



# OKALTA-CUFFLING FLATS

## AREA REDEVELOPMENT PLAN

### BYLAW 16-1060



October 2016



MMM GROUP



## **STANDARD LIMITATIONS**

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- A: Policy Review
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# 1 INTRODUCTION

In response to increasing development applications and future servicing needs, the Town of Turner Valley contracted MMM Group Limited to prepare an Area Redevelopment Plan for the Okalta and Cuffling Flats neighbourhoods (henceforth “Okalta-Cuffling Flats”) within the municipality. The primary objective of the Plan is to ensure that future growth in these areas occurs in a logical and orderly manner while also ensuring that strategic environmental, infrastructure, recreational and community objectives are secured. The Plan was prepared using background research into the area and consultation with residents and key stakeholders. Implementation of the Plan is intended to be a market-driven and long-term undertaking.

The Plan was subsequently adopted by Council as Bylaw 16-1060.

## 1.1 ORGANIZATION OF THIS PLAN

The Okalta-Cuffling Flats Area Redevelopment Plan (“ARP” or “the Plan”) is organized into 5 sections:

**Section I: Introduction** introduces the background context for the Plan: the purpose of the Plan, the characteristics of the Plan Area, its history and present day conditions, and the policy guidance that was derived from other influential regulations.

**Section II: Natural and Built Environment** outlines the key development opportunities and constraints that derive from conditions in the Plan Area.

**Section III: A Changing Neighbourhood** describes the core benefits, drawbacks and values of the community today, and a coherent vision for the community in the future.

**Section IV: Policies for Development** describes the conceptual plan and supporting policies that are required to achieve the vision for the community.

**Section V: Making it Happen** explains how the Plan will be implemented over time, and additional studies that should be undertaken.

The **Appendices** contain more information about relevant policy documents and public consultation, and can be found attached at the end of the Plan.

## 1.2 PURPOSE OF THE AREA REDEVELOPMENT PLAN

An Area Redevelopment Plan (ARP) is a planning tool that helps municipalities guide future growth and development in existing neighbourhoods. In Okalta-Cuffling Flats population growth is anticipated to increase the demand for housing and amenities, and the strain on infrastructure and services. According to unofficial municipal census results, the Town of Turner Valley experienced a 24 percent increase in population between 2008 and 2015, and has become home to 344 new residents since 2011. At the same time, the Okalta-Cuffling Flats area already faces deficiencies in water, storm water and sanitary infrastructure, and in recreational space.

The purpose of this ARP is to ensure that future development in Okalta-Cuffling Flats occurs in a logical and orderly manner. More specifically, growth must align with higher level plans, necessary upgrades to municipal services and infrastructure, and respect the unique identity that makes Turner Valley a desirable place to live – an identity premised on heritage appreciation, environmental stewardship, cultural development, and small town lifestyle. The Plan examines current conditions in the area and makes recommendations about how potential future growth can be accommodated in ways that are both financially and environmentally sustainable.

### ***Authority of the Plan***

An Area Redevelopment Plan (ARP) is a statutory plan as described in the *Municipal Government Act* (Revised Statutes of Alberta, 2000, Chapter M-26). An ARP can be used to preserve land or buildings in neighbourhoods under significant development pressure, improve buildings or public infrastructure in existing neighbourhoods, or facilitate redevelopment of underutilized lands.

The *Municipal Government Act* was consulted for guidance regarding the criteria that must be included when drafting a new ARP, and the other regulations that constrain or enable planning, subdivision and development activities throughout the Province.

The overarching objectives of the ARP are to:

- Provide a planning and policy framework for future development of the Plan Area.
- Outline development standards and requirements to ensure responsible future growth.
- Recommend a potential subdivision and land use pattern for the Plan Area.
- Identify recreational and infrastructure upgrades that align with future land uses and enhance community health and identity.
- Supply a roadmap for implementing the Plan over an anticipated 20-year planning horizon, as determined by property market forces.

## 1.3 CONTEXT

### 1.3.1 LOCATION

The Okalta-Cuffling Flats area is located in the south-west corner of the Town of Turner Valley, around 75 kilometers southwest of Calgary, Alberta. The area being considered under this Plan comprises approximately 87 hectares (+/-215 acres) within the SE Quarter of Section 1-20-3 W5M; part of the NE Quarter that lies south of Evergreen Estates; and part of the SW quarter section that lies east of the Sheep River (see **Figure 1: Location Plan** and **Figure 2: Plan Area**). The boundaries of the Plan Area coincide with quarter section boundaries except on the north and west sides, which are extended toward Evergreen Estates and the Sheep River, respectively.

### 1.3.2 LAND USE CONTEXT

The Plan Area comprises two distinct neighbourhoods – Okalta and Cuffling Flats – at the south-west edge of the Town. The Sheep River separates Okalta, to the north of the river, from Cuffling Flats, to the south. There are several adjacent low-density residential subdivisions, including Calkins Place and Bailey Ridge to the east, and Schmaus Meadows and proposed future phases of Everwood Estates to the north. To the south and west are agricultural lands within the MD of Foothills. Additionally, a water treatment plant and the Turner Valley Gas Plant are both situated near the eastern boundary of the Area. Access to the Plan area from the town is currently limited to Okalta Road SW (a private road) north of the river, and to 16th Avenue SW south of the river.

### 1.3.3 CALGARY METROPOLITAN PLAN

The Calgary Metropolitan Plan (CMP) is a framework of shared goals and commitments that is intended to guide the members of the Calgary Regional Partnership (CRP) toward sustainable growth in the region. Especially relevant to the Okalta-Cuffling ARP:

- Protect riparian areas,
- Follow provincial water and storm water management best practices,
- Enhance landscape connectivity,
- Orient new development to achieve efficient use of land and infrastructure,
- Accommodate one-quarter of new population growth in existing developed areas,
- Provide a range of housing types.

These objectives are intended to be achieved through collaboration with other CRP members, and through the implementation of supportive local plans and policies. The Okalta-Cuffling ARP draws guidance from the above mentioned commitments, especially in respect of preserving riparian areas around the Sheep River to enhance landscape connectivity, providing for a diverse housing stock and encouraging new development that increases density in an established lower density residential area of the Town, and finally in seeking to provide infrastructure solutions in an efficient manner.

Appendix A: Policy Review includes a discussion of relevant plans and studies that were considered during formulation of the ARP.

#### **1.3.4 AREA HISTORY**

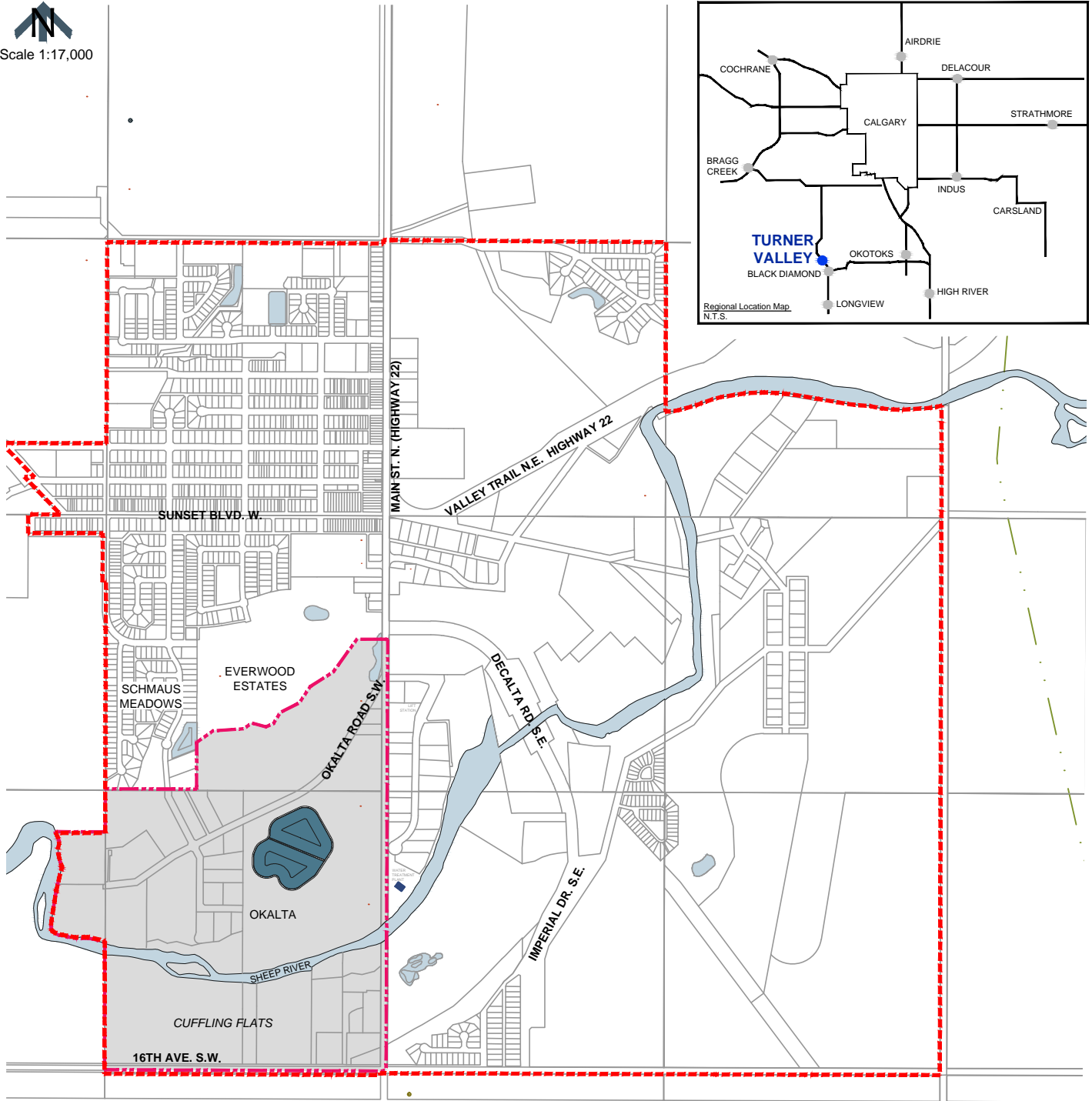
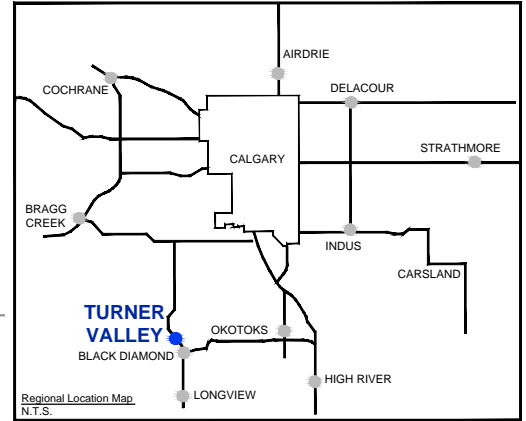
The neighbourhoods now known as Okalta and Cuffling Flats fall within the traditional territories of five First Nations who ceded the land to the Crown in an 1877 treaty agreement. Oil was discovered in Turner Valley in 1914, and boom towns developed to house and service migrant workers from elsewhere in Canada and the United States. The Okalta and Cuffling Flats neighbourhoods inherited their names from the unique monikers given to them by residents of the historic resource towns.

