



# The Waterford Estates SW Outline Plan

MAY 2024

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# 1.0 Introduction

The Waterford Estates SW Outline Plan (OP) provides planning policy direction and support for the land use and future subdivision of the lands on the southwestern boundary of the City of Chestermere. The outline plan presents a neighbourhood concept that aligns with the Chestermere Municipal Development Plan (MDP) vision to create distinctive communities that promote a safe, family-oriented and sustainable environment.

The plan area lands are located within the "South Community" in the Waterbridge Master Area Structure Plan (MASP) and within the Waterford Area Structure Plan (ASP). Ultimately, the lands will form a logical extension of proposed future developments, including the Waterford Stage 1 Outline Plan, which is located to the north and east of the site.





2.0

**Site Context**

## 2.1 Location & Ownership

Waterford Estates SW is located at the city limits within the southwestern quadrant in Chestermere. It is identified within the "South Community" in the Waterbridge Master Area Structure Plan (MASP) and forms the southernmost portion of the Waterford Area Structure Plan (ASP).

The plan area comprises ±64.74 hectares (±160.00 acres) of land and is bounded by Waterford Estates SW Stage 1 Outline Plan to the north, Paradise Meadows, an existing estate subdivision to the east, Township Road 240 (Peigan Trail) to the south, and Range Road 284 (Conrich Road) to the west.

Waterford Estates SW is wholly owned by Pollyco Developments Ltd. and comprises all of SW ¼ Section 4-24-28-W4M.

## 2.2 Existing Land Use

The outline plan area is undeveloped and prior to development is designated as Urban Transition. The intent of the Urban Transition District is to hold land awaiting urban development and utility servicing in a relatively undeveloped state. Adjacent land uses include Urban Transition (UT) District, Large Lot Rural Residential (LLR) District, and the Ranch and Farm (RF) and Hamlet Industrial (HI) districts in Rocky View County.

On adjacent lands to the north, the "Waterford Stage 1 Outline Plan and Land Use Redesignation" has been approved by the City. Various land use districts were approved for this plan, all of which complement the Waterford Estates SW Outline Plan area.

Paradise Meadows, a large lot subdivision, is located on adjacent lands to the east. Special consideration has been made to ensure a compatible interface between the Outline Plan area and Paradise Meadows. Should future land owners wish to redevelop and add more homes, a street connection with Waterford Estates SW has been preserved.



## 2.3 Site Conditions

The Waterford Estates SW OP is characterized by gently rolling topography. The lands generally slope towards the southwest portion of the site.

A Biophysical Impact Assessment (BIA) completed for the Waterford ASP identified one Class II wetland, one Class IV wetland, and three non-wetlands within the outline plan area. In December 2017, a BIA was completed by Sweetgrass Consultants Ltd., subsequently a June 2021 update was completed by Tannas Environmental, which revised all sites as ephemeral water bodies and one (1) wetland.

Among the identified ephemeral water bodies is a naturalized drainage course at the northeast corner of the plan area. The drainage course flows north to south, connecting adjacent lands to the Western Irrigation District canal (WID).

Due to the history of intensive agricultural land use within the plan area, existing native habitats are small and mostly isolated, and overall, the lands have a low potential for wildlife biodiversity.

There are currently no existing piped municipal water, sanitary or storm water facilities within the plan area, and there are no known gas wells or pipelines on site.





3.0

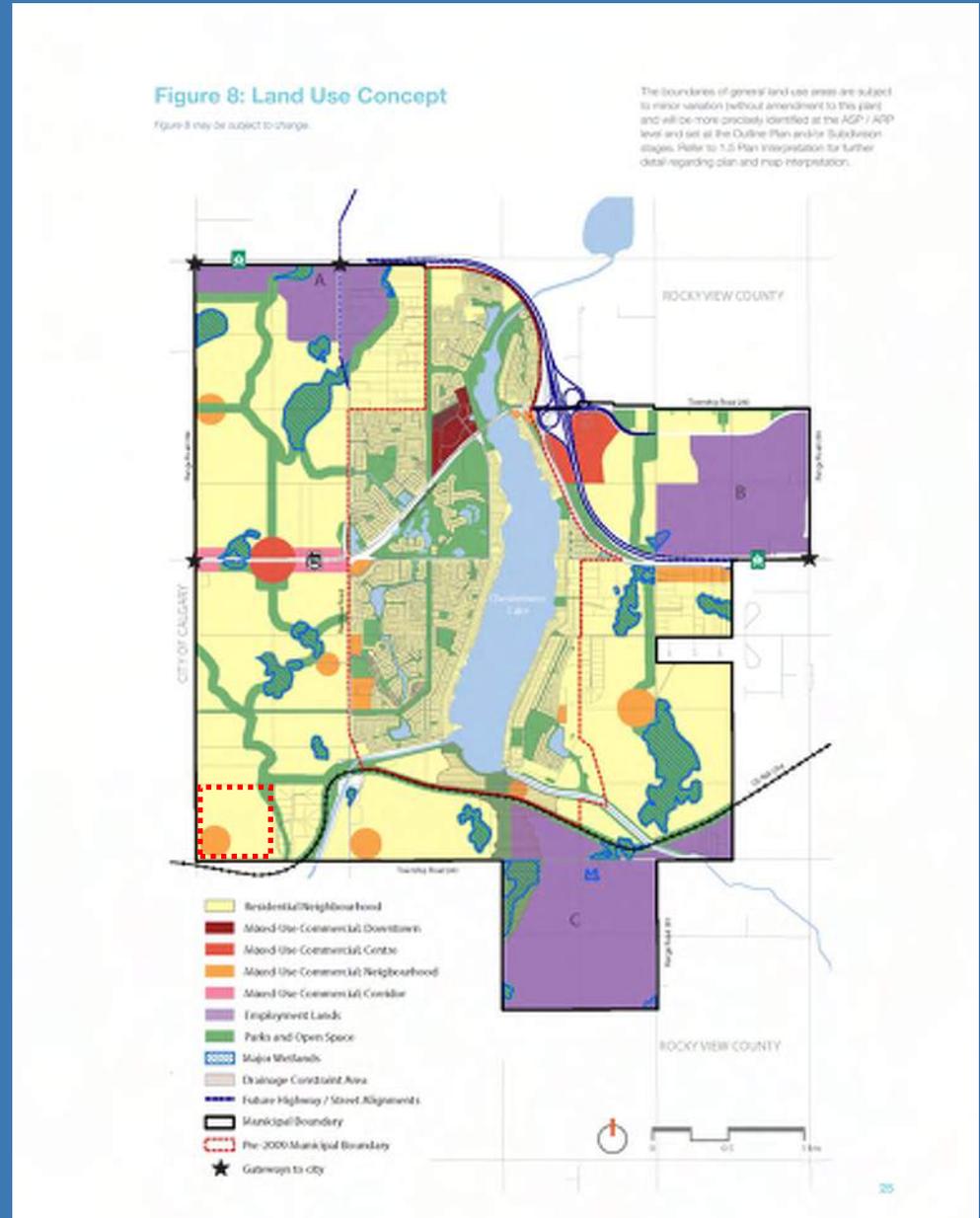
# Guiding Plans & Policies

# 3.1 Municipal Development Plan

In 2016, the City of Chestermere adopted a new Municipal Development Plan (MDP) (Bylaw No. 015-15), providing city-wide vision, goals, and policies to direct long-term growth and development. The MDP identifies the Waterford Estates Outline Plan area as a Residential Neighbourhood, with a Mixed-Use Commercial node and open spaces connected to the overall City open space and regional pathway network.

The lands subject of this Outline Plan are outlined in a red dashed line on the adjacent map.

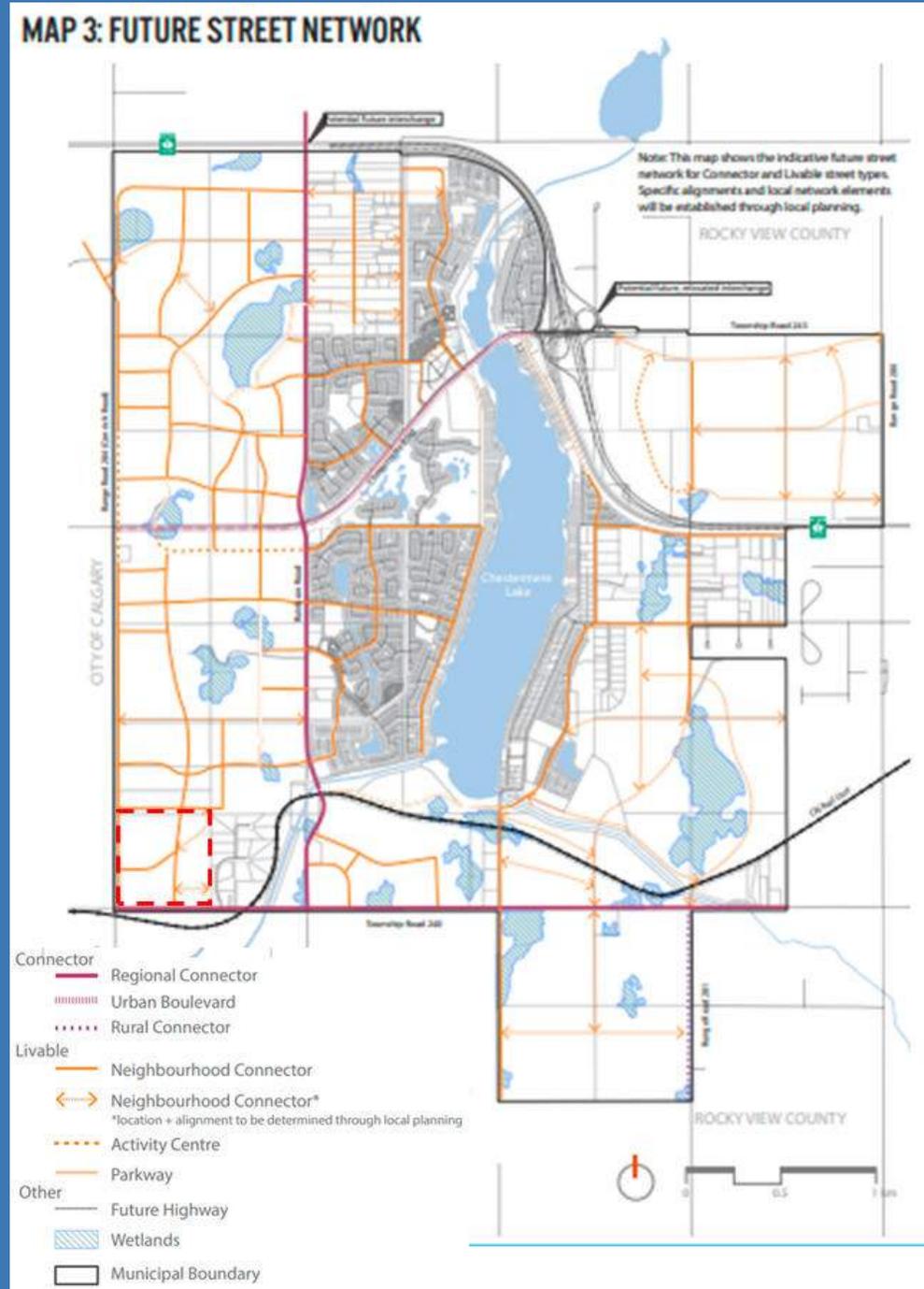
 **Plan Area – Waterford Estates SW Outline Plan**



# 3.2 Transportation Master Plan

The City of Chestermere Transportation Master Plan (TMP) was approved in October 2017 and provides direction for transportation planning in the City in conjunction with the vision outlined in the MDP. The Outline Plan allows for a road widening in anticipation of future upgrades to township Road 240.

