This can only be confirmed through the detailed study. It should be noted that if any park space is planned in the area, that this could help balance the need for upgrades to the system as park spaces have minimal service requirements.

For the City of Saskatoon, there are development standards that require storm water retention on developed sites. The retention requirements are applicable to all types of developments, whether it is for park space or high density residential. In all cases, the detailed design of the specific re-development will account for this storm water retention in many forms, whether it is roof storage, underground storage or surface storage.

For the Caswell Hill neighborhood, there are various methods to meet storm water retention requirements. The requirements for retention are set out by the City of Saskatoon, and are primarily needed to reduce the impact of flow in the storm sewer network. Most cases of creating on site retention require the restriction of outflows to the city sewer system, which can be achieved through the use of outflow control devices such as an orifice plate.

Surface storage of storm water is usually the most economical and preferred method of storage, should sufficient land be available to accommodate the required volume of storage. This is typically done through the use of planned ponding at catch basins in park space or parking lots. Park space also increases the potential for infiltration, decreasing the amount of runoff into the storm system.

In cases where buildings cover much of the redeveloped land, roof top storage and underground storage becomes two other options that could be used, although surface storage is still the preferred method. Roof top storage requires flat roof tops, as is the case with most of the

existing transit buildings. Should any parts of the existing transit buildings be considered for roof top storage, the detailed design process would determine any limitations and special considerations for an effective system.

Underground storage could be utilized through using oversized storm pipes on site, with orifice controlled outflows at the downstream end. The restricted outflow requirements and orifice sizing would be determined in the detailed design stage.

The suitability of each storage method is based on many factors that vary with each proposed development. All methods of storm water retention on site require overflow considerations to allow for proper drainage of the site during large storm events to ensure the protection of buildings from potential flooding.

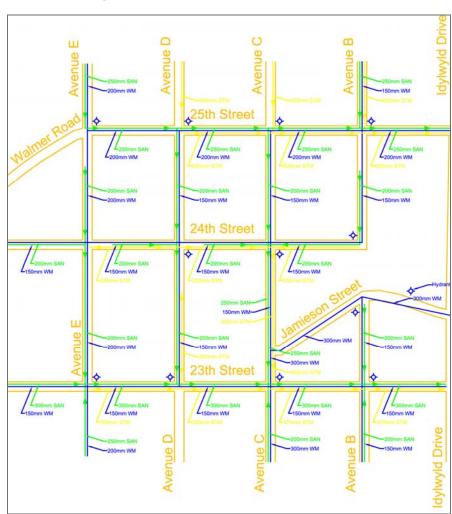


Figure 5: South Caswell Services Model

Source: City of Saskatoon, August 2009

4.2 Transit Buildings

The transit buildings located within the Caswell Hill neighborhood are currently in use as both office and industrial/commercial space. For re-developments that propose the use of any or all of these buildings in a modified manner, potential developers will assess the feasibility of the building upgrades required, compared to the projected income. The redevelopment of the buildings would have to follow the current building code requirements with respect to many areas such as structural, mechanical and fire regulations.

Due to the industrial nature that the building sites have been exposed to for many years, the environmental impacts on the site may determine the suitability of the existing buildings for future use. Findings from environmental testing may determine the required level of site remediation, which could impact the buildings themselves.

4.3 Utility Locations/Descriptions

4.3.1 Watermains

Watermains are found within all road right-of-ways within the study area. Watermains are typically 150mm or 200mm diameter cast iron pipe, built around 1910 – 1913. A 300mm diameter cast iron watermain was installed along Jamieson Street between Idylwyld Drive and Avenue C in 1951. In 1992, an upgrade to install a PVC watermain under the rail crossing at 23rd Street occurred from the railway crossing east along 23rd Street to Avenue C.

4.3.2 Sanitary Sewer

All roads within the study area have sanitary sewers, with the exception of Jamieson Street. Sanitary sewers are typically 200mm diameter vitrified clay tile (VCT) pipe, built around 1910 – 1913. 250mm diameter VCT pipe is located along 25th Street, and 300mm diameter VCT is located along 23rd Street. In 1992, an upgrade to install PVC sanitary pipe under the rail crossing at 23rd Street occurred from the railway crossing east along 23rd Street to Avenue C. All sanitary flows generated in the system drain towards the south east corner of the study area.

4.3.3 Storm Sewer

Storm sewers are not located in each street within the study area, as they are primarily used for conveying storm water flows during rain events, which utilizes overland flow in some places. Catch basins located at most intersections collect and convey the storm water into the pipe network. The primary network is located along 25th Street and 23rd Street, both conveying water to the east to Idylwyld Drive. Branch systems are located along 24th Street, as well as Avenue B, C and D. Most of the pipes in the system are VCT, while a few storm sewers are made of concrete.

The 23rd Street storm sewer mains were originally built at the same time as the water and sanitary sewer systems in 1912. These pipes are 300mm to 375mm in diameter. Branch lines to the north were also installed on Avenue C (300mm) and Avenue D (250mm). Between 1947 and 1951, 250mm diameter storm sewers along 24th Street were installed, connecting to the 23rd Street main via Avenue C and D. The 25th Street storm sewer main is a 600mm diameter pipe, built in 1929. Branch systems to the north flow into the 25th Street storm main via Avenue B (450mm), Avenue C (375mm) and Avenue D (450mm).

4.3.4 Power/Gas/Communications

With the neighborhood being fully serviced for all utilities, service to each lot is available, either by laneway or street services. Specific locations and sizes of shallow utilities were not indicated on the municipal record plan drawings.

5.0 TRANSPORTATION AND CIRCULATION

All roads located near the transit facility are local two-way streets with on-street parking available. Traffic in the area is composed of local, through and bus traffic. The bus traffic includes scheduled service and movements to and from the transit garage. Scheduled bus service in the area consists of the #5 route which runs east-west on 23rd Street with a 30 minute peak frequency. On weekdays, bus movement to and from the transit garage peaks between 5:30am and 6:30am at 52 buses. During an entire weekday, 145 buses will depart from the garage.

The neighborhood is designed in a grid road layout and therefore has a number of entry and exit points. This results in traffic cutting through the neighborhood to avoid congestion on Idylwyld Drive, 33rd Street and 22nd Street. Traffic counts and movements suggest that 25th Street, Avenue C and Avenue E are being used as short cuts for traffic moving to and from the downtown area. On 25th Street, traffic does not have to slow down because all stop signs on this route are two-way.