Although the Town of Turner Valley was incorporated in 1930, the two neighbourhoods remained part of the Municipal District of Foothills until 1974, when they were annexed to provide land for future residential or commercial development south of the existing town. Subsequently, an Area Concept Plan was prepared to outline the type and location of future residential and commercial developments in the part of Okalta immediately south of the existing Town. A General Municipal Plan (1980) outlined the road network and concept plan for the neighbourhoods, which fundamentally influenced the current land use pattern. Today, population growth in the municipality and the area residents' desire for municipal services, have prompted the Town to consider options to intensify and guide development in the area.

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:17,000



### LEGEND

	PLAN AREA BOUNDARY		EXISTING HYDROLOGY
	TOWN BOUNDARY		RAW WATER RESERVOIR

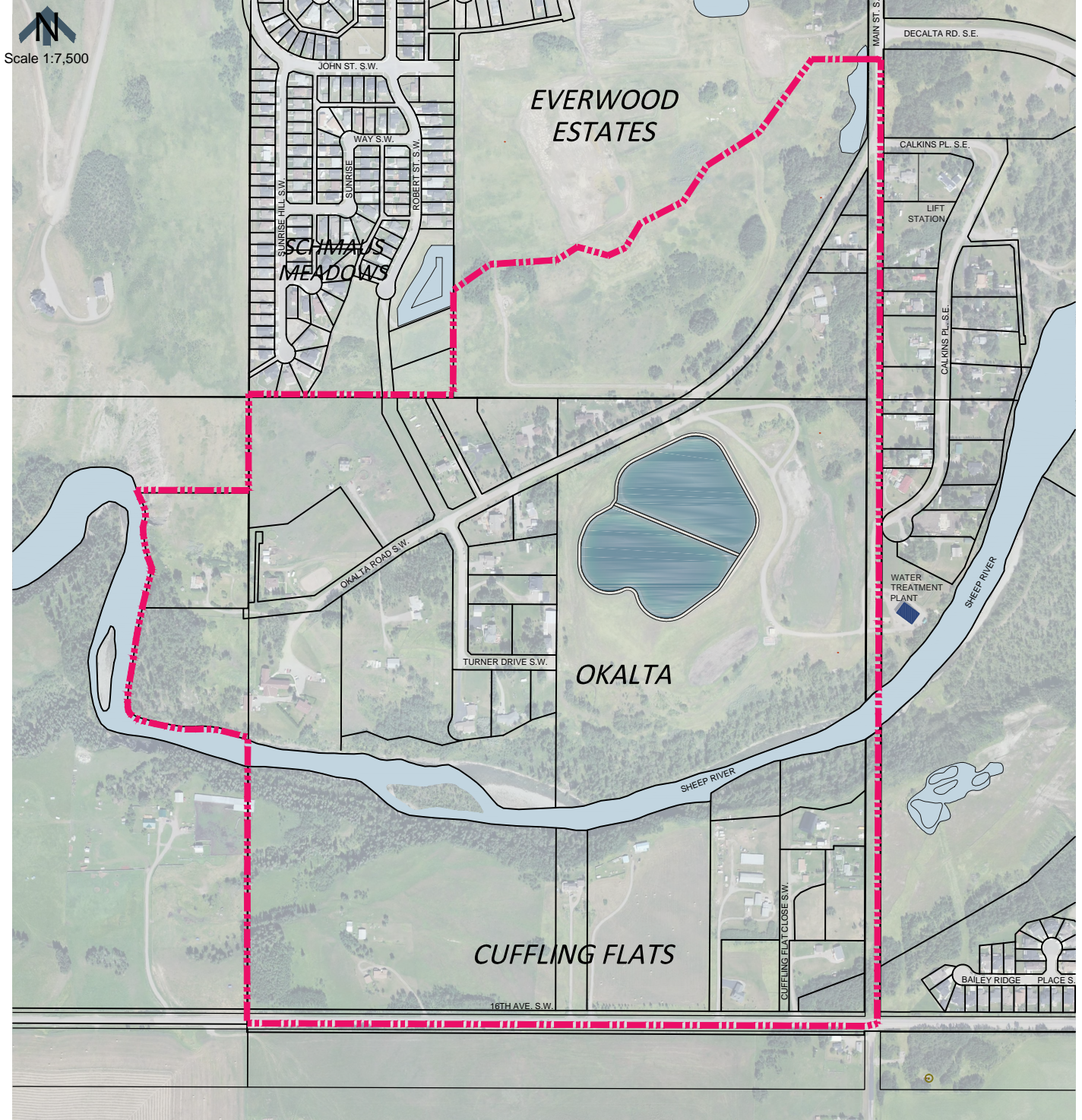
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# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley



### LEGEND

- - - - - PLAN AREA BOUNDARY      — LEGAL PROPERTY BOUNDARIES

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## 2 NATURAL AND BUILT ENVIRONMENT

### 2.1 TOPOGRAPHY AND NATURAL FEATURES

Although large portions of the Plan Area have slopes less than 15%, some significant topographical features pose constraints to development (see **Figure 3: Slope Analysis**). Cuffling Flats exhibits a plateau-like profile, with a gentle slope from west to east, and a steep embankment adjacent to the Sheep River. The escarpment also affects the westernmost side of Cuffling Flats, such that potential development is restricted by steep slopes.

Okalta has several distinct topographical sub-areas.<sup>1</sup>

- There is a terraced area extending offsite to the north which includes the Everwood Estates and Schmaus Meadows offsite developments. An escarpment area roughly delineates the property line between Everwood Estates and the northern boundary of the Plan Area.
- A second distinct area is bounded by the aforementioned escarpment to the north, Sheep River to the west, and Okalta Road SW to the south and east. This land is a narrow, flat terrace that slopes gently to the south east.
- A third area is bounded on the north side by the low ridge, upon which Okalta Road SW was constructed, and by the Sheep River to the south and west. The land generally slopes to the south and east, falling between 8 and 13 metres depending on location. The escarpment adjacent to the Sheep River has steep slopes and an average decline of 10 metres.

In addition to the escarpments discussed above, the Plan Area contains a number of other significant natural features, including grasslands, woods and riparian areas (see **Figure 4: Natural Features**). In particular, the Sheep River is an important and defining feature of the town, providing aesthetic and recreational value to residents, and natural corridors for wildlife. Both the escarpments and the river valley are identified as Environmentally Sensitive Areas in the Turner Valley Municipal Development Plan (MDP).

#### 2.1.1 ESCARPMENTS

In order to mitigate danger to life and property from slope stability hazards, the Land Use Bylaw requires a 30-metre setback from both top and toe of any slope greater than 15%. This restriction applies to much of the escarpments within the Plan Area, basically preventing development along the outer edges of Okalta, and along the north and west edges of Cuffling Flats. These setbacks can be reduced at the discretion of the Development Authority if an applicant demonstrates that the slope is stable and safe, with the provision of an acceptable professional geotechnical engineering study.

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<sup>1</sup> Okalta Area Structure Plan Bylaw 94-629



### 2.1.2 SHEEP RIVER

The Sheep River presents two major constraints for development. First, the river is a practical barrier that separates Okalta from Cuffling Flats, and interrupts the continuity of any large-scale redevelopment plan. Infrastructure connectivity – pedestrian or transportation networks, utilities, municipal services – is equally challenged by the barrier. Second, the Land Use Bylaw establishes restrictions on development within the *floodway and flood fringe* (together, the Flood Risk Area) of the Sheep River. Only certain types of low intensity land uses (e.g. public parks, boat launches) are permitted within the floodway, which presents the highest flood risk. Development is permitted within the flood fringe area with the appropriate flood risk mitigation. However, due to the steep escarpments adjacent to the river no suitable flood fringe development areas exist.

As a result, residential development within the Plan Area is not permitted riverward of the adjacent escarpments. Nevertheless, residents and policy documents emphasize the opportunity that the river represents in terms of environmental protection, habitat connectivity for wildlife, aesthetic and recreational use value (including expansion of park space and trail networks), and tourism/economic development as part of the Town's "Back to Nature" brand.

#### *Natural Features Constraints / Opportunities*

- *Provide for a 30 metre setback from all slopes greater than 15%.*
- *Connectivity challenges.*
- *Land use restrictions along the river banks.*
- *Natural and ecological amenity areas.*
- *Recreation opportunities.*
- *Rural residential character.*

## 2.2 OIL AND GAS FACILITIES

The history of Turner Valley is tied directly to the discovery and development of oil and gas resources. As a result, a variety of active and abandoned wells, pipelines and other facilities are located within and adjacent to the Plan Area (see **Figure 5: Oil and Gas Facilities**).

Setback requirements from oil and gas wells and/or pipelines create a significant development constraint within the Plan Area. The Alberta Energy Regulator (AER) recommends a setback of 5 metres from an abandoned well to allow for maintenance and protection of the well site, and to avoid damaging construction or excavation equipment that may be used on site. There are 9 such abandoned or suspended wells identified within the Plan Area. However, the location of pipelines was inconsistently documented until the mid-20<sup>th</sup> century, which suggests that accurate descriptions of pipeline rights-of-way may not be included with the easement on a given land title. Additional studies may be required by individual landowners at the time of subdivision to determine if any abandoned pipelines or servicing utilities are present on the property.

The AER has also established setbacks from active oil and gas facilities depending on the potential release rates of hydrogen sulphide (H<sub>2</sub>S or sour gas) from active sour gas wells and pipelines. Level 1 facilities have the lowest risk of releasing sour gas, while Level 4 facilities



have the highest risk. The distance of the setbacks correspond to the risk level of the facility. Four active Level 1 gas wells operate within the Plan Area, and are assigned a setback of 100m each. A fifth gas well operates just beyond the northern boundary, and its setback includes lands at the north-east corner of the area.