 **Plan Area – Waterford Estates SW Outline Plan**

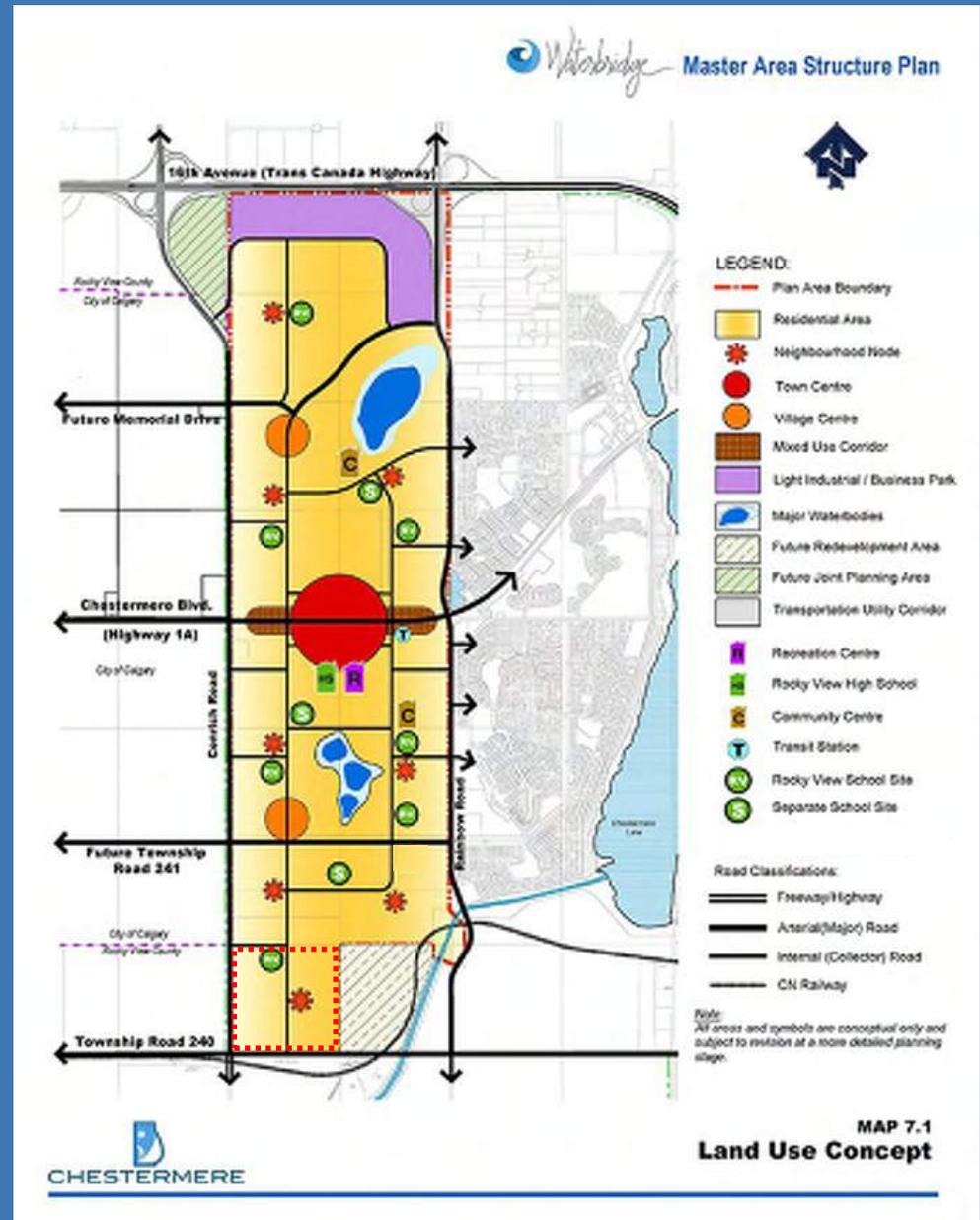


# 3.3 Waterbridge Master Area Structure Plan

The Waterbridge Master Area Structure Plan(MASP) was adopted in 2014 and provides a high-level vision for the lands forming the western gateway to the City of Chestermere. The intent of the MASP is to provide overarching policies to guide the future development of detailed ASPs within the Waterbridge area.

The lands subject of this Outline Plan are outlined in a red dashed line on the adjacent map.

 Plan Area – Waterford Estates SW Outline Plan



# 3.4 Waterford Area Structure Plan

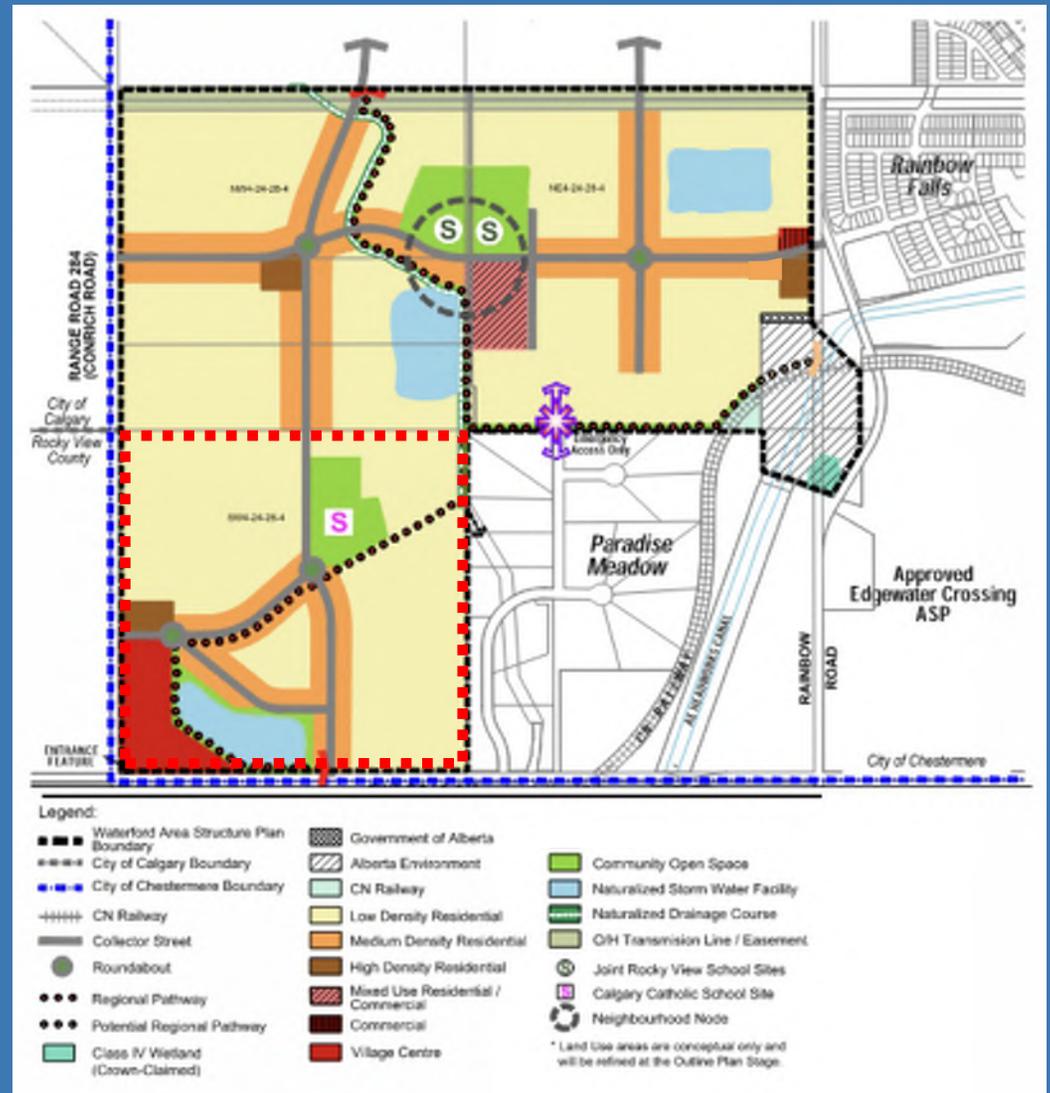
The Waterford Area Structure Plan (ASP) was adopted in 2016 and aligns with the MDP and MASP to provide detailed planning direction for the future development of the subject outline plan area. The Waterford Estates SW OP comprises approximately one third of the overall ASP area and is located in the southernmost quarter section.

The Waterford ASP envisions the plan area to be a distinctive, connected, and complete community that reflects and incorporates a waterscape or recreation theme.

In particular, these guidelines will assist in development of the Mixed-Use Village Centre and it's integration with the adjacent storm water pond and adjoining park space, serving the plan area.

The lands subject of this Outline Plan are outlined in a red dashed line on the adjacent map.

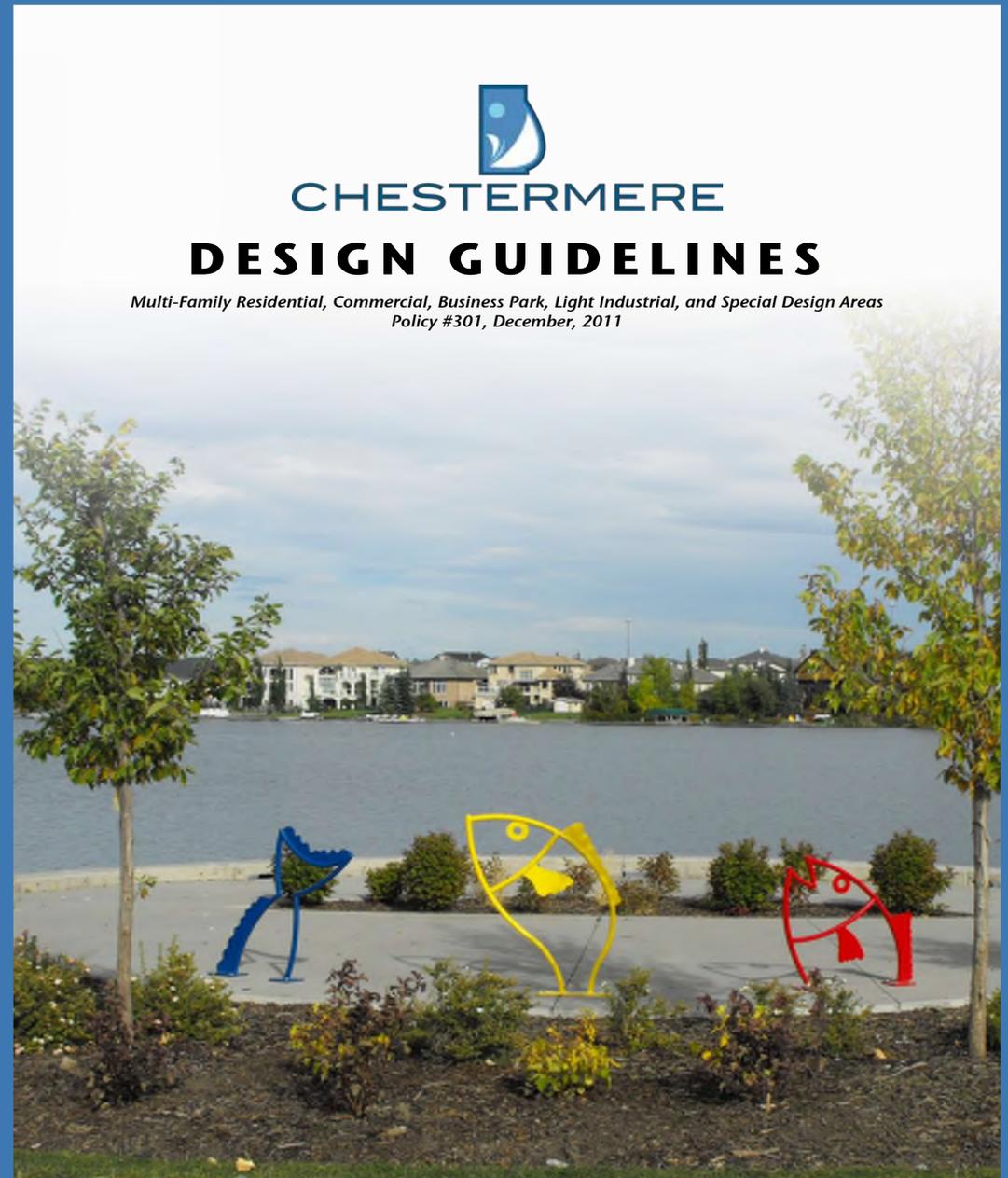
 **Plan Area – Waterford Estates SW Outline Plan**



## 3.5 Chestermere Design Guidelines

Chestermere's Design Guidelines, adopted in 2011, provide a complement to the architectural controls used by developers in reviewing builder proposals for new developments. These design guidelines are intended assist in creating an attractive, cohesive, and recognizable built form in Chestermere. These design guidelines apply to multi-family residential, commercial, business park, light industrial, and special design areas including gateways, streets, town centre, residential infill, and lake edge development.

