

RURAL MUNICIPALITY OF ROSSER

By-law No. 1-16

BEING a By-law to provide a vision and direction for the development of the Rural Settlement Centre of Rosser within the Rural Municipality of Rosser

WHEREAS *The Planning Act*, S.M. 2005, c.30 – Cap. P80 provides as follows:

“Adoption of secondary plans

63(1) A board or council may, by by-law, adopt a secondary plan to deal with objectives and issues within its scope of authority in a part of the planning district or municipality, including, without limitation, any matter

- (a) dealt with in the development plan by-law;
- (b) dealing with subdivision, design, road patterns, building standards or other land use and development matters; or
- (c) respecting economic development or the enhancement or special protection of heritage resources or sensitive lands.

Consistency with development plan by-law

63(2) A secondary plan by-law must be consistent with the development plan by-law.

Adoption process

64 A secondary plan by-law is subject to the same hearing and approval process required to adopt a zoning by-law under Part 5.”

AND WHEREAS the Rural Municipality of Rosser is a member of the South Interlake Planning District;

AND WHEREAS South Interlake Planning District Board adopted a Development Plan By-law No. 3-10 on July 26th, 2011;

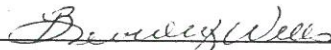
NOW THEREFORE the Council of The Rural Municipality of Rosser in open council assembled enacts as follows:

1. That the Rural Settlement Centre of Rosser Secondary Plan document, attached hereto and forming part of this By-law, is hereby adopted.
2. That the Rural Settlement Centre of Rosser Secondary Plan By-law shall take force and effect on the date of third reading of this By-law.

DONE AND PASSED as a by-law of The Rural Municipality of Rosser at 0 077E PR 221, Rosser in the Province of Manitoba this 28th day of February, A.D. 2017.



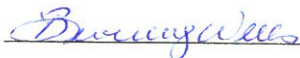
Reeve
Frances Smee



Chief Administrative Officer
Beverley Wells

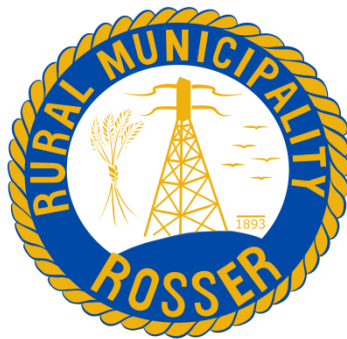
Read a first time this 9th day of February, A.D. 2016.
Read a second time this 11th day of October, A.D. 2016.
Read a third time this 28th day of February, A.D. 2017.

I, Beverley Wells, Chief Administrative Officer of the Rural Municipality of Rosser, certify this to be a true and correct copy of By-law No. 1-16 given third reading and passed on the 28th day of February, 2017 by the Council of the Rural Municipality of Rosser.



2016

A SECONDARY PLAN FOR THE RURAL SETTLEMENT CENTRE OF ROSSER



A Secondary Plan for the Rural Settlement Centre of Rosser, located near the junction of Provincial Road 221 and Road 67N, in the Rural Municipality of Rosser, Manitoba, as prepared for the Rural Municipality of Rosser.

Revision date: August 16, 2016

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Purpose of the Secondary Plan.....	1
1.2	Regulatory Framework.....	1
1.3	Interpretation	2
1.4	Definitions	3
2	LOCATION	4
3	BACKGROUND	6
4	PLAN VISION AND PRINCIPLES.....	7
5	STAKEHOLDER ENGAGEMENT	9
6	DEVELOPMENT POLICIES AND PRINCIPLES.....	10
6.1	Development Concepts	10
6.1.1	Land Use.....	11
6.1.1.1	Objectives	12
6.1.1.2	General Land Use Policies.....	12
6.1.1.3	Rosser Residential Development Area Policies.....	13
6.1.1.4	General Development Area Policies	14
6.1.1.5	General Development - Conditional Uses including Institutional and Commercial Policies	15
6.1.2	Urban Design.....	15
6.1.2.1	Objectives	15
6.1.2.2	Urban Design Policies	15
6.1.3	Parks, Green Spaces, and School Grounds.....	17
6.1.3.1	Parks and Green Spaces Objectives.....	18
6.1.3.2	Parks and Green Spaces Policies.....	18
6.1.4	Environment and Sustainable Development	21
6.1.4.1	Objectives	21
6.1.4.2	Environmental and Sustainable Development Policies	21
6.2	Transportation Plan	22
6.2.1	Transportation Objectives.....	23
6.2.2	Vehicular Transportation Policies.....	24
6.2.3	Active Transportation Policies	24
6.3	Capital Improvement Plan.....	25
6.3.1	Capital Improvement Objectives	25
6.3.2	Capital Improvement Policies.....	25

6.3.3	Wastewater Sewer System Plan	27
6.3.4	Water Distribution System Plan.....	28
6.3.5	Surface Water Management Plan	28
6.3.6	Solid Waste Management Plan	31
6.4	Sustainability Plan	32
6.4.1	Sustainable Energy Objectives	32
6.4.2	Sustainability Policies	32
7	PLAN IMPLEMENTATION STRATEGY.....	34
7.1	Implementation Policies.....	34
8	APPENDIX A – SUBDIVISION APPROVAL PROCESS CHART	35
9	APPENDIX B – LARGE MAPS	36
	MAP 1: SECONDARY PLAN LAND USE AREAS	
	MAP 2: CONCEPT PLAN	
	MAP 3: TRANSPORTATION PLAN	
	MAP 4: CAPITAL IMPROVEMENT PLAN	
	DRAWING 1: RAIL BUFFERING	

TABLE OF FIGURES

Figure 1: RSC of Rosser General Location.....	5
Figure 2: Designs Shall Reflect the Feel of a Heritage Village	17
Figure 3: Land Allocation for Parks is Necessary for Holistic Living.....	18
Figure 4: Ground Profile Showing Setback for Residence and Rail Right-of-Way.....	20
Figure 5: Plantings shall include Native Biota	22
Figure 6: Planning for Infrastructure is Essential for Services Expansion.....	28
Figure 7: A Dry Creek Bed is a Sustainable Drainage Control Method.....	29
Figure 8: Culverts can be Designed as Habitat.....	30
Figure 9: Well Designed Green Spaces and Drainage Exhibit Environmental Sustainability	31
Figure 10: Study the Environment for Free Energy Opportunities	33
Figure 11: Implementation of the Plan Yields a Sustainable Community	34

TABLE OF MAPS

Map 1: RSC Land Use Areas.....	6
Map 2: Concept Plan	12
Map 3: Transportation Plan.....	23
Map 4: Capital Improvement Plan.....	27

1 Introduction

1.1 Purpose of the Secondary Plan

The Secondary Plan for the Rural Settlement Centre of Rosser (RSC) provides a long term vision and development framework for the area based on sound land use planning principles that correspond with the South Interlake Planning District (SIPD) Development Plan. This Secondary Plan provides guidance for the efficient and sustainable development of the Rosser community. This includes setting policies for land use, urban design, parks and green spaces, sustainable development, transportation, and infrastructure in more detail than outlined in the SIPD Development Plan. It is envisioned that all development applications for lands located within the RSC shall be generally consistent with the Secondary Plan.

1.2 Regulatory Framework

The Development Plan is designed to be a high level policy guide but it does not address specific planning details for the RSC. *The Manitoba Planning Act* requires that the Development Plan be used in conjunction with provincial policies, regulations, and municipality and planning district requirements to facilitate the creation of planning controls. These planning controls include Secondary Plans, Zoning By-Laws, Development Agreements, and Building By-Laws.

The Development Plan denotes that any proposed land development shall be put forward in such a way as to *maintain the rural character and nature of the communities while ensuring compliance with the Plan's overall objectives regarding safe, efficient, economic, environmentally sustainable, and compatible land use patterns*. Secondary Plans are useful where a community wishes to develop a large parcel of land and needs infrastructure to support the growing community. According to the Development Plan, a Secondary Plan can address the following:

- Identify centres which are created to accommodate residential development
- Illustrate efficient development in a well-planned manner
- Demonstrate integration into existing roadways and services of the area
- Demonstrate arrangements of future roadways and building lots
- Cite major physical features
- Manage surface water drainage
- Create public open spaces
- Protect prime agricultural land
- Demonstrate planning for municipal servicing and fire protection

As per Section 63 of *The Manitoba Planning Act*, the Secondary Plan for the RSC of Rosser is designed to be consistent with the policies outlined in the Development Plan. This Secondary Plan defines specific objectives and policies for the RSC. It documents unique heritage and resources for preservation, while outlining objectives for land use, infrastructure, and sustainable development strategies.

The Secondary Plan scope includes details respecting:

- Subdivisions,
- Road patterns,
- Building standards, and
- Planned land uses.

Moreover, the Secondary Plan is considerate of economic development opportunities, while protecting heritage resources, and outlining sustainability objectives.

This Secondary Plan reflects objectives for the forecasted residential population and business economic growth of the region as anticipated within a 10-year planning window. As the end of the planning horizon approaches, this Plan will be reviewed and updated according to physical, social, environmental, and economic objectives of the time.

1.3 Interpretation

Acts, Regulations, and By-Laws: Many Manitoba Acts, Regulations, and By-laws are quoted herein. Additional Acts, Regulations, and By-Laws may be applicable for some development types. It is the responsibility of the developer to adhere to all applicable Acts, Regulations, and By-Laws regardless of their inclusion in this Plan.

Figure interpretation: Boundaries, structures, and fixtures shown on the maps, drawings, and images herein are approximate only. A Conceptual Plan shall not be considered a legal plan. Concept plans shall not be used for construction.

Maps: Maps are provided within the body of the document for immediate reference while reading. Larger versions of the maps are included at the end of the report. The maps are not to be interpreted as legal plans.

