

# CITY OF SWIFT CURRENT

ST. JOSEPH SCHOOL SITE REDEVELOPMENT PLAN



FEBRUARY 2017



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## INTRODUCTION

Associated Engineering Ltd. (AE) has been contracted by the City of Swift Current (City) to prepare a Land Use Concept Plan (Concept Plan) to guide the redevelopment of the St. Joseph School Site. St. Joseph School is located in south-central Swift Current and is scheduled for demolition which presents an opportunity for redevelopment of the building site and the surrounding school yard. The school site comprises of 2.02 hectares and is located approximately 400 metres south of the Canadian Pacific rail yard between 2nd Avenue Southeast and 3rd Avenue Southeast.

The I Concept Plan considers the future distribution of land uses, taking into consideration the requirements of the built-form, as well as a general strategy for the extension and connection of services necessary to support the direction portrayed in the concept plan.

The primary goal of the Concept Plan is to prepare a design which positively integrates with neighbouring developments and creates a cohesive and harmonious community. The plan will also provide City Council, Administration, private developers, utility agencies, and other stakeholders as a basis for future decision making.

## DEVELOPMENT OBJECTIVES

Associated Engineering engaged City Administration and local stakeholders to establish objectives for the redevelopment of the School site. The following objectives were developed through this engagement process.

1. To provide the City with an opportunity to support community growth through infill development.
2. To provide the City with an opportunity to enhance the built-form and the function of the existing public open space.
3. To create a transition from the commercial development to the south to surrounding low density single-unit dwellings.
4. To introduce complimentary land uses.
5. To take advantage of existing infrastructure.
6. To retain and enhance recreational opportunities on the site:
7. To preserve the outdoor skating facility and its associated facilities.
8. To create a four season park.
9. To integrate a system of pathways.
10. To retain as much green space as possible.

The above noted objectives form the basis for the concept plan.

## LOCATION AND LAND OWNERSHIP

The school is located within the City's designated in-fill areas as presented on Schedule C in the City of Swift Current's Zoning Bylaw. These designated in-fill areas are intended to provide an opportunity for the redevelopment of existing or vacant lands.

The lands proposed for redevelopment within this concept plan include:

- Block 15, Lots 11-18, Plan #P5326.
- Block 16, Lots 1-20, Plan #P5326.

The legal survey data for the school site indicates that the site has been previously subdivided into 28 individual properties. As illustrated in the adjacent figure, the current legal boundaries for the site follow the same pattern of development as represented by adjacent properties.



The City is the current registered owner of all property contained within the plan area. As the registered property owner, the City has elected to take the lead role in the preparation of this land use concept plan and intends to follow the same published processes and procedures which would apply to a private developer to ensure a consistent outcome.

## ADJACENT LAND USES

Developments to the west, north, and east of the plan area are predominately single-detached dwellings with rear lanes. The gross residential development densities in these surrounding areas are estimated to be 10.5 units per hectare.

The development to the south of the plan area includes both commercial and residential land uses with an estimated gross residential development density of 27 units per hectare. The higher residential density to the south is a direct result of the composition of housing which consists of single-detached and three story apartment style units. Commercial development in this area includes the Co-op Marketplace and gas bar, a restaurant, a graphics designer firm, and a carpet-cleaning business.

The combined gross residential development density for lands surrounding the plan area is estimated to be 15 units per hectare. The overall development pattern follows a traditional grid road system.

Riverside Park is located approximately 350 metres east of the northeast boundary of the plan area. This community park comprises of approximately 10 hectares and includes playground facilities, a spray park, soccer pitch, tennis courts, and a segment of the City's Chinook Parkway Path System. This is an important amenity space for the residents in this area of the City as it provides active, passive, and programmable park space.

Other development in the area includes the Prairie Pioneers Independent Housing Inc. which is located approximately 130 metres southwest of the plan area. The Prairie Pioneers Independent Housing Inc. is a non-profit organization which provides rental housing and life lease suites for seniors.

It is anticipated that the development patterns, the land use mix as well as the development density of the surrounding built-up areas should be considered in the plan design. For example:

- The existing grid road pattern should be continued where possible.
- Where possible, consideration should be made to balance the need to introduce a slightly higher density to support commercial development and to be consistent with the City's Infill Guidelines while also respecting the existing residential densities in the area.

## POLICY CONTEXT

The City has six guiding documents to form growth and development decisions. Two of these documents are statutory which provide formal policies and regulations for the orderly development of land within the City. The other four are non-statutory plans which are considered to be guidelines and provide direction during the development process.

The two statutory documents are:

- The City of Swift Current Development Plan No. 3 – 2003.
- The City of Swift Current Zoning Bylaw No. 24 – 2014.

The non-statutory documents consist of:

- The City of Swift Current Housing Plan, 2012.
- The City of Swift Current Infill Guidelines, 2014.
- The City of Swift Current Servicing Master Plan.
- The City of Swift Current Developer's Guide for Preparing Concept Plans, 2015.

A review of these six documents was completed to ensure the concept plan meets the City's overall goals and objectives.

The City of Swift Current Development Plan No. 3 – 2003 (DP) is the overarching policy document guiding the orderly development of lands within the City. The City’s DP contains goals, objectives, and policies related to growth and development which need to be considered in the redevelopment of the school site. The following key policies taken from the DP have been considered in the development of the land use concept plan:

### 1. Development Density

- The DP suggests maintaining an average density of 10.5 units per hectare.

### 2. Residential Development

- To provide for an adequate and affordable supply of residential housing types, lots and densities that take into account the age, family, or household and economic structure of the City residents
- To cooperate with private sector, non-profit groups, and public agencies to increase long-term supply of safe, affordable and accessible housing particularly for young families or households, seniors, and special needs groups.
- To establish housing targets based on the following considerations:
  - Housing mix (single-detached, semi-detached, row housing, apartments).
  - Housing tenure (ownership and rentals).
  - Housing for seniors.
  - Affordable housing.
  - Housing for special needs groups.
- To meet the demand for affordable housing by increasing densities in the Inner City Areas.
- To encourage single-unit and multi-unit infill development in the Inner City Areas by providing incentives for new construction.
- To encourage housing development proposals for seniors where it is in the interest of residents.
- To ensure that new residential dwellings adjacent to major roadways are provided with adequate buffering.
- To encourage the rehabilitation, redevelopment, and infills to increase the amount and quality of housing in established neighbourhoods.
- To support infill development on vacant or underutilized parcels in the Inner City Areas subject to compatibility in age, height, scale, and design to other residences in the immediate vicinity and with appropriate landscaping and infrastructure capacities.
- To provide multi-unit dwellings near collector and arterial streets; however, dwellings should not have frontage on highways or arterial roadways.

### 3. Open Spaces, Parks and Recreational Facilities

- To ensure that the provision of open spaces, parks, and recreational facilities respond to demographic and leisure trends.
- To ensure that open spaces, parks, and recreational facilities are of sufficient size within convenient travel distances for neighbourhood residents.



- To integrate the City’s trail system with existing and new neighbourhoods.
4. Transportation
- To ensure that the infill development reduces the need for new transportation infrastructure.
  - To take into account the concentration of high density developments near public transit routes.

The land use concept plan is considered a second tier plan which is required to be prepared in conformity with the overall objectives and policies represented within the DP. It is anticipated that the land-use, circulation, and infrastructure plan maps will be adopted by resolution of Council and appended as a schedule to the DP. This report will be used to provide textual background to support the mapping appended to the DP.

#### CITY OF SWIFT CURRENT HOUSING PLAN

The City of Swift Current Housing Plan provides an assessment of the current housing situation in the City and associated strategic recommendations for meeting the communities housing goals over the next 15-year period.