In particular, these Guidelines will assist in development of the Mixed-Use Village Centre and sits integration with the adjacent stormwater pond and adjoining park space serving the plan area.





4.0

**Neighborhood Vision**

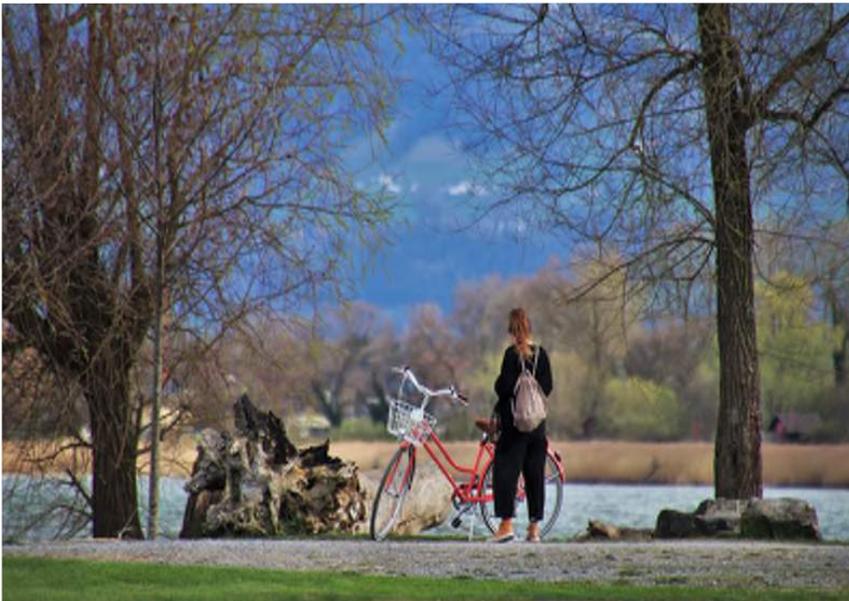
# Neighborhood Vision



The vision for Waterford Estates SW is that of a unique and welcoming, mixed-use residential neighbourhood. Through complementary interfaces with adjacent neighbourhoods, Waterford Estates SW will create a unified, well-connected, complete community that embraces and celebrates natural water features to create great spaces for residents and visitors alike.

Waterford Estates SW is guided by the principles outlined in the Waterford ASP. Through implementation of the ASP principles, the Waterford Estates SW OP strives to create:

- A Distinctive community with a unique sense of place. Waterford Estates SW will incorporate community gateway features, open spaces, and attractive housing options, with a Village Centre offering areas for residents and visitors alike to gather, socialize, and fulfill daily needs.
- A Connected community that promotes travel by different modes. Waterford Estates SW will incorporate an easily accessible street and trail network that connects major destinations and links adjacent communities, encouraging residents to walk or cycle.
- A Complete community that incorporates a mix of lands uses, services, recreational opportunities, and housing types that allow residents to thrive and live in the community throughout all stages of life.
- A community that incorporates and embraces a waterscape theme. Waterford Estates SW will emphasize the importance of water by sensitively incorporating the existing wetland into an enhanced naturalized storm waterpond, and protecting and enhancing the existing drainage course.



# The plan area was designed to complement the proposed Waterford Stage 1 Outline Plan to the north.

The Waterford communities are inherently linked, and Waterford Estates SW will provide a sensitive interface and transition, while also developing major community amenities that will inform future stages of development and will support the creation of a complete community.

The majority of Waterford Estates SW is within walking distance of the Village Centre. Higher-density residential uses and attractive open spaces are located in close proximity to the commercial node, creating active edges along Chestermere city limits and gateway streets into the neighbourhood.

Throughout the neighbourhood, a modified grid street network will provide safe, convenient connections for all transportation modes and will link neighbouring communities. Together with the mobility options offered by the street network, on and of-road pathways will provide additional active transportation opportunities for pedestrians, cyclists, and recreation users, with direct links to key destinations, open spaces, and adjacent neighbourhoods. Open spaces are located throughout the community to connect with pathways and to ensure that a majority of residents are within walking distance to recreation and gathering spaces.

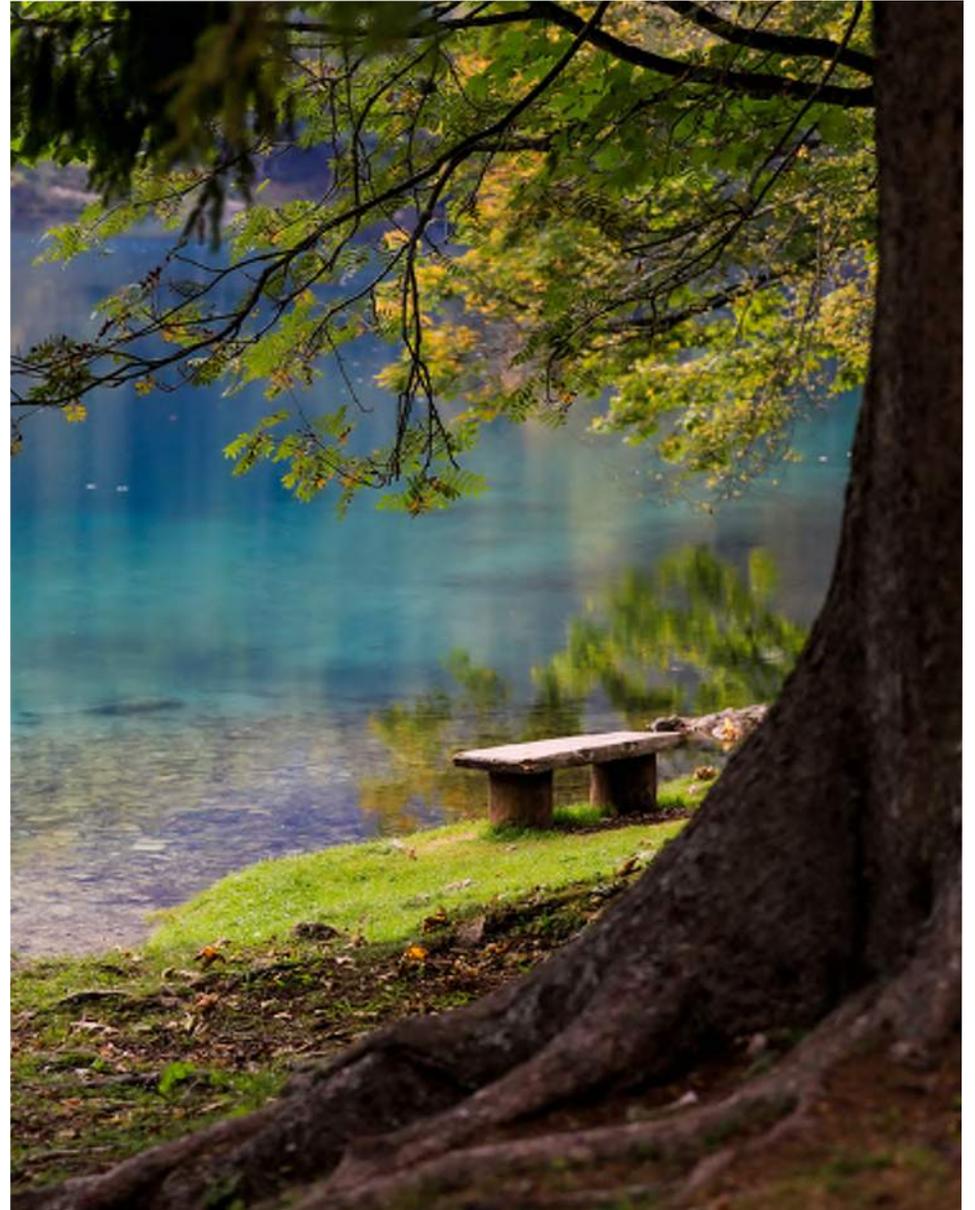


# The Village Centre is located along the southwestern boundary of Waterford Estates SW, adjacent to Range Road 284 and Township Road 240.

Single-detached homes are also located along the eastern boundary to ensure a compatible and sensitive interface with the existing Paradise Meadows large lot subdivision.

Semi-detached homes and townhomes are located within walking distance to the Village Centre, the central school site, and multi-use pathways, providing appropriate transitions of density. Townhomes adjacent to the commercial site are proposed to be live-work units, offering opportunities to create a sensitive interface with the Village Centre while also providing an appropriate transition to other residential areas. Single and attached housing forms are distributed throughout the community, allowing for a spectrum of housing choices in all areas of Waterford Estates SW.

A low-rise multi-family apartment buildings are located at the Township Road 240 community entrance, across from the school site and adjacent to Conrich Road, within walking distance to the Village Centre and school site. They will be easily accessed by a regional pathway, and will have direct access to adjacent playground and green spaces, and the naturalized stormwater pond. These locations will activate the central commercial node and will help animate adjacent transportation corridors.

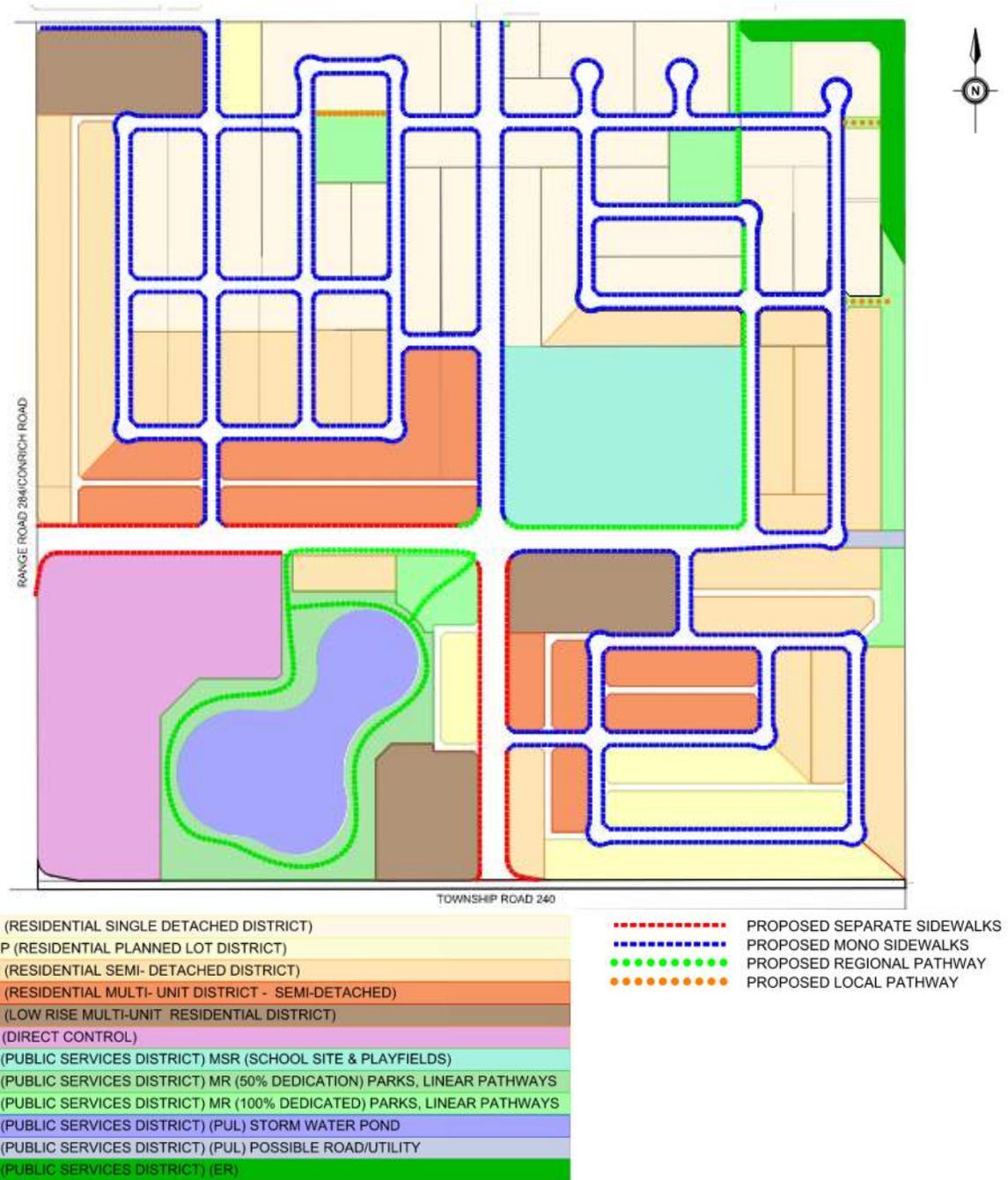


# 4.1 Development Concept

Waterford Estates SW is designed to be a new, welcoming community in Chestermere's southwest.