Revisions to the Law: It is possible that revisions to Acts, Regulations, and By-Laws may occur within the planning horizon. Where an Act, Regulation, or By-Law has been changed following the issuance of the Plan, the Act, Regulation, or By-Law will govern over this Plan.

Definite Grammar:

- (a) The use of “shall”, “must”, and “may” cannot be interchanged as they are written to express specific meanings. The use of “shall” indicates mandated requirements, while the use of “may” indicates that the requirement is dependent on the information presented by the proponent and the decision for institution of the requirement remains with the government at the time. Where “must” is used, it is to be understood as imperative.
- (b) The use of “and” is a conjunctive connector and the word “or” is disjunctive. That is, “and” mean jointly while “or” means one or the other. “And/or” means one or the other or both.
- (c) The plain meaning rule applies. That is, this document is to be understood as ordinary language with ordinary words, technical terms, and cultural terms being recognized with their ordinary definitions.

1.4 Definitions

CentrePort: Land set aside within the Rural Municipality of Rosser and the City of Winnipeg for the development of industrial, manufacturing, and intermodal transportation development, as planned in the Rosser CentrePort Secondary Plan. CentrePort is a 5-minute drive from the RSC.

Concept Plan: A detailed report and/or drawings that clarify elements of a planned development. The plan may include the legal lot layout, lot serving, transportation routes, phasing plan, and implementation strategies.

Development Plan: A development plan is a report which outlines the long-term vision and goals of a community and is used to guide development within the planning area of a municipality or planning district.

Development Concepts: Policies and guidelines applicable to land development, which may also be used to guide a development Concept Plan.

General Development Area: Lands within the RSC which are intended for general uses.

Manitoba Infrastructure (MI): A Provincial government department that manages, plans, and maintains Provincial transportation infrastructure.

OurWinnipeg: The 2015 City of Winnipeg Development Plan.

Roadway Standards: Local requirements which direct the required legal, physical, and construction details of a transportation route.

Rosser Residential Development Area: The land area within the RSC which is not designated as General Development Area, and is planned for residential use.

Rural Settlement Centre (RSC): A community area, as designated within the regional Development Plan. Herein, RSC means the Rural Settlement Centre of Rosser. Subdivisions within the RSC are intended to meet the Provincial Regulation MR 137/2006 definition of an "Urban Residential Subdivision".

Secondary Plan (Plan): A high level report which states the policies and guidelines that are required to accomplish the objectives which were determined by the stakeholders. Typically, a Secondary Plan addresses the planned socio-economic and environmental needs of a community or business area.

Stormwater Management Plan: Documentation of planned methodologies and design which will be applied to control the outflow and quality of surface water that is anticipated to leave a development area.

Sustainable Development: Planning and implementing works in a way that results in a positive long-term social, physical, environmental, and economic impact.

Transportation Plan: A document that includes the evaluation and planning for vehicular and active transport movements through the area in a way that meets objectives and complies with policies.

Urban Residential Subdivision: A subdivision resulting in the creation of lots used or intended to be used as permanent residences located within an incorporated city, town or village, local urban district or any recognized settlement centre.

Water, Wastewater, and Solid Waste Plans: A document that includes the assessment and design of community-based systems for municipal services.

2 Location

The RSC is situated in a prime location that services CentrePort, the City of Winnipeg, and the surrounding agricultural area. The RSC is located near the junction of P.R. 221 and Road 67N, within the Municipality of Rosser as shown on Figure 1. The RSC is a 10-minute drive from the City of Winnipeg and only a 5-minute drive from the CentrePort development area.

The RSC is an asset for the region, as it designates complementary land uses that support rural agriculture, Winnipeg businesses, and CentrePort industries. Firstly, the

RSC is surrounded by highly productive agricultural lands and agri-businesses, which require human resources to operate. Next, Winnipeg and CentrePort are active business centres for intermodal transportation, manufacturing, and commercial enterprises, which require employees for current and developing needs.

This plan captures the vision of a RSC containing 200 lots, which includes private and publicly-owned properties. Several new roads are planned to link the residential neighbourhoods. Municipal servicing, parks, and business development areas are also planned. The location of the development areas are graphically illustrated on Map 1.

The RSC is to be primarily developed for residential use and is surrounded by agriculture lands. The RSC areas are categorized as either general use or residential use. Several livestock operations, mixed farming operations, and a Manitoba Hydro electricity distribution centre are located on the periphery of the RSC. The Canadian Pacific Railway Carberry main line is located on the north side of the RSC and parallel to P.R. 221.

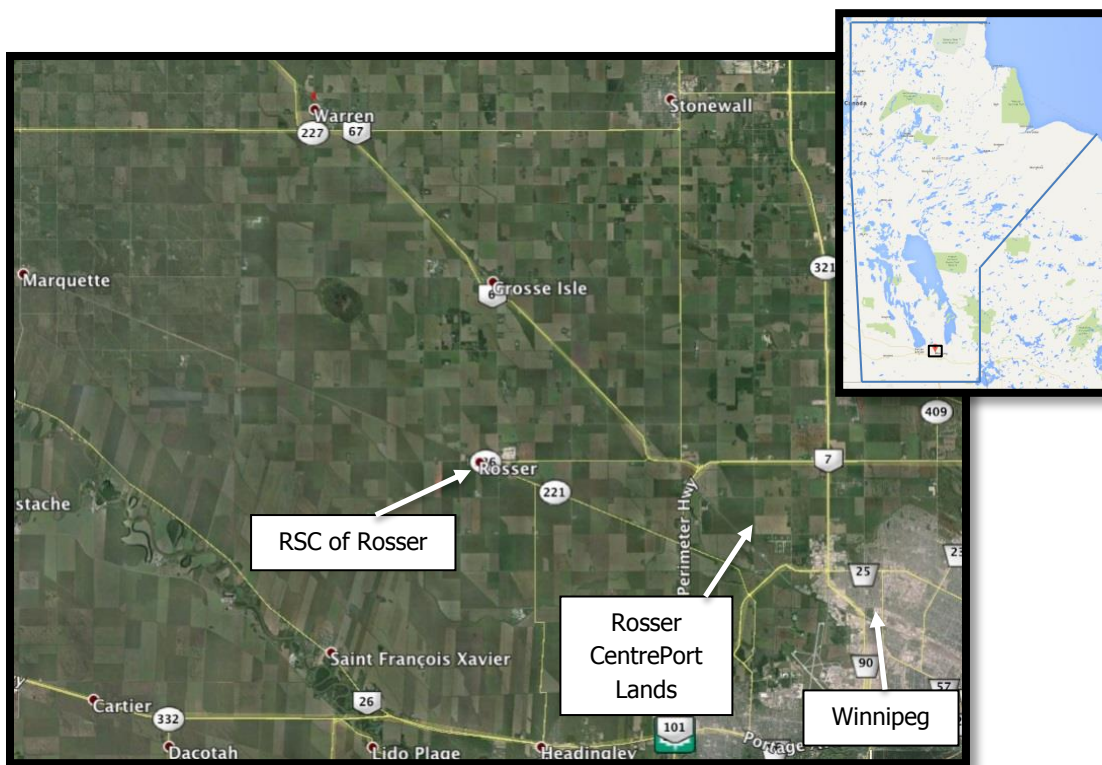
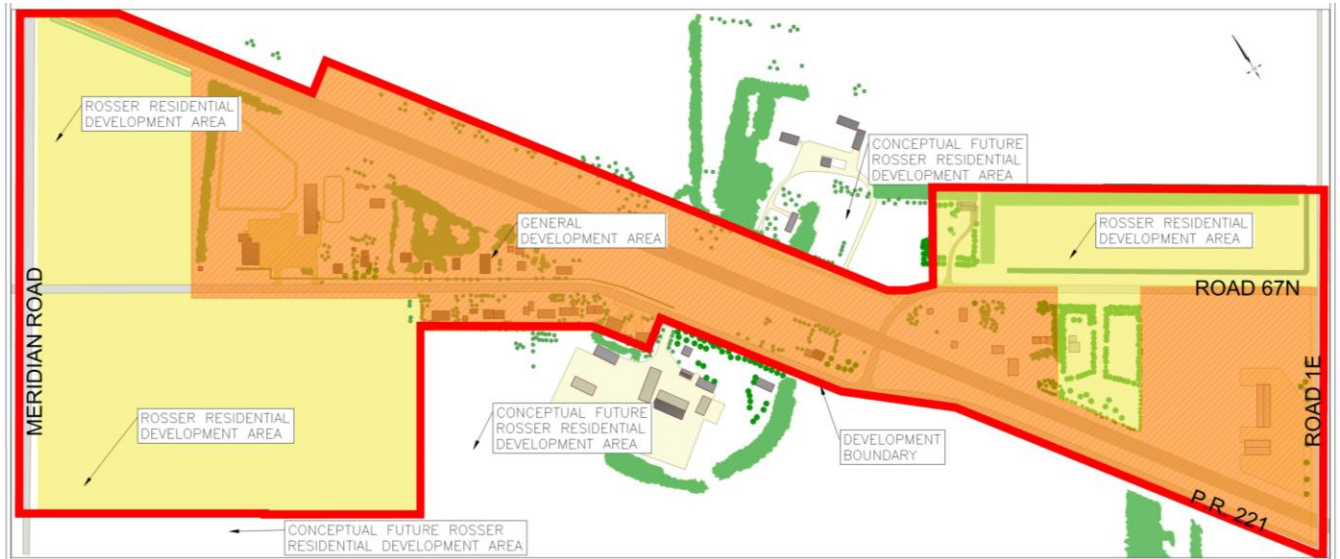


Figure 1: RSC of Rosser General Location



Map 1: RSC Land Use Areas
 (larger version available at the back of the report)

3 Background

In July of 2011, the South Interlake Planning District Development Plan was enacted to provide a cohesive visionary plan for the district area. Within the Development Plan, the Community of Rosser was designated as a rural settlement. In the previously adopted RM of Rosser Zoning By-Law (1985), the land was zoned General Development, however, it is now planned for the land to have multiple zones to account for the different uses planned within. The land designation will now include General Development Area and Rosser Residential Development Area, both of which will be defined as zones in the Zoning By-law. As per the Development Plan objectives, this Secondary Plan addresses the land use, infrastructure, and sustainable development objectives of the settlement area.