Several pipelines (operated by Crescent Point Energy Corp.) are located within or at the boundary of the Plan Area, for the most part at the quarter section boundaries to the south and east. Exceptions include sour gas mains that align roughly with the north side of Okalta Road SW and that penetrate the Town-owned reservoir parcel; and a natural gas main that aligns with Cuffling Flat Close SW before running east beyond the Plan Area boundary.

Permanent structures cannot be constructed within 7.5 metres of either side of a Level 1 pipeline, so development must account for a 15 metre pipeline right-of-way. The pipeline operator acknowledges but does not condone a number of existing temporary structures within the ROW.

#### *Oil and Gas Constraints / Opportunities*

- Setbacks to oil and gas facilities restrict development.
- Rights of way for pipelines pose constraints.
- Unknown and abandoned oil and gas infrastructure may exist.

## **2.3 EXISTING DEVELOPMENT**

Existing development in the Plan Area is minimal. Land uses in the Plan Area are predominantly residential with around 30 established detached dwellings, along with some agricultural uses. The gross residential density is 0.5 units per hectare.

At the time this ARP was prepared, the majority of the Plan Area was designated an *Urban Reserve District* (see **Figure 6: Existing Land Use**), which according to the Land Use Bylaw provides for a continuation of the low-density rural character of designated lands, while acknowledging their proximity to developed areas and their intended future development. In general, the designation permits single detached dwellings on lots of at least 8 ha (20 acres), although many of the existing lots are identified as exceptions with regards to size.

Although lot sizes vary, most are between 0.3 ha and 1 ha (0.74 acres - 2.5 acres). Smaller lots are located on subdivided parcels in the center and south east, while the largest lots – the Town-owned parcels that accommodate the reservoir and future recreation area, and the privately-owned parcel south of the Sheep River – together account for over half of the total Plan area. Most of the lots are only sparsely developed with single-family dwellings, modest accessory buildings (e.g. garages, sheds), and occasionally agricultural structures (e.g. barns). Some of these structures will require relocation or removal in order to fully realize the proposed redevelopment concept plan.

Near the northern Plan boundary, there is currently a significant area of *Residential Restricted Single-Family* and *Residential Multi-Unit* lands that will require redesignation in order to accommodate the planned recreational uses (both of these are currently undeveloped). A

subdivision in the center of the Plan Area is designated *Direct Control District 3*, meaning that site-specific regulations apply.

Approximately 3% of the Plan Area is designated as either *Environmental Reserve* (ER) or *Municipal Reserve* (MR). These parcels are concentrated adjacent to the Sheep River in Cuffling Flats and just south of Everwood Estates in Okalta, respectively, though smaller parcels can be found in other portions of the Plan Area. The raw water reservoir parcel is a *Public Utility Lot* (PUL) and is owned by the Town.

To date, the lots owned by the Town do not contain any development, with the exception of the raw water reservoir and maintenance yard on the eastern side of the Plan Area. The remaining privately held properties in the plan area retain a strong rural character and characteristic low-density residential form.

The non-profit 'Youth with a Mission' property at the end of Okalta Road SW is a significant private development which uses several former hospital buildings for a Christian missionary training program. There is potential to repurpose this development, to redevelop the property for residential purposes, or to retain it for its current use.

The ARP planning process provides an opportunity to review the current land use within the plan area and propose land use designations that can accommodate the existing and future development set forth by this plan. This process may include the introduction of land use designations more consistent with those of developed neighbourhoods to the north and east (which tend to permit denser residential forms).

### 2.3.1 REDEVELOPING

Redevelopment must account for existing structures, lot boundaries, ownership challenges and other existing development in the Plan Area. As majority of the developable area within the plan boundaries is privately held, the assembly and/or subdivision of lots depends on the response of existing landowners to subdivision/boundary changes or the sale of their land. As a result, development may occur sooner or more readily in some areas than in others, and redevelopment may be more successful where it aligns with existing boundaries.

The Town also owns a substantial parcel north of Okalta Road SW intended for the provision of public recreation, effectively precluding private redevelopment on these lands. The amenity offered by the development of this park makes the surrounding properties an attractive location for greater density residential development.

At the same time, the existing community has helped to establish the rural residential form and character that makes the area desirable from a development perspective. The character should be carried through into the design of redevelopment projects.

## 2.4 LAND OWNERSHIP

Approximately three-quarters of the land within the Plan Area is privately owned, while the balance is owned by the municipality (see **Figure 7: Ownership**). Town lands include Environmental and Municipal Reserves, the lot that contains the raw water reservoir, and the lands north of Okalta Road SW that have been reserved for future recreational uses.

### 2.4.1 LEGAL AGREEMENTS ON TITLE

As a result of previous subdivisions, there are a number of caveats or agreements registered on title between Plan Area landowners and other parties (predominantly the Town of Turner Valley). The constraints that these documents present for redevelopment are discussed further in Section 5 -Making it Happen.

- Deferred Reserve Agreements registered against 4 of the parcels in the total amount of 2.7 hectares, which will require either dedication or further deferral at the time of future subdivision.
- Nine parcels are subject to Deferred Servicing Agreements; the nature of these agreements varies, but generally requires the landowner or developer to enter into a Development Agreement with the Town at the time of further subdivision for the provision of (or payment for) public improvements.
- Some landowners are required to relinquish title on part of their lands for future rights-of-way, when necessary.
- A number of Development Agreements require that future development be connected with municipal services at the time of future subdivision.

#### *Land Use and Development Constraints / Opportunities*

- Rural residential character should be carried through into the Development Concept
- Land assembly poses a challenge to redevelopment
- Municipal reserves and open spaces create opportunity to upgrade the trail connections
- Recreational park and open spaces around water reservoir create a high amenity area
- Existing legal agreements on title need to be recognized in a municipal reserve strategy and for development levies and agreements

## 2.5 MUNICIPAL INFRASTRUCTURE

### 2.5.1 WATER AND WASTE WATER INFRASTRUCTURE

The Plan Area is currently underserved by municipal water (**Figure 8: Existing Water Servicing**) and waste water infrastructure. Because there is no piped wastewater collection system in the area, residents rely on private septic systems. By contrast, recent nearby developments (Schmaus Meadows, Calkins Place, Bailey Ridge) have dedicated sanitary sewer and potable water infrastructure. According to a 2014 servicing study, the Calkins Place lift station was designed to accommodate future wastewater flows from Cuffling Flats and lands to its immediate west.

Although some parts of Okalta are serviced by a piped water distribution system, Cuffling Flats remains dependent on private wells. Some residents have identified poor or inconsistent water quality from their wells. The existing raw water reservoir and pump station facility is located just south of the Okalta Road SW; supply/intake mains run east to the water treatment facility just beyond the Plan Area boundary.

The provision of municipal services to existing and future development within the plan area is one impetus for this plan.

### 2.5.2 STORMWATER

The existing developed portions of the study area have a semi-conventional drainage system (surface ditches and pipe systems – see **Figure 9: Existing Drainage**). There is offsite runoff from the north and south that drains into the plan area due to the location of the Sheep River that bisects the plan area and drains the site/ Town.

### 2.5.3 TRANSPORTATION INFRASTRUCTURE

The Plan Area has two main roads that provide access from surrounding communities (**Figure 10: Existing Transportation**). Okalta Road SW extends for around 1.07km from the terminus of Main Street SW to a dead end at the quarter section boundary to the west end of the plan area. This road is 2 lanes wide (8m wide with 20m ROW) and unpaved, with no formal sidewalk. The road provides access to Turner Drive SW and a possible future connection to Schmaus Meadows via Robert Street SW.

The second main road is 16<sup>th</sup> Avenue SW along the southern boundary of the Plan Area, which continues beyond Turner Valley as Township Road 200. The road is also 2 lanes wide (9m wide with 30m ROW) and paved.

Any development adjacent to the ROW of the 16 Avenue SW requires consultation with the MD of Foothills. One private road – Cuffling Flats Close SW – is accessed from 16<sup>th</sup> Avenue and provides access to nine existing country residential properties within the Town Boundaries.

### 2.5.4 SUMMARY OF MUNICIPAL INFRASTRUCTURE

The total area available for new development is limited by the physical presence of municipal rights-of-way, pathways, and the raw water reservoir, and the area that may be required in the future should infrastructure expansion become necessary. Additionally, although not generally a

physical constraint on development, the limited capacity of existing municipal infrastructure presents a practical constraint with respect to density and servicing extents.

As identified above, the Plan Area is not currently serviced by municipal water and wastewater infrastructure. Additional development in the area is likely contingent on the ability to provide the necessary municipal water and wastewater infrastructure to service the Plan Area. The connection of both water and waste water systems to the municipal network would allow residential densification, as well as alleviate the water quality concerns among existing residents utilizing private water wells.

## 2.6 DEVELOPMENT CONSTRAINTS SUMMARY

**Figure 11: Development Constraints** depicts a summary of the natural and built environment constraints which can impact redevelopment opportunities. The main constraints include oil and gas infrastructure, escarpment areas with slopes in excess of 15% grade, existing lot and ownership configurations, lack of water and sanitary infrastructure and the Sheep River. In particular the Sheep River and escarpments present opportunities for contextual subdivision and development to capitalize on the attraction of these natural amenities.