A waterscape and recreation theme is emphasized within the community through open spaces and amenities located adjacent to the existing drainage channel and the naturalized storm pond.

The community will be comprised of diverse residential uses, a vibrant Village Centre commercial node, and open spaces, all connected by a convenient gridded street network, and regional pathway connections to other areas of Chestermere.



# Land Use Designations

## RESIDENTIAL SINGLE DETACHED DISTRICT (R-1)

The Residential Single Detached District provides for low density residential development with high standards of design and appearance. The majority of housing forms in Waterford Estates SW will be comprised of single-detached housing in a variety of architectural styles.

## RESIDENTIAL PLANNED LOT DISTRICT FRONT DRIVE (R-1PFD)

The Residential Planned Lot District Front Drive provides for a narrower alternative to the traditional single-detached dwelling, with a driveway in the front of the lot. The R-1P district creates diversity among single-detached dwellings and contributes to a more varied streetscape.

## RESIDENTIAL PLANNED LOT DISTRICT REAR LANE (R1-PRL)

The Residential Planned Lot District Rear Lane also provides for a narrower alternative to the traditional single-detached dwelling, with parking in the rear lane of the lot. The R-1P district creates diversity among single-detached dwellings and contributes to a more varied streetscape.

## RESIDENTIAL SEMI DETACHED DISTRICT (R-2)

The Residential Semi Detached District provides for the integration of semi-detached dwellings within low and medium density areas, offering variety in housing type. Within Waterford Estates SW, semi-detached housing has been incorporated in close proximity to the school and open spaces and in areas with close access to the Village Centre.

## RESIDENTIAL MULTI-UNIT DISTRICT (R-3)

The Residential Multi-Unit District provides for the development of multi-unit and semi-detached residential development to increase the variety of dwelling types available in the community. Housing types permitted in this district include: semi-detached homes, duplexes, stacked townhouses, and townhouses. Within Waterford Estates SW, multi-unit dwellings have been incorporated along collector streets and in close proximity to the Village Centre.

## LOW RISE MULTI-UNIT RESIDENTIAL DISTRICT (R-4)

The Low Rise Multi-Unit Residential District provides for the development of multi-family housing in the form of 3 to 4 storey apartment buildings in order to increase the variety of housing choices available within the community. This district allows for the highest residential densities, and within Waterford Estates SW, 3 to 4 storey multi-unit buildings are anticipated adjacent to the Village Centre, along the main north-south collector road, across from the school site and adjacent to the future Conrich Road / RR 284.

## VILLAGE CENTRE - DIRECT CONTROL (DC)

Development in this district is intended to increase density while being compatible with adjacent low and medium density residential uses. The Mixed-Use area is comprised of commercial (C), inclusive of two and three storey residential (R-4) above the commercial uses, backing onto the storm pond and green space amenity.

## PUBLIC SERVICES DISTRICT (PS)

The Public Services District accommodates recreational and education facilities, places of worship, offices, health and research facilities and public utilities to service the community. Within Waterford Estates SW, the Public Services district provides for the inclusion of the required municipal reserve and municipal school reserve allocations. The PS district also provides for the development of public utilities, including the naturalized stormpond, and the inclusion of the public utility lot area comprising the drainage course.

# Housing Design

Residences within Waterford Estates SW will be designed to complement the overall community character and identity, forming a cohesive and vibrant physical environment.

Homes will exhibit good design principles in a modern interpretation of traditional styles to minimize visual impact. Architectural styles within the community are expected to include: Craftsman, Prairie, Tudor, Colonial, and French Country. Architectural details, materials and colours will be influenced by trends at the time of each stage of development, but the overall foundation of traditional architecture will ensure continuity. Further details are provided in the Waterford Estates SW Architectural Design Guidelines document, submitted under separate cover.

\*Housing types photos are from the Waterford Estates SW Architectural Design Guidelines, Home Works Design Inc



## 4.2 Village Centre

The Village Centre is located along the southwestern boundary of Waterford Estates SW, adjacent to Range Road 284 and Township Road 240.

The Village Centre will be a mixed-use area providing a mix of commercial and residential amenities that meet the everyday needs of Waterford residents, in alignment with the policy requirements of the Waterford Area Structure Plan.

The Village Centre, together with the surrounding open spaces and multi-family buildings, will act as a nucleus and central node for community activity. Its convenient location at the intersection of two major regional arterials, as well as two of the plan area's main multi-modal collectors, will ensure good exposure and accessibility to local and regional traffic, and the pathway network will provide direct pedestrian and cyclist access to the Village Centre. The site will also be accessible by a future public transit system, with proposed bus stops located adjacent or within short walking distance to the site



# Village Centre Park Space

A mix of commercial uses will be offered within the Village Centre, and may include: a grocery store, banks, restaurants, and other retail and service uses. Specific services and uses will be further defined at the development permit stage. A conceptual plan for the commercial area is shown in adjacent figure. The commercial area will also be complemented by a lookout onto the naturalized storm pond and surrounding green spaces. By clustering community services and amenities, the Village Centre creates a series of vibrant gathering spaces that contribute to the overall sense of place and community character of Waterford Estates SW.

The Mixed-Use area is comprised of commercial (C), inclusive of two and three storey residential (R-4) above the commercial uses, backing onto the storm pond and green space amenity.



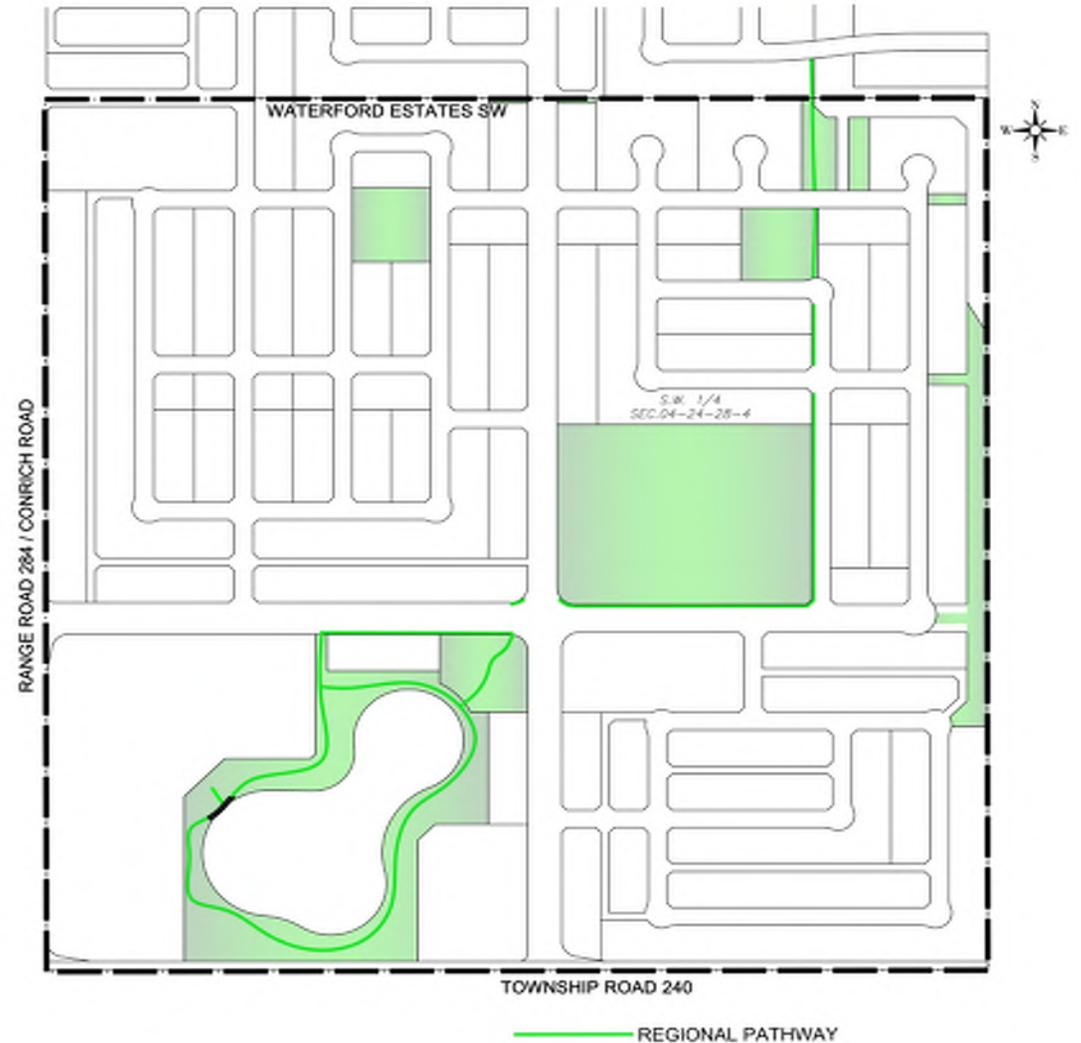
TOWNSHIP ROAD 240

# 4.3 Open Space & Community Amenities

## Pathways

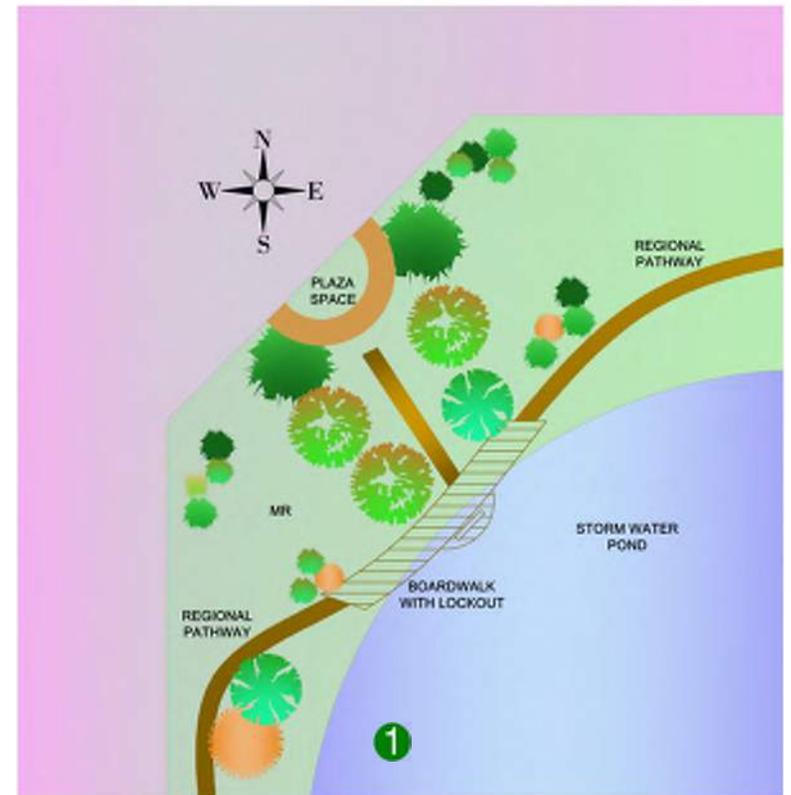
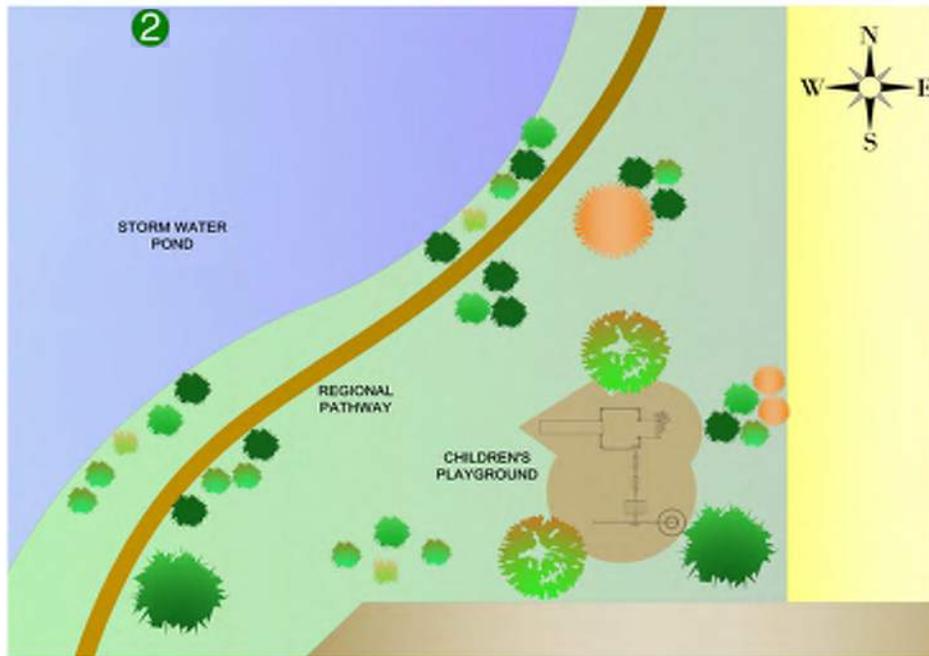


The regional pathways network runs north-south from future development to the north to the school site, then continues east-west towards the Village Centre, where it loops around the stormpond. The regional pathway, along with on-street multi-modal infrastructure offers a connected network that provides a comfortable and varied recreational experience for pedestrians and cyclists throughout the community.