The RSC area is a close-knit agricultural community that recognizes the economic benefit of commerce and employment opportunities in and around the Winnipeg Capital Region. Agricultural land use dominates 85% of the area surrounding the RSC and beyond this, Winnipeg and CentrePort predicate the land use. The objective of the Secondary Plan is to realize an increase in rural residential development at this location with minimal encroachment on prime agricultural land, in support of the needs of the agricultural community, Winnipeg, and CentrePort. In essence, this Secondary Plan is supporting a sustainable residential environment that promotes a rural lifestyle and encourages the return of young families to the community.

Farm-related and agricultural-based business is a key industry for Manitoba and Rosser. Rosser is committed to fostering the industry development as global demand for agri-

products continues to grow. Moreover, Rosser acknowledges the transition from an older generation of farmers to the younger generation, and wishes to support the varied needs of generations of the agricultural community.

CentrePort is a land area within the Rural Municipality of Rosser and the City of Winnipeg, which, through the Rosser CentrePort Secondary Plan, is designated for industrial, manufacturing, and transportation uses. Although CentrePort was only recently officially established, the area already consists of a vibrant and productive business community. CentrePort represents a growing demand for employees and business owners, for which this Secondary Plan supports the CentrePort plan by offering land for housing and general development needs.

The City of Winnipeg, through OurWinnipeg, recognizes and embraces opportunities for growth in the business and residential sectors. Recent census reports indicate a population growth rate increase, which is reflected in the economic gains of the City. OurWinnipeg and the strategic plans for communities, transportation, water and waste, and sustainability highlight the opportunities for the RSC of Rosser to exist in symbiosis with Winnipeg's plans.

The RSC of Rosser Secondary Plan encapsulates Rosser's objectives for addressing the needs of the region by supporting rural agriculture, CentrePort, and Winnipeg. This is accomplished through the designation of lands for development, establishments of policies, and infrastructure management plans that support the socio-economic growth through sustainable planning initiatives.

4 Plan Vision and Principles

The intent of the RSC Secondary Plan is to provide a basis for managing growth and development that supports the character, rural lifestyle, and heritage of the region. The policies and guidelines herein have been created in conjunction with the Development Plan to aid in shaping the growth and development of the region. The RSC Vision statements are italicized below:

Create a community that is both livable and sustainable with provisions that support a traditional residential community.

Development in the RSC is intended to provide housing and neighbourhood options to those presently living and working within the community and also to those employed in neighbouring regions. Rosser is a short commute to both the City of Winnipeg and CentrePort and would appeal to regional workers looking to manage their environmental footprint. It is anticipated that with the industrial development and creation of employment at CentrePort and in Winnipeg, the demand for local housing will increase.

Create a community that will be desirable for locally-employed individuals.

The unique character and economy of the region is founded in its agriculture roots; these rural landscapes are an asset and an important part of the community structure. The region is surrounded by diverse agricultural operations and agricultural land. The Development Plan supports rural settlement but outlines that *all development shall be done in efficient land use patterns as to minimize impact on prime agricultural land.*

Promote growth while respecting and protecting prime agricultural land.

Protection of natural lands also plays into long term sustainability and environmental policies for the region. The Development Plan *is supportive of sustainable land use activities that protect and complement its remaining natural environment.* This includes the protection of natural areas and habitats, creation of open spaces, and the development of recreational corridors (cycling, horseback riding, hiking, cross country skiing, etc.). The promotion of the natural environment is fostered through the creation of recreational and pollination corridors, which will service the community while providing habitat to native flora and fauna. These designated areas will also enhance and preserve natural ecological features and functions in conjunction with the vision of sustainable developments.

Preserve and protect the natural environment.

The application of sustainable concepts to the development of residential subdivisions serves to create a community that protects and promotes the natural environment. The vision of this region is that of a village living harmoniously with the environment and supporting regional business. Developments shall be designed with attention to land stewardship principles, management of watersheds and drainage patterns, and thoughtful integration into existing infrastructure.

Plan, design, and build in an environmentally, socially, and economically sustainable manner.

The Secondary Plan supports the application of pedestrian-friendly neighbourhoods, the inclusion of mixed housing, community facilities, and open spaces. These design principles encourage young families, retirees, and others seeking a rural lifestyle to settle in the region. Generally, the lot sizes will be minimized in order to reduce the footprint on the land and to limit encroachment on agricultural lands. Moreover, utility and road right-of-way will be minimized to limit loss of agricultural land.

Minimize the lot sizes and footprint of infrastructure to reduce the encroachment on to agricultural lands.

Commercial uses that promote community gathering places and provide services to the community are encouraged. To maintain the centralized community atmosphere, commercial uses are to be located within the General Development Area. Furthermore, the RM aims to encourage development in a manner that supports the community small businesses and enhances the local flavour. The development of unique markets that support local artisans and producers would serve the community members, positively impact the regional economy, and also increase tourism.

Support the establishment of community-based markets and local business.

Beyond artisan markets, there is an opportunity for commercial developments that are synergistic with the school, community centre, and family-oriented residential neighbourhoods. The RSC is ideally suited for the development of childcare facilities and activity centres and should be planned for the General Development Area. Moreover, the creation of a local childcare system would further encourage families to move into the RSC.

Encourage the creation of businesses which support the holistic needs of residents.

5 Stakeholder Engagement

The engagement and participation of local community members was a critical component of the preparation of the Secondary Plan. Multiple opportunities have been created to allow for conversations, community input, and stakeholder engagement. This includes open houses, workshops, Council meetings, and document reviews.

Public open houses and workshops were held over multiple days in June of 2013. At these meetings, Randall Arendt, a Land Use Planner who specializes in sustainable and efficient design, facilitated the planning and conceptual design of a visionary plan for land use and developments.

Through the community engagement process, it became apparent that the community shared intrinsic values with respect to environmental sustainability. The community upholds the significance of a rural living lifestyle, and therefore seeks:

- Management of the footprint of developments to prevent encroachment on agricultural land
- Creation of a close-knit community with a village feel and a defined core
- Incorporation of existing land features and natural vegetation in the landscape planning
- Revegetation strategies that enhance the environment for pollution prevention
- Implementation of domestic water, municipal sewer, and fire protection services

- Measures that mitigate the increase in post-development surface water runoff

These meetings acted to solidify the community's design standards and Secondary Plan objectives. Several conceptual sketches were developed during the forums and then re-presented to the community in September 2013. Further refinements occurred thereafter as a result of the discussions with stakeholders.

The conceptualization of a land use plan for Rosser led to the identification of municipal servicing requirements (water and sewer). In January 2014, a report was drafted to document the servicing requirements and associated costs. Several meetings were held in May 2014 with the Council, Public Works, and the Manitoba Water Services Board, to clarify roles, responsibilities, and costs associated with the municipal services.

In June 2014, revisions to the Zoning By-Law commenced to reflect the land use plans for the RSC. The proposed Zoning By-Law was further refined and the land use plans were clarified by Municipal Council through meetings held in 2015.

In 2015 the Draft Secondary Plan was shared with branches of government and the utility companies through an informal review process. Feedback received from the agencies was used to refine the Secondary Plan and the associated conceptual design plans.

6 Development Policies and Principles

The Secondary Plan is developed in accordance with the Development Plan. Once the Secondary Plan is passed, development shall adhere to the policies and guidelines outlined in the Development Plan, Secondary Plan, and Zoning By-Law. The Secondary Plan development policies and guidelines included relate to these core elements:

- Development Concepts
- Transportation Plan
- Capital Improvement Plan
- Sustainability Plan

The policies and guidelines for development concepts are included in the following subsection to aid developers in the planning of their land use and overall layout. A land developer is also encouraged to review the policies, guidelines, and infrastructure plans to ensure development compliance with respect to high level planning of roads, capital improvements, and sustainability. These core elements are described in the subsequent sections.

6.1 *Development Concepts*

Development concepts are specific objectives and policies for the development of residential, general use, and recreational spaces. The development concepts aim to

promote rural lifestyles and respect the region's agricultural heritage through policies for the design of development areas. It is foreseen that the development concepts would act as a framework for a subdivision's Concept Plan. Through the application of the development concepts, the plan meets the current community needs while also safeguarding the needs of future generations.