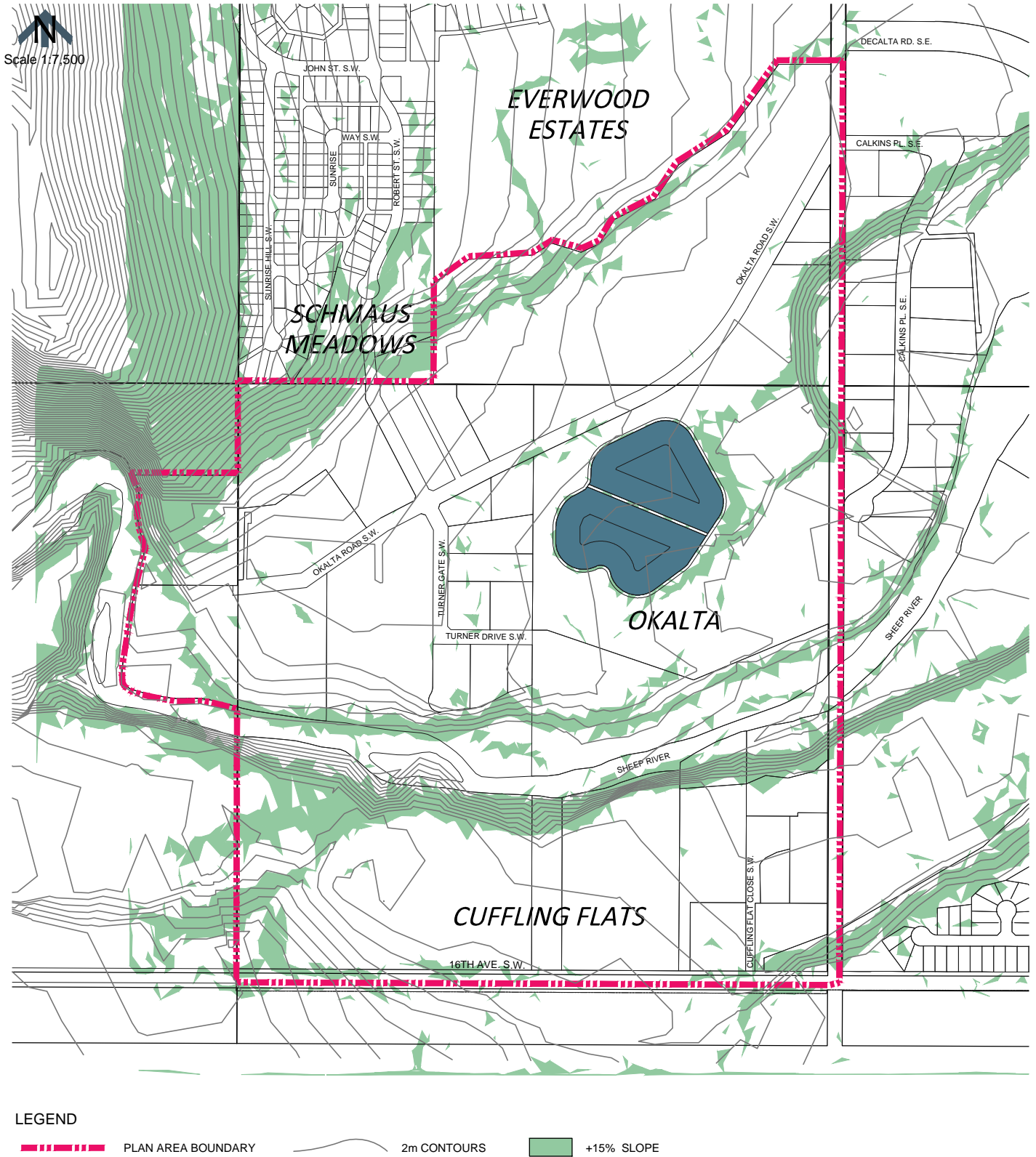
### *Municipal Infrastructure Constraints / Opportunities*

- Future development may be constrained by the capacity of the existing *municipal infrastructure* system or the requirement for sanitary lift stations. For example, the lift station at Bailey's Place is at capacity.
- The provision of water and wastewater systems would allow for residential densification to common urban standards for single family housing.
- The waste water constraint in Cuffling Flats can be resolved via connection to the Calkins Place sewage collection network.
- The *road network* is generally adequate at the moment, but the extent and condition of roads presents a constraint on future development. Increased traffic from new development may require a more extensive or higher quality transportation network.



# Okalta & Cuffling Area Redevelopment Plan

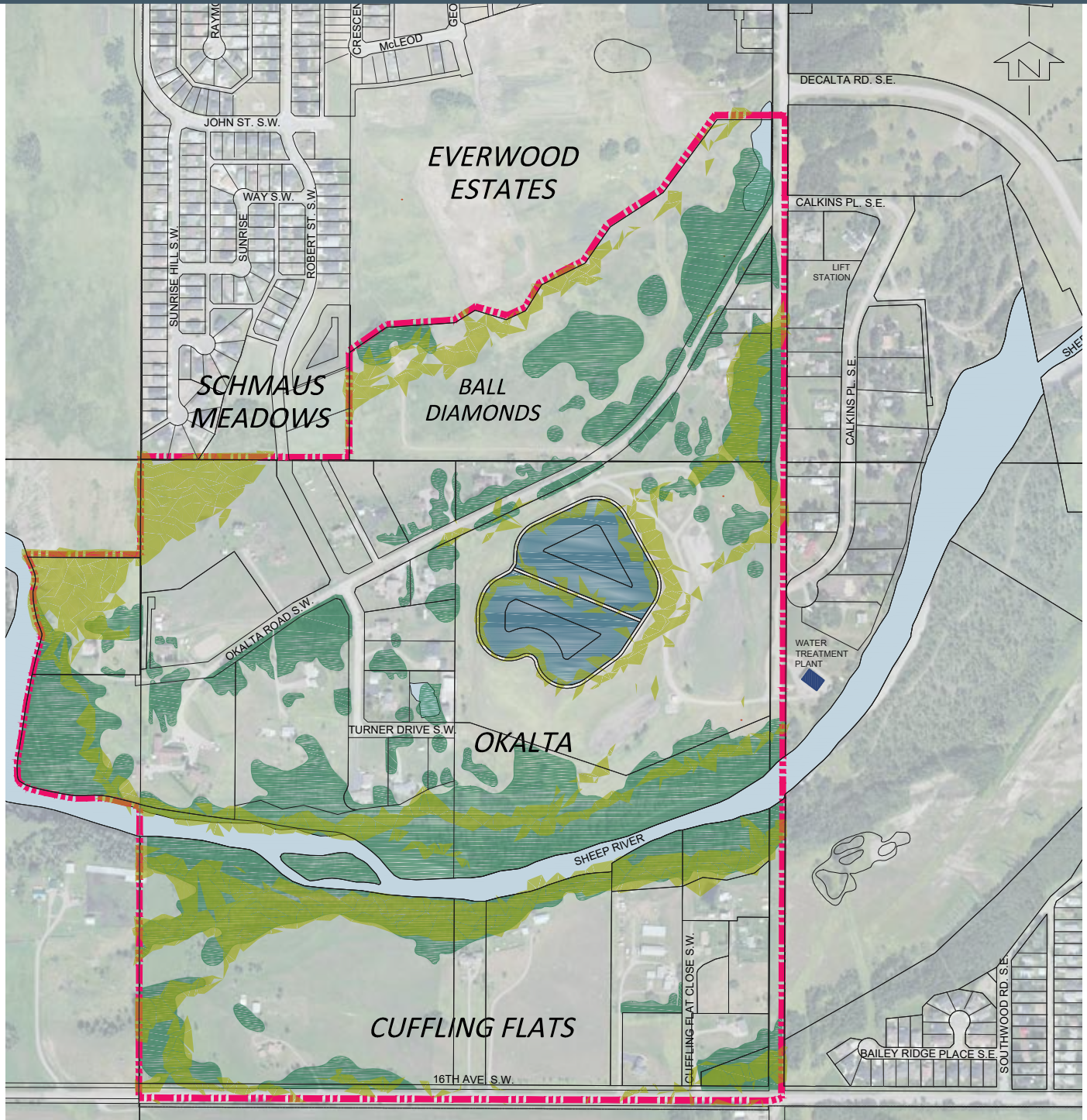
## The Town of Turner Valley



February 2016

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley



### LEGEND

	PLAN AREA BOUNDARY		ESCARPMENT AREA
	EXISTING HYDROLOGY		EXISTING TREES AND SHRUBS
	RAW WATER RESERVOIR		

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P:\5214064-000 Town of Turner Valley - Okalta and Cuffling ARP\ & E\5000 - Professional Services\Shared technical\CAD\Figures\5214064-TURNER VALLEY-ARP-FIGURE 4-EXISTING FEATURES.dwg

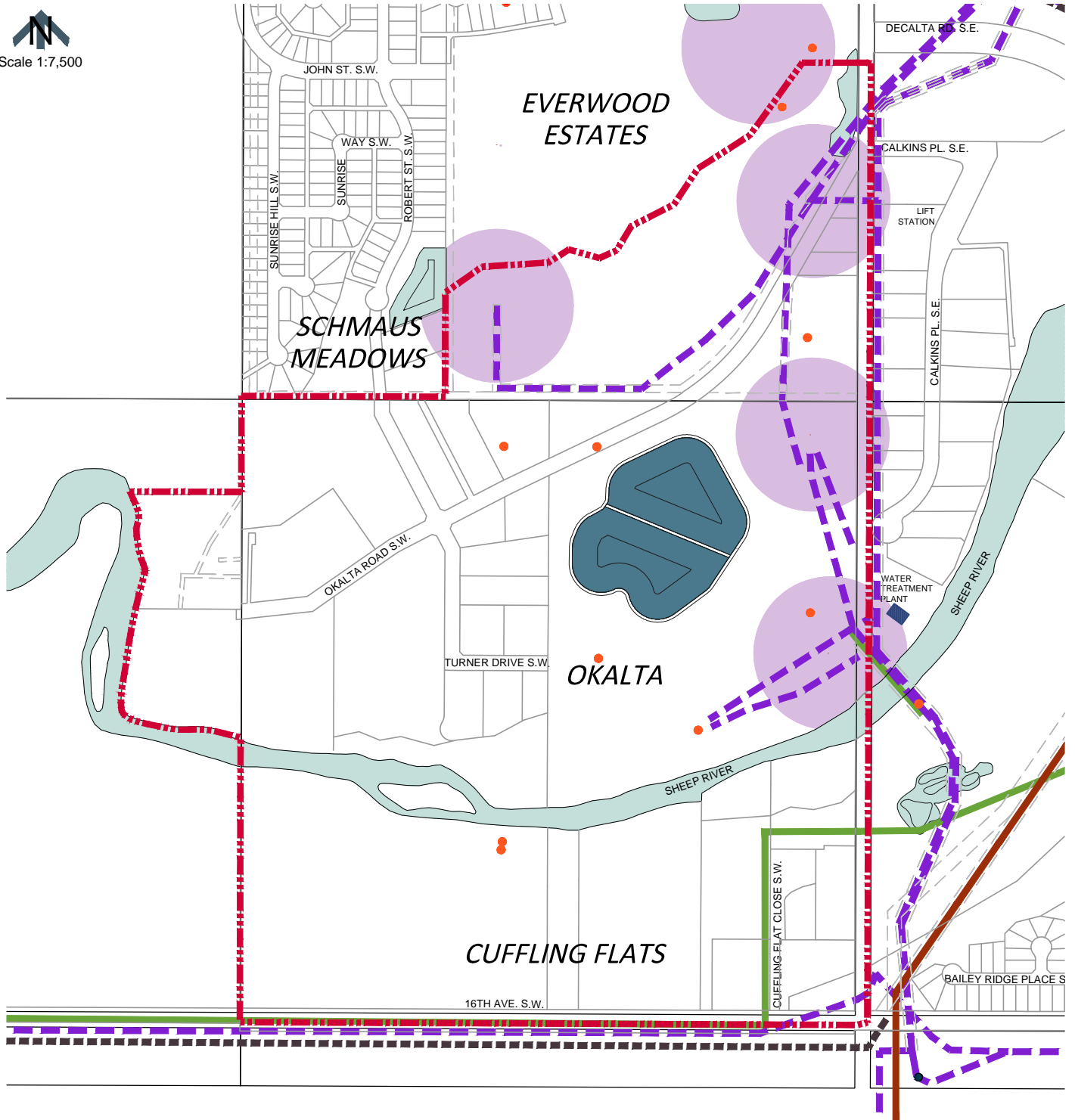
February 2016



# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

- |  |                                |  |                                 |  |                                 |
|--|--------------------------------|--|---------------------------------|--|---------------------------------|
|  | PLAN AREA BOUNDARY             |  | EXISTING LVP MAIN               |  | FLOWING GAS WELL & 100m SETBACK |
|  | EXISTING NATURAL GAS MAIN      |  | EXISTING EASEMENTS AND SETBACKS |  | ABANDONED WELL & 5m SETBACK     |
|  | EXISTING SOUR NATURAL GAS MAIN |  | RAW WATER RESERVOIR             |  | SUSPENDED WELL & 5m SETBACK     |
|  | EXISTING CRUDE OIL MAIN        |  | EXISTING HYDROLOGY              |  |                                 |