This short cut traffic leads to issues of traffic volume, speed, and behavior. In the 2001 Caswell Hill Local Area Plan, 29th Street was identified as the road most in need of traffic calming to address these issues. Since the report, a number of traffic calming measures have been implemented, including zebra crosswalks, pedestrian crossings and a four-way stop at the intersection of 29th Street and Avenue E.

Currently, an extension of 25th Street between Idylwyld and 1st Avenue is being completed. Depending on access and turning restrictions, this extension could result in more traffic cutting through the neighborhood, and might require traffic calming measures to be implemented on 25th Street, similar to those already in place on 29th Street.

The 2001 Caswell Hill Local Area Plan did not identify any parking issues near the transit garage.

6.0 CULTURE AND HERITAGE

The City of Saskatoon first became a permanent settlement in 1883. In 1884, W. Horn, A. Brown and Capt. Andrews began homesteading land on what are now the Westmount and Caswell Hill districts of the City. However, it wasn't until 1905 that the Ashworth-Holmes subdivision, later known as Caswell Hill, became Saskatoon's first suburb. This area had been part of the Caswell Star Shorthorn Farm and encompassed the area now bounded by Idylwyld Drive on the east, Avenue E on the west, 22nd Street to the south and 28th Street on the north. It was first put on the market September 1, 1905 and was sold out by that spring with lots going for \$50.00 for a 25 foot lot.



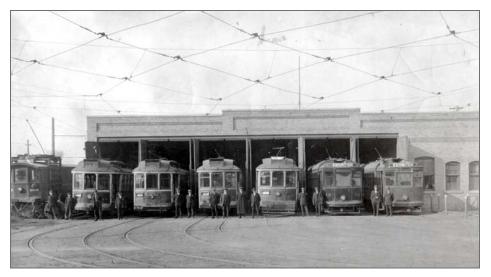
Source: City of Saskatoon

Records are unclear as to when R.W. Caswell first began farming in the area. However, what is known is that he was one of the Temperance Colonists of 1883 that originally set out to escape the liquor trade out east and set up a "dry" community in the Prairie region. The area between 28th and 33rd streets (the top of the hill, where Caswell's farmstead once stood) is properly called "Caswell Hill". This is an important distinction to make because while the present day "Caswell Hill" neighbourhood encompasses both areas, older maps of the City show there were two distinct neighbourhoods - Ashworth Holmes in the south and Caswell Hill in the North. Caswell School, built on the site of R.W. Caswell's original homestead was constructed in 1910, but as late as 1911 the grounds were fenced to keep Mr. Caswell's cattle out.

In Saskatoon's history, the two names John Ashworth and Joseph H. Holmes are perpetually remembered together and are a lasting reminder of the neighbourhood's history. They developed Saskatoon's first suburb and donated the land for one of the city's first public parks, Ashworth Holmes Park. Ontario-born John Ashworth came to Saskatoon in 1904 to practice law. Here he ran into fellow University of Toronto alumnus Joseph H. Holmes, the managing editor of the Phoenix newspaper. In 1905, with their total stake consisting of 500 borrowed dollars and Ashworth's legal expertise, the two men established a real estate business. They bought a quarter section of farmland and marketed it as a residential subdivision. Their investment paid off handsomely and the first 40 acres sold-out in six months. Within two years, the area now known as Caswell Hill was filling up and development was spilling over into Mayfair, north of 33rd Street.

In 1907, Ashworth and Holmes donated 10 acres of land in their new subdivision to be used as a public park. The park was built to its present pattern in 1912. Ashworth Holmes Park is today one of the oldest parks in Saskatoon. Ashworth and Holmes also donated land for the Christ Church Anglican church on 28th St. West, and for Prince of Wales School, which once stood where Mayfair Pool is now.

Early in Saskatoon's history, leaders in the community realized that a railway would help Saskatoon prosper and in 1890 a rail-line was built from Regina through Saskatoon to Prince Albert. The rail-line was built west of the settlement because the east bank of the river was too steep. In 1907, the Canadian Pacific Saskatoon Railway Station, located at 305 Idylwyld Drive, was constructed. It remained in use until 1960 when it was closed. The station was sold to a private developer who redeveloped the space into shops and services. Today this site is recognized as having national historical significance for its Chateau style architectural style and remains a gateway site to the community.



Source: City of Saskatoon

Local public transportation for the City of Saskatoon began 23 years after the first rail line was built through the City. Saskatoon Municipal Railway began operating on January 1, 1913 with a fleet of streetcars. The servicing garage was located in the Caswell Hill neighbourhood, on the north side of 24th Street between Avenues C and D. This site currently serves as the City's transit maintenance and storage facilities.

Diesel buses began supplementing streetcar service in about 1938. In the 1940s a decision was made to replace streetcar service with trolley buses; the first trolley bus ran on November 22, 1948, starting a three-year transition period, and the last streetcar ran on November 10, 1951. With the demise of the streetcars, Saskatoon Municipal Railway was renamed Saskatoon Transit System on August 15, 1949. The trolley buses were in turn phased out and ran for the last time on May 10, 1974. Over the years the residential community surrounding the transit servicing garages witnessed many upgrades and expansions. The original servicing garage, on the north side of 24th Street between Avenues C and D underwent many additions over the years. A second garage south of the original was built on 24th Street. 301-24th Street West is now considered the Saskatoon Transit headquarters with the entire transit facility occupying almost two and a half full blocks in the neighbourhood.

7.0 ENVIRONMENTAL OVERVIEW

7.1 Introduction

This report presents the results of a high level environmental assessment conducted by Clifton Associates Ltd. at the City of Saskatoon's existing transit facilities located at 315 Avenue C North and 321 24th Street West, Saskatoon, SK (Site). Although the assessment does not conform to the Canadian Standards Association for Phase I Environmental Site Assessment guidelines (CSA, 2001), the assessment is based on a Phase I Environmental Site Assessment, but is not as in depth. The high level assessment is based on information gathered during limited site research and a site visit.

Building B

Building B

Figure 6: City of Saskatoon Existing Transit Facilities

Source: City of Saskatoon, 2009

This assessment does not conform to the Canadian Standards Association for Phase I Environmental Site Assessment guidelines (CSA, 2001).

7.2 Site Description

7.2.1 Site Property

The Site (2 buildings and associated parking lots) is currently occupied by the City of Saskatoon Transit Services. The original building (Building A) was completed in 1913 and additions and modifications to the buildings were completed throughout the 1970s and 1990s. Building A was originally used to house street cars (trolleys) and buses. Building B was constructed in the 1980s. The current use of the Site is as a bus barn, where City of Saskatoon buses are serviced and stored.

Site Reconnaissance Photographs



Photograph No. 1: Waste oil collection area in Building A.