The development concepts include:

- Land Use
- Urban Design
- Parks, Green Spaces, and School Grounds
- Environment and Sustainable Development

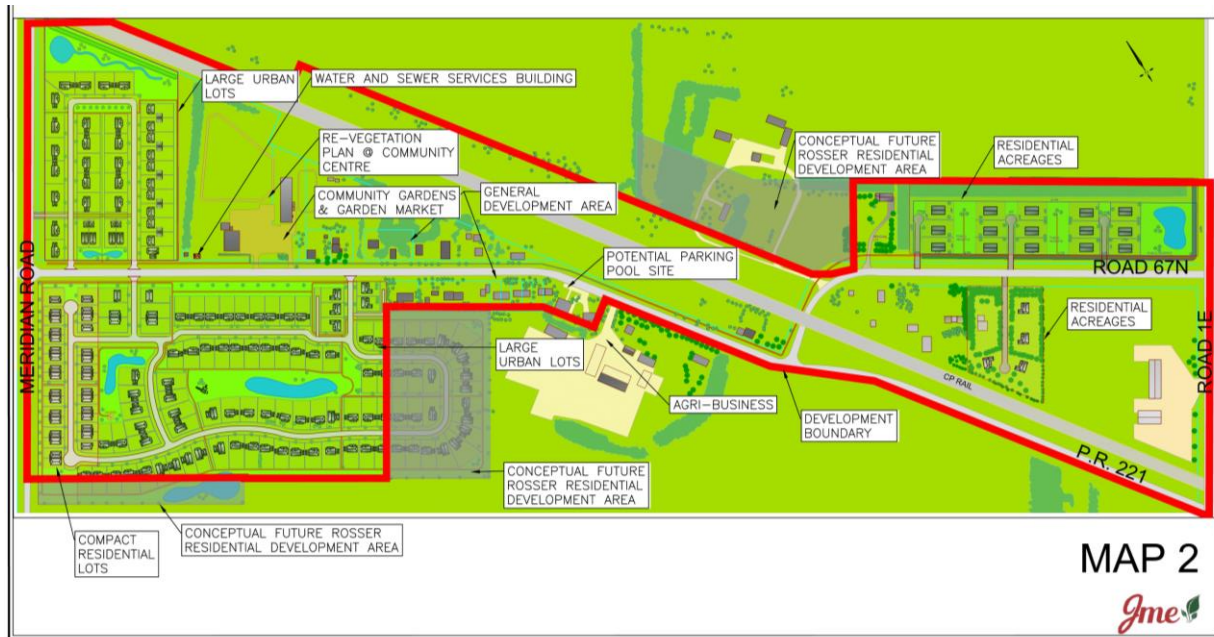
A Concept Plan may be created by a developer to clarify the details of their development. The Concept Plan may include reports, subdivision sketches, drawings, maps, and graphics to clearly indicate how the development meets the objectives of the Secondary Plan by highlighting the strategy, phasing, technical details, and schedule of the development.

6.1.1 Land Use

The Development Plan identifies a growing demand for sustainable residential development and related uses in the district. As per the Development Plan, land use designations shall provide clarity and guidance to foster the development needs.

Planned use areas are identified on Map 2. The existing residential-sized lots at the core of the RSC are planned to be the General Development Area and are intended for mixed uses that support the community's needs. Foreseen development includes infill housing, public buildings, and commercial ventures, with some uses that are more intensive or have a greater impact being conditional upon Council approval, as per the Zoning By-law.

The Rosser Residential Development Area is defined as land areas that meet the development objectives of this plan while also flanking the General Development Area within the RSC. The Rosser Residential Development Area is specifically intended for sustainable residential development - other uses are not permitted. The conceptual plans of residential neighbourhoods is shown on Map 2, where lots are identified as either acreages, large urban, or compact, in line with the Development Plan objectives. Moreover, the conceptual layout of the Rosser Residential Development Area, as shown on Map 2, provides opportunity for future residential expansion by reserving road right-of-way and public land for connections to adjacent land, which would be designated if in symbiosis with future Plan objectives. Foresight has been used to conceptualize future Plan areas, and these areas are highlighted in the maps to assist in planning for future connections of road, sewer, water, paths, and community functionality. The future plan areas will only be considered for development when or if the SIPD Development Plan includes the said areas within the Developable Land Area.



Map 2: Concept Plan

6.1.1.1 Objectives

1. Identification of potential land uses including Rosser Residential and General Development Areas
2. Creation and promotion of open public spaces, pedestrian routes, recreational trails, and connectivity between existing and proposed developments
3. Protection of natural areas and habitat, including development and protection of pollination corridors
4. Protection of prime agriculture lands

6.1.1.2 General Land Use Policies

1. The future land uses shall be limited by the designated zones and be compatible with existing land uses.
2. The Zoning By-Law shall differentiate intended uses and conditional uses, with conditional uses requiring Council approval.
3. New developments shall be planned to connect with the existing infrastructure, to provide accessibility between community areas, and to create soft transitions between land use areas.
4. A development may require a traffic study report to assess the impact to traffic flow and to identify required mitigation measures for safety. The Municipality or MI shall determine instances when a traffic study is required.

5. A Concept Plan shall indicate an efficient land use pattern that maintains the rural character, focuses on the central community, and optimizes the multiple elements of sustainable living.
6. Subdivision lot sizes shall be shown on a Conceptual Plan or Subdivision Sketch. Organization of the lots shall be such that similar sized lots are grouped together. Typically, $\pm 15\%$ difference in lot areas shall be permitted for adjacent lots. Lots shall be no larger than 0.139 hectare ($\frac{1}{3}$ acre) with the majority of the lots being 930 m² to 1390 m² (10,000 to 15,000 sq. ft.).
7. Open spaces shall be planned to meet needs of the community and consideration shall include the integration of recreation, gathering points, and play facilities.
8. To encourage active transport, subdivision block lengths shall be limited to a maximum of 375 m unless intersected by an active transport pathway no less than 3.0 m wide. Additional requirements are found in the *Manitoba Subdivision Regulation 137/2006 (Subsection 3)*.
9. Developments shall include the dedication of land as a Public Reserve and construction of interconnected multi-use trails. The trails shall be planned to link residential, commercial, institutional, and public areas. Inclusion of pedestrian corridors will limit the reliance on automobiles and promote the village atmosphere, as shown on Map 3.
10. A Concept Plan shall demonstrate the protection of native species, habitat, and ecological corridors. Detailed designs may include an analysis of environmental impact and recommendations for mitigation and preservation.
11. Some developments may require additional engineering in order to comply with Manitoba Infrastructure requirements and or Conservation and Water Stewardship requirements. Developers must confirm the design requirements of all regulatory authorities and plan developments accordingly.

6.1.1.3 Rosser Residential Development Area Policies

1. To support the growth of the RSC of Rosser, residential neighbourhood developments shall be located near the centre of the RSC.
2. Proposed residential developments shall incorporate mixed housing types, which will foster a sense of community in a planned subdivision. Housing types should include compact homes, seniors' housing options, and mixed-size urban homes.
3. Concept Plans shall include pedestrian trails on Public Reserve which may be accessed from each lot.
4. Open spaces shall cover a minimum of 20% of the development land area within the Rosser Residential Development Area.
5. Active transportation routes shall be linked between Rosser Residential Development Areas and plans shall provide points for future expansion and connectivity.

6. Designs shall ensure proper connectivity with existing roadways while providing provisions for connections to future roadways.
7. Designs shall be considerate of adjacent land uses and provide buffering and safety measures to address any associated risks. Where development is proposed near Canadian Pacific (C.P.) Railway property, development designs shall comply with the C.P. Railway Guidelines for Residential Developments Near Railways.
8. Sustainable initiatives shall be identified in each development proposal and may include land dedication for environmental benefit. Environmental benefits may include a pollination corridor, nutrient settlement pond, garden of natural plant species, or other initiative that have a known benefit to nature.
9. Infrastructure needs and surface water management strategies shall be identified and land must be allocated during the design phase.

6.1.1.4 General Development Area Policies

1. The designated General Development Area is intended primarily for residential development but may also include institutions, public facilities, and commercial activities that support the community needs.
2. Subdivision and infilling with new homes within the General Development Area shall be encouraged to promote a compact village atmosphere.
3. Streetscaping shall be carefully planned to ensure the village atmosphere is maintained through conceptualization. The streetscaping shall foster multi-use trails, which shall be preserved through the General Development Area to maintain the connective nature of the overall area plan.
4. Non-residential use lots shall provide off-street parking.
5. The use of signage shall be permitted as long as the signage complies with the Rosser Zoning By-Law.
6. Driveways and access points to the main roads should be shared and located at the lot line (where sharing and or locating on the lot line is possible) to improve the safety along the multi-use trail and the safety along the intersecting road.
7. Sustainable initiatives shall be identified in each development proposal and may include land dedication for environmental benefit.
8. Infrastructure needs shall be identified and surface water management strategies shall be designed at the Development Concept phase.
9. Designs shall be considerate of adjacent land uses and provide buffering and safety measures to address any associated risks. Where development is proposed near Canadian Pacific (C.P.) Railway property, development designs shall comply with the C.P. Railway Guidelines for Commercial/Industrial Developments Near Railways.

6.1.1.5 General Development - Conditional Uses including Institutional and Commercial Policies

1. Institutional uses shall be located near residential areas as long as the planned use is compatible with the surrounding neighbourhood in terms of convenience, traffic, noise, architectural design, and landscaping.
2. Concept Plans for land within the General Development Area may include the dedication of land for institutional uses such as additional schools, places of worship, and community facilities. These land uses are subject to approval through the Zoning By-Law.
3. Typical conditional uses of the General Development Area are commercial in nature and may include community gathering centres that support local artisans, rural industry, community heritage, and community needs. Open air markets, farmers' markets, or collective shops and child care facilities provide local employment and services to the community. The Rosser Zoning By-law shall regulate the uses in the General Development Area in accordance with this Plan.

6.1.2 Urban Design

Urban design in the Secondary Plan allows for the creation of a visually appealing community with strong interconnectivity and visual linkages across different land uses. This plan serves to support and guide the development of a livable, unique, and sustainable community in the RSC of Rosser.

6.1.2.1 Objectives

1. Application of strong urban design principles for the creation of a community that is attractive with a high environmental benefit.
2. Landscaping, streetscaping, and architectural standards will serve to create a visually appealing residential community that also promotes sustainability and a holistic lifestyle.
3. The use and design of hardscape and softscape features to create a village atmosphere that retains the agricultural heritage and rural lifestyle.

6.1.2.2 Urban Design Policies

1. Streetscaping guidelines shall be developed to support the desired character and feel of the community.
2. Streetscaping designs shall include hardscape and softscape features that accentuate the village style while providing features that promote active transport and community gathering locations.