The Housing Plan provided population demographics for the City based on the most recent census data provided from 2011. This data indicated that local populations are aging with the greatest increase represented within the 25 to 34 and 50 to 64 age cohorts.

The Housing Plan projects a population growth rate of 1.54% which translates into a population increase of 5,969 people by 2036. This increase is expected to consist predominately of young and immigrant families. To support this increased population, it is estimated that a total of 2,388 new dwelling units will be required based on an average of 2.5 persons per household as referenced in the report.

Within the Housing Plan, a shortage in apartments, townhomes, and smaller homes was identified. An increase in rental prices has resulted in an increased demand for homeownership and the demand for starter homes. The Housing Plan also suggests that seniors are looking to remain in their homes but to down-size.

The following recommendations have been taken from the Housing Plan for consideration in the preparation of the land use concept plan:

- 30 dwelling units per hectare is the suggested target density for infill development.
- To ensure a sufficient supply of affordable and entry-level housing.
- To support a mixture of housing product.
- To support development that targets specific demographics including first time home owners and support for senior populations.

#### CITY OF SWIFT CURRENT INFILL GUIDELINES

The City of Swift Current Infill Guidelines is a companion document to the Housing Plan and provides a framework to guide the development of infill sites. The Infill Guidelines provide objectives and guiding policy statements related to the design and development of infill sites. The following key objectives and

guiding policy statements were taken from the Infill Guidelines for consideration of the preparation of the land use concept plan.

The City's Infill Guidelines provide the following City wide objectives:

- To contribute to the creation of livable mature areas through residential infill.
- To strive to secure community support and acceptance for residential intensification in mature areas.
- To make more efficient use of existing infrastructure and community facilities.
- To contribute to the physical renewal of older neighbourhoods.
- To achieve housing forms that contribute in the long term.

The City's Infill Guidelines provide the following neighbourhood focused objectives:

- To maintain a balanced mix of housing types and density in mature areas.
- To protect the stability of single family areas.
- To develop animated and secure public streets and open spaces.
- To minimize vehicular traffic and parking impacts that may result from intensification.
- To secure improvements to the existing mature areas of infrastructure as part of redevelopment.
- To provide additional housing opportunities.

Based on the application of the City's Infill Guidelines, the school site is considered a large scale infill development and should comply with the infill guidelines goals and objectives for large scale development sites.

## CITY OF SWIFT CURRENT SERVICING MASTER PLAN

The City of Swift Current Servicing Master Plan assesses the current capacities of core infrastructure systems throughout the City. The following information taken from the Master Plan relates directly to current infrastructure within the overall plan area.

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### WATER

The plan area is serviced by a series of 150 mm water mains providing service for domestic use and firefighting demand flows through a network of major and local water mains along the southern, northern, and western boundaries.

The Master Plan confirms that the water system pressure within the project site area at the peak hour demand is considered sufficient to address fire flow requirements.

Water servicing may be extended south along 3<sup>rd</sup> Avenue to provide servicing connections for development, however final watermain sizing will depend on detailed analysis. Based on the existing network it is reasonable to assume that the extension of services along 3<sup>rd</sup> Avenue would consist of a 150 mm watermain.

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## STORMWATER MANAGEMENT

There are two outfall systems that are providing land drainage for the project site area. They are as follows:

- North of the project site area between Dahl Street and Friesen Street, stormwater runoff outfalls to the river through a series of 600 mm storm trunks before expanding to a 750 mm storm trunk outfall. The Master Plan identifies this storm trunk as an area that may experience storm surcharges through manholes at 4th Avenue between Dahl Street and Friesen Street.
- The Master Plan suggests that the 750 mm storm sewer along McIntosh Street has existing capacity; however, overland runoff will need to be managed locally and where possible suggested to be controlled to below the pre-development (existing) flow rate and volume.

With consideration to the redevelopment of the site and to ensure adequate capacity within the storm sewer network, the site design will need to acknowledge the anticipated increase in stormwater runoff resulting from the conversion of open space to residential development. Consideration should be given to employing Low Impact Design (LID) principles that would support greater local infiltration and the reduction of off-site stormwater discharge.

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## SANITARY SEWER

The plan area is serviced by Lift Station No. 2 at the intersection of 1<sup>st</sup> Avenue and South Railway Street West. The existing sanitary flows are split along 2<sup>nd</sup> Avenue between McIntosh Street East, and Dahl Street West. The south section of the block directs sewage to Lift Station No. 4 while the north section of the block directs sewage to Lift Station No. 2.

A condition assessment of Lift Station No. 2 was completed in December 2010 by AECOM. The findings of this condition assessment concluded that while the lift station pump capacity is considered adequate, there is an existing lack of capacity in the wet well storage below the invert of the inlet pipe. Lift Station No. 2 does not have capacity to service the proposed project site build out. At this time, AE does not have any information regarding the condition of Lift Station No. 4.

The City of Swift Current may decide to implement the recommendations contained within the Master Plan which recommend increasing storage capacity within Lift Station No. 2. Alternatively, there is potential to connect sewage flows from the plan area to Lift Station No. 4 through a connection along the south boundary of the site.

The extension of sanitary sewer servicing will depend on detailed analysis; however, based on available information from the City's AutoCAD model, it is not expected that sanitary servicing can be extended along 3<sup>rd</sup> Avenue. Extending the sanitary service to the development along 3<sup>rd</sup> Avenue would result in the pipe not meeting the requirements for a minimum depth of cover of 2.5 m as outlined in the City's Design and Development Standards. Site grading considerations will need to be given to ensure that the 2.5 m minimum depth of cover is achievable.

## CITY OF SWIFT CURRENT ZONING BYLAW

The City of Swift Current Zoning Bylaw No. 24/2014 is a regulatory companion document to the City's DP which contains specific regulations and standards for the implementation of the Development Plan policies. The redevelopment of the school site will be governed by the application of the zoning regulations associated with the intended zoning district to be applied within the plan area.

## SITE INVENTORY & ANALYSIS

### EXISTING USES & SITE IMPROVEMENTS

Physical improvements on the school site include the existing school building, two sheds, a basketball court, soccer pitch, two tot sized ball diamonds and an outdoor rink. The school building is scheduled for demolition and it is assumed that the two sheds will either be relocated elsewhere or demolished. It is our understanding that the basketball court and outdoor rink should be accommodated in the final design.



The soccer pitch and ball diamonds are intended to be discontinued as part of the redevelopment of the site whereas the outdoor skating rink is intended to be retained and the basketball courts are to be relocated within the planned open space area. The basketball courts are also surrounded by park benches, picnic tables, garbage cans, and bicycle racks. If these items are in good condition, the City may be able to relocate these facilities elsewhere in the City or reuse them within the planned open

space on the site.

Vegetation on the site is limited to three mature trees located in the northwest corner. These trees may be casualties during the demolition of the school building based on their close proximity. However, if they remain following the demolition consideration will need to be made on how to incorporate them into the final development of the site.



## CONSULTATION

Public consultation was a key component in the development of the concept plan. A two staged approach was taken to consult with the public and local stakeholders which included hosting a series of public workshops to gain initial input into the plan. The second stage involved hosting a public open house to present the draft concept plan and recommendations and to obtain public comments to assist in refining the plan prior to finalization.

## PUBLIC WORKSHOPS

Two public workshops were hosted by the City and facilitated by AE's project team members at the Chinook Golf Course club house. The City distributed invitations to residences within 100 metres of the school site advertising the events.

The workshops provided an opportunity for local stakeholders, City Administration, and AE's project team members to establish local priorities for the form and density of the redevelopment for the site.