Photograph No. 2: Waste oil storage area in Building A.



Photograph No. 3: Kerosene and lubricant storage in Building A.



Photograph No. 4: Fluid storage area in Building A.



Photograph No. 5: Oil storage container in Building A.



Photograph No. 6: Engine oil storage container in Building A.



Photograph No. 7: Parts cleaning area in Building A.



Photograph No. 8: Concrete in oldest (SW) portion of Building A.



Photograph No. 9: Used batteries in Building A.



Photograph No. 10: Biodiesel storage area in Building B.



Photograph No. 11: Oil storage container in Building B.



Photograph No. 12: Diesel fuelling station in Building B.

7.2.2 Previous Environmental Reports

Clifton Associates Ltd. was unable to locate any environmental reports for the site. According to Mr. Walter Plessl of the City of Saskatoon, remedial activities were completed in the 1990s due to the presence of a leaking underground storage tank on the north side of Building B. He was not aware of the name of the engineering firm that carried out the investigation.

7.3 Site Conditions

Following a limited historical records review of the Site, Clifton Associates Ltd. personnel (Ms. Lisa White) conducted a site visit on 22 April 2009. Characteristics reported herein reflect conditions present on the date of the site visit.

Investigative work was limited to visual reviews from the Site and from publicly accessible points. There were no visible sources of potential contamination adjacent to the Site.

The work did not include a survey for the presence of PCBs, lead paint or asbestos.

7.3.1 General Observations

Weather conditions during the review were overcast and cool (~ 5°C). Access to the Site was west from Avenue C North. Observations were made of current land use activities and environmental conditions on the Site in order to identify potential contamination sources capable of adversely affecting the Site.

Currently, the Site consists of two buildings (Building A and B, shown in Figure 6) A bus parking area is located to the north of Building A and there is a concrete pad and parking area located to the north of Building B.

7.3.2 Facilities

7.3.2.1 General

Generally, "housekeeping" practices at the Site were very good. There was no debris or garbage noticed on Site. Visual evidence of spills and discolored surfaces were observed on the Site, both inside the buildings, as well as outside in the parking lot area. These spills are small in size (up to 60 cm in diameter) and are cleaned up with sawdust.

The lights within the buildings consisted of sodium/mercury vapour lights installed in the 1980s, as well as older fluorescent lights.

An electrical transformer is located in the area to the southeast of Building A.

7.3.2.2 Building A

The original building, located in the southwest area of Building A, was constructed in 1913 and used to house and service street cars. Additions were made to the Building at two different times through the 1970s and 1980s. Building A is comprised of a bus servicing area, offices, bathrooms, bus parts wash bay and storage areas for bus parts and associated fluids.

Building A contains a hoist area for repairing buses, as well as a pressure washing area and individual solvent stations for cleaning equipment and parts. Mechanical equipment in Building A includes 4 sets of post hoists, an underground hydraulic hoist and an overhead hoist to repair buses. Lines containing air, gear oil, engine oil, transmission oil, water and lubricant are present at each service bay.

A tow truck and bobcat are stored in Building A, along with up to 140 regular buses and 25 handicapped buses.

A majority of pipe insulation material that could potentially contain asbestos was replaced in the 1980s, when a new natural gas boiler was installed. It is not clear if all of the asbestos containing material was replaced. Asbestos containing materials could also still exist in the original portion of the building.

The shop in the parking lot area to the northwest of Building A was torn down in 1994. The rest of the parking area to the north of Building A was historically used as a disposal area for used bus parts, which are currently still buried on-site.

7.3.2.3 Building B

The current offices and building were constructed in the 1980s. Building B is comprised of a bus wash bay, offices, bathrooms and bus storage area. Hybrid buses are stored in Building B.

Heating is provided with a forced air furnace. Heating and exhaust is provided by make up units.

7.3.3 Fluid & Chemical Storage

7.3.3.1 General

Acetylene and oxygen is stored on the site, along with new and used batteries, solvents, lacquer and paint. Used batteries are removed from site and recycled. Used solvents are picked up by Envirotec for disposal off-site.

7.3.3.2 Building A

There is a used oil storage system on the southeast side of Building A, consisting of a 45 gallon discharge tank and a 500 gallon holding tank. No secondary containment exists for either tank.

No environmental specifications were available to confirm that the used oil storage tank meets environmental regulations. The used oil storage tank is cleaned by Envirotec on a bi-weekly basis.

Numerous other storage tanks exist in Building A including a transmission oil tank (250 gallon volume), engine oil tank (250 gallons), gear oil tank and hydraulic fluid tank. Kerosene, lubricant and antifreeze drums (45 gallons each) and various other oils and lubricants (5 gallon pails) were also stored within the building. The storage tanks appeared to have secondary containment. The kerosene drums and 5 gallon pails were stored in an area with secondary containment, but the lubricant and antifreeze were not.

Materials such as Freon and coolant are recovered and recycled with specialized equipment.

The original portion of Building A was used to service and store trolley buses. This would include the use of cooling oil, which would likely have contained PCBs. The buses' switching gear could also have contained mercury.

7.3.3.3 Building B

There is an underground storage tank (UST) located in the area to the northwest of Building B. The UST stores up to 25,000 L of diesel fuel and was installed in 1994 or 1995 after the removal of the previous underground storage tank. A fuel dip is performed every day as a spill prevention measure and a spill alarm system is in place. Secondary containment is in place for the underground tank, although it was not observed during the site visit.

Numerous other storage tanks exist in Building B, including a biodiesel storage tank (20,000 L volume), engine oil storage tank (250 gallons) and windshield washer fluid drums (45 gallons each). The storage tanks appeared to have secondary containment, but the windshield washer fluid drums were stored in an area with secondary containment.

Two fuel pumps are located within Building B to fill bus tanks. The fuelling stations do not have secondary containment.

7.3.4 Surface Conditions

The buildings were constructed on concrete slabs. The parking to the north of Building A is modified asphalt and the parking area to the north of Building B is asphalt. The entire Site is relatively flat.

Both buildings are equipped with interior surface drains. Any water used for cleaning within the buildings is directed toward a surface drain. The sediment in the drains is cleaned out three times a year and disposed of in the waste material area (Loraas disposal bin). Any overflow from the surface drains proceeds to the COS storm sewer system.

A series of pits used to contain small spills and leaks (less than reportable) of hydraulic or other fluids and oils are cleaned out by Envirotec for disposal off-site on a regular basis.

Small amounts (up to 60 cm diameter) of antifreeze and oil (or other fluids) were visible on the floors of both buildings and in the parking area to the north of Building A.