3. Street furniture shall consistently follow the rural heritage character of the community and styles shall be blended between regions and sectors thereby ensuring a uniform theme throughout the RSC.
4. Sidewalks or pedestrian pathways shall be installed to encourage active transportation. These paths shall be linked with green space corridors to allow for a network of routes within the community.
5. Through-streets shall incorporate traffic calming measures such as raised pedestrian crossings, curves, and medians, so as to reduce speeds and increase safety for pedestrians.
6. Where possible, streets shall provide two exits which return to the village core, thereby avoiding isolated community areas while enhancing the village atmosphere.
7. Bicycle racks shall be provided at commercial and institutional developments.
8. Outdoor storage and loading shall be controlled by the Rosser Zoning By-Law to ensure the area maintains the desired visual appeal.
9. Store and home fronts shall be designed to provide visual appeal from the vantage point of both the roads and non-motorized trails. The incorporation of various architectural styles may be applied to foster creativity so long as the overall ambiance of a rural village is maintained. This includes the provision of architectural features on two sides of homes (the side facing green spaces and the side facing the streets or lane).
10. Home fronts shall be designed to enhance the village atmosphere; garage faces should be architecturally pleasing, and set back further from the street than the face of the home.
11. Heritage buildings and pre-existing structures shall be taken into consideration when designing new buildings. The heritage styles shall be blended into the proposed developments, enhancing the heritage-village environment. That is, adjacent structures and landscaping shall contain features and styles that are compatible and enhancing to the existing heritage style buildings and landscaping.
12. Existing trees shall be protected and incorporated into neighbourhood designs and green space as a sustainability measure.
13. Trees and other planted vegetation shall be incorporated into the hardscape to provide increased visual appeal as well as to further encourage active transport. When possible, the species planted should be native or naturalized plants that are well adjusted to the region and require minimal care.
14. A minimum of one tree per new lot shall be planted.
15. Any paving adjacent to the vegetation shall be permeable, to aerate the root systems and to provide opportunity for the vegetation to flourish.

16. Trees, shrubs, and other vegetative screenings may be used as sound and visual buffers between major roadways and residential neighbourhoods.
17. Drainage designs and stormwater management practices shall be applied in a manner that mitigates the impact on the community and environment. Surface water shall be managed as a feature which is incorporated into green space and adjacent to pedestrian walkways where and when possible. Refer to the Stormwater Management Section of this Plan for details.
18. The reuse of rainwater for lawn care and gardening is encouraged.
19. Pesticides, herbicides, and fertilizers are controlled substances within the RSC and their use shall be controlled by guidelines set forth by Rosser.



Figure 2: Designs Shall Reflect the Feel of a Heritage Village

6.1.3 Parks, Green Spaces, and School Grounds

The RSC vision includes ample parks and green spaces. This land use will provide recreational, sport, and leisure locations for local residents and visitors to the region. To meet these needs, a blend of large open playing fields, public gardens, play structures, and seating areas shall be allocated in the developable area. Connectivity between the parks and green spaces will allow for the creation of corridors that promote active transport.

These parks and green spaces also allow for the incorporation of edible landscaping into their design. The application of edibles landscape design in green space can provide aesthetics, health, and economic benefits.

Schools, school yards, and community centres are an intrinsic part of a community's living space. These spaces often serve to provide recreation, sport facilities, and play locations. As such, these spaces need to be interconnected with pedestrian routes that link into the Rosser Residential Development Area as well as other parks and green spaces. Safety of users is of utmost importance, and therefore precautions shall be taken to mitigate risks associated with locating parks and green spaces near to areas intended for vehicles, trains, and commercial enterprises.

6.1.3.1 Parks and Green Spaces Objectives

1. Accommodation of the respective needs of the individual neighbourhoods, the community, and the region as a whole. *The Manitoba Planning Act* requires that land be dedicated for public and open spaces in all major developments. This includes creation of playgrounds and parks.
2. Create acoustic, vibratory, olfactory, and visual buffering plus safety measures (when applicable) between incompatible uses.
3. Aid in development and management of surface water drainage and sediment deposition.
4. Protection and promotion of natural habitats for native flora and fauna.
5. Creation and protection of pollination corridors.
6. Promotion of community health and well-being through the process of supplying educational, recreational, social and play locations at the community level.



Figure 3: Land Allocation for Parks is Necessary for Holistic Living

6.1.3.2 Parks and Green Spaces Policies

1. The Rosser Residential Development Area shall have pocket parks. Pedestrian walkways shall be planned to connect these parks within the overall community. These parks must include features such as small scale play structures, seating areas, and public gardens.

2. A Concept Plan shall demonstrate that green space is available and convenient to all residences. Each residence shall have a green space or play park provided within 400 m.
3. Incompatible uses shall be buffered through the use of parks and green spaces with appropriate mitigatory measures to address any negative sensual impacts or safety risks.
4. Green spaces, parks, pathways and play structures shall be designed to be accessible to all residents, including seniors and those with disabilities.
5. The planning and creation of parks and recreational spaces will consider combined use with the school board and school recreational sites.
6. Where feasible, new parks shall be located in areas that maximizes the use and accessibility of existing facilities.
7. Where feasible, the preservation and incorporation of large existing trees, shelter belts, and other sensitive vegetation into parkland shall be encouraged.
8. Buffers between land use areas shall be created. These buffers may be planted with native plant species and dedicated for the creation of habitat and topsoil stabilization. In cases where tree species are not an ideal planting solution, the incorporation of native prairie grasslands and wild flowers presents an attractive alternative. These areas may be parallel to pedestrian routes. The use and creation of native plant groupings will limit the associated green space maintenance within the region.
9. Ecologically sensitive areas, including localized regions containing native species and natural habitats shall be established and protected. Furthermore, the development of natural habitat and preservation of ecological species shall be interconnected via pollination corridors.
10. Regions of the parks or green spaces may be dedicated to the use of community and/or school gardens.
11. Concept Plans that incorporate green spaces must address the control of noxious weeds.

6.1.3.2.1 Buffering and Safety

It is acknowledged that there are potential incompatible uses nearby to the RSC which provide unique challenges and opportunities. All elements of detailed infrastructure, structural, landscaping, and other design must be considerate of the nearby uses such as the rail line, utility station, highway, and agricultural activities, and designs must be completed accordingly. Designs must mitigate any acoustic, vibratory, olfactory, and visual impacts, and address safety risks.

Developers and designers should familiarize themselves with the publication, "Guidelines for New Development in Proximity to Railway Operations," prepared for the Federation of Canadian Municipalities and the Railway Association of Canada, 2013, which recommends building setback distances and buffering techniques for residential neighbourhoods that are planned near to rail facilities.

The Conceptual Plan accounts for the buffering recommendations and provides additional mitigative measures, as shown in maps section of this report. Therein, it is noted that the conceptual setback of the nearest home is 25% greater than the railway association’s recommended setback, as shown in the profile below (and in full size at the back of the report). Also, in addition to chain link safety fence, berm, and acoustic fence, this Plan proposes the use of vegetation such as tall coniferous trees, a dry creek, and a water feature, which all aid in the buffering of the sensual impact of the rail line. Finally, the Plan includes multi-use trails which are designed to provide a safe route of travel for citizens within the community; the multi-use trails convey non-motorized traffic to controlled crossings of the road and rail.

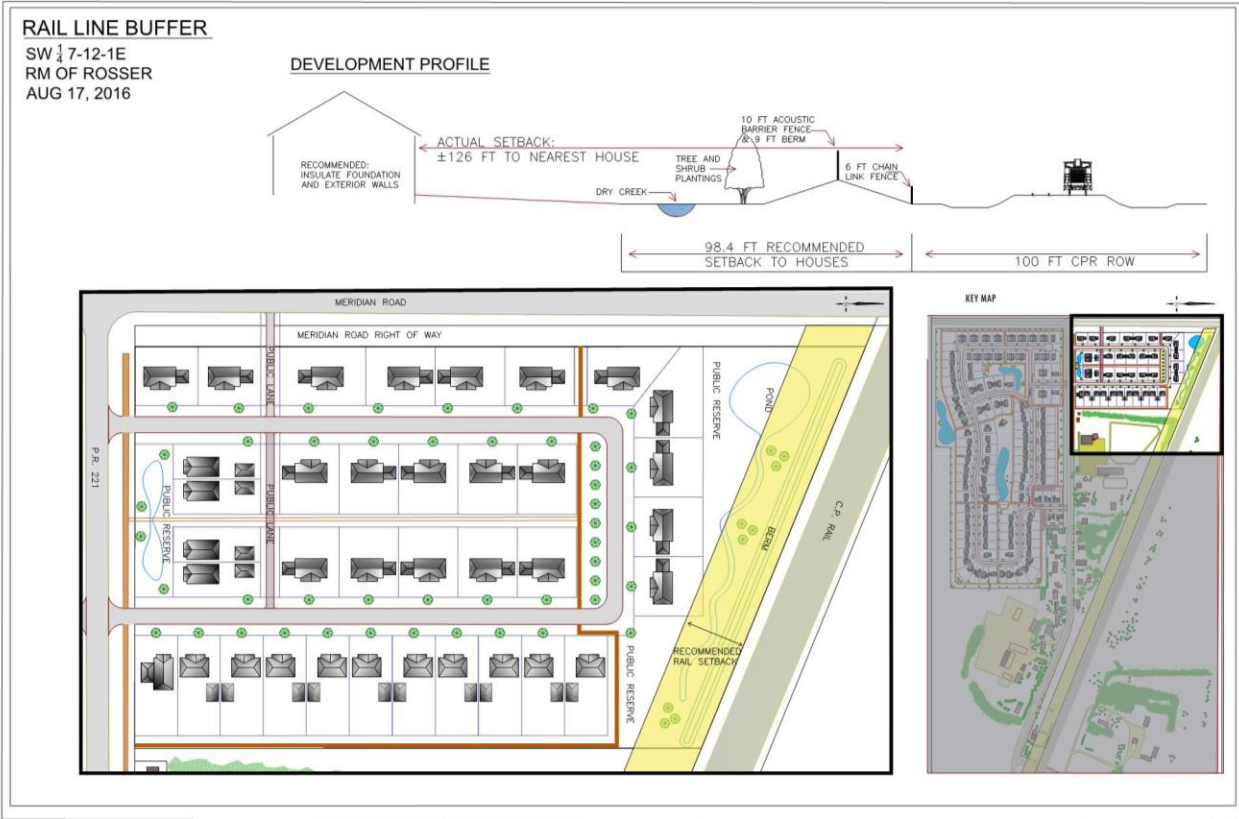


Figure 4: Ground Profile Showing Setback for Residence and Rail Right-of-Way

The above-noted buffering techniques such as vegetated berms, tall coniferous trees, multi-use trails, water features, and construction setbacks are used throughout the community to add to the overall aesthetics while also sheltering community members from other potential incompatible uses.