Each workshop began with a brief presentation to provide background information on the purpose of the project, explain what infill development represents, explain the benefit of infill development, and to provide context for the land use concept plan. The attendees broke into groups of five to seven persons and were asked to describe their preference for redevelopment of the site. A series of questions were provided to guide the discussions. At the conclusion of each workshop, the individual groups shared their perspectives.

A total of 24 residents attended the two workshops. The information gathered by AE from these workshops was recorded to inform subsequent discussions with the City.

The general comments summarize the discussions over the two-day period.

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## GENERAL COMMENTS

### 1. Residential Development

- There was general consensus that the site should be developed exclusively for residential purposes with some land retained for open space.
- Preferred Housing Type:
  - Affordable homes were generally seen as the primary housing needed in the City and this area.
    - Prices ranging from \$225,000 to \$300,000.
  - Low-medium market housing was also seen as acceptable for this area.
    - Prices ranging from \$300,000 to \$350,000.
  - Would like to see smaller housing options for empty-nesters, not necessarily geared exclusively for seniors but smaller more affordable units for empty-nesters.
  - Generally, averse to introducing rental units into the area, but there is a preference for privately owned dwellings to reduce transient population in the area.
- Housing Product:
  - Single-detached dwelling units representing the continuation of the existing built form of the area were generally preferred.
  - If a compromise had to be made, the majority seemed to be satisfied with the introduction of semi-detached dwelling units on this site.
  - Some of the attendees felt row housing would be okay if designed and located properly; however, the majority were against this kind of housing product.
  - Opposition was expressed for walk-up or low rise apartments:

- Considered eye sores.
- Averse to the resultant increase in density.
- These kinds of development would increase traffic congestion on 2<sup>nd</sup> Avenue Southeast and parking requirements in the area.

2. Commercial Development:

- The general consensus is that there is little or no opportunity (market) for the expansion of commercial development in this location.
- The attendees felt that the current businesses, besides the Co-op have struggled keeping their doors open in this area of the City because everyone either travels downtown or out towards the highway for their commercial services.
- Additional commercial development would increase the volume of traffic in this area even more so than residential development and negatively impact local quality of life.
- Additional commercial development would decrease the visual appeal of the area.
- One of the groups had expressed support for additional service orientated development (i.e. dance studio, martial arts facility or recreational complex) that would benefit the entire City and help create something unique in the south which could attract people to this area of the City.

3. Open Space Comments:

- Outdoor Skating Rink:
  - Every group agreed that it was necessary to retain the outdoor skating rink.
    - It is used regularly by all ages for hockey.
    - They also create a little skating area north of the outdoor skating rink for those looking to ice skate and note play hockey.
    - The outdoor skating rink is well maintained and is in good physical condition.
    - It has a paved surface which creates opportunities to use the outdoor skating rink during off seasons for other sports related activities and provide a secondary use in the summer months creating a multi-purpose for season space such as:
      - ❖ Lacrosse;
      - ❖ Ball hockey; and
      - ❖ Basketball (courts located at the side of the rink).
- Open Space Preservation:
  - Every group agreed that open space needs to be retained on this site.
  - Some wanted to retain the park space between 2<sup>nd</sup> and 3<sup>rd</sup> Avenue Southeast.
    - Used regularly by children and adults.
    - Possible trade-off for higher density development.
  - Most groups saw value in retaining the space north of the outdoor skating rink for park space, trails, and possibly a playground facility.
    - Based on the orientation of the outdoor skating rink, the attendees felt that the best option was for the area north of the outdoor skating rink to remain as a park space due to pucks or other objects flying over the end boards.
- Trails/Pathways:

- The general consensus was that a designated trail or pathway system around the entire site would be beneficial and attractive to the area.
  - The trail could be meandering through the larger open space areas and form part of the existing sidewalk system surrounding the block.
  - The trail would connect to the various features on the site such as the outdoor skating rink, the potential playground facility, and adjacent sidewalks.

4. Additional Comments:

- 2nd Avenue Southeast:
  - The general consensus was that this arterial road is considered a concern.
    - The additional development of the school site will further impact the existing issue of traffic, delays, and access onto 2<sup>nd</sup> Avenue Southeast.
    - It was considered a greater concern if a higher density development is located on this site because more units result in more people which would result in more traffic.
  - The general consensus was that upgrades are required to a number of intersections south of the site with the Gladstone Street East and 2<sup>nd</sup> Avenue Southeast intersection specifically mentioned.
  - Also expressed concerns regarding pedestrian movements along this segment of roadway based on current vehicle speeds which are perceived to only increase with the removal of the school zone.

The following represents the detailed comments received by the four individual stakeholder groups hosted at the two workshop events.

Groups A, B, C, and D Overall Designs & Comments

GROUP A

- Felt it was valuable to retain a good portion of the existing park space between 2nd Avenue Southeast and the outdoor skating rink.
  - The area currently hosts the ball diamonds and a soccer pitch.
  - This space is used regularly and that is why it was considered valuable to the group.
- To retain this green space, Group A felt they would be willing to trade-off for a form of higher-density development for more green space.
  - Group A felt they could transition from a lower density along 2<sup>nd</sup> Avenue Southeast to a higher density along 3<sup>rd</sup> Avenue Southeast.
    - Single-detached dwelling units along 2<sup>nd</sup> Avenue Southeast.



- Semi-detached or row housing along 3<sup>rd</sup> Avenue Southeast including the land north of the outdoor skating rink.
- A segment of 3rd Avenue Southeast would be closed and end in a cul-de-sac.
  - This option would provide primary access to the dwellings with secondary access via the rear lanes.

#### GROUP B

- Felt that the commercial area south of the school site could use a transition area.
  - The southwest area along 2<sup>nd</sup> Avenue Southeast would be developed with semi-detached dwelling units and as it would progress north along the west side of the property, it could remain semi-detached or transition to narrower lot single detached dwelling units.
- Group B felt that the east half of the block should remain exclusively as single detached dwelling units on similar sized lots surrounding the site.
- This group preferred to retain the park space surrounding the outdoor skating rink and the area north of the rink.



- The group felt that there was an opportunity to introduce something unique to the area by closing a segment of 3<sup>rd</sup> Avenue Southeast in favor of a contiguous park space with single detached dwelling units fronting onto the park space.
  - These park front dwelling units would have primary access through the rear lane similar to those properties which front onto the arterial street where no front access is permitted.
- To further promote this space, the group felt it was key to create pedestrian accessibility and therefore planned for a designated trail system throughout the site.
  - The group also thought that it would be valuable to have a trail system which had lights.

#### GROUP C

- Felt it was important to maintain a consistent built-form as the surrounding area.
- Felt that the outdoor skating rink needed to stay and preferred to maintain some park space north and south of the rink.
- Group C looked at two potential options for the school site's redevelopment:
  - Option 1 located at the rear lane off of 3<sup>rd</sup> Avenue Southeast into the school site block which loop's back to 3<sup>rd</sup> Avenue Southeast.
    - The housing products rear yards would back onto this lane and front yards would be located along the surrounding roads.



- Felt that the housing product on the inside block may be a location to allow for a higher density product such as semi-detached or a smaller row house unit.
- Option 2 reconfigured 3<sup>rd</sup> Avenue Southeast and had lots front onto the new street.
  - To prevent double frontage, the group agreed that a buffer would be located along McIntosh Street, 2<sup>nd</sup> Avenue Southeast, and Dahl Street.
    - ❖ This buffer would allow for a space for a connecting walking path and provide additional green space which further insulates the redevelopment from 2<sup>nd</sup> Avenue Southeast.
  - The group also saw an opportunity to retain a larger amount of park space which could host playground facilities or sports fields.