7.3.5 Waste Generation, Storage and Disposal

Waste generation includes daily garbage accumulation which is subject to removal by Loraas Disposal. Used oil is removed by Envirotec. Information pertaining to the application and approval of all of the storage tanks on the Site was unavailable at the time of the assessment.

7.3.6 Air Emissions

Diesel emissions from operating and idling buses could potentially affect the environmental condition of the Site.

An air exchange unit was installed in Building A in the 1990s.

7.3.7 Site Interviews

An interview was conducted with Walter Plessl (Mechanical Supervisor with the Utility Services Department, City of Saskatoon) during the 22 April 2009 site visit. Mr. Plessl has worked at the site since the 1980s and he provided the following information during the interview:

- It is believed the original building (Building A) was constructed in 1913 and additions made from the 1970s to the 1990s.
- Mr. PlessI recalled the presence of a historic underground storage tank (UST) located on the north side of Building B. To Mr. PlessI's knowledge, the UST was removed in the 1990s, at which time the contaminated soil was removed and a new UST installed. The contaminated soil was then land farmed in the parking area to the north of Building A.
- Mr. PlessI indicated that there has been one environmental spill in Building A that he is aware of, when a lubricant and/or oil tank overflowed sometime in the 1980s. He was unaware of the volume of spill or whether the spill was reported.

A phone interview was also conducted with Abe Driedger (Transit Services Branch, City of Saskatoon) on 05 May 2009. Mr. Driedger provided historical information regarding the site, as follows:

A boiler containing heating oil and associated UST were historically located at the north central end of Building A. Heating oil was also historically stored in the south central area of Building A.

- An underground storage tank for oil was historically located in the north central area of Building A.
- ➤ The current waste oil storage area in the southeast of Building A consisted historically of two underground tanks.
- ➤ A gasoline fuelling station and associated storage tank was historically located in the northeast area of Building A.
- Diesel fuel and gasoline were historically stored in USTs in the south central area of Building A. Diesel fuel was also stored in an underground tank in the west central area of Building A. This tank was relocated to the area to the northeast of Building B.
- Two USTs were historically located in the area to the northeast of Building B. The USTs were removed and a new UST installed in the area to the northwest of Building B.

7.4 Summary of Environmental Concerns

The following is a summary of the environmental concerns identified at the Site:

- ➤ Historical diesel and gasoline underground storage tanks in Building A and near Building B indicates the potential presence of hydrocarbon contamination.
- Storage and land farming of hydrocarbon contaminated soil in the north parking lot area of Building A indicates the potential presence of hydrocarbon contamination.
- ➤ Historical use and storage of heating oil in Building A indicates the potential presence of polyaromatic hydrocarbons (PAHs).
- Historical use and storage of trolley buses in Building A indicates the potential presence of PCBs and mercury.
- Fuelling areas in Building B do not have secondary containment, indicating the potential presence of hydrocarbon contamination.
- The waste oil storage area in Building A does not have secondary containment, indicating the potential presence of hydrocarbon contamination.
- ➤ Disposal of used bus parts in the parking area to the north of Building A indicates the potential presence of a number of contaminants, including lead and hydrocarbons.
- ➤ Historic spills of lubricant and/or oil of unknown volume in Building A indicate the potential presence of hydrocarbon contamination.
- Asbestos containing materials could be present in the older areas of Building A.
- Fluorescent light ballasts may contain polychlorinated biphenyls (PCBs) in both buildings.
- Paint used throughout the buildings could possibly contain lead.

7.5 Recommendations

Due to the numerous environmental concerns at the Site (Buildings A and B), it is recommended that a Phase I and possible Phase II Environmental Site Investigation be completed for both buildings.

7.6 Limitations

This report was prepared by Clifton Associates Ltd. for the account of MMM. The material in it reflects Clifton Associates Ltd. best judgment available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Clifton Associates Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

This report has been prepared in accordance with generally accepted engineering practice common to the local area. No other warranty, expressed or implied is made. Site information was obtained from the sources listed in the report and from interviews with individuals. Clifton Associates Ltd. accepts no responsibility for any deficiencies or inaccuracies in the information provided in this report that are the direct result of intentional or unintentional misrepresentations, errors or omissions of the persons interviewed or information reviewed.

Our conclusions regarding the site are based on observations of existing site conditions, our interpretations of available site history and the information obtained from the referenced subsurface exploration. Conclusions regarding the condition of the Site will not represent a warranty that all areas within the Site are of the same quality as may be inferred from observable Site conditions and readily available site history. The scope executed for this project is not an audit for regulatory compliance or a detailed condition survey for the presence of asbestos, lead paint, PCBs, radon or other naturally occurring materials.

7.7 Closure

No environmental site investigation or remediation can wholly eliminate uncertainty regarding environmental conditions in connection with a property. This investigation is intended to reduce, but not eliminate the uncertainty regarding environmental conditions. The work was based in part upon the environmental quality guidelines and regulations in effect when the work was conducted. Future regulatory changes may require re-assessment of the findings of this investigation.

8.0 NEIGHBORHOOD SAFETY

Neighbourhood Safety is not just about preventing crimes in a neighbourhood it is also about addressing the community's perceptions of safety. The City of Saskatoon has been active in developing Neighbourhood Safety Action Plans to better address the concerns of communities. These Neighbourhood Safety Action Plans utilize tools such as Risk Assessments, Safety Audits and Crime Prevention through Environmental Design (CPTED) Reviews, in identified neighbourhoods to mitigate both present and perceived safety issues.

Caswell Hill was ranked the sixth highest in terms of total crimes reported throughout the City of Saskatoon in both 2007 and 2008. The majority of these crimes were either theft over \$5,000 or assaults. However, it is evident from the statistics listed in Table 2 that both violent crime and property crime have been decreasing in the area.