# Natural Open Spaces

A natural open space is located within the north area of Waterford Estates SW to highlight the drainage course and complement the proposed neighbourhood pathway connection. The natural area will offer passive recreation activities with opportunities to interact with natural play furniture. Across the street, townhomes will face the park, increasing passive surveillance, and creating a safer and more vibrant community gathering space.



## 5.0 School Site

One School site is located within the plan area. The site is centrally located within Waterford Estates SW, at the intersection of the two community entry collector roads and directly adjacent to the regional pathway. The regional pathway also provides a direct link from the proposed Catholic school site to neighborhoods north of the plan area, including another school site located in Waterford Stage 1 to the north.

The school site will include a school building and supporting playfields, which are anticipated to support community uses outside of school hours. Final location of the building and playfields will be determined at the Development Permit stage. Currently, the school site is intended for use by the Catholic School Board as an elementary or junior high school, but that may change, as development timing of the school site is finalized.





6.0

**Mobility Network**

# Mobility Network



The Waterford Estates SW transportation network will facilitate multi-modal connections throughout the plan area. The community's implementation of Complete Streets principles through a modified grid street network will enable easy vehicular, cyclist, and pedestrian connections to major roads, the pathway network and to major destinations. The overall network will also provide the opportunity to implement public transit routes that connect to the proposed system throughout the rest of Chestermere.

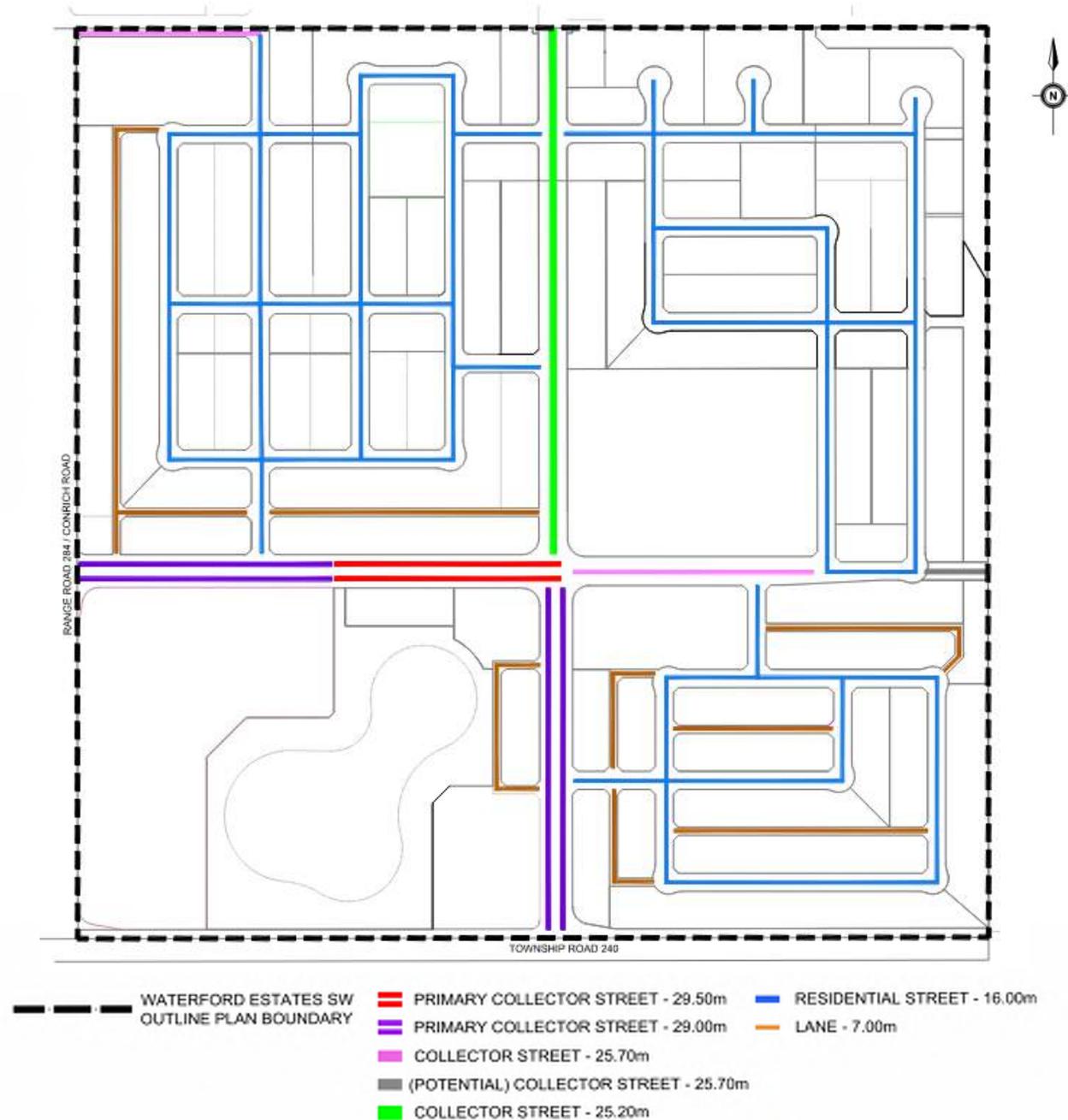


# 6.1 Street Network

The Waterford Estates SW street pattern is a modified grid network with direct connections to adjacent Waterford neighbourhoods and the surrounding Chestermere communities. The adjacent figure shows the outline plan area road network.

Two main collector roads within Waterford Estates SW will provide direct access west to Range Road 284 and south to Township Road 240 within the greater regional road network. Range Road 284 is anticipated to be a 4-lane arterial roadway and Township Road 240 is anticipated to be a 4-lane arterial road within the City of Chestermere.

The internal street network follows Complete Streets policies and is designed to be consistent with the overall Waterford ASP and Waterbridge MASP. Waterford Estates SW proposes four modified cross-sections. The Watercrest Terrace has been removed from the plan and has been replaced with lots fronting Range Road 284 and serviced via a rear lane, creating a more interactive interface along the western boundary of the plan area. The modified cross-sections along and of Watercrest Boulevard, will accommodate a 2.5m Regional Pathway within the road right-of-way.



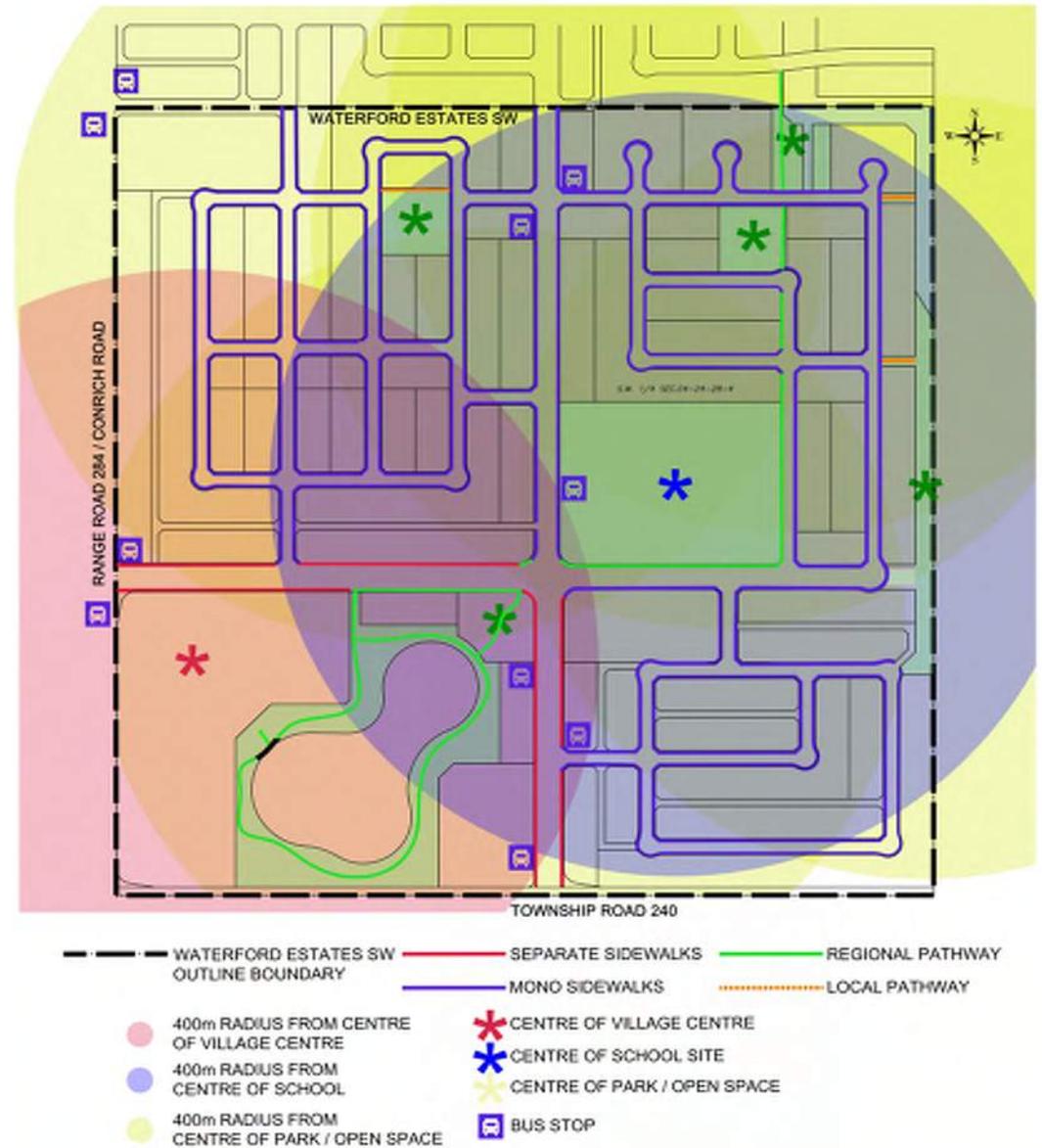


# Walkability Catchment

The walkability catchment is shown in the adjacent figure, and was formulated as per MDP Policy 3.4.1.3 and Calgary Regional Partnership's Greenfield Tool Box: Walkability Catchment.

The Walkability Catchment illustrates that the majority of Waterford Estates SW is within a 5-minute walking distance to key destinations providing daily needs including: parks, schools, and commercial areas.