GROUP D

- Felt that the school site block should remain subdivided as 20 individual lots exclusively for single detached dwelling units.
- Preferred to retain the park space surrounding the outdoor skating rink and the greenspace north of the rink.
  - Felt that there was an opportunity to introduce something unique to the area by closing a segment of 3<sup>rd</sup> Avenue Southeast in favor of a contiguous park space with single detached dwelling units fronting onto the park space.
    - These park fronting dwelling units would have primary access through



the rear lane similar to those properties which front onto the arterial street where no front access is permitted.

- To further promote this space, the group felt that it was key to create pedestrian accessibility and therefore planned for a designated trail system throughout the site.

## PUBLIC OPEN HOUSE

A come and go public open house event was hosted and facilitated by the City and AE's project team members. The objective of this event was to share the work completed to date with the public. This provided the public with an opportunity to engage the project team members in discussion regarding the materials presented and record any written comments via comment sheets provided. To provide the public with an additional opportunity to comment, the City posted the display boards and comments sheets on their website for one and a half weeks following the public open house event.

A total of 40 residents attended the public open house and 17 comment sheets were filled out that evening. The online post following the event added an additional five respondents via comment sheets. Based on a review of the submitted comment sheets and through discussions during the event, several consistent themes for the concept plan were identified, including:

- Built-form.
- Development density.
- Open space.
- Accessibility and transportation.

The following information describes the scope of comments received based on these common themes.

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### BUILT-FORM

Built-form refers to the physical structures intended to occupy the site including their massing and architectural styling. Based on the comment sheets and discussion during the event, the proposed building style, form of development, and look of the buildings was found to be generally acceptable. However, there was also input received as suggested improvements to the site regarding built-form, such as:

- Residents were not in favour of apartment buildings.
- Residents preferred a combination of bungalow and two-story units.
- The housing style should fit the surrounding neighbourhood.
- The development should provide garage options.
- The development should have housing that accommodates seniors and families.
- The development should have a mixture of dwelling unit types.

As a developer proceeds with subsequent design and subdivision of the site, it is expected that the final built-form will be confirmed. The objectives represented in this concept plan are intended to influence and form the basis for future decisions in this regard.

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## DENSITY

Density represents the number of dwelling units per hectare. This measurement is used to understand servicing requirements, estimate populations, and determine how an area functions within its surroundings.

Based on a review of the comment sheets, it was clear that some of the attendee's felt that the density proposed in the St. Joseph School redevelopment concept plan was too high. However, the proposed concept plan design provides 34 units on 1.82 gross hectares of land generating a total gross density of 18.7 units per hectare. The City of Swift Current's Housing Plan, 2012, identifies the infill school sites as locations with an opportunity to increase density with a suggested target of 30 units per hectare. The proposed concept plan is below the City's suggested target by 11.3 units per hectare; however, this plan achieves the City's objective by using the infill school sites to increase the density of the area without changing the built-form and function of the adjacent surrounding area.

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## OPEN SPACE

The open space component of the concept plan was another common topic. A concern was brought forward regarding the reduction in greenspace and the removal of the baseball diamonds, however, the concept plan increases the functionality and attractiveness of the existing open space. The proposed open space plan for the area consists of the following upgrades based on conversations with the attendees from the public workshops and the City administration:

- Provide the opportunity for active and passive recreational uses.
- Close-off 3rd Avenue Southeast at the middle of the block, increasing the amount of greenspace and providing increased opportunities for passive recreation.
- Create a four season multi-functional space for enjoyment and gathering.
- Enhance the outdoor skating rink and the lands which surround it to increase the recreational opportunity of the space.
  - Suggested the addition of a tot park with bench seating and playground facilities on a pour-in-place rubber surface making these facilities accessible to all persons regardless of mobility levels.
  - Introduction of lit pathways to various features of the open space providing accessibility throughout the open space area.
  - Introduction of basketball courts on the paved skating pad north of the outdoor skating rink.

In addition to increasing the open space functionality, the plan area is located approximately 350 metres west of the City's Riverside Park. This is one of the largest and most versatile parks in the City containing a wide array of athletic and recreational facilities. It includes a number of tennis courts, a soccer pitch,

running track, spray park, playground equipment, and the Chinook Trail which influences decisions concerning the local recreational amenities to incorporate into this plan.

Best practice research suggests that a convenient walk to gain access to open space should be within 400 metres for residents. With Riverside Park providing a large number of residents with active recreational space within 400 metres, the St. Joseph Redevelopment plan provides an excellent opportunity to supplement the Riverside park by offering a smaller scaled park for the immediate surrounding area.

As for the removal of the ball diamonds, the next nearest diamond in relation to the plan area is approximately 1,200 metres southwest at the Fairview Middle Years School. In addition, there are a number of ball diamonds near the City's Credit Union iPlex along Memorial Drive. This provides a central location for baseball events which also creates a strategic advantage for maintenance of the fields. It also allows for families with more than one child of a different age to be able to attend games or practices without rushing from one ball diamond to the next. Through discussions, it was identified that the existing ball diamonds on the site are no longer used for organized sports as the previous users have moved on to other diamonds within the City.

By increasing the functionality of the open space areas and adding additional greenspace via the closure of 3<sup>rd</sup> Avenue Southeast, the loss of the school yard will have less of an impact on local residents.

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## ACCESSIBILITY & TRANSPORTATION

A number of comments were provided relating to accessibility and transportation. Many of the comments revolved around traffic generation, pedestrian and cyclist accessibility, intersection and roadway improvements to 2<sup>nd</sup> Avenue, and parking.

For the proposed concept plan, it was important to eliminate any direct access from the development onto 2<sup>nd</sup> Avenue Southeast as referenced in the City's DP. Also, City administration felt that it was necessary to show how a person could navigate through the site via sidewalks and pathways as the plan needed to be accessible to all regardless of mobility levels.

Based on the Trip Generation forecast from the Institute of Transportation Engineers' Trip Generation Manual, 9th Edition (ITE manual), a school site typically generates an average of 1.29 vehicle trips per day per student and the proposed form of development illustrated in the proposed concept plan is estimated to generate 5.8 vehicle trips per day per dwelling unit. The average enrollment of students attending the St. Joseph School over a five-year period was 127 students which would generate an estimated 165 vehicle trips per student per day. The proposed redevelopment plan, at 34 dwelling units, is estimated to generate 200 vehicle trips per day resulting in an increase in vehicle trips in the area by approximately 35 vehicles per day. These additional daily trips are expected to be more evenly distributed via the four access points into the development rather than being focused at the north end of the site at the school building.

The public also felt that 2<sup>nd</sup> Avenue Southeast had issues in terms of existing traffic volumes, speed, and noise. A potential response to the identified issues concerning traffic along the arterial roadway would be to consider constructing curb extensions at the McIntosh Street and 2<sup>nd</sup> Avenue Intersection as this location is anticipated to generate the largest volume of pedestrian users via the link between residential and commercial development. This would provide both traffic calming and a pedestrian refuge from vehicles.

The comments concerning parking focused on the number of spaces provided for each unit plus additional guest parking spaces. The proposed concept plan currently exceeds the City's zoning regulations for parking spaces for this kind of development which states in section 3.22.6:

1.5 parking spaces for each dwelling unit plus 1 visitor parking space for each 5 dwelling units.

At 34 units, following this regulation would amount to 58 parking spots required on site. The proposed concept plan provides two parking spots for each dwelling plus an additional visitor parking space for every 4.25 dwelling units. The proposed concept plan provides a total of 76 parking spots which is 18 more spaces than the City's zoning bylaw requires for this type of development.