Table 2: Caswell Hill Crime Statistics, 2007- 08				
Violent Crimes	2007	2008	% Change	
Violations Causing Death	0	0	N/A	
Attempted Murder	0	1	N/A	
Sexual Violations	7	7	0.00%	
Assaults	119	106	-10.92%	
Kidnapping	2	3	50.00%	
Armed Robbery	11	11	0.00%	
Robbery	19	12	-36.84%	
Criminal Harassment/Stalking	7	4	-42.86%	
Uttering Threats	29	22	-24.14%	
Other Crimes Against the Person	2	1	-50.00%	
Total Violent Crimes	196	167	-14.80%	
Property Crimes	2007	2008	% Change	
Arson	3	1	-66.67%	
Arson Break and Enter - Residence	3 64	1 37	-66.67% -42.19%	
Break and Enter - Residence	64	37	-42.19%	
Break and Enter - Residence Break & Enter - Business	64 11	37 8	-42.19% -27.27%	
Break and Enter - Residence Break & Enter - Business Break & Enter - Other	64 11 13	37 8 12	-42.19% -27.27% -7.69%	
Break and Enter - Residence Break & Enter - Business Break & Enter - Other Theft Over \$5000	64 11 13 0	37 8 12 3	-42.19% -27.27% -7.69% N/A	
Break and Enter - Residence Break & Enter - Business Break & Enter - Other Theft Over \$5000 Bicycle Theft Under \$5000	64 11 13 0 16	37 8 12 3 17	-42.19% -27.27% -7.69% N/A 6.25%	
Break and Enter - Residence Break & Enter - Business Break & Enter - Other Theft Over \$5000 Bicycle Theft Under \$5000 Other Theft Under \$5000	64 11 13 0 16 162	37 8 12 3 17 124	-42.19% -27.27% -7.69% N/A 6.25% -23.46%	
Break and Enter - Residence Break & Enter - Business Break & Enter - Other Theft Over \$5000 Bicycle Theft Under \$5000 Other Theft Under \$5000 Theft of Motor Vehicle	64 11 13 0 16 162 63	37 8 12 3 17 124 63	-42.19% -27.27% -7.69% N/A 6.25% -23.46% 0.00%	
Break and Enter - Residence Break & Enter - Business Break & Enter - Other Theft Over \$5000 Bicycle Theft Under \$5000 Other Theft Under \$5000 Theft of Motor Vehicle Possession of Stolen Property	64 11 13 0 16 162 63 17	37 8 12 3 17 124 63 16	-42.19% -27.27% -7.69% N/A 6.25% -23.46% 0.00% -5.88%	

Statistics compiled May 4, 2009 from SPS records management system

In February of 2005, a safety audit of the Ashworth Holmes Park was completed by local residents. Residents were asked to complete both a questionnaire and Walk-About survey of the Park. The questionnaire and survey yielded valuable information about how residents of the Caswell Hill Community feel about an existing park space and safety improvements they would like to see implemented so that the community can continue using the space safely.

Identifying community safety concerns for existing sites is important so that best practice may be applied to future developments. Key points identified by community members need to be considered in the future planning of public spaces in the community. Safety audits and CPTED reviews can assist with limiting the outcomes of unlawful or socially unacceptable behaviour but it is equally important to look at the causes of this type of behaviour. Second Generation CPTED is an approach to crime prevention that looks at the cause rather than the symptoms of what motivates people to commit crimes in their neighbourhood. Second Generation CPTED examines the following principles:

- Cohesion: Creating a neighbourhood identity, a sense of community that creates ownership
- Connectivity: A neighbourhood that has positive working relationships with external agencies so they do not operate in isolation
- Capacity: Neighborhood Threshold and Tipping Points: The capacity of any given space or use to properly support the intended use without becoming destabilized
- Community Culture: People brought together for a common purpose, how people share a sense of place

As part of this planning process for South Caswell incorporating the principles above will endeavor to create ownership through community participations and identify uses and connections that will enhance the redevelopment of the area. However, equally important are the first generation teachings of CPTED. Integrating key sight lines, passive surveillance techniques, navigable pedestrian oriented spaces, and the creation of areas with high visual interest will naturally work to connect the community, create cohesion and develop a sense of culture within a neighbourhood.

SOUTH CASWELL CONCEPT PLAN

APPENDIX B - ONLINE SURVEY AND RESULTS

South Caswell Concept Plan Survey

1. Are you a:			
		Response Percent	Response Count
Resident of Caswell Hill		30.6%	19
Landowner in Caswell Hill		9.7%	6
Resident and a landowner in Caswell Hill		38.7%	24
Business Owner/ operator in Caswell Hill		14.5%	9
Other interested person (outside of Caswell Hill)		12.9%	8
	answere	ed question	62
	skippe	ed question	0

2. How did you hear about this survey?			
		Response Percent	Response Count
Word of Mouth		40.3%	25
Community Update Flyer		30.6%	19
City of Saskatoon Website		9.7%	6
Caswell Hill Community Association Website		21.0%	13
Other		1.6%	1
	If you chose "Other" ple	ase specify:	22
	answere	ed question	62
	skippe	ed question	0

3. What is your age group?			
		Response Percent	Response Count
0-9		0.0%	0
10-19		1.6%	1
20-29		12.9%	8
30-39		35.5%	22
40-49		16.1%	10
50-59		24.2%	15
60+		9.7%	6
	answere	ed question	62
	skippe	ed question	0

4. What is the primary mode of transportation you and/or your family use?			
		Response Percent	Response Count
Walking		16.1%	10
Bicycle		8.1%	5
Car		66.1%	41
Transit		8.1%	5
Other		1.6%	1
If you chose "Other" please specify:			6
answered question		62	
	skippe	ed question	0

5. Please indicate the top 3 uses you would most like to see in this area if the transit site relocates?			
		Response Percent	Response Count
Residential		43.5%	27
Mixed Use (for example, residential and commercial, residential and office, etc.)		61.3%	38
Retail Commercial		25.8%	16
Restaurants		37.1%	23
Office Space		11.3%	7
Park Space		80.6%	50
Community Centre		35.5%	22
Light Industrial Uses		3.2%	2
Other		1.6%	1
If you chose "Other" please specify:		10	
	answered question		62
	skippe	ed question	0

6. If the site were to incorporate residential uses, what type of residential uses would you like to see (check all that apply):

		Response Percent	Response Count
Only single family dwellings		10.0%	6
Low-rise multi-family (townhouses, bungalow condos, duplexes)		35.0%	21
Higher-rise multi-family (apartments of more than 3 stories)		23.3%	14
A mix of single and multi-family dwellings		33.3%	20
Mixed-use residential including commercial space		58.3%	35
No residential uses		6.7%	4
Other		0.0%	0
	If you chose "Other" ple	ease specify:	8
	answere	ed question	60
	skippe	ed question	2

7. If the site were to incorporate park space, what type of park space would you like to see (check all that apply):			at apply):
		Response Percent	Response Count
Neighbourhood Pocket Park with a play structure for school age children		48.3%	29
Neighbourhood Park for organized sports like soccer and baseball		30.0%	18
Village Park designed for walking and cycling. A place to meet and socialize.		70.0%	42
Open Green Space for Community Gardens		51.7%	31
Community Centre with recreation space		25.0%	15
Skateboard Park		8.3%	5
Off-Leash Dog Park		21.7%	13
No Park Space		3.3%	2
Other		0.0%	0
If you chose "Other" please specify:		7	
answered question		60	
	skippe	ed question	2