With proper mitigation of risks and incompatible uses, the resulting community fabric will form a mosaic of sensual attractiveness. That is, landscape buffering that includes water features, elevated berms, treed nooks, attractive barrier fencing, and safe crosswalks are desired features that add to the appeal of the village atmosphere. Likewise, houses and commercial structures that are well insulated and acoustically sealed are compliant with current building codes and meet sustainability objectives.

6.1.4 Environment and Sustainable Development

The RM of Rosser is committed to creating a community that is ecologically sound and promotes long term sustainability of local and natural resources. Being founded on agricultural roots defines this community as one with strong interconnections with the rural landscape and biotic environment. As such, this Secondary Plan serves to outline objectives and policies that will allow for the continued development and growth of the community while safeguarding the local environment and the agricultural systems. The application of a sustainable approach to community development will improve the social well-being, enhance the environment, and build the local economy.

6.1.4.1 Objectives

1. To create a village that is environmentally, socially, and economically sustainable.
2. To create an increasingly self-sufficient community that promotes well-being and health while minimalizing the environmental footprint.
3. To continue to support and protect the agricultural systems, heritage and practices that are integral part of the local region.

6.1.4.2 Environmental and Sustainable Development Policies

1. Homeowners are encouraged to maintain the natural features of landscapes and biodiversity by the inclusion of native and low maintenance species into landscaping plans. Grass species that do not require mowing or have low water requirements are encouraged. Moreover, species which have adapted to the region are also encouraged because these species typically have less reliance on external support.
2. Community focal points such as schools, community centres, and parks shall be centrally located to reduce the reliance on automobiles and promote active transport.

3. Sustainable compact building designs that incorporate energy efficiency concepts to reduce environmental footprint shall be supported and encouraged.
4. Innovative water management techniques shall be incorporated into the Concept Plan and shall include concepts such as engineered dry creek beds, staged settlement ponds, pond aeration, and grass-lined channels.
5. Surface water management techniques shall incorporate natural water filtration and purification systems in retention ponds. Designs shall include the planned reuse of filtered water to reduce reliance on piped water systems.
6. The health of the natural ecosystem shall be protected by reducing air and water pollutants. Other sustainable techniques and technologies shall be encouraged to be adopted by land owners and may include rain barrels, bio-energy and alternative energy, and a green building envelope.
7. Commercial and institutional developments shall include LEED concepts.
8. The RSC shall support community initiatives to plant gardens and edible landscapes on boulevards and other open spaces so long as it does not interfere with traffic (pedestrian or other) flow.
9. The developers may create open spaces that can be managed with minimal maintenance cost/time/resources. This includes cultivating the use of no or minimal mow grasses, application of xeriscaping, or other methods that reduce the need to maintain a space, thereby reducing the greenhouse gas emissions associated with maintenance of the spaces.



Figure 5: Plantings shall include Native Biota

6.2 Transportation Plan

The Secondary Plan provides policy and guidelines for the integration of Transportation Plans at both the community and neighbourhood scales. The transportation objectives consider the differing transportation demands of the new residential areas and the existing regions, while the policies include direction for the design of transportation means between land uses. A Transportation Plan accommodates safety, accessibility, and flow between areas, while meeting the transportation needs of the region. The RSC Transportation Plan concept is shown on Map 3.

In the design of a Transportation Plan, thoughtful planning and consideration shall be given to promote active transportation and car-pooling initiatives, while considering commuter traffic. Transportation networks and pathways shall be created in a manner that supports the village feel and minimizes the carbon footprint. Accommodations shall be made for private commuters to coordinate shared transportations, i.e. as the community grows, it is

prudent to provide parking space and shared-vehicle options for typically-rural commuters and parents who are dropping off school-children. A fluid interconnected network of all transportation systems is required to facilitate the evolution and development of a sustainable community.

Transportation plans include two elements:

- Vehicular transportation
- Active transportation



Map 3: Transportation Plan

6.2.1 Transportation Objectives

1. Promote and improve development areas, community, and regional connectivity.
2. Aid in the planning and development of safe and efficient future roadways and community connections.
3. Create an interconnected transportation network that promotes alternative transportation methods and minimizes the community's ecological footprint.
4. Promote active transportation within the community.
5. Incorporate design elements that facilitate the movement of farm equipment and vehicles.

6.2.2 Vehicular Transportation Policies

1. Roadways and developments shall be planned to facilitate connectivity to major arteries. This may necessitate the inclusion of roundabouts at major intersections as the community grows and develops.
2. All proposed new roadways shall minimize impacts on existing infrastructure, with internal road networks designed to minimize access points to major routes – two access points being the preferred internal road plan.
3. The installation of landscaped medians shall be encouraged. The creation of landscaped medians or roundabouts at the entrance to developments may be utilized to draw attention to the development entrances.
4. In developments fronting a main road, single-lined houses on service roads may be installed to limit the number of access points to the major roadway. Where service roads are not possible for lots fronting onto the main roads, driveway approaches may be shared at the lot line.
5. Roadway planning shall apply width allowances required for the safe transportation of farm equipment while minimizing the disturbance to traffic flow and circulation.
6. Traffic calming approaches shall be applied to residential areas to slow traffic flow, improve safety, and reduce through-traffic in neighbourhoods.
7. The development of roadways and active transport corridors shall be inclusive for persons with limitations to mobility. This may include the creation of handicap parking stalls near parks, plus roadway and active transportation designs which are constructed to accessibility Standards.
8. Rosser Roadway Standards shall be enacted by the Municipality and implemented by development designers. The Standards shall provide direction with respect to pavement widths, grades, and material compositions, in compliance with RSC sustainability objectives and Provincial Regulations.
9. Permits must be acquired from MI with respect to new approaches and roadway intersections with Provincially roads under the jurisdiction of MI.

6.2.3 Active Transportation Policies

1. The development of active transportation routes throughout the community shall be encouraged. These routes shall be installed so as to connect parks, residential, commercial, and institutional facilities.
2. Sidewalks or paths shall be built in parallel to roadways to encourage safe alternative routes for active transport.
3. Safe active transport routes and crossings shall be incorporated into the transportation network.
4. Bicycle parking facilities shall be made available at green spaces, commercial locations, and at parking pool locations.
5. Standards for active transportation design shall be prescribed by Rosser.

6. Accommodations shall be made for safely crossing the rail right-of-way, to permit connectivity between the community areas.

6.3 *Capital Improvement Plan*

The municipality will manage growth and development in line with the vision of achieving sustainability and self-sufficiency. Expected growth and development within the RSC necessitates the expansion of municipal infrastructure. The Development Plan states that *all urban development shall be connected to municipal services such as sewer and water where available*. Conceptual plans for the proposed expansion and creation of municipal sewer and water systems are outlined on Map 4, and can be reviewed in detail in the Conceptual Servicing Report, 2014. The Plan was prepared in accordance with the Development Plan and take into consideration projected population growth within the region.

There are four elements to the Capital Improvement Policies, which include:

- Wastewater management
- Water for domestic use and fire protection provisions
- Surface water management
- Solid waste management

6.3.1 *Capital Improvement Objectives*

1. Plan systems to address community needs related to wastewater, domestic water, fire protection, surface water, and solid waste management.
2. Plan for a smooth transition as the community shifts from on-site wastewater management to a community-based system.
3. Incorporate sustainability concepts to reduce the environmental impacts of the municipal systems.

6.3.2 *Capital Improvement Policies*

1. Concept Plans shall demonstrate how the development area will be serviced by municipal sewer and water.
2. Every new lot shall be provided with a connection to the municipal sewer and water. Where the sewer and water mains are not in place at the time of subdivision, lot purchasers are required to pay for and connect to the main within 12 months of the availability of the service.
3. Concept plans shall include a Stormwater Management Plan.
4. Water conservation and water use efficiency shall be promoted by Rosser. Where development plans indicate a proposed high water demand, the proponent will

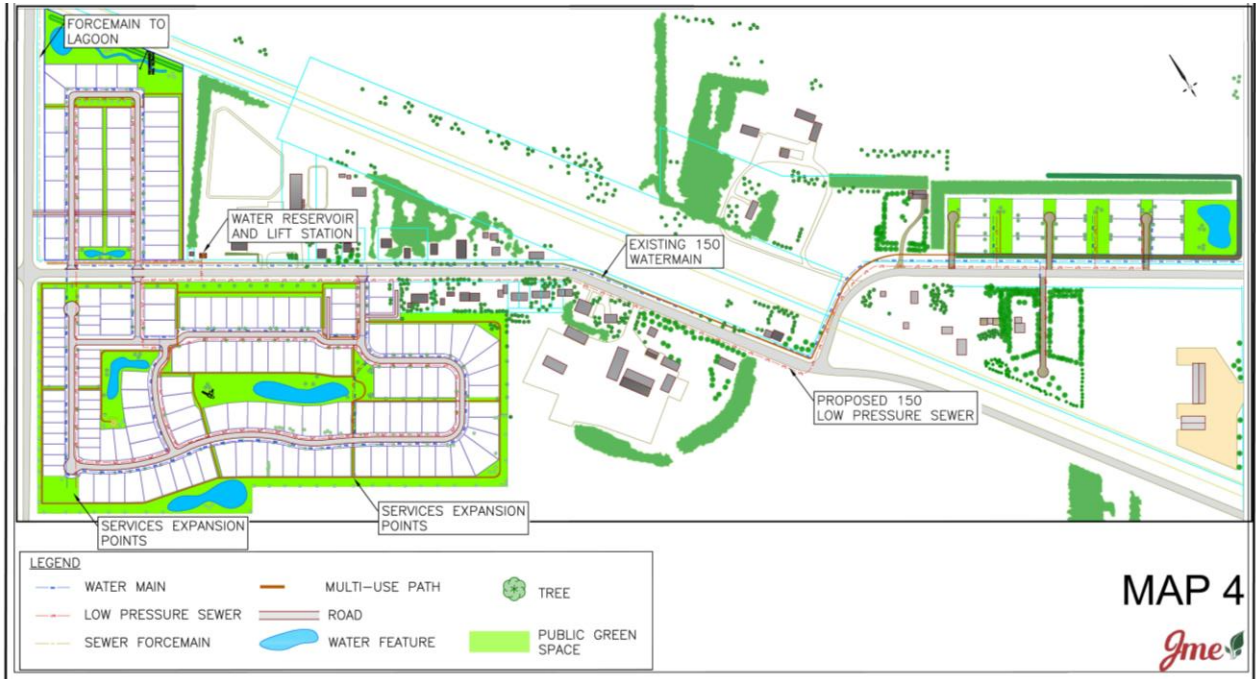
be required to provide details of planned water management strategies. Developments with planned high water demand will be conditional upon Council approval.