## LAND USE STRATEGY OBJECTIVES

### ST. JOSEPH SCHOOL SITE OBJECTIVES

The concept plan has been prepared with the following development, residential, and open space objectives in mind:

- To redevelop the school site for residential purposes.
- To accommodate affordable housing and down-size options for empty nesters.
- To design the site providing the City with the flexibility to develop the site in multiple phases.
- To create an area that is attractive, unique, and a place where people want to be.
- To provide affordable housing opportunities.
- To develop semi-detached or row housing up to four units as part of a comprehensively planned dwelling group development.
- To orientate housing away from 2<sup>nd</sup> Avenue Southeast respecting its role as an arterial roadway.
- To off-set the reduced yard sizes associated with the development by providing an internal and external public open space.
- To retain the outdoor skating rink.
- To provide four season park/open space/recreational opportunities.
- To ensure that the park and open space are physically accessible.
- To enhance the overall quality of the park and open spaces.



## ST. JOSEPH SCHOOL SITE REDEVELOPMENT CONCEPT PLAN

The concept plan has been designed to take full advantage of a vacant inner city block and create a development which is unique, attractive, and affordable. It has been designed as a dwelling group development which is comprehensively planned with internal roadways and open spaces. Based on this design, it is expected that the development would proceed as a bare-land condominium where future home owners purchase the dwelling and enter into a condo agreement where they pay a condo maintenance fee for the continued maintenance of the roads, facilities, and internal green spaces. Condo maintenance fees are your percentage share of the costs to maintain the bare-land condo and unlike rent; they are not a profit source for management.



The concept plan provides a total of 34 dwelling units including 24 four-unit multi-family dwellings, 6 three-unit multi-family dwellings, and 4 semi-detached dwelling units as the housing product. The overall layout of these dwelling units has been orientated away from 2<sup>nd</sup> Avenue Southeast, Dahl Street, 3<sup>rd</sup> Avenue Southeast, and McIntosh Street to maintain the role of the roadways in this area. Each dwelling unit in this option is provided with two parking stalls with an additional eight guest parking stalls centrally located within the plan area.

To maintain the character of the surrounding area, the massing of the buildings and building materials used should remain consistent with adjacent development. As represented on the below photo, a low fence could be located around the site which identifies the physical separation of public and private lands but allows for the development to be attractive and be part of the surrounding area. The built-form of the development could be a bungalow, two-story, or a combination of both styles for multi-unit dwellings which would fit seamlessly with adjacent development. The purpose for choosing this style of development for the concept plan relates to the types of homeowners envisioned for this area which



consist of first-time homeowners, families, and seniors. Apartment style development is not envisioned in this area.



It is common with multi-family development to have reduced yard sizes which increases the importance of locating these types of developments near open spaces to off-set the reduction in yard size. The concept plan has taken the reduced yard size into account by providing two islands of internal greenspace within the comprehensively planned area and a direct connection with the

adjacent greenspace east of the site. The two internal greenspace areas off-set the reduced yard spaces and create an opportunity to provide internal playground facilities or park benches. By accommodating various park features that are useable by different age groups, these internal greenspaces create gathering spots for all residents within the concept plan area which broadens the target market.

The internal roadways for this site have been sized to 6.5 metres which is consistent with other dwelling group developments in the City. The parking spaces have been sized based on the City's zoning regulations which provide specifications on the length and width of a parking stall.

## OPEN SPACE

Open space within the concept plan makes up approximately 0.60 hectares of the gross development area. These areas include passive and active park spaces, and an internal pathway system connecting the various park features.

Based upon consultations with City administration and public stakeholders, the general consensus was for the outdoor skating rink to be retained in its current location. To promote four season use of this facility it is expected that the City will explore opportunities of installing basketball hoops along the side boards of the outdoor skating rink. As the internal surface of the outdoor skating rink is paved, there are also opportunities for the rink to accommodate outdoor lacrosse and ball hockey during the warmer months.



The lands situated directly north of the rink could be used for the development of; a new tot park with associated playground facilities; a meandering pathway which connects the park to the surrounding community; and the installation of benches or picnic tables for the benefit of residents.





The concept plan accommodates vehicle access to the site by providing 14 off-street parking spots along the southeastern boundary of the plan area adjacent to the outdoor skating rink. The intention of the dedicated parking spots was to eliminate illegal parking within the laneway located east of the rink.

## POPULATION PROJECTIONS, DENSITY & DEVELOPMENT YIELDS

The distribution of land uses within the plan area is summarized as follows:

Land Use	Hectares	Acres	Percent
Gross Development Area	2.03	5.02	100.0%
Internal Open Space	0.15	0.37	7.4%
Public Open Space	0.60	1.48	29.6%
Internal Road	0.26	0.64	12.8%
Public Road	0.14	0.35	6.9%
Residential Development	0.88	2.17	43.3%

The internal and public open space represents approximately 37.0% of the gross development area. Two main factors contribute to the dedication of open space within the concept plan.

During consultations with the City and the public, emphasis was placed on the importance of retaining the outdoor skating rink and its surrounding park space. It was also indicated that there may be an opportunity to enhance the park space by introducing a dedicated pathway system and playground equipment to the public park spaces.

The second factor was the provision of a dedicated internal open space to offset a reduction in the size of privately owned yards within the development.

Internal and public roadways represent 19.7% of the gross development area. This is comparable to other residential developments across Western Canada which typically encompass 20-25% of the gross development area.

Residential development represents approximately 43.3% of the gross development area.

The final development density at full build-out of the plan area will be influenced by the market conditions and decisions of the developer based upon the forms of residential development provided within the applicable zoning district with recognition of the desire to promote a complementary form and density in relation to existing surrounding developments.

The 2011 Census Canada data identifies that the City's average number of person's per census family as 2.8. Based upon an average of 2.8 persons per household, at full build-out the plan area is anticipated to accommodate a total population of 100 residents. Forecasting the future population in an area is important when evaluating the property servicing in the context of the broader community infrastructure capacity. Population projection and the timing for development will also inform municipal decisions concerning the community services including health, fire, and protective services as well as assessing the future demand on local schools.

## CIRCULATION

### ROADWAYS

The plan area is bound by one arterial street, 2<sup>nd</sup> Avenue Southeast to the west, and three local roads, Dahl Street East to the north, 3<sup>rd</sup> Avenue Southeast to the east, and McIntosh Street East to the south. To ensure that the arterial road maintains its current function, no direct property access is provided along 2<sup>nd</sup> Avenue Southeast. Access to the proposed residential development is to be provided from the three local roads. This enables vehicle traffic to flow freely along 2<sup>nd</sup> Avenue Southeast without interruptions experienced from individual residential vehicle access points along roadways.

Project consultations identified concerns with the operations and capacity of 2<sup>nd</sup> Avenue Southeast consisting of traffic speeds, waiting times, and the safety at existing pedestrian crossings.

One approach for dealing with the perceived traffic concerns would be to install curb extensions at the key intersections. Curb extensions are known to provide traffic calming, reduce traffic speeds, and promote safer pedestrian crossings without impacting the function of a road. It is recommended that a curb extension be located on the four intersections corners of 2<sup>nd</sup> Avenue Southeast and McIntosh Street.



The implementation of the concept plan requires the closure of a portion of 3<sup>rd</sup> Avenue Southeast and its conversion to a cul-de-sac. This will enable local access to the proposed open space and to the residential development and eliminates transient traffic through the plan area.

## ACTIVE TRANSPORTATION

Active transportation networks are intended to facilitate human powered transportation including pedestrians and cyclists. The concept plan accommodates both of these forms of transportation through an integrated internal pathway system and the continuation of public sidewalks.