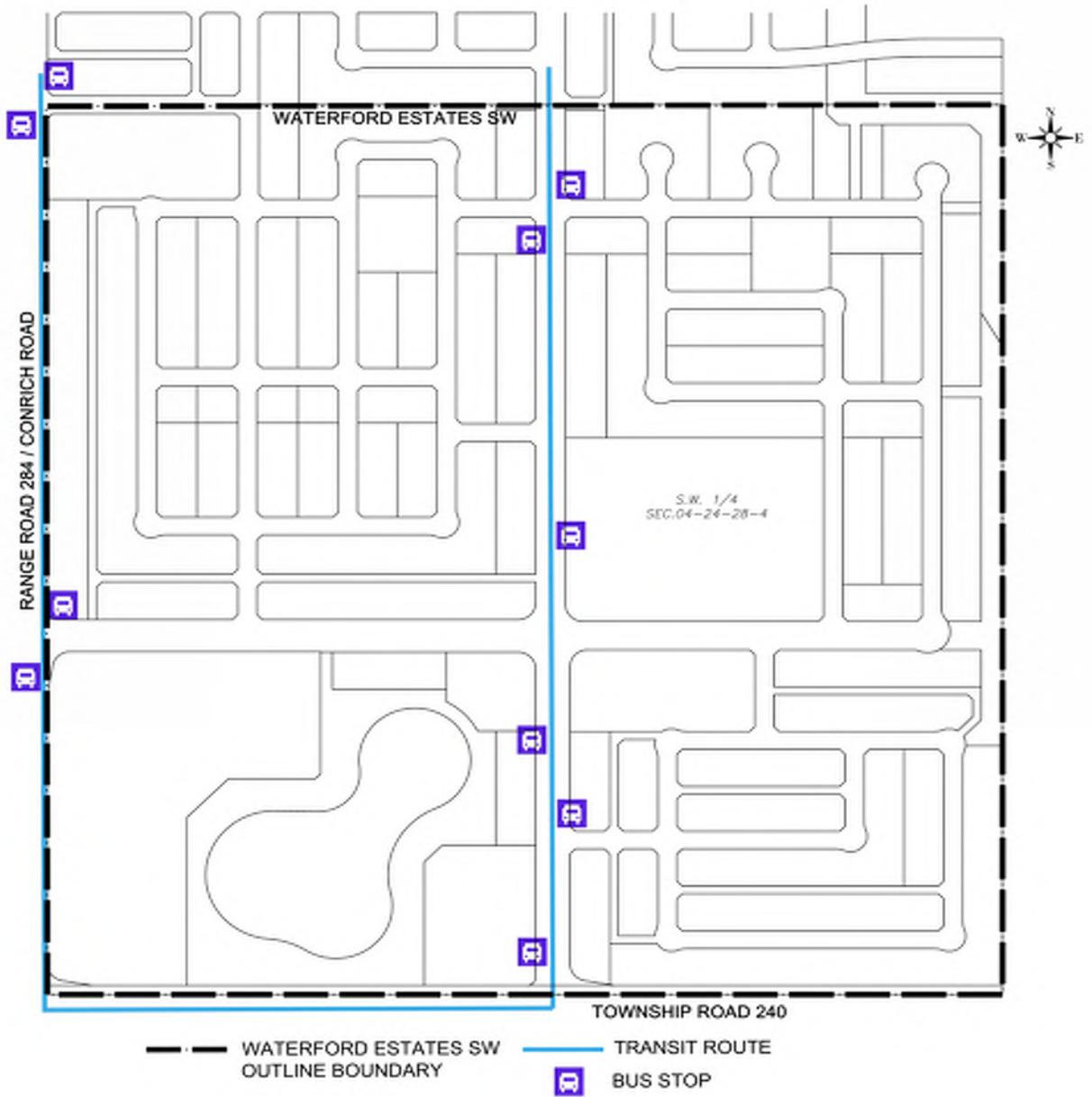
Open spaces and amenities are located throughout the community to provide a majority of residents with access to open spaces within a 400 m distance of their homes.



## 6.3 Public Transit

Currently, there is no public transit system operating in the City of Chestermere. However, the outline plan mobility network has been planned in coordination with adjacent communities and has been designed to accommodate a future bus route and associated bus stops throughout Waterford Estates SW. The proposed route and stop locations are shown in the adjacent figure, along Range Road 284, Township Road 240, and Waterbury Road.

The strong connectivity provided by the grid street network and the integrated pathway system offers residents access to future bus stops within walking distance. Overall, all residences in Waterford Estates SW are located within 400 m of a bus stop.





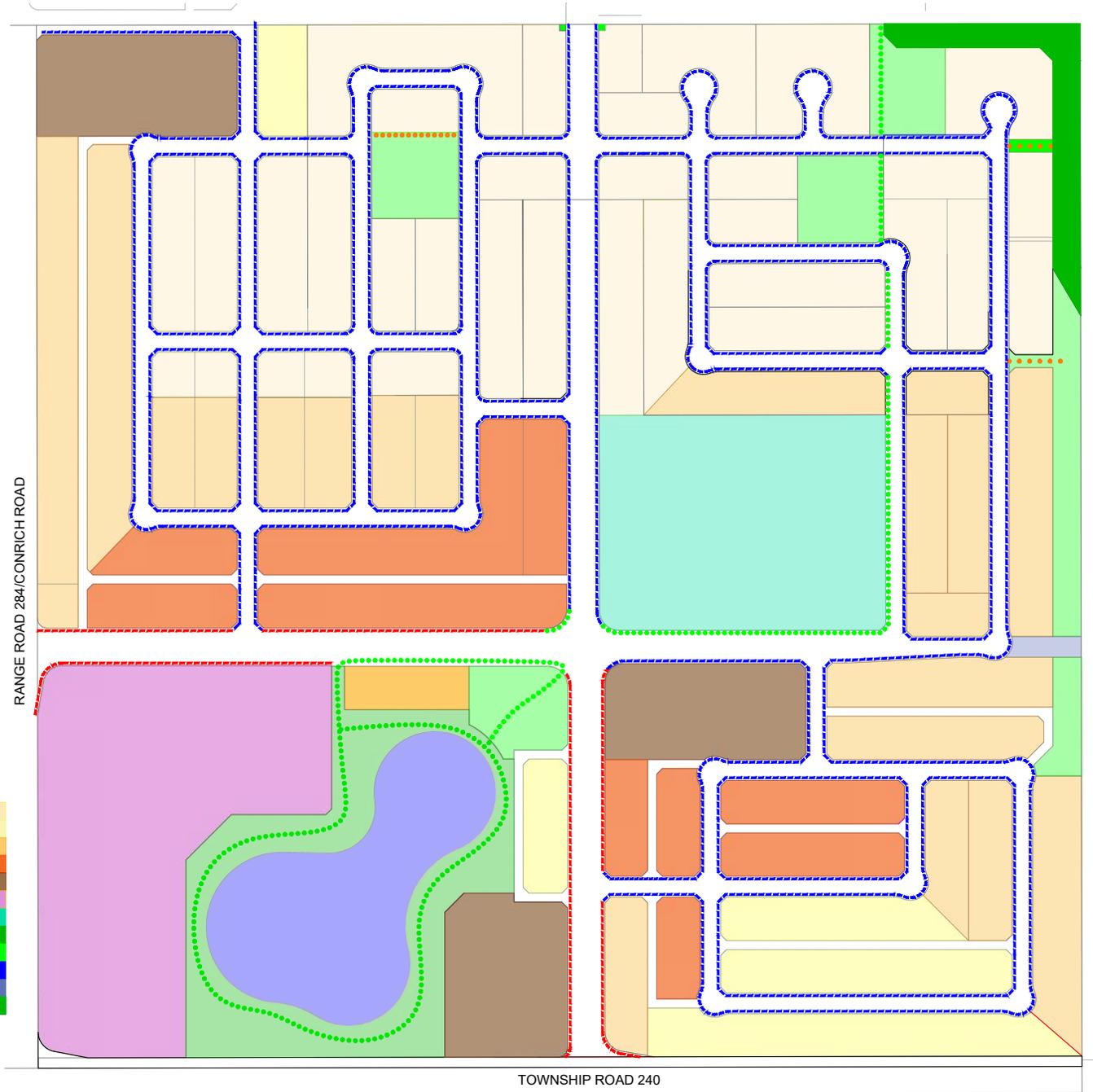
7.0

# Land Use Concept

# 7.1 Outline Plan

- - - - - PROPOSED SEPARATE SIDEWALKS
- - - - - PROPOSED MONO SIDEWALKS
- ● ● ● ● PROPOSED REGIONAL PATHWAY
- ● ● ● ● PROPOSED LOCAL PATHWAY

- R-1 (RESIDENTIAL SINGLE DETACHED DISTRICT)
- R-1P (RESIDENTIAL PLANNED LOT DISTRICT)
- R-2 (RESIDENTIAL SEMI- DETACHED DISTRICT)
- R-3 (RESIDENTIAL MULTI- UNIT DISTRICT - SEMI-DETACHED)
- R-4 (LOW RISE MULTI-UNIT RESIDENTIAL DISTRICT)
- DC (DIRECT CONTROL)
- PS (PUBLIC SERVICES DISTRICT) MSR (SCHOOL SITE & PLAYFIELDS)
- PS (PUBLIC SERVICES DISTRICT) MR (50% DEDICATION) PARKS, LINEAR PATHWAYS
- PS (PUBLIC SERVICES DISTRICT) MR (100% DEDICATED) PARKS, LINEAR PATHWAYS
- PS (PUBLIC SERVICES DISTRICT) (PUL) STORM WATER POND
- PS (PUBLIC SERVICES DISTRICT) (PUL) POSSIBLE ROAD/UTILITY
- PS (PUBLIC SERVICES DISTRICT) (ER)



## 7.2 Outline Plan Statistics

The Land Use Statistics represent a breakdown of all development lands within Waterford Estates SW. The plan area consists of a mix of residential forms, open spaces, commercial uses, stormwater facilities, and a school. Approximately 60% of the developable area within the Waterford Estates SW OP consists of residential land uses. The anticipated number of residential units is 1,250 units, and assuming an average occupancy of 3 people per unit, as per the Waterford ASP, population at full build-out is expected to be 3,750 people.

## 7.3 Density

Waterford Estates SW is anticipated to create 1,250 residential units ranging from single-detached houses to apartment units within a low-rise building. Residential densities are listed in Land Use Statistics. The anticipated residential density for the outline plan area is 19.7 UPH (8.0 UPA). Density was calculated in accordance with the City's MDP policy 3.4.4.2. Based on the anticipated number of units, R-1P lots equate to 27% of total single-detached dwellings.

## 7.4 Municipal Reserve

Waterford Estates SW Outline Plan is providing an open space system that exceeds the required 10% municipal reserve (MR) dedication. Included in the MR land dedication are: the school site, pathways, open space areas around the stormwater pond, including a plaza/lookout, playground, and the natural open space located in the northeastern portion of the plan area.

## 7.5 Land Use Statistics

	Ha	Ac	Units	Front (m)	Width (m/FT) per lot
Total Site Area (Gross Developable Area)	64.80	160.06			
TWP 240 Road Widening	0.68	1.68			
PS (ER) Environmental Reserve	0.68	1.68			
<b>Net Developable</b>	<b>63.44</b>	<b>156.70</b>			
Residential Single Detached-Estate Lots (R-1)	7.64	18.86	126	2073.96	16.46/54
Residential Single Detached-Standard Lots (R-1)	4.24	10.48	85	1168.75	13.75/45
Residential Planned Lot-Front Drive Lots (R-1PFD)	1.17	2.89	31	349.67	10.97/36
Residential Planned Lot-Rear Lane Lots (R-1PRL)	1.89	4.67	48	480.56	10/33
Residential Semi-Detached Lots (R-2)	10.00	24.70	273	2733.8	10.00/32
Residential Multi-Unit Lots (R-3)	4.71	11.63	171	1031.45	6.00/20
Low-Rise Multi Unit Lots (R-4 District) (42 UPA)	3.50	8.65	364		
Mixed Use Village Centre District (Direct Control)	4.78	11.81	152		
<b>Open Spaces and Pathways (Municipal Reserve)</b>					
School Site and Playfields (PS)	3.66	9.04			
Open Space/Municipal Reserve 50% Credit (PS)	1.28	3.15			
Open Space/Municipal Reserve 100% Credit (PS)	2.65	6.55			
% of Open Space Provided as Creditable Municipal Reserve	12.0	%			
<b>Other Uses</b>					
Public Utility Lots (Stormwater and Drainage)	2.55	6.30			
Roads	15.37	37.97			
<b>Anticipated Number of Residential Units</b>			<b>1250</b>		
<b>Anticipated Residential Density</b>	<b>19.7</b>	<b>8.0</b>			