8. If the site were to incorporate commercial uses, what type of commercial would you like to see (check all that apply):

		Response Percent	Response Count
Convenience Store		35.0%	21
Coffee Shop/Café		75.0%	45
Restaurant without a lounge		28.3%	17
Restaurant with a lounge		45.0%	27
Pub/Lounge only (no restaurant)		16.7%	10
Drug Store		26.7%	16
Medical Offices/Clinic		35.0%	21
Professional Offices		46.7%	28
General Retail		48.3%	29
No commercial uses		8.3%	5
Other		0.0%	0
	If you chose "Other" ple	ase specify:	7
	answere	ed question	60
	skippe	ed question	2

9. In addition to the previous questions regarding land use, what are your top 2 concerns regarding the redevelopment of this area:			
		Response Percent	Response Count
Safety		46.7%	28
Pedestrian amenities		36.7%	22
Train traffic		16.7%	10
Vehicular traffic		18.3%	11
Ensuring a mix of uses		46.7%	28
Re-use of existing buildings		16.7%	10
Timing/phasing of the redevelopment		16.7%	10
Other		1.7%	1
	If you chose "Other" ple	ase specify:	13
	answere	ed question	60
	skippe	ed question	2

10. Which statement best describes how you feel about preserving the existing transit facility for historical reasons?			
		Response Percent	Response Count
All of the buildings are important and need to be saved for historical reasons		1.7%	1
Some of the building may be important and should be saved for historical reasons		45.0%	27
None of the buildings have historical importance and should be torn down		53.3%	32
	answere	ed question	60
	skippe	ed question	2

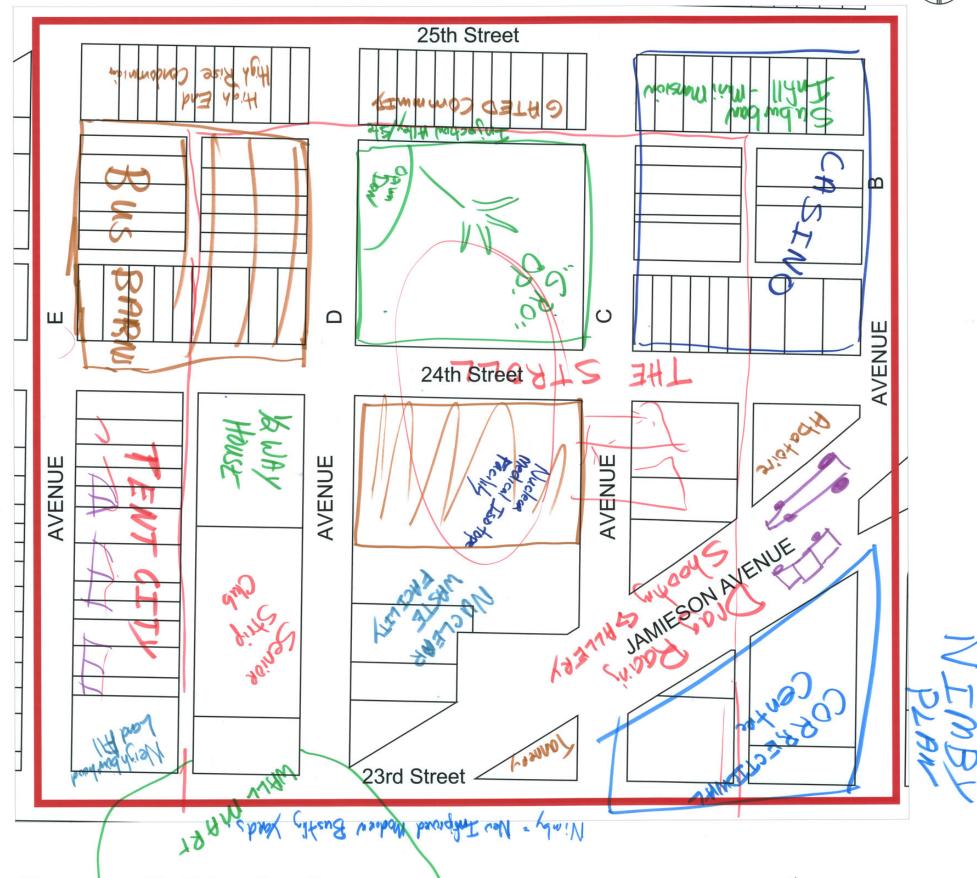
11. Please describe any other thoughts you have for the redevelopment of this site:		
		Response Count
		29
	answered question	29
	skipped question	33

12. What are your contact details? (optional if you are interested in receiving a response on a specific item)								
		Response Percent	Response Count					
Name:		96.9%	31					
Mailing Address:		81.3%	26					
Email Address:		96.9%	31					
	answere	32						
	skipped question							