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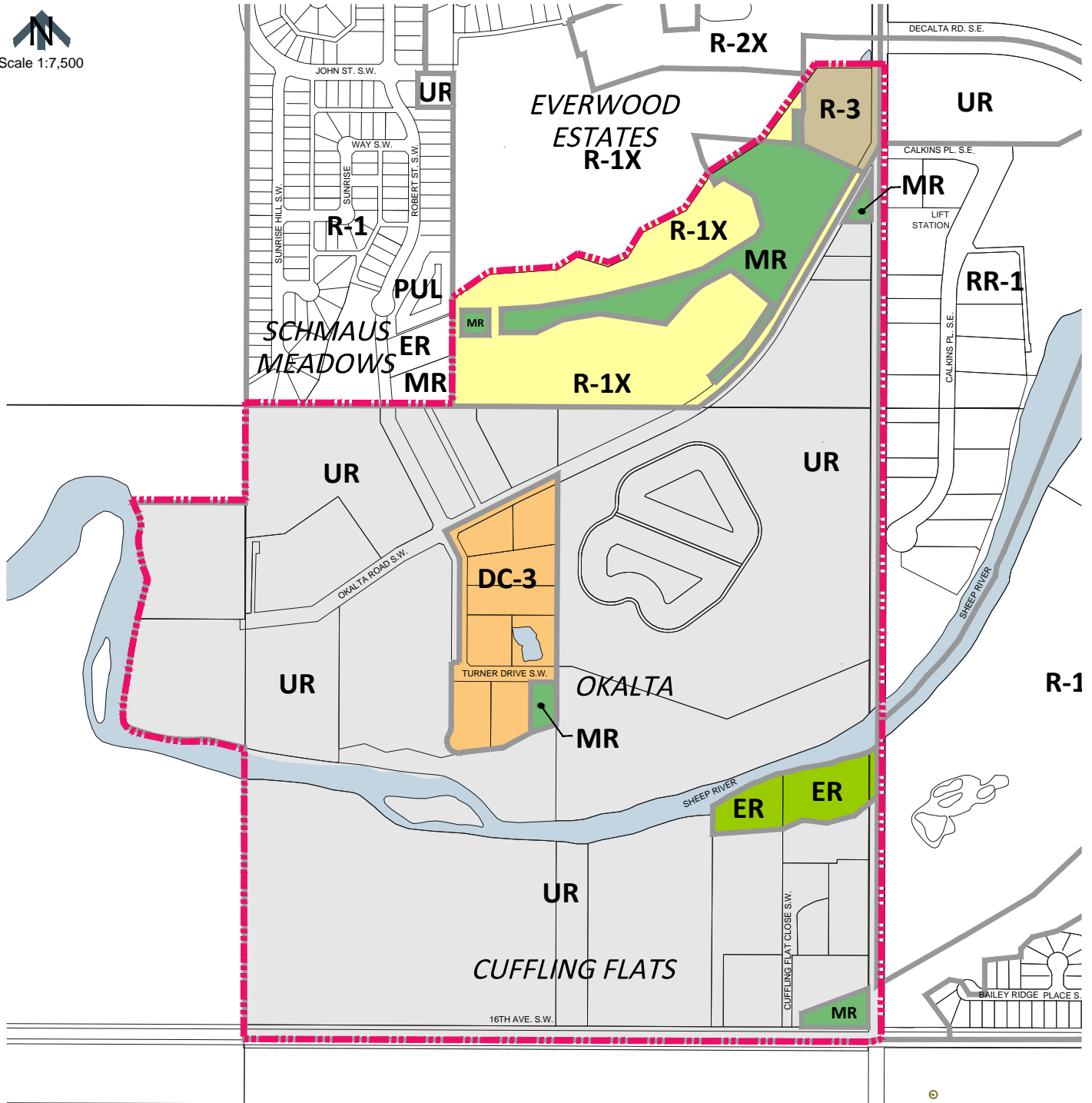
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# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

- PLAN AREA BOUNDARY
- EXISTING LAND USE BOUNDARY

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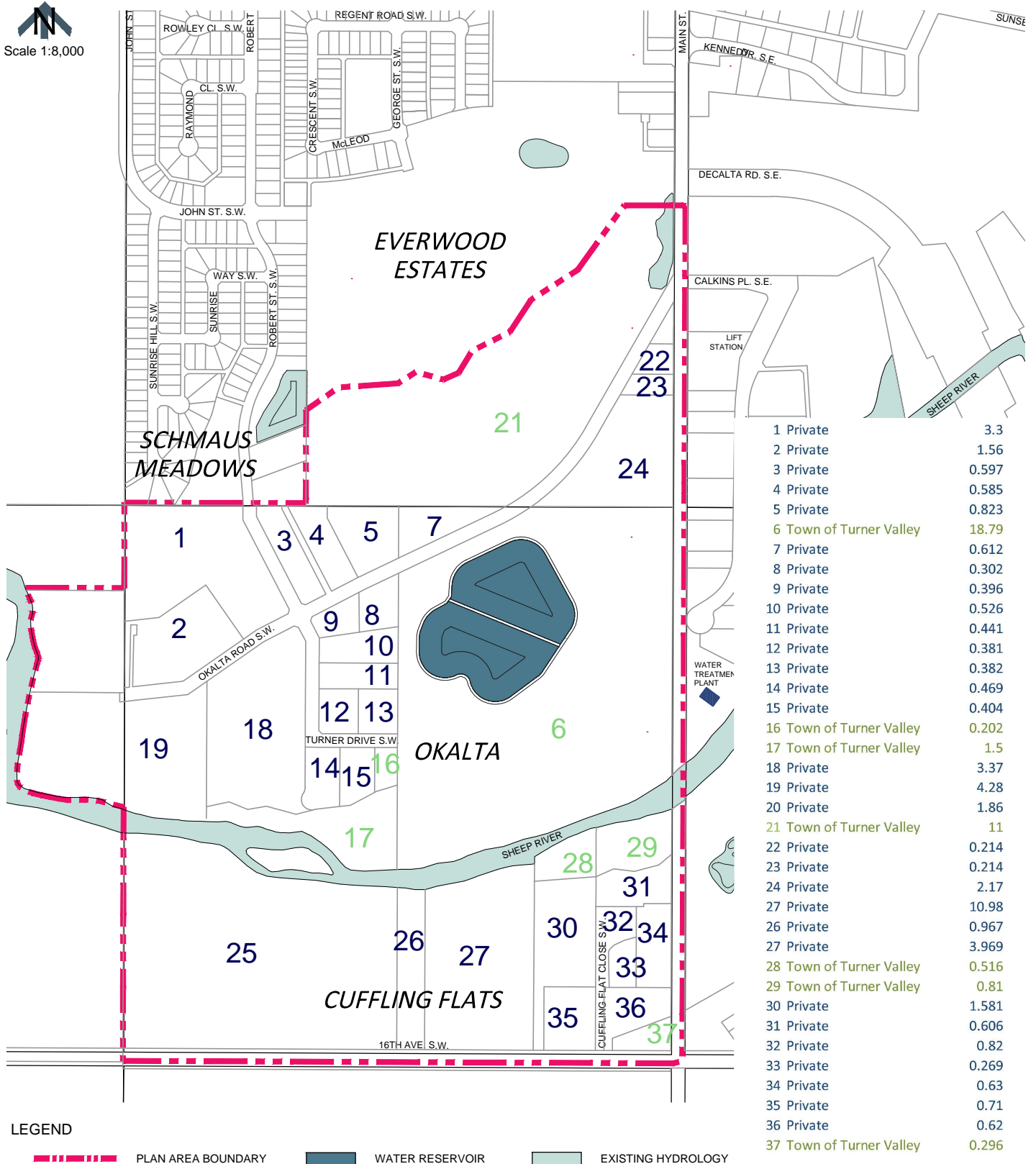
- UR - URBAN RESERVE DISTRICT
- DC - DIRECT CONTROL DISTRICT
- R-1 - RESIDENTIAL SINGLE FAMILY DISTRICT
- R-1X - RESIDENTIAL RESTRICTED SINGLE FAMILY DISTRICT
- RR-1 - RESIDENTIAL GENERAL SINGLE DETACHED DISTRICT
- R-2 - RESIDENTIAL TWO DWELLING DISTRICT
- R-2X - RESIDENTIAL GENERAL DISTRICT
- R-3 - RESIDENTIAL MULTI-UNIT DISTRICT
- M-2 - GENERAL INDUSTRIAL DISTRICT
- MR - MUNICIPAL RESERVE
- ER - ENVIRONMENTAL RESERVE