The internal trail system provides the ability for pedestrians and cyclists to access the internal open spaces from a variety of locations maximizing the overall permeability of the site. The trail system is planned as an asphalt surface to reduce maintenance requirements and to maximize accessibility for all levels of mobility.

Lighting will be provided along the internal trails and in the immediate vicinity of proposed recreational facilities and key points along the pathway to enable safe navigation and use of the area as well as to discourage unwanted

activities after dark. External connections to the trail system have been located to correspond with existing cross walks to support safe navigation across city streets.

## SERVICING

### WATER DISTRIBUTION

Potable water for the proposed multi-family development will be supplied by the existing municipal water distribution system. The following sections outline the proposed servicing option and the basis for design.

#### EXISTING WATER INFRASTRUCTURE

The project site area is serviced by a series of 150 mm diameter water mains providing service for domestic use and firefighting through a network of major and local water mains along the southern, northern, and western boundaries as outlined in Figure 7-1.

#### WATER DESIGN PARAMETERS

Conceptual design of the water distribution system for the project site area is based on the parameters set forth in the City of Swift Current's Servicing Master Plan (SMP) supplemented by AE design standards

and engineering best practices. Specifically, the water demand estimates are based on the following parameters:

- Average Day Demand (ADD): 454 Lpcd
- Maximum Day Demand (MDD): 2.4x ADD
- Peak Hour Demand (PHD): 3.1x ADD

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#### WATER DEMANDS SUMMARY

The estimated demands have been calculated based on the lot layout proposed for the project site area and an estimate of 3.5 person’s/dwelling as defined in the City’s Design Standards Manual. Based on a maximum of 37 units, the estimated design population for this development is 130 persons. The information below presents the Average Day (ADD), Maximum Day (MDD), and Peak Hour (PHD) demands associated with the proposed infill development.

Design Population	ADD (L/s)	MDD (L/s)	PHD (L/s)
130 persons	0.68	1.64	2.11

Fire flows, as outlined in the City’s Design and Development Standards, shall be designed to meet the minimum development type classes while maintaining a residual pressure at any location of 140 kPa (20 psi). As outlined in *Section 4.1.12* of the Standards, multi-family developments are classified as a Class B development requiring a fire flow at the hydrant of 1900 – 3785 L/min (31.6 L/s – 63.1 L/s).

The anticipated available fire flow, and minimum pressure are based on information provided in the SMP. The information below outlines the required fire flows and pressure versus the anticipated available values.

Fire Flow Required (L/s)	Fire Flow Available (L/s)	Minimum Pressure Required (kPa)	Minimum Pressure Available (kPa)
63	150 – 175	140	413 - 551

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#### WATER SERVICING OPTIONS

The existing 200 mm diameter waterman along 3<sup>rd</sup> Avenue may be extended approximately 105 m south to a new hydrant connection. A 200 mm diameter pipe is required as the hydrant represents a dead end connection. The hydrant itself will provide additional fire protection to the development. Servicing connections for the development are proposed as illustrated in Figure 7-2.

While the final waterman sizing will depend on further analysis in the preliminary and detailed design, based on the existing network it is reasonable to assume that the extension of services along 3<sup>rd</sup> Avenue would consist of a 200 mm waterman. Consideration to the age and condition of the existing 150 mm asbestos cement waterman will need to be given to the connection of the new PVC waterman.

The SMP confirms that the water system pressure within the project site area at the peak hour demand is considered sufficient to address fire flow requirements. This will be confirmed during preliminary and detailed design.

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OPINION OF PROBABLE COST – WATER

Item	Extension
200 mm Water Main Extension (PVC C900)	\$31,500
150 mm Off-line Hydrant	\$10,000
Tie-in to Existing Water Main	\$10,000
Service Connections	\$100,000
<b>Total Conceptual Cost</b>	<b>\$151,500</b>



**LEGEND**

- PW — EXISTING WATERLINE
- EXISTING FIRE HYDRANT
- ✕ EXISTING VALVE

Figure 7-1  
Existing Water System









- LEGEND**
-  EXISTING WATERLINE
  -  PROPOSED WATERLINE
  -  FUTURE WATERLINE SERVICE CONNECTION
  -  EXISTING FIRE HYDRANT
  -  PROPOSED FIRE HYDRANT
  -  EXISTING VALVE

Figure 7-2  
Proposed Water System

## WASTEWATER COLLECTION

Wastewater collection for the project site area will be provided by a gravity sewer collection system with a connection to the existing municipal sanitary sewer network. The following sections outline the proposed servicing option and the basis for design.

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### EXISTING WASTEWATER INFRASTRUCTURE

The project site area is serviced by Lift Station No. 2 & No. 4 at the intersection of 1<sup>st</sup> Avenue and South Railway Street West. The existing sanitary flows are split along 2<sup>nd</sup> Avenue between McIntosh Street East, and Dahl Street West. The south section of the block directs sewage to Lift Station No. 4 while the north section of the block directs sewage to Lift Station No. 2.

A condition assessment of Lift Station No. 2 was completed in December 2010 by AECOM. The findings of this condition assessment concluded that while the lift station pump capacity is considered adequate, there is an existing lack of capacity in the wet well storage. While the pump capacity is not considered to be the limiting factor, Lift Station No. 2 does not have the wet cell capacity to service the proposed project site build out.

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### WASTEWATER DESIGN PARAMETERS

Conceptual design of the wastewater collection system for the project site area is based on the parameters set forth in the SMP. Using the SMP as a guide, the projected sewage generation rates were estimated to be 85% of water demand. Calculation estimates for wastewater flows attributed to the project site area are based on the following parameters:

- Project site area of 2.02 ha.
- Wastewater generation rate of 386 Lpcd.
- Project site area design population of 130 people based on 3.5 person's/household and a maximum of 37 units.
- 0.28 litres per second per hectare allowance for wet weather flow.
- Harmon Peaking Factor calculated based on the land use design population.

$$\text{Harmon Formula } M = 1 + 14/(4 + P^{0.5})$$

Where, M = Harmon Peaking Factor

P = Population in thousands

- Manning's pipe flowing full calculation for main sizing/evaluation.

$$\text{Manning's Equation } Q = (FDMA/K) + I/I$$

Where, Q = Wastewater flow (L/s)

F = Average daily per capita water consumption

D = Population density (persons/ha)



M = Harmon Peaking Factor

A = Area (ha)

K = Constant (86,400)

I/I = Inflow & Infiltration (L/s)



**LEGEND**

- SS — EXISTING SANITARY SEWER PIPE
- EXISTING SANITARY SEWER MANHOLE
- ▶ SANITARY SEWER FLOW DIRECTION

Figure 7-3  
Existing Wastewater System

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## WASTEWATER DEMANDS SUMMARY

The project site area was analyzed as a single catchment area. The Harmon Peaking Factor was calculated to be 4.22, while the inflow/infiltration rate was calculated to be 0.6 L/s. Using Manning's Equation, the project site area will generate a wastewater flow of approximately 3.0 L/s based on the design population of 130 people.