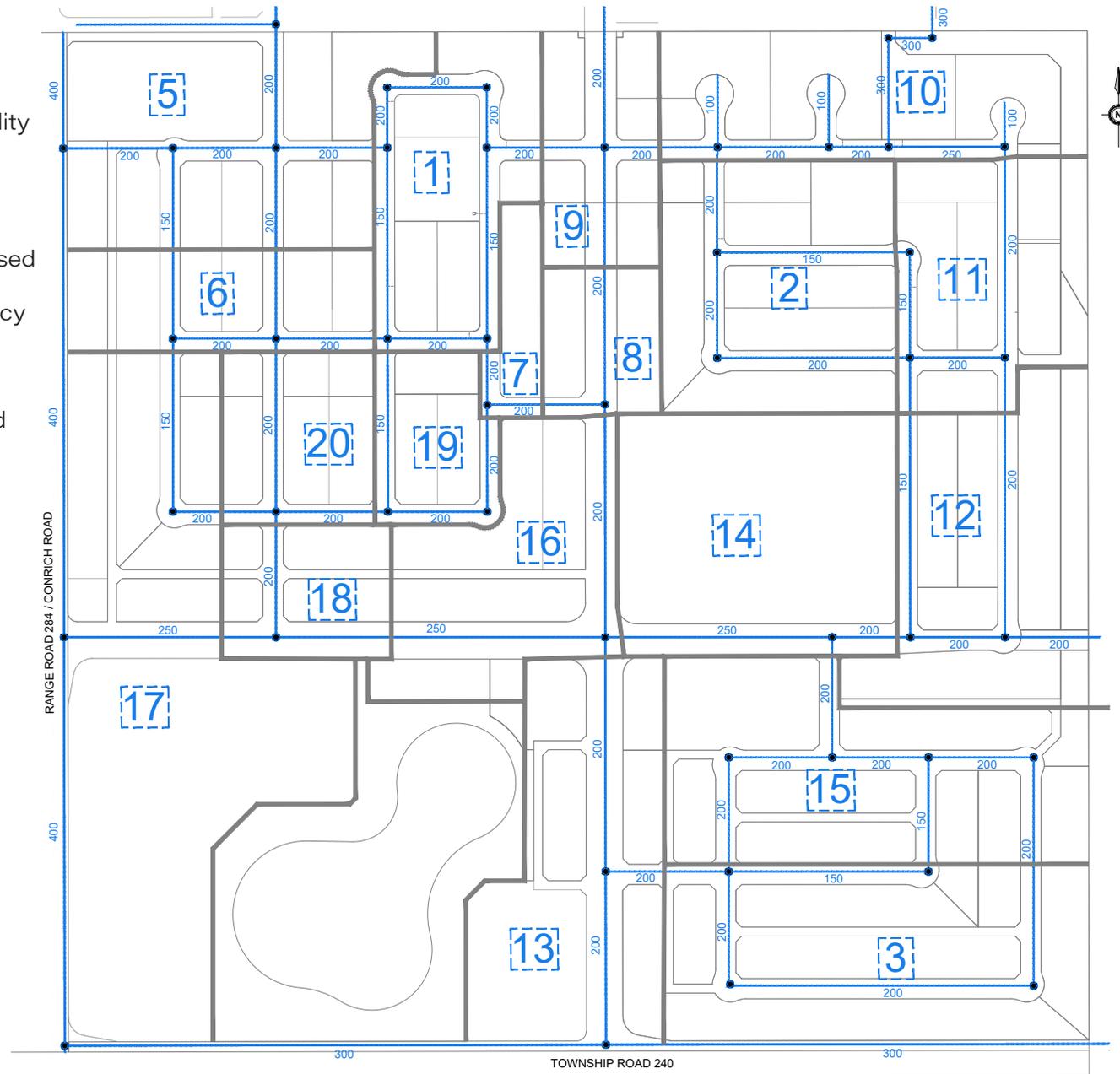
8.0

**Servicing**

# 8.1 Water Servicing

The water supply for the Waterford Estates SW outline plan area was analyzed using the latest information provided within the Chestermere Utility Master Plan (2017).

The adjacent figure depicts the proposed water system network. The watermain system would consist of newly constructed pipes within proposed roadways and will be looped throughout the proposed Outline Plan area to provide redundancy and adequate fire flows. Details of the water servicing design are described in the Waterford Estates SW Water Supply Analysis, submitted under separate cover in support of the Waterford Estates SW Outline Plan.



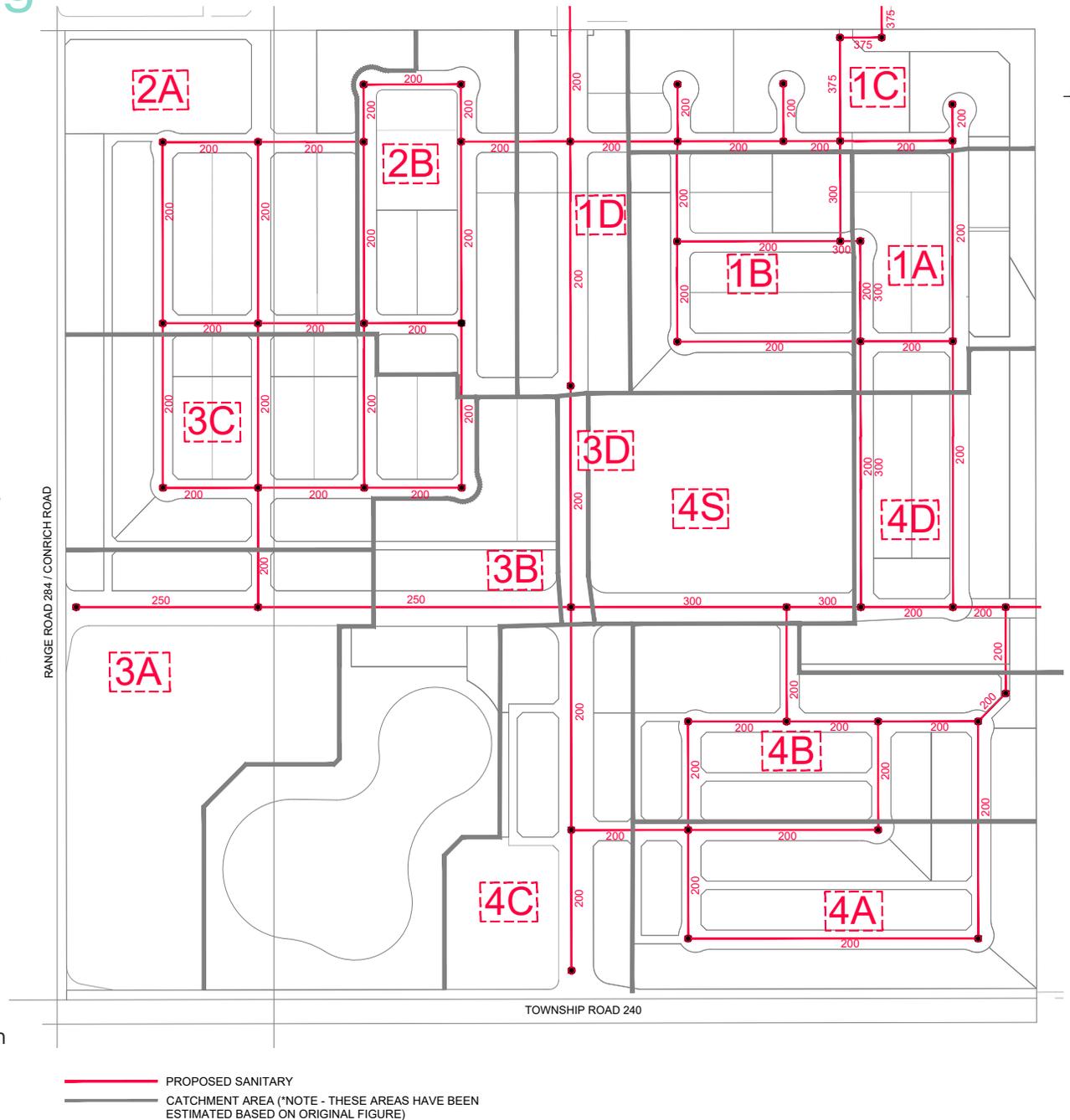
- - - - - PROPOSED WATER  
 \_\_\_\_\_ CATCHMENT AREA (\*NOTE - THESE AREAS HAVE BEEN ESTIMATED BASED ON ORIGINAL FIGURE)

## 8.2 Sanitary Servicing

The Waterford Estates SW Outline Plan area will be serviced by sanitary sewer gravity through a piping system that conveys flows from south to north to connect to Waterford Estates SW Stage 1, in accordance with Lee Maher Engineering and Associates, Waterford SW Offsite drawings, issued November 10, 2021. The Waterford Stage 1 proposed sanitary gravity trunk main tie-in is located at the north end of the Waterford Estates SW boundary and ultimately discharges to the Rainbow Road trunk sewer and Lift Station 13. A forcemain would then convey the sanitary sewer flows from Lift Station 13 to the City of Calgary sanitary sewer system. The Waterford Estates SW Stage 1 sanitary system has been designed to accommodate flows from Waterford Estates SW. The downstream Rainbow Road sewer trunk and Lift Station 13 has sufficient capacity to service the Waterford Area Structure Plan boundary including Waterford Estates SW.

The sanitary sewer system network will consist of newly constructed pipes within proposed roadways and would be designed and constructed accordingly to the City of Chestermere design standards; the minimum size of the proposed sanitary sewer pipes would be 200mm in diameter for residential areas and 250mm in diameter for commercial areas with minimum slope and minimum cover, where possible.

The skeletal model of the sanitary system was developed to assess the main trunk sizes and capacities. At this stage, all sanitary sewer demands have been assigned to key junctions to ensure the sizing of the main trunk. Pipe sizes will range from 200mm to 375mm. The adjacent figure outlines the proposed sanitary sewer system network. Details of the sanitary sewer design are described in the Waterford Estates SW Sanitary Study Analysis submitted under separate cover in support of the Waterford Estates SW Outline Plan.