5. Solid waste generation and management shall be reviewed by Rosser, with the aim of reducing community waste generation and optimizing recycling, reuse, and repurposing strategies.
6. All capital asset systems shall be assessed and managed to minimize the energy and resource demands.
7. All water and sewerage systems must comply with the *Public Health Act*, and the *Water Works, Sewerage and Sewage Disposal Regulation MR 331/88R (Sections 6 and 7 and the Amendment)*.

In addition, these policies related to system design are guided by the *Manitoba Act 62.2(3)* and *Manitoba Regulation MR40/2007*.

8. System designers shall provide the analysis undertaken to confirm if the existing drinking water and wastewater services have sufficient capacity to accommodate the projected development needs.
9. System designers shall describe the methods employed to protect the environment and public health and safety within the provision of drinking water and wastewater services.
10. System designers shall ensure that the capacity and sustainability of the sources of water on which the services rely will not be exceeded.

The Development Plan states that *the availability and timing of the municipal servicing system extensions shall help direct the staging of future developments*. And as such the Capital Improvement Plans are proposed herein. A conceptual layout of the infrastructure is shown in Map 4.



Map 4: Capital Improvement Plan

6.3.3 Wastewater Sewer System Plan

The installation of an adequate wastewater management system is imperative to the health of the community and of the region. Wastewater generated from homes and institutions is currently managed with septic tanks and fields or holding tanks, and trucked to the municipal lagoon, three miles away. The sustainable solution for future development is the installation of a wastewater collection system in RSC. The existing lagoon is sized to accommodate the projected population growth for the next ten years. Future development beyond the current planning horizon may necessitate an expansion to the lagoon.

Given the spread of the community, grading of the land (relatively flat), and sustainability objectives, a low pressure sewer system is recommended to address the needs of the settlement area. The effluent will be transported via pipes and lift stations to the existing lagoon while the solid waste will be removed from tanks on an annual basis. This method of sewer management is the most sustainable option as it permits the break-down of organics at the service site, thereby reducing the size requirements of a wastewater lagoon.

The proposed wastewater management system will be developed and installed in phases to meet the needs of the community as it grows and develops. The need for a lagoon expansion will be reviewed and considered for implementation towards the end of the planning period, approximately 15 years after the start of construction of new

developments and installation of piped connections from the RSC of Rosser to the lagoon. Environmental methods that reduce the lagoon settling time and manage nutrient loads will be investigated during this planning period, as an alternative to lagoon expansion.

Given the proposed staged installation/development of the municipal wastewater management system, it may be that homes in new developments do not have access to the municipal sewer at the time of construction. In these cases, home owners are requested to install a two staged holding tank with a baffle system. This type of tank is compatible with the low pressure sewer system that is to be installed. The home owners will be responsible for pumping these holding tanks until the homes are connected to the municipal wastewater system.

6.3.4 Water Distribution System Plan

The region is presently serviced by private groundwater wells and a 150 mm domestic water supply line with services provided by the Cartier Regional Water Co-Operative. Due to demands on the line, the water pressure currently fluctuates, and future fire suppression requirements would not be met. The proposed solution is to construct a water reservoir and pressure booster pumps, which would equalize the pipe pressure and ensure that the domestic and fire suppression needs of the RSC are met.



Figure 6: Planning for Infrastructure is Essential for Services Expansion

6.3.5 Surface Water Management Plan

At present, the Rosser Residential Development Area is largely comprised of annually cropped land. Stormwater drainage is detained on the land and follows natural courses and field swales, until it reaches ditches or municipal drains on the perimeter of the RSC area. Moreover, within the General Development Area, the present density of structures is also very light. Moving forward, as development in the community progresses, the frequency of non-permeable surfaces, density of structures, and land coverage by mowed grasses will necessitate engineered water management practices.

Proper water management practices include:

- Maximizing infiltration of runoff to recharge regional groundwater systems
- Installing retention ponds

- Designing detention areas that slow the rate of runoff
- Minimizing the impervious footprint
- Redirecting runoff into directions beneficial to landscaping
- Capturing and filtering water for future re-use

In following the direction of the community and environmental sustainable policy outlined in this document, sustainable stormwater management practices and principles are also recommended. The application of environmentally conscientious water management practices achieves long-term sustainability while promoting the growth of the community.

During the development of the land, there will be a predictable increase in runoff water from the construction of buildings and hard non-permeable surfaces such as roads, driveways, and parking lots. The water collecting and moving from these surfaces is often contaminated with material and pollutants accrued on roadways. It is imperative that this water not only travels through appropriate drainage channels but that it is also filtered before leaving the community area.

Concepts are included to mitigate the environmental risks of surface water pollution and to protect the future ground water supply. Options for mitigation include:

- Permeable road surface
- Long drainage routing channels
- Catch basins and retention ponds
- Vegetated swales and dry creek beds
- Natural and mechanical water filtration systems
- Runoff collection and recycling
- Biomass recovery and reuse
- Rain gardens
- Dry wells



Figure 7: A Dry Creek Bed is a Sustainable Drainage Control Method

It is recommended that new roadways and parking facilities are constructed with permeable surfaces when possible. These surfaces allow for increased water infiltration and will reduce the amount of runoff. The surface shall be designed to allow for water filtration as it travels through the engineered road system and into the water table. This filtration will serve to aid in the removal of harmful contaminants from the water before it enters the natural water reserves. The application of permeable surfaces assists in the growth and development of urban forests. Moreover, these surfaces allow for the creation of air and water pockets that are not normally possible below hard surfaces. Finally, this microclimate is favourable to root development.

It is anticipated that even with the installation of permeable paving surfaces, stormwater will still need an overland drainage route. These permeable surfaces will only be able to facilitate the drainage of a percentage of the surface water. As such, long drainage channels and retention ponds will be built into the green spaces and corridors of the community.

Drainage paths shall be created to follow pedestrian routes and ecological corridors. These will drain towards the proposed retention ponds or the existing ditches and drainage channels at the perimeter of the RSC. These planned features will aid in active water transport and also increase the aesthetics of the parks and green spaces. The incorporation of swales vegetated with native species, dry creek beds, and French drains provide for varied hardscape and softscape details.

Retention ponds create a catchment for excess runoff that cannot be dissipated through infiltration or evaporation. Often, the water from an urban catchment area is contaminated with chemicals, petrochemicals, or salts; these contaminants enter retention ponds and make the water therein unusable for other purposes. In order to manage the risks associated to these pollutants, it is suggested that two-tiered retention pond systems be created in the residential areas, with one shallow vegetated tier and a deep oxygenated tier. Land use management practices will also be imposed to restrict the opportunity for chemical and pollutant introduction. Cattails growth is also encouraged around the edge of the retention ponds to deter geese.

Drainage patterns will divert runoff and stormwater towards the shallow retention pond. The shallow first tier may be heavily vegetated with reeds, bulrushes, and other semi-aquatic (occasionally wetted) perennial species. The root systems of these plants will serve to filter and immobilize the pollutants while the shallow, slow moving water will encourage the removal of suspended sediments. The water entering the shallow pond will overflow into a second, deeper retention pond.

The second deeper retention pond would be filled with filtered and decontaminated water from the shallow pond. This water will be oxygenated through the incorporation of a fountain or other aeration method. The water from the deep pond will then be available for irrigation and other municipal maintenance uses.

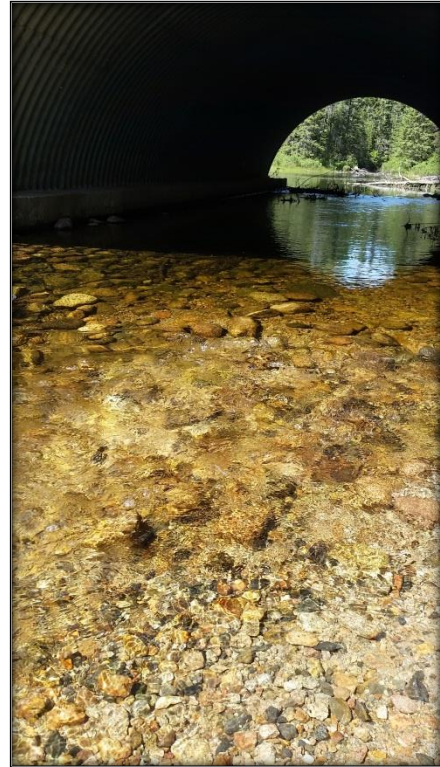


Figure 8: Culverts can be Designed as Habitat

Stormwater retention ponds and adjacent green spaces shall be designed to deter the use by Giant Canada geese. Large nesting and migrating populations of Giant Canada geese are known to be destructive to an area due to:

- Overgrazing - which damages the vegetation.
- Excessive defecation and molted feathers - which contaminate the soil and water.
- Aggressive behavior – which is a risk to humans who are using the space.