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## WASTEWATER SERVICING OPTIONS

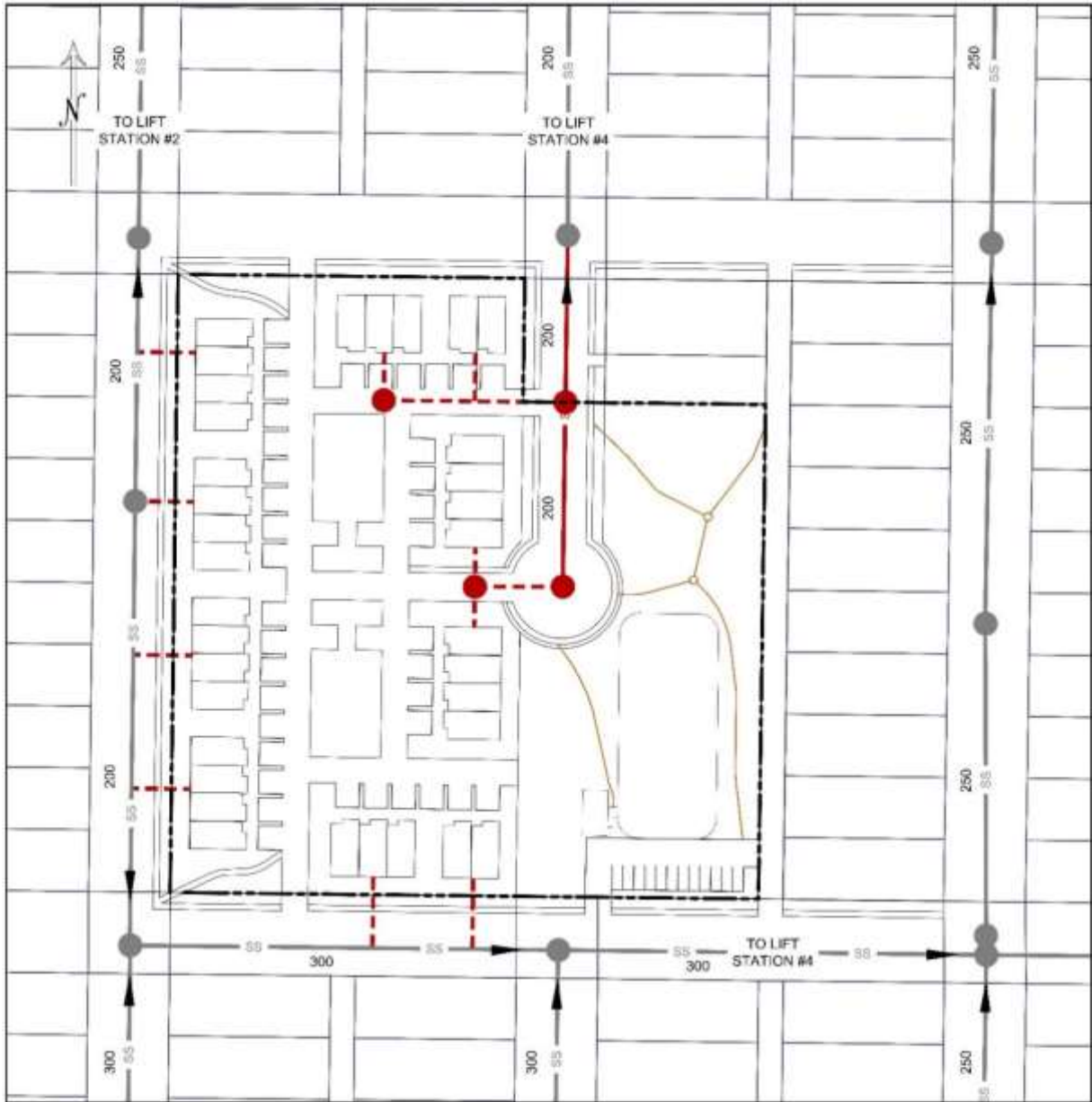
Extending the sanitary service approximately 85 m south to the project site area along 3<sup>rd</sup> Avenue as shown in Figure 7-4 will require site grading considerations to ensure that a minimum depth of cover of 2.5 m can be achieved. Extending the sanitary service connection along 3<sup>rd</sup> Avenue provides potential service to the north-west portion of the project site area, and a potential central connection should a developer wish to further extend a sanitary sewer line into the internal development. Additionally, a connection along 3<sup>rd</sup> Avenue directs wastewater flow to Lift Station No. 4 thereby minimizing impacts on Lift Station No. 2.

Servicing connections similar to the potable water connections will provide wastewater collection servicing to the individual units as illustrated in Figure 7-4.

It is expected that the wastewater flows may be split to Lift Station No. 2 and Lift Station No. 4 based on the existing catchment areas. Based on the number of units it is expected that the development will direct 0.7 L/s to Lift Station No. 2, and 2.3 L/s towards Lift Station No. 4.

To address the wet well capacity issues at Lift Station No. 2, the City may decide to implement the recommendations contained within the Lift Station No. 2 Condition Assessment which recommend lowering the high water pump on level from 0.37 m to approximately 0.25 m above the low water pump off level. If lowering the high water pump on level does not alleviate sewer backup, or additional development results in increased flow to the lift station, the City may need to implement the measures outlined in the Condition Assessment report to increase the capacity of the wet well.

Alternatively, there is potential to connect sewage flows from the plan area to Lift Station No. 4 through a connection along the south boundary of the site; however, at this time, AE does not have any information regarding the condition of Lift Station No. 4.



**LEGEND**

- SS — EXISTING SANITARY SEWER PIPE
- SS — PROPOSED SANITARY SEWER PIPE
- - - - FUTURE SANITARY SEWER SERVICE CONNECTION
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- ▶ SANITARY SEWER FLOW DIRECTION

Figure 7-4  
Proposed Wastewater System

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OPINION OF PROBABLE COST - WASTEWATER

Item	Extension
200 mm Sanitary Sewer Extension	\$25,000
Manholes	\$20,000
Tie into Existing Manhole	\$5,000
200 mm Sanitary Sewer Extension	\$20,000
Manhole	\$20,000
Tie into Existing Manhole	\$5,000
Service Connections	\$100,000
<b>Total Conceptual Cost</b>	<b>\$195,000</b>

## STORMWATER MANAGEMENT

Stormwater management for the project site area will be provided by attenuating on-site post-development flows to the calculated pre-development flow rates to minimize the impact on the existing storm sewer system. The following sections outline the proposed servicing option and the basis for design.

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### EXISTING STORMWATER INFRASTRUCTURE

There are two outfall systems providing stormwater drainage for the project site area as follows:

- North of the project site area between Dahl Street and Friesen Street, stormwater runoff outfalls to the river through a series of 600 mm storm trunks before upsizing to a 750 mm storm trunk outfall to the Swift Current Creek. The SMP identifies this storm trunk as an area that may experience storm surcharges through manholes at 4th Avenue between Dahl Street and Friesen Street.
- McIntosh Street, located along the south boundary of the development site outfalls to the river via a 750 mm storm sewer. The SMP identifies this storm trunk as potentially having capacity to convey stormwater flows.

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### STORMWATER DESIGN PARAMETERS

Conceptual design of the stormwater management system is based on the parameters set forth in the City's Design and Development Standards. Specifically, the stormwater design is based on the following parameters:

- For areas less than 65 ha, the Rational Method shall be used to design the storm sewer system.
- The time of concentration is comprised of the overland flow time to the storm sewer inlet. Overland flow time to curbside in residential areas shall not exceed 10 minutes in duration.
- Where the maximum initial time of concentration is ten minutes, the rainfall intensity (i) has an associated five year return period rainfall rate of 80.7 mm/hr.
- Plan area of 2.02 ha.
- Runoff coefficient (C) values of:
  - Pre-development 0.30 (natural prairie).
  - Post-development 0.70 (multi-family development).
- Development will attenuate on-site flows to the pre-development flow rate
- Rational Method Formula

$$Q=2.78 CIA$$

Where, Q = the design peak flow (L/s)

I = the intensity of rainfall (mm/hr) corresponding to the time of concentration

A = contributing area (ha)

C = the runoff coefficient

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## STORMWATER DESIGN SUMMARY

The project site area primarily consists of park space, therefore a pre-development runoff coefficient of 0.30 was selected based on these existing conditions and best practices for natural prairie. As per the design parameters, the IDF data for the five year return storm design event was obtained from Atmospheric Environment Services. The pre-development peak flow was determined using the Rational Method providing a value of 0.14 m<sup>3</sup>/s.