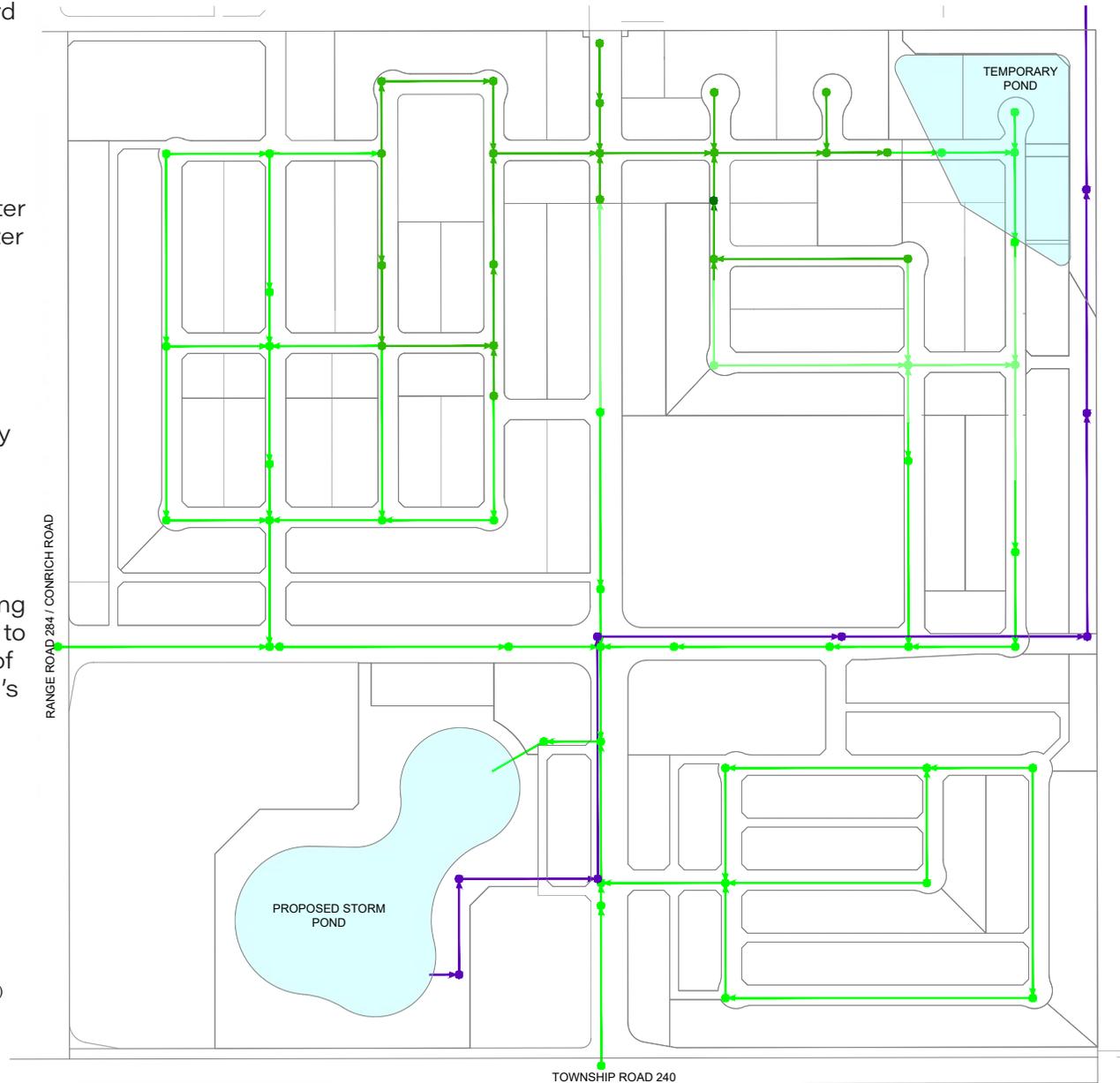


# 8.3 Stormwater Servicing

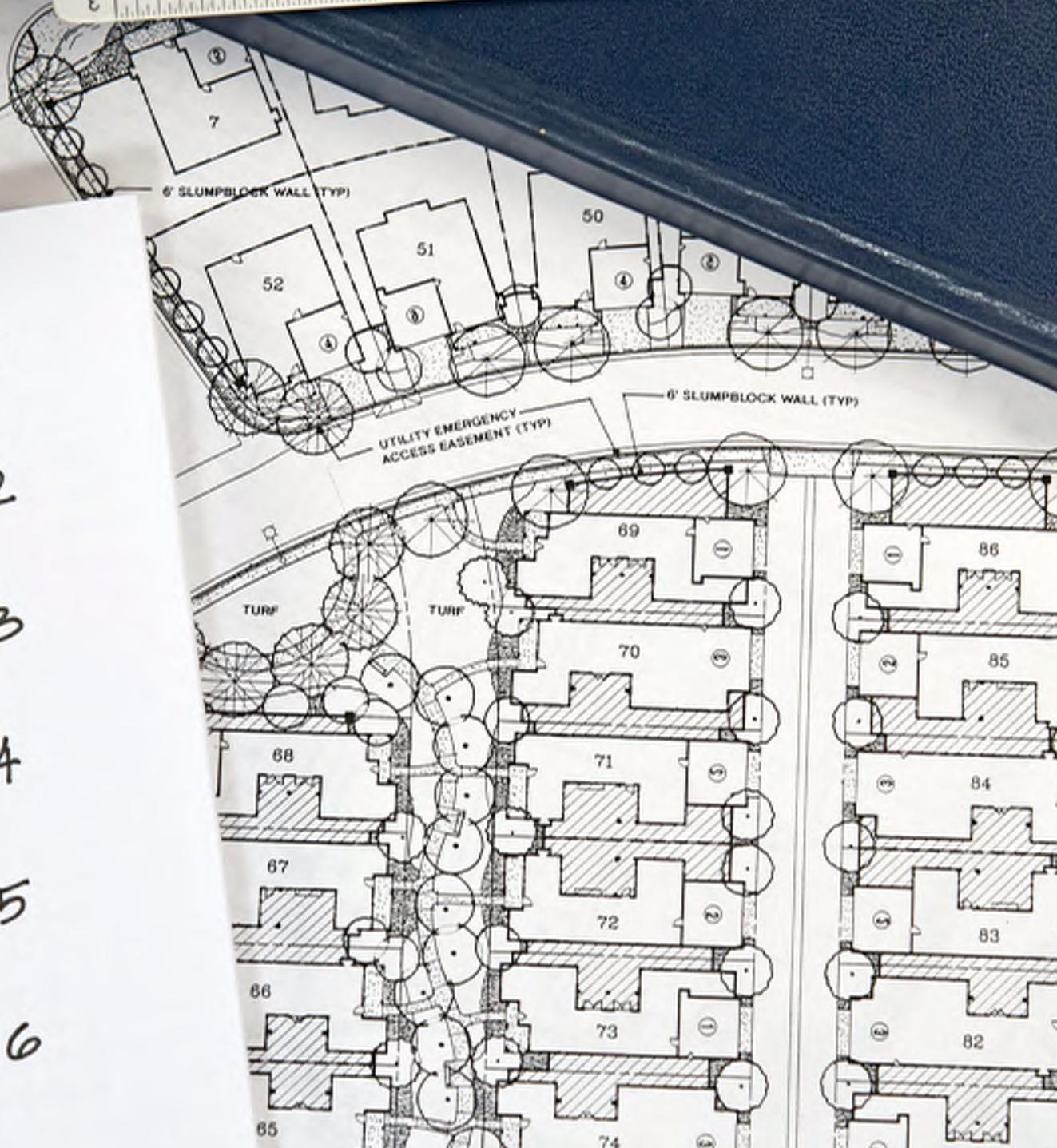
The stormwater management systems of Waterford Estates SW are intended to integrate function and amenity. The adjacent figure depicts the proposed stormwater system network. The Phase 1 Stormwater management system will include a temporary stormwater management pond in the northeast corner of the development. A conventional piped system will transport stormwater flows to the temporary and/or proposed stormwater management facility in the southwest of the proposed development. The temporary and/or proposed stormwater management facility will be a pond with a permanent water level surrounded by landscaping and areas for public recreation. The temporary and/or proposed pond will provide capacity to store the volume of water generated by the 1:100 year storm event and reduce the outflow rate to the off-site infrastructure.

Proposed park spaces in the community of Waterford Estates SW will use the created stormwater for irrigation to maintain the landscaping and reduce the volume of water being discharged to the downstream receiving waterbodies. The use of the treated water reduces the demand on the City's potable water system and is considered a Best Management Practice/Low Impact Development strategy.

-  PROPOSED STORM MAIN
-  PROPOSED STORM MANHOLE
-  PROPOSED STORM MAIN (TREATED)
-  PROPOSED STORM MANHOLE (TREATED)
-  STORM MAIN (PHASE 1)
-  STORM MANHOLE (PHASE 1)
-  STORM MAIN (PHASE 2)
-  STORM MANHOLE (PHASE 2)



L A P  
SEE 5



-  PHASE 1
-  PHASE 2
-  PHASE 3
-  PHASE 4
-  PHASE 5
-  PHASE 6

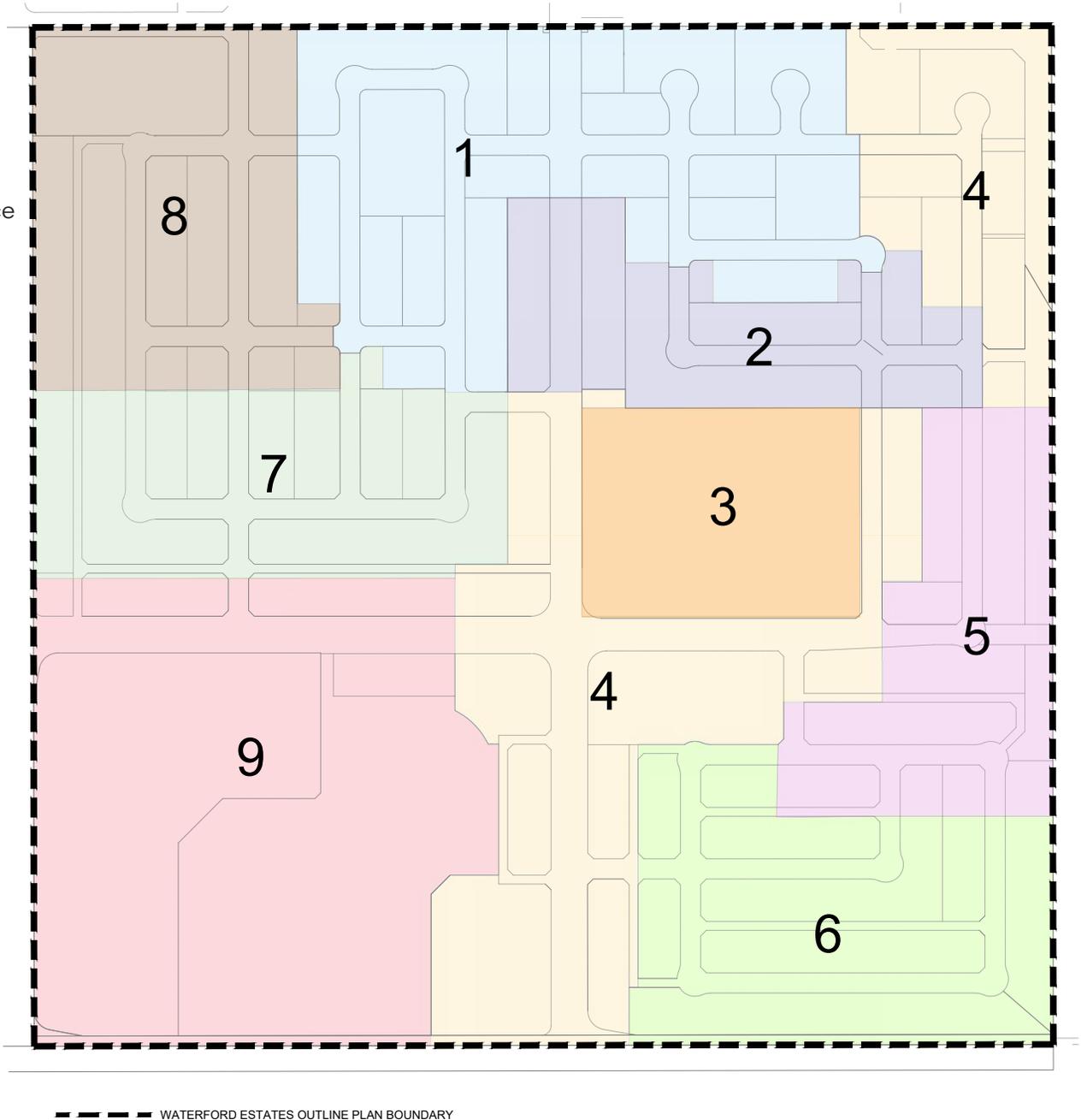
9.0

# Phasing



# 9.1 Phasing Plan

Phasing within the Waterford Estates SW Outline Plan area is anticipated to occur in nine phases, and will generally follow the adjacent figure. Development will begin in the north, adjacent to Waterford Estates SW Stage 1. Ultimate phasing will depend on market demand and infrastructure requirements. The logical extension of open space amenities, roads, and utilities will progress along with additional phases of development.





10.0

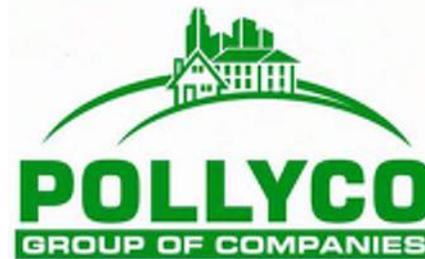
# Supporting Studies

## 10.1 Supporting Studies

The following technical studies have been completed in support of this Outline Plan and Land Use Redesignation application and are submitted under separate cover.

- Justification for Historical Resources Act Requirements: Waterbridge – South Community Area Structure Plan (Bison Historical) | January 2015
- Commercial Market Analysis (Hume Consulting) | July 2015
- Wetland Avoidance Analysis (Westhoff Engineering Resources Inc.) | August 2015
- Biophysical Impact Assessment (Sweetgrass Consultants Ltd.) | December 2017
- Geotechnical Investigation (Almor Testing Services Ltd.) | December 2017
- Sanitary Sewer Servicing Report (Urban Systems Ltd.) | January 2018
- Potable Water Servicing Report (Urban Systems Ltd.) | January 2018
- Staged Master Drainage Plan (Urban Systems Ltd.) | January 2018
- Transportation Impact Assessment (Bunt & Associates) | January 2018
- Waterford Estates Architectural Design Guidelines (Home Works Design Inc.) | January 2018

**Prepared For:**



**Prepared By:**

**IDEA GROUP INC.**

**Revised By:**