SOUTH CASWELL CONCEPT PLAN

APPENDIX C - DESIGN WORKSHOP CONCEPTS







1a of 7

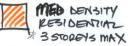
LASWELL















- , TROLLEY CAR AS PLAY STRUCTURE: HERITAGE NOD
- . ROUND-A-BOUT FOR TRAFFIC CONTROL
- · PEDESTRIAN FRIENDLY



1b of 7 South CASWELL













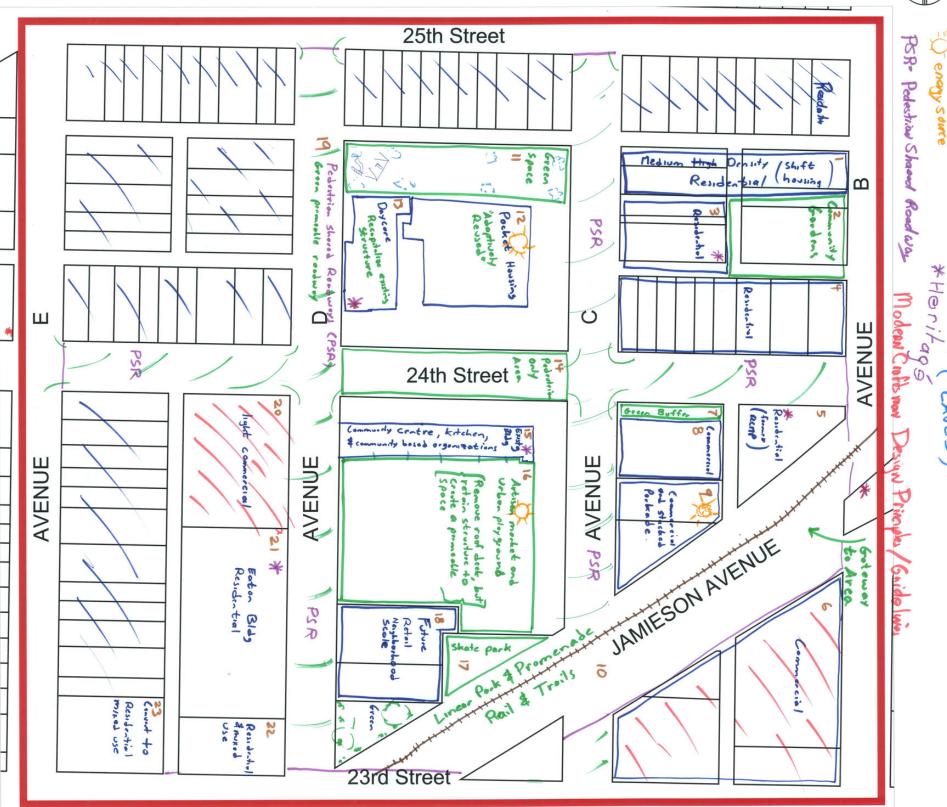




- . TROLLEY CAR AS PLAY STRUCTURE: HERITAGE NOW
- · ROUND-A-BOUT FOR TRAFFIC CONTROL
- · PEDESTRIAN FRIENDLY



2a of 7



























Ed's Vision.























SOUTH CASWELL CONCEPT PLAN

APPENDIX D - DESIGN WORKSHOP EXIT SURVEY AND RESULTS



Exit Survey June 20, 2009

Please take a minute	to comment on today's wo	orkshop. V	Ve appreciate your input.
Did you find the worksho	p today useful and/or edu	cational?	
	Yes		No
Did you fill out the online	survey?		
	Yes		No
How did you find out abo	ut the workshop?		
	Caswell Hill Communit	ty Associa	tion Website
	City of Saskatoon Web	osite	
	Direct Invitation		
	Word of Mouth		
	Other: (Please indicate	e)	
Do you have any further	comments about the desi	gn worksho	pp?

THANK YOU FOR YOUR PARTICIPATION

- 37 People Attended the Workshop29 People Signed-in28 People Filled out Exit Surveys
 - 100% of respondents found the workshop useful and/or educational
 - 53.6% Did not fill out the Online Survey
 - 46.4% Did fill out the Online Survey
 - 60.7% Found out about the workshop by direct invitation
 - 25% Found out about the workshop through word of mouth
 - 10.7% Found out about the workshop through the flyer
 - 3.6% Found out about the workshop through other means (Councillor Lorje, Community Association)

Comments:

- Very Educational
- I'm glad I participated
- Excellent Session
- Great Job
- Thought it was well done lets see what actually happens
- All the plans were very interesting. It's interesting to see all the different ideas as well as the common themes.
- Very interesting and a wonderful way to involve people in creating a "new" Caswell Hill.
- Excellent background to neighbourhood development
- Excellent way to get the community involved. Thank you.
- Very good, informational, fun and we were able to voice opinions
- Useful to gather ideas and consider possibilities
- It was very well organized. The numbers were very good. I think we had a broad scope of interests. The diversity of ideas on a similar theme was very exciting. Lunch was great! I am excited to see what comes from it.
- I would have like more information, start the process with the city moving forward, start decision making, comment made as the group was dispersed about the structure of the steering committee.
- Exciting, need trees!
- Well planned- lots of time to interact. I really hope the City considers seriously the suggestions generated.
- It was Fun! Thanks! Good food too!
- It would be good to have the background of the city-owned buildings and others of historical/heritage or unique note...
- Community people have considered this change of development for quite some time which shows in the similarities of designs. Please keep the community involved in this process including updates to the plans. And thanks for the opportunity to take part in the design!
- Incorporate wind/solar/geothermal to power new homes and facilities, Indoor skate park for youth all year round, Underground parking(ensure ample parking), Green space around the whole perimeter.

- Excellent feeling to be involved and contribute ideas. We love out neighbourhood. Well run.
- Good Lunch Thanks. Good Tools. Interested parties attended.
- Please look closely at options for adaptive reuse of the buildings early on.
 Consider the EOI process being used for the Arthur Cook building as a model for soliciting private developer's input on the issue. And let the existing property owners retain their land and buildings.