February 2016

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:8,000

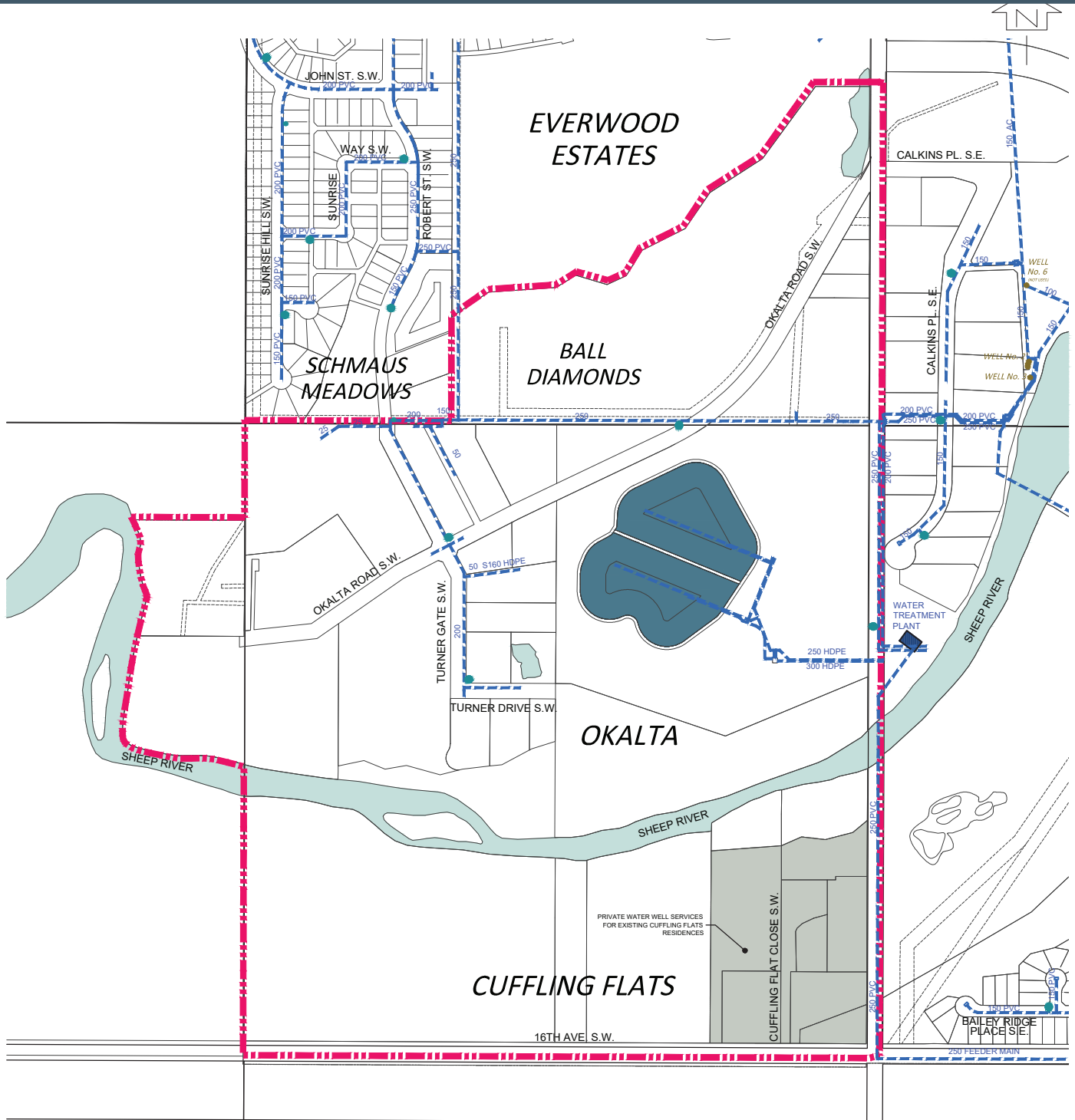


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February 2016

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley



### LEGEND

- |  |                       |  |                     |
|--|-----------------------|--|---------------------|
|  | PLAN AREA BOUNDARY    |  | RAW WATER RESERVOIR |
|  | EXISTING WATER MAIN   |  | EXISTING HYDROLOGY  |
|  | EXISTING FIRE HYDRANT |  | LEGAL BOUNDARIES    |
|  | EXISTING WATER WELL   |  |                     |

NOTE:

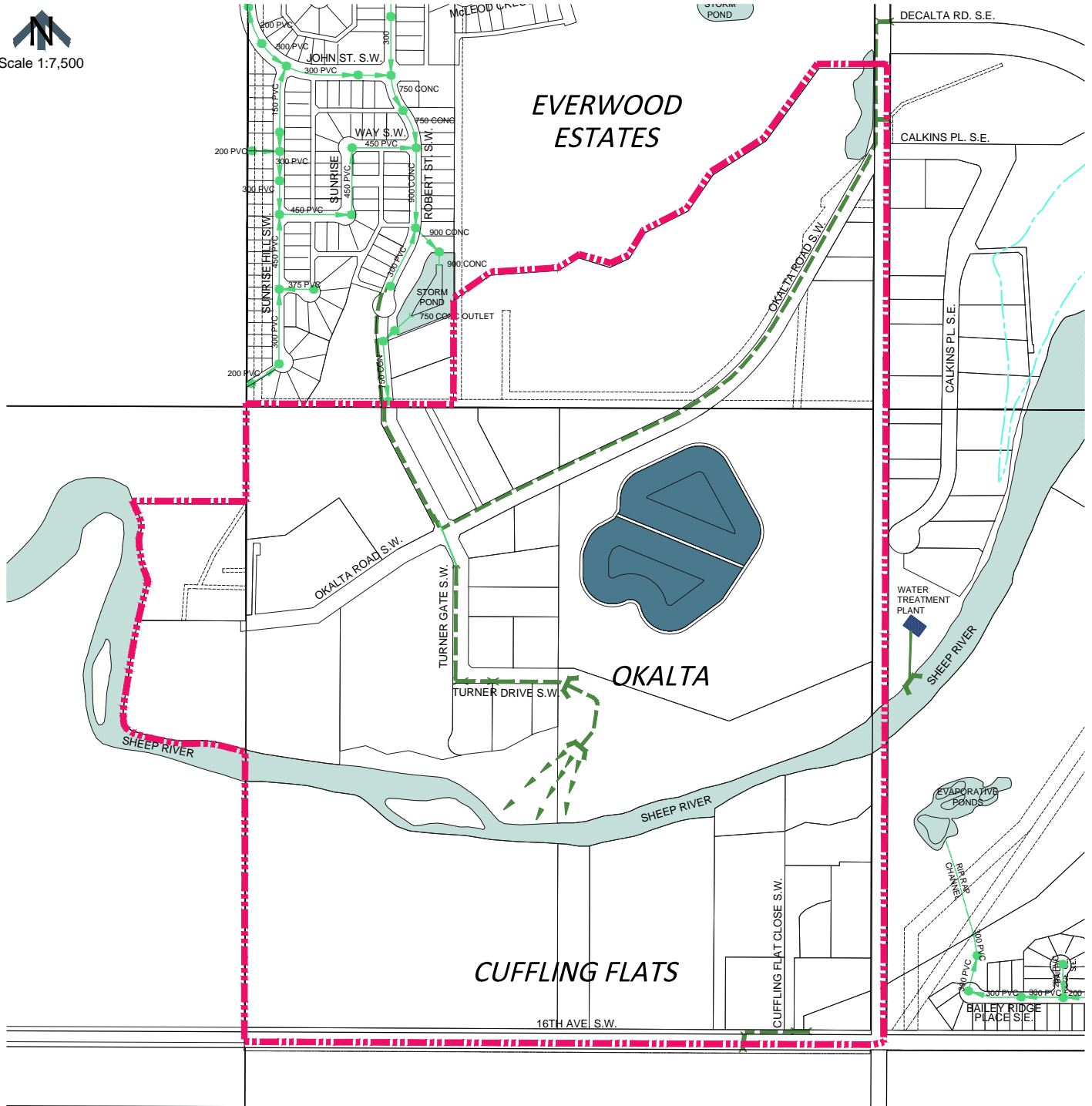
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February 2016

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

- |  |                    |  |                     |  |                    |
|--|--------------------|--|---------------------|--|--------------------|
|  | PLAN AREA BOUNDARY |  | SHEET FLOW TO RIVER |  | WATER RESERVOIR    |
|  | EX ST 600 CON      |  | EXISTING OUTFALL    |  | EXISTING HYDROLOGY |
|  | EXISTING DITCH     |  |                     |  |                    |

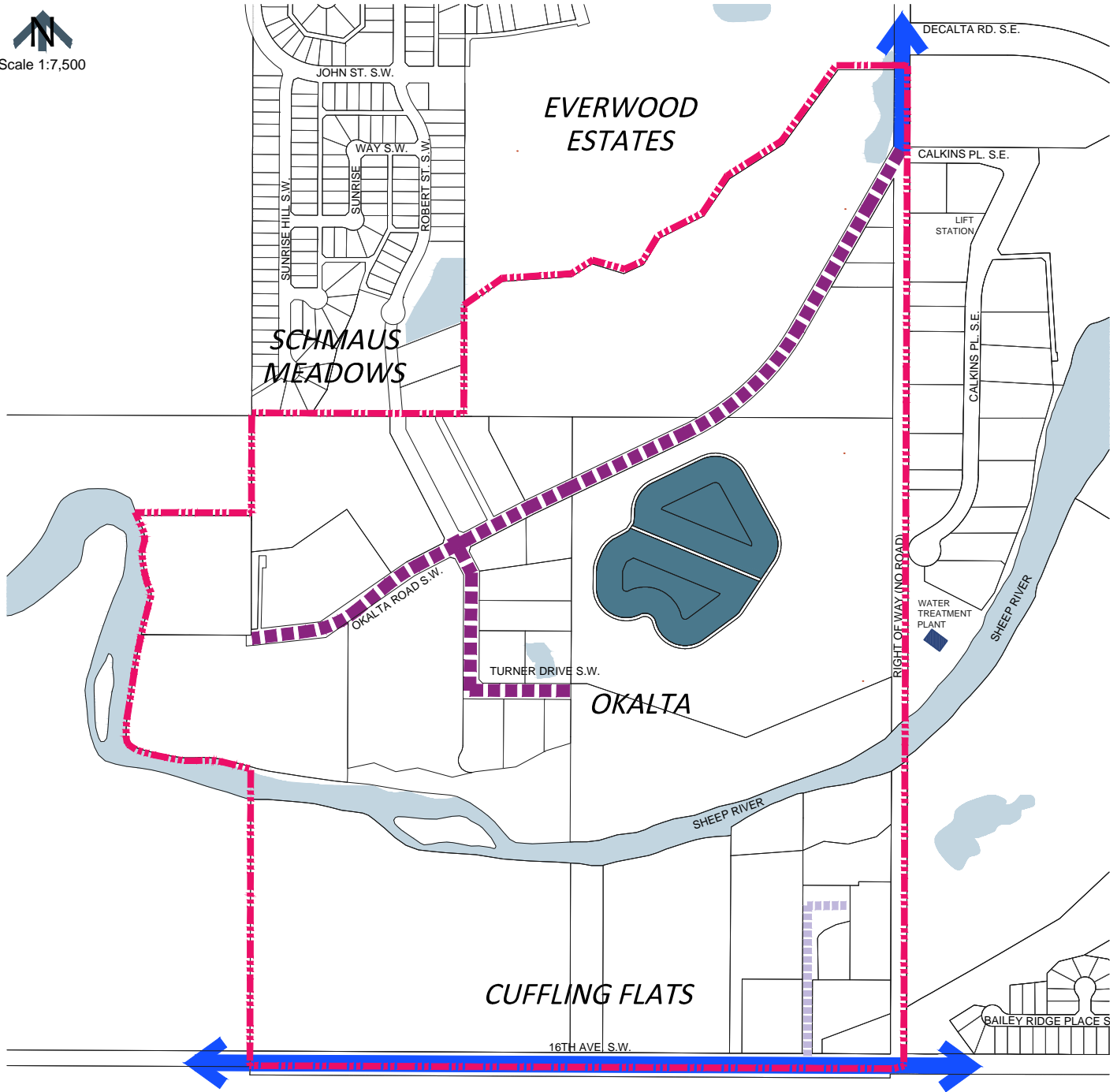
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February 2016