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## STORMWATER SERVICING OPTION

A post-development runoff coefficient of 0.70 is based on the project site area. It is recommended that the post development flow, calculated to be 0.32 m<sup>3</sup>/s, be attenuated to the pre-development condition.

With consideration to the redevelopment of the site and to ensure adequate capacity within the storm sewer network, the site design will need to acknowledge the anticipated increase in stormwater runoff resulting from the conversion of open space to residential development. Attenuating the flow to the pre-development condition can potentially provide for system improvements by reducing the overall flow into the storm sewer.

Figure 7-5 illustrates the conceptual stormwater plan for the project site area.

As the intensity and frequency of weather events increase, stormwater drainage can be impacted more than other infrastructure during localized and short duration weather events. Although the City's Standards specify that site drainage plans shall clearly identify how stormwater in excess of the 1:5 year return design storm event, it is recommended that the site drainage be designed to attenuate the 1:25 year post development flow to the 1:5-year pre-development flow to minimize impacts to the existing stormwater system during high intensity rainfall events. The 1:25 year return design storm event was chosen based on a review of the City of Winnipeg standards as a best practice.

The post development flow may be attenuated to the pre-development condition by restricting the flow through an orifice plate or restricting the pipe size that connects to the existing stormwater system along McIntosh Street. Further consideration should be given to employing Low Impact Design (LID) principles that would support greater local infiltration and the additional reduction of off-site stormwater discharge.

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## OPINION OF PROBABLE COST – STORMWATER

Item	Extension
Stormwater Servicing Connection	\$20,000
Total Conceptual Cost	\$20,000



**LEGEND**

- EXISTING STORM SEWER PIPE
- - - - - FUTURE STORM SEWER SERVICE CONNECTION
- - - - -> PROPOSED OVERLAND DRAINAGE
- (ST) EXISTING STORM SEWER MANHOLE
- (ST) PROPOSED STORM SEWER MANHOLE

Figure 7-5  
Proposed Stormwater System



## SUMMARY OF CONCEPT SERVICING COSTS

Based on the servicing options presented herein, the information below represents a summary of the opinions of probable cost.

Assumptions included in developing the Opinion of Probable Cost:

- All required servicing costs would be assigned to the Developer of the site recognizing that that the improvements considered benefit only the direct area of development.
- Potable water servicing is external to the project site area.
- Sanitary servicing is external to the project site area, except where specified.
- Stormwater servicing is managed by collection of overland flow to a central internal project site location that has not been determined at this time.
- The cost of road spot repairs has been included.

Developer	Cost
Water Distribution System	\$151,500
Wastewater Collection System	\$195,000
Stormwater Servicing Connection	\$20,000
Roadway (Repaving 3rd Avenue)	\$96,500
<b>Subtotal</b>	<b>\$463,000</b>
Contingency (20%)	\$92,600
Engineering (12%)	\$55,560
<b>Total</b>	<b>\$611,160</b>

Contingency includes, but is not limited to:

- Estimating accuracy based on quantities assumed.
- Suitable condition of existing services to tie into the development.
- Modifications to the site layout or proposed site servicing plan.

Engineering includes:

- Legal survey/plan of proposed subdivision.
- Conceptual / Preliminary Design.
- Detailed Design.
- Tendering.
- Construction Services.
- Resident Engineering.

## IMPLEMENTATION STRATEGY

Concept plans within the City of Swift Current are adopted through a resolution of Council. They are intended to inform the subsequent preparation of a subdivision and development permit application, providing the City with a basis for evaluating the level of compliance of these submissions with the City's vision for this area.

This plan was prepared to align with the City's infill and overall development goals, objectives and policies with consideration to the input provided through public and stakeholder engagement. This plan is intended to establish the core design principles that need to be acknowledged in the actual development of the site. The following sections identify these key design principles which will be used by the City to evaluate the level of compliance that a future development application may have with this plan which in turn will define the approval process and need for additional consultation in the future.

### R3 – HIGH DENSITY MULTI-UNIT DWELLING

To facilitate the residential development envisioned by this plan, the area will require rezoning from the current R2 – Low Density Multi-Unit District to a R3 – High Density Multi-Unit District. The R3 District allows the same permitted uses as the R2 District but includes boarding houses, dwelling groups, multiple-unit dwellings, and terrace dwellings as permitted uses. The application of the R3 District enables the site to be developed as a bare-land condominium where individual dwellings are situated as a group on a single parcel of land. As a condominium development, internal roads and infrastructure as well as green spaces are commonly owned by the occupants.

The unrestricted application of the R3 zone provides the opportunity to construct multi-unit dwellings with no regulation to the number of units developed. To ensure that the plan remains consistent with the intention to limit the number of dwelling groups, the rezoning would be subject to the execution of a contract limiting the forms of residential development to single detached and semi-detached dwellings and multiple unit dwellings not to exceed four units.

The *Planning Development Act, 2007, Section 69 (1)*, allows Council, through the Development Plan, to enter into an agreement with a developer to re-zone land to allow for a specific development. Guidelines as to the terms of the agreement will be specified as per the City's Development Plan. The agreement must be registered against the title, as an interest, before the rezoning will take effect and the development can occur. Zoning reverts to the original zone if the development is found in breach of the agreement. Council may require a performance bond to ensure completion of the agreement.



To support and guide the future development of the St. Joseph School site, the following core design principles shall apply:

#### BUILT-FORM

- a) Perimeter fencing should be constructed and designed to enable visibility from the abutting streets.
- b) The exterior appearance of the dwelling units should be consistent in material, finishing and mass to existing surrounding dwellings.
- c) The layout of the dwelling units should provide opportunities for casual surveillance onto public and private spaces (i.e. Internal and public open spaces, and internal and external streets).

#### DENSITY:

- a) The development shall have a maximum gross density of 20 units per hectare.

#### OPEN SPACE:

- a) A formal landscape design shall be prepared for the development pursuant to the City of Swift Current's Zoning Bylaw as amended from time to time.
- b) An internal sidewalk network should be provided to enable the efficient navigation of the area for all levels of mobility.
- c) All public pathways shall be constructed with an asphalt surface. Internal pathways and sidewalks shall be constructed with either concrete, asphalt, brick pavers, or pavement.
- d) Curb ramps shall be provided where a pathway or sidewalk interacts with a road or lane to allow for pedestrians with wheelchairs or mobility issues to move freely throughout the site.

#### AMENDMENTS TO THE PLAN

Following Council's adoption of this concept plan, any changes to the concept plan presented by a developer will be subject to the *City's Developers Guide for Preparing Concept Plans* (the Guide) amendment process. Where a change to this plan is envisioned, an application is required to be submitted to the Planning and Growth Development Department defining the context of the proposed change. The Guide defines the difference between a minor or major change and the associated process followed to consider the change. A minor change is required to be reviewed and subject to approval by the Development Review Committee. A major change results in the need to restart the concept plan process as defined within the Guide including additional public engagement as required by the City.

#### PHASING STRATEGY

The concept plans design accommodates a multitude of ways in which phasing can be approached to the servicing and development based upon the logical extension of services to the site. As indicated in the servicing section, water, sanitary sewer, and stormwater services originate within the surrounding streets providing the concept plan area an opportunity to tie-into the services via curb stop connections. These services will be investigated in greater detail during the preliminary and detailed design phases

for the development of the site. Ultimately, phasing of the site is contingent on the developers' design layout and overall preference for extending services.