SOUTH CASWELL CONCEPT PLAN

APPENDIX E - CAPITAL COST ESTIMATES

	South Caswell - Class D Cost Estir	nates					5509031
ITEM#	DESCRIPTION	UNIT	Quantity	l	JNIT PRICE		AMOUNT
A	UNDERGROUND WORKS						
1.0	Sanitary						
	a) 200mm SDR 35 PVC	l.m.	590	\$	270.00	\$	159,300.00
	b) 250mm SDR 35 PVC	l.m.	320	\$	280.00	\$	89,600.00
	c) 300mm SDR 35 PVC	l.m. ea.	120 10	\$ \$	300.00	\$	36,000.00
	d) Manhole (4 m depth at \$1500/m) e) Connect to existing Stub line	ea.	6	\$	6,000.00 10,000.00	\$ \$	60,000.00 60,000.00
	o, comicor to omorning crap mile	ou.	ŭ	•	10,000.00	\$	-
2.0	Watermain					\$	-
	a) 150mm SDR 35 PVC	l.m.	820	\$	150.00	\$	123,000.00
	b) 200mm SDR 35 PVC c) 300mm SDR 35 PVC	l.m. l.m.	120 90	\$ \$	175.00 220.00	\$ \$	21,000.00 19,800.00
	d) Hydrant Assembly	ea.	2	\$	6,200.00	\$	12,400.00
	e) Valves	ea.	20	\$	2,000.00	\$	40,000.00
	f) Connect to existing watermain	ea.	6	\$	10,000.00	\$	60,000.00
	21					\$	-
3.0	Storm a) 250mm SDR 35 PVC	l.m.	300	\$	150.00	\$ \$	45,000.00
	b) 300mm SDR 35 PVC	l.m.	300	\$	200.00	\$	60,000.00
	c) 600mm Concrete	l.m.	120	\$	600.00	\$	72,000.00
	d) Manhole (4m depth at \$1500/m)	ea.	7	\$	6,000.00	\$	42,000.00
	e) Connect to existing Stub line	ea.	6	\$	10,000.00	\$	60,000.00
	SUBTOTAL					\$	960,100.00
В	ROADWORKS						
1.0	200mm Reinforced Concrete	s.m.	6,600	\$	150.00	\$ \$	990,000.00
2.0	Excavation	c.m.	4,720	\$	25.00	\$	118,000.00
3.0	Subgrade compaction (300mm)	s.m.	7,260	\$	10.00	\$ \$	72,600.00
4.0	Sub-base material (200 mm)	s.m.	4,790	\$	18.00	\$	86,220.00
5.0	Base course material (150 mm)	s.m.	1,090	\$	14.00	\$	15,260.00
6.0	Geotextile	s.m.	6,600	\$	6.90	\$	45,540.00 -
7.0	Concrete Curb (Vertical Curb and Gutter)	l.m.	1,050	\$	95.00	\$ \$	99,750.00
8.0	Concrete Sidewalk (1500 mm wide)	sq.m	1,347	\$	125.00	\$	168,375.00
	SUBTOTAL					\$	1,595,745.00
ITEM#	DESCRIPTION	UNIT	Quantity	1.18.11			LINIT
				UNI	T PRICE	AMO	UNI
С	LANDSCAPING AND URBAN DESIG	3N	,	UNI	T PRICE	AMO	UNI
		3N		UNI	T PRICE	AMO	UNI
C 1.0	LANDSCAPING AND URBAN DESIGNATION Pavers a) D & 25th					AMO	
	Intersection Pavers	sq.m sq.m	425 425	\$	170.00 170.00		72,250.00 72,250.00
	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th	sq.m sq.m sq.m	425 425 400	\$ \$	170.00 170.00 170.00	\$ \$ \$	72,250.00 72,250.00 68,000.00
	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th	sq.m sq.m sq.m sq.m	425 425 400 400	\$ \$ \$ \$	170.00 170.00 170.00 170.00	\$ \$ \$ \$	72,250.00 72,250.00 68,000.00 68,000.00
	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd	sq.m sq.m sq.m sq.m	425 425 400 400 400	\$ \$ \$ \$ \$	170.00 170.00 170.00 170.00 170.00	\$ \$ \$ \$	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00
	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th	sq.m sq.m sq.m sq.m	425 425 400 400	\$ \$ \$ \$	170.00 170.00 170.00 170.00	\$ \$ \$ \$	72,250.00 72,250.00 68,000.00 68,000.00
	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping	sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 400	\$ \$ \$ \$ \$ \$	170.00 170.00 170.00 170.00 170.00 170.00 170.00	\$ \$ \$ \$ \$ \$	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 68,000.00 258,400.00
1.0	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping a) Avenue D trees	sq.m sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 400 1520	*****	170.00 170.00 170.00 170.00 170.00 170.00 170.00	***	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 68,000.00 258,400.00
1.0	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping a) Avenue D trees b) Avenue C trees	sq.m sq.m sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 400 1520	*****	170.00 170.00 170.00 170.00 170.00 170.00 170.00 500.00	***	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 68,000.00 258,400.00 32,000.00 28,500.00
1.0	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping a) Avenue D trees b) Avenue C trees c) Avenue D sod (3.0m boulevard)	sq.m sq.m sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 1520 64 57 1437	*****	170.00 170.00 170.00 170.00 170.00 170.00 170.00 500.00	****	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 258,400.00 32,000.00 28,500.00 14,370.00
1.0	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping a) Avenue D trees b) Avenue C trees	sq.m sq.m sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 400 1520	*****	170.00 170.00 170.00 170.00 170.00 170.00 170.00 500.00	***	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 68,000.00 258,400.00 32,000.00 28,500.00
2.0	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping a) Avenue D trees b) Avenue C trees c) Avenue D sod (3.0m boulevard) d) Avenue C sod (3.0m boulevard) e) Park (basic development cost) Master Landscape Plan	sq.m sq.m sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 400 1520 64 57 1437 1257	*****	170.00 170.00 170.00 170.00 170.00 170.00 170.00 500.00 500.00 10.00	***	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 258,400.00 32,000.00 28,500.00 14,370.00 12,570.00 350,150.00
2.0	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping a) Avenue D trees b) Avenue C trees c) Avenue D sod (3.0m boulevard) d) Avenue C sod (3.0m boulevard) e) Park (basic development cost)	sq.m sq.m sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 400 1520 64 57 1437 1257	*****	170.00 170.00 170.00 170.00 170.00 170.00 170.00 500.00 500.00 10.00	****	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 258,400.00 32,000.00 28,500.00 14,370.00
2.0	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping a) Avenue D trees b) Avenue C trees c) Avenue D sod (3.0m boulevard) d) Avenue C sod (3.0m boulevard) e) Park (basic development cost) Master Landscape Plan	sq.m sq.m sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 400 1520 64 57 1437 1257	*****	170.00 170.00 170.00 170.00 170.00 170.00 170.00 500.00 500.00 10.00	***	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 258,400.00 32,000.00 28,500.00 14,370.00 12,570.00 350,150.00
2.0	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping a) Avenue D trees b) Avenue C trees c) Avenue D sod (3.0m boulevard) d) Avenue C sod (3.0m boulevard) e) Park (basic development cost) Master Landscape Plan Consultant Fees	sq.m sq.m sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 400 1520 64 57 1437 1257	*****	170.00 170.00 170.00 170.00 170.00 170.00 170.00 500.00 500.00 10.00	****	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 258,400.00 28,500.00 14,370.00 12,570.00 350,150.00
2.0	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping a) Avenue D trees b) Avenue C trees c) Avenue D sod (3.0m boulevard) d) Avenue C sod (3.0m boulevard) e) Park (basic development cost) Master Landscape Plan Consultant Fees SUBTOTAL	sq.m sq.m sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 400 1520 64 57 1437 1257	*****	170.00 170.00 170.00 170.00 170.00 170.00 170.00 500.00 500.00 10.00	\$	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 258,400.00 258,400.00 28,500.00 14,370.00 350,150.00
2.0	Intersection Pavers a) D & 25th b) C & 25th c) D and 24th d) C & 24th e) D & 23rd f) C & 23rd g) Pedestrian Walkway Landscaping a) Avenue D trees b) Avenue C trees c) Avenue D sod (3.0m boulevard) d) Avenue C sod (3.0m boulevard) e) Park (basic development cost) Master Landscape Plan Consultant Fees SUBTOTAL Total Construction Costs	sq.m sq.m sq.m sq.m sq.m sq.m sq.m	425 425 400 400 400 400 1520 64 57 1437 1257	*****	170.00 170.00 170.00 170.00 170.00 170.00 170.00 500.00 500.00 10.00	\$	72,250.00 72,250.00 68,000.00 68,000.00 68,000.00 258,400.00 28,500.00 14,370.00 12,570.00 350,150.00 1,172,490.00