Developers are encouraged to design naturalized ponds that include brush or tall grass species adjacent to the periphery of the pond and emergent vegetation in the basin. Rock and woody material may also be used as shoreline landscaping that discourages goose establishment. If ramps are installed for maintenance, ramps should have barrier fences adjacent to the water's edge.

At the individual property level, the Secondary Plan supports the utilization of rain and runoff capture techniques. The installation of rain barrels and cisterns to capture water from roofs will prevent it from entering the stormwater management system. This water can then be repurposed for non-potable water purposes such as irrigation. Not only does this limit the amount of water entering the drainage system, it also aids in a reduction to the stress applied to the water supply system for the community. A 'free' supply of water for gardening and lawns reduces the amount of domestic water demand required by residences.



Figure 9: Well Designed Green Spaces and Drainage Exhibit Environmental Sustainability

6.3.6 Solid Waste Management Plan

Rosser operates a solid waste transfer station, which is located north of the RSC. Currently, many community members deposit their waste directly at the transfer station, where bins and allocated areas are used to sort waste streams. Rosser manages the waste site and coordinates recycling pick-up times.

It is planned that new developments within the RSC would be serviced with a solid waste pick up service. Details of the service shall be planned in a manner that minimizes refuse, as per the policy.

6.4 Sustainability Plan

In line with the community's goals of being self-sufficient, sustainable, and efficient, it is proposed that the residents, stakeholders, and municipal leaders embrace opportunities to increase self-sufficiency at a community level. As the economic climate shifts and alternative energy sources become more in demand, having a community-based industry and energy supply plan will be an asset. Moreover, fostering the development of local industry will allow for increased local employment, reduced traffic, reduced transportation costs, and lead to a greater resilience.

One method of measuring a community's ecological footprint is to assess the carbon consumption. This may be completed for different types of community members (i.e. employee, student, resident) and for the community as a whole. The planned carbon consumption may be evaluated for different scenarios that reflect choices in energy supply, building materials, and community systems.

There are a number of industry options that may meet the energy needs of the community while reducing the community's carbon consumption. In addition, these industries may be created to further support the regional agriculture systems. It is important that these business ventures are assessed for their net-carbon-benefit.

6.4.1 Sustainable Energy Objectives

1. Creating a sustainable community with a zero-carbon-impact.
2. Improve community economy.
3. Adopt sustainable energy use at the residential level.

6.4.2 Sustainability Policies

1. Rosser shall evaluate the RSC carbon demand and assess opportunities for reducing demand and creating carbon credits.
2. Rosser shall encourage the adoption of sustainable energy solutions.
3. Business developments that align with the energy objectives shall be encouraged.
4. Developers shall implement sustainable energy reduction or sustainable energy supply strategies.
5. Building Standards shall be implemented, and shall include building efficiency and sustainability targets.

Some sustainability strategies to consider include:

- Neighbourhood planning to maximize solar gain and minimize wind chill
- Community-based or home-based geothermal systems
- Micro-grid sustainable energy supply for a development area
- Solar powered street lamps
- Wind turbines and solar energy systems for individual homes or businesses
- Bioenergy heating supply from agricultural or waste bi-products, i.e. using biomass to produce alternative heating sources
- Creating a linkage relationship with CentrePort to facilitate the re-purposing of waste products into potential heat sources i.e. processing pallets and other shipping materials into locally reusable materials
- Adopting guidelines and strategies for home owners in the community to install and use pellet stoves or other biomass heat sources in homes and facilities
- Municipal lagoon nutrient stripping through biomass harvesting



Figure 10: Study the Environment for Free Energy Opportunities

The creation of biomass processing facility within the region would create local employment, support local agriculture, and reduce the community's needs for external energy sources. In addition to the use of waste products from agriculture systems, there is potential to link-in to CentrePort and utilize waste products within the goods transportation chain as well. During the future planning and land dedication, it is recommended that consideration is given to potential industry and locations best suited to meet the needs of the proposed industry type. This includes mindful planning of transportation routes, linkages into the community (incorporation into proposed walking paths) and waste management.

These alternative energy sources can be further supplemented by the capture and utilization of 'free' energy. This could include the adoption of zone-based or home-based geothermal, solar, or wind energy.

Given that a primary goal for the RSC of Rosser is the preservation of agricultural land, it is recommended that alternative energy sources be implemented within the community footprint, i.e. large wind and solar farms would not be advised. Instead, the optimization of the positioning of homes and roof angles may facilitate the successful incorporation of passive solar capture, active solar capture, or wind capture systems. Other sustainable energy options that

do not require land area may also be considered. The utilization of free energy sources will serve to reduce the ecological footprint of the community and promote long term sustainability.

7 Plan Implementation Strategy

The Secondary Plan for the RSC of Rosser has been created as a collaborative work that aids in guiding the development and growth of the community in a sustainable manner. Many of the ideas presented herein are conceptual and have been documented to be used as guiding tools during the development process. During the development and growth period, modifications to the Secondary Plan may be required. Discussion on required modifications should be approached in a collaborative fashion and will be supported so long as the original intent of the document is maintained. The documented ideas presented herein guide the Zoning By-Law, Concept Plans, and follow the applicable Codes.

7.1 Implementation Policies

1. Developments shall comply with the Policies set forth herein, with Development Agreements reflecting the requirements of the Plan.
2. The Rosser Zoning By-Law shall be updated to reflect the Plan.
3. Revisions and creation of new Rosser By-Laws and Standards shall be completed as necessary for the successful implementation of the Plan.

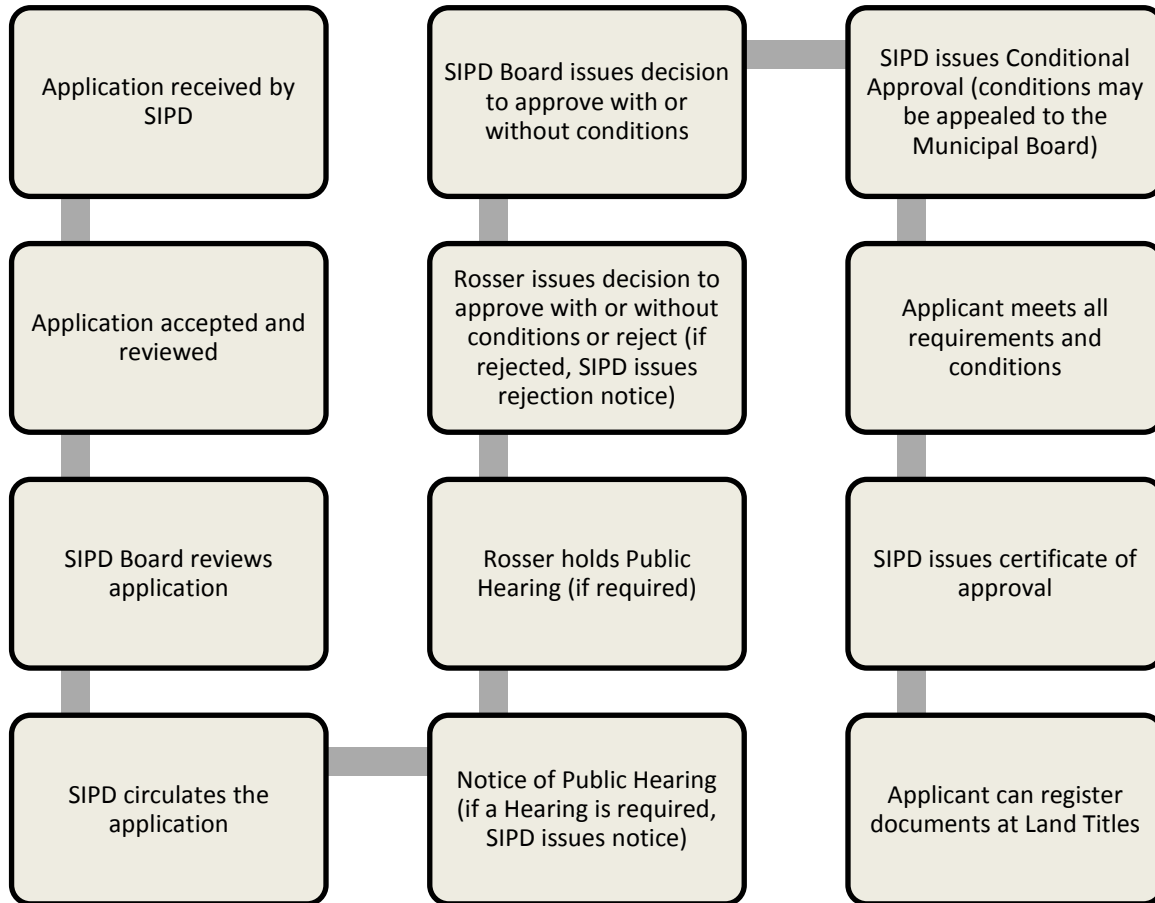


Figure 11: Implementation of the Plan Yields a Sustainable Community

8 Appendix A – Subdivision Approval Process Chart

Process for Subdivision Applications

Rosser and SIPD as Approving Authority



- Circulation Inclusions:
- Agriculture
 - City of Winnipeg
 - Conservation and Water Stewardship
 - Canadian Pacific Rail
 - Heritage Resources
 - Infrastructure and Transportation
 - Manitoba Hydro
 - Mines Branch
 - MTS Inc.
 - Office of the Fire Commissioner
 - South Interlake Planning District
 - Rural Municipality of Rosser
 - Transport Canada
 - Winnipeg Airports Authority

9 Appendix B – Large Maps