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

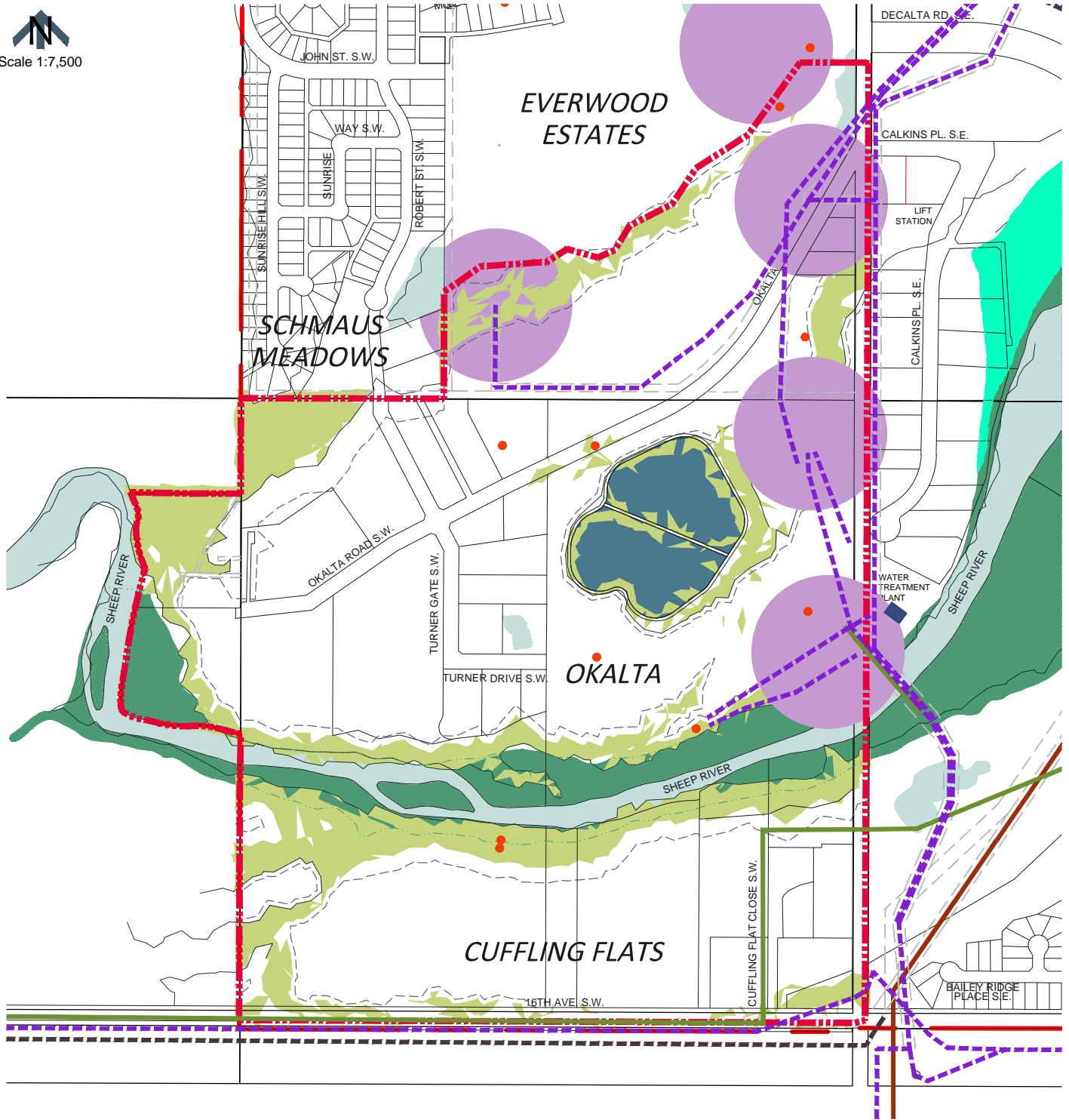
- - - - - PLAN AREA BOUNDARY
- - - - - RESIDENTIAL COLLECTOR ROAD
- - - - - PRIVATE RESIDENTIAL ROAD
- - - - - MAJOR COLLECTOR ROAD

February 2016

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

	PLAN AREA BOUNDARY		RAW WATER RESERVOIR		EXISTING NATURAL GAS MAIN
	ESCARPMENT SETBACK		EXISTING HYDROLOGY		EXISTING SOUR NATURAL GAS MAIN
	FLOODWAY		ESCARPMENT AREA		EXISTING CRUDE OIL MAIN
	FLOOD FRINGE		FLOWING GAS WELL & 100m SETBACK		EXISTING LVP MAIN
			ABANDONED WELL & 5m SETBACK		EASEMENTS AND SETBACKS

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February 2016



### 3 A CHANGING NEIGHBOURHOOD

This section sets out the considerations that went into establishing a vision for the future of the Plan area development. Land use policy, plans and bylaws set out the aspirations of different levels of government and their constituents for the intended future state of a community's development. In the case of Turner Valley, the Municipal Development Plan speaks strongly to the community's intent for future development. The Land Use Bylaw provides regulations intended to guide development in achieving the vision of the Municipal Development Plan. These policies, plans and bylaws, along with public consultation and site analysis have guided the vision for redevelopment of the Okalta Cuffling Flats ARP planning area.

#### 3.1 VISION STATEMENT

**Okalta-Cuffling Flats is a safe, friendly and family-oriented community that promotes a tranquil small-town lifestyle and enables stewardship and preservation of the natural environment, while providing opportunities for context-sensitive and financially sustainable residential intensification.**

### 3.2 STRATEGIC OBJECTIVES

Objectives for this ARP that will help achieve the Vision and guide land use and implementation policies include:

- 1. Preserve and enhance the natural amenities of the area, including the environmentally sensitive lands and riparian areas around the Sheep River.**
- 2. Establish a comprehensive recreational trail network that connects the river, parks and the town centre to enable residents to access natural and commercial amenities. This should include a future pedestrian river crossing, if financially feasible.**
- 3. Integrate Municipal Reserves, Environmental Reserves, Public Utility Lots, and the recreational trail network to provide a comprehensive open space network for residents of the Town.**
- 4. Provide for a variety of housing types and lot sizes to promote a complete community that welcomes different generations and income levels.**
- 5. Ensure that proposed residential densities reflect the rural context of the area, while enabling economically feasible redevelopment.**
- 6. Enable the provision of municipal water and waste water services for all new development in a financially responsible manner.**
- 7. Provide for the development and expansion of public facilities.**

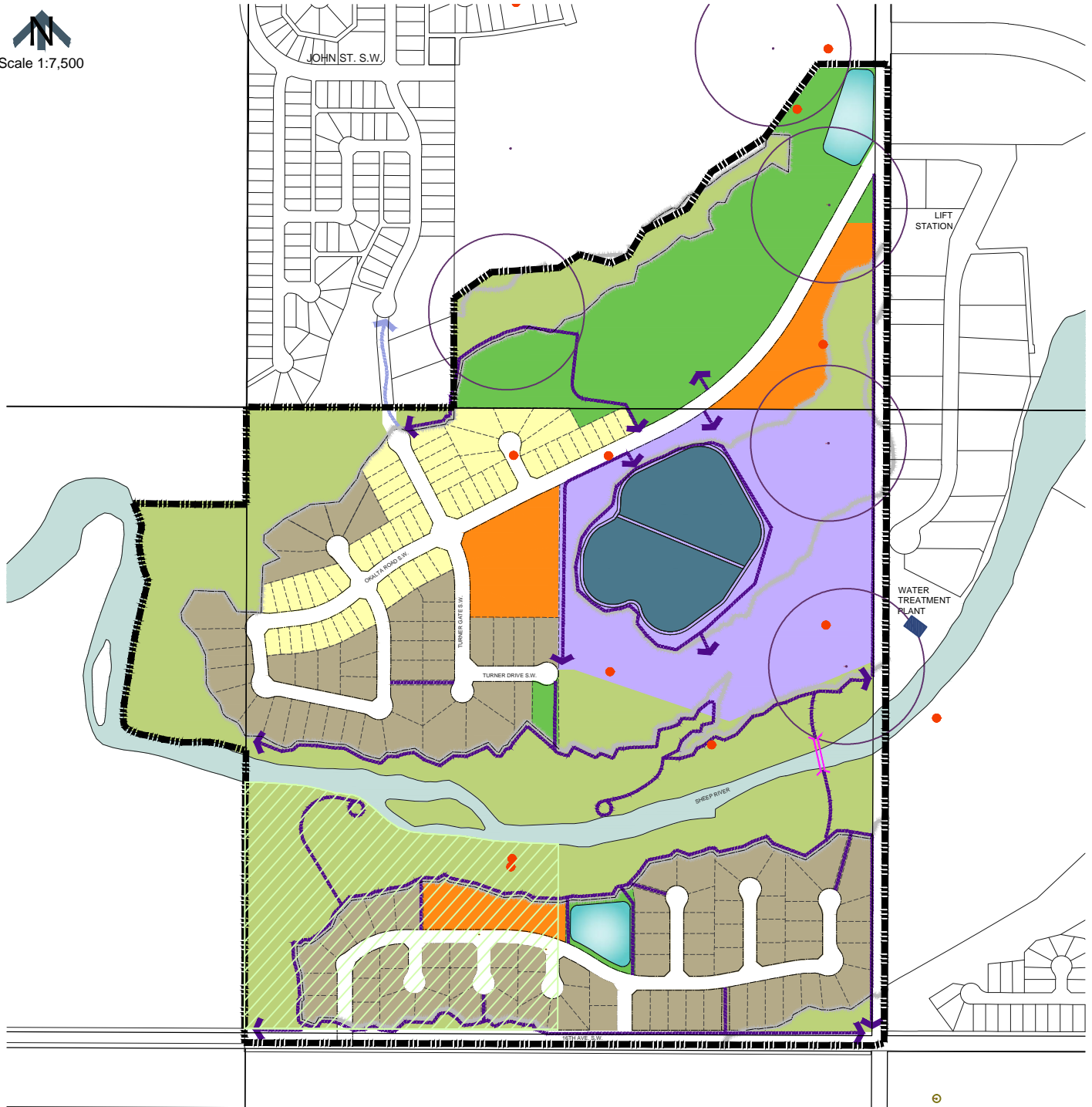
In order to realize this Vision and the Strategic Objectives, **Figure 12: Development Concept Plan** establishes land uses and a conceptual subdivision scheme, and Section 4 – Policies for Development establishes guidance for future development. Each policy is intended to address a community development objective that aligns with the overarching Vision, balanced by the constraints and opportunities set out in Section 2 - Natural and Built Environment.



# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

	PLAN AREA BOUNDARY		PROPOSED OFFSITE MULTI-USE TRAIL AND EMERGENCY ACCESS		RESIDENTIAL - TOWN DENSITY		PROPOSED MR
	ESCARPMENT SETBACK		PROPOSED MULTI-USE TRAIL		RESIDENTIAL - COMPACT		PROPOSED ER
	RAW WATER RESERVOIR		POTENTIAL FOOTBRIDGE		RESIDENTIAL - RURAL CHARACTER		PROPOSED SWMF
	ABANDONED WELL & 5M SETBACK		TENTATIVE LOT BOUNDARY		PROPOSED PUL		ENVIRONMENTAL STUDY OVERLAY
	FLOWING GAS WELL & 100M SETBACK						

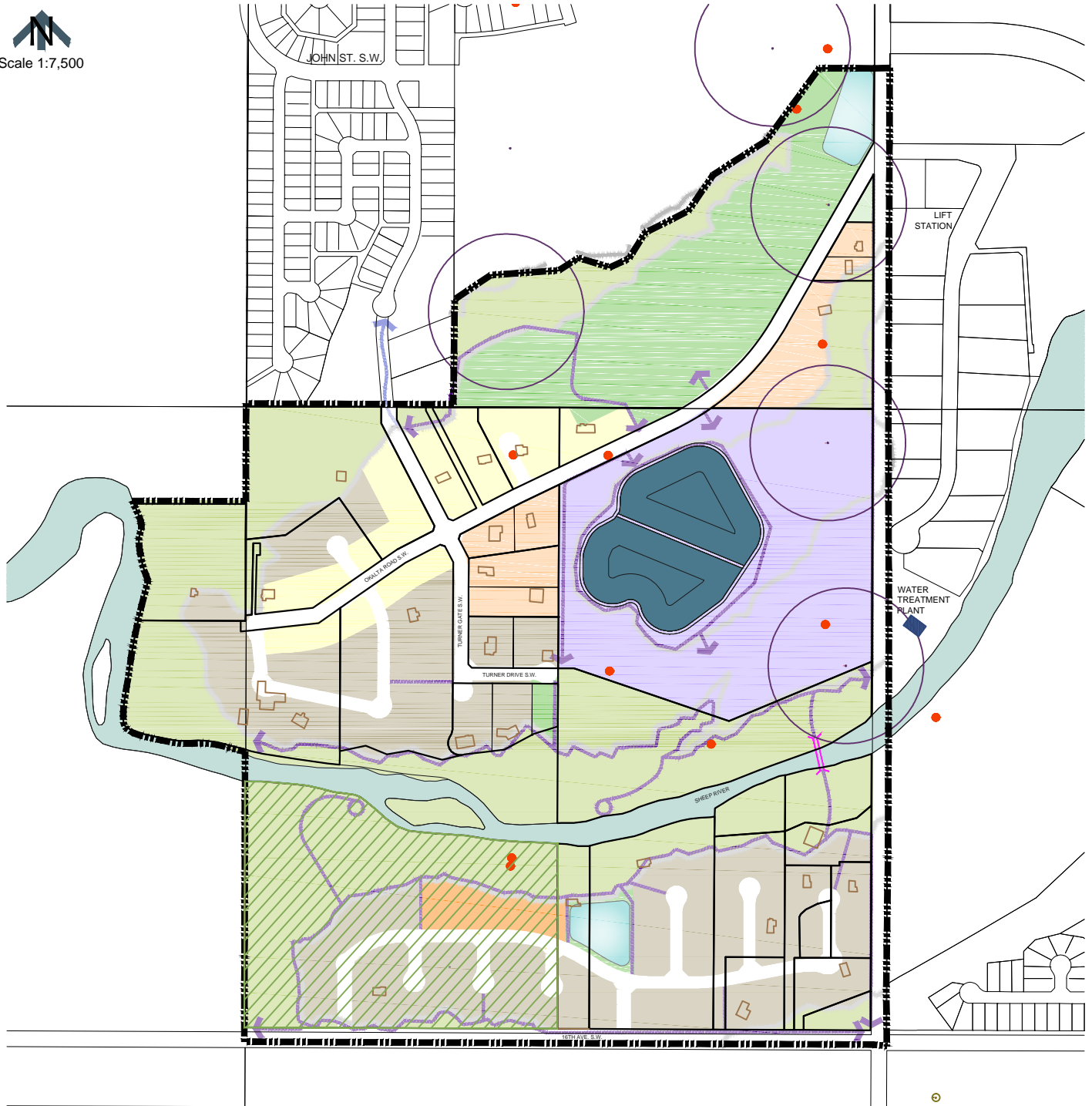
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May 2016

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

- |                                 |   |                               |                                  |
|---------------------------------|---|-------------------------------|----------------------------------|
| PLAN AREA BOUNDARY              | PROPOSED OFFSITE MULTI-USE TRAIL AND EMERGENCY ACCESS | RESIDENTIAL - TOWN DENSITY    | PROPOSED MR                      |
| ESCARPMENT SETBACK              | PROPOSED MULTI-USE TRAIL                              | RESIDENTIAL - COMPACT         | PROPOSED ER                      |
| RAW WATER RESERVOIR             | POTENTIAL FOOTBRIDGE                                  | RESIDENTIAL - RURAL CHARACTER | PROPOSED SWMF                    |
| ABANDONED WELL & 5M SETBACK     | EXISTING LOT BOUNDARY                                 | PROPOSED PUL                  | ENVIRONMENTAL STUDY OVERLAY AREA |
| FLOWING GAS WELL & 100M SETBACK | EXISTING BUILDING                                     |                               |                                  |

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May 2016

## 4 POLICIES FOR DEVELOPMENT

There is a broad consensus among the guiding policy documents and the community engagement feedback about the opportunities and challenges that face Okalta-Cuffling Flats today, and the changes that are desired for the future. This information has been used to prepare a *Development Concept Plan* (**Figure 12: Development Concept Plan**) that sets out the overall intended development and related land uses. **Table 1: Development Concept Statistics** describes the breakdown of land uses in the Development Concept Plan.

**Figure 13: Development Concept Plan – Existing Property Boundaries** sets out the existing property boundary pattern overtop of the proposed land uses to enable land owners and other stakeholder to understand potential changes.

The Development Concept Plan shows a number of land use and infrastructure changes. The escarpments and Sheep River valley – which present both a hazard to development and a valuable environmental amenity – have been identified as Environmental Reserves. This reduces the Gross Developable Area by nearly a third, leaving fewer than 60 hectares for redevelopment.

### *Notes on Interpretation of Figure 12: Development Concept Plan*

- Boundaries of land use areas are conceptual in nature and can be refined through further study of site constraints and development proposals.
- Significant changes may require amendments to this plan to ensure compliance and opportunity for public consultation.

Around 41% of the remaining area has been proposed for residential development. The preferred residential form remains mostly single detached dwellings, ranging from a standard town lot size to a larger lot size more in keeping with the fringe of a rural community. Some standard (urban) density and higher (multi-unit) density is also proposed in strategic locations nearby to open spaces (e.g. the proposed public recreation lands, trails and raw water reservoir) to encourage a diverse housing supply and to account for forecast population growth in the area.

With regards to public spaces, nearly 9 hectares of land has been designated as Municipal Reserve to provide public parks for recreation. New/upgraded roads are required to provide appropriate access for residents and emergency vehicles, and to improve connections with surrounding areas. Although the raw water reservoir and surrounding lands account for nearly 24% of the Gross Developable Area, it is a necessary piece of municipal infrastructure that remains in the Plan. The land area is retained to enable future expansion of these important infrastructure facilities. Finally, a multi-use trail network is proposed to improve connectivity throughout the Plan Area and to provide access to important amenities and the remaining community.

The Concept Plan is supported by a number of policies, which are discussed in detail below. These policies establish guidelines for developers, landowners and Council to follow in assessing future development proposals in Okalta-Cuffling Flats.

**Table 1: Development Concept Statistics**

	Area (ha)	% of GDA
<b>GROSS AREA</b>	<b>87.58</b>	<b>100%</b>
<i>Natural Area (Environmental Reserve)</i>	<i>28.14</i>	
<b>GROSS DEVELOPMENT AREA (GDA)</b>	<b>59.44</b>	<b>100%</b>
<b>LAND USE BREAKDOWN</b>		
<b>Parkland, Recreation (Municipal Reserve)</b>	<b>8.9</b>	<b>15%</b>
<i>Recreation use</i>	<i>8.3</i>	<i>14%</i>
<i>Pocket-park</i>	<i>0.6</i>	<i>1%</i>
<b>Public Utility Lots</b>	<b>15.0</b>	<b>25%</b>
<i>Raw Water Reservoir Site</i>	<i>13.9</i>	<i>23%</i>
<i>Storm Pond – Okalta</i>	<i>0.6</i>	<i>1%</i>
<i>Storm Pond - Cuffling Flats</i>	<i>0.5</i>	<i>1%</i>
<b>Transportation</b>	<b>11.0</b>	<b>18%</b>
<i>Main Roads</i>	<i>4.0</i>	<i>7%</i>
<i>Internal Roads</i>	<i>6.9</i>	<i>12%</i>
<b>Residential</b>	<b>24.7</b>	<b>41%</b>
<i>Town Density (R-1)</i>	<i>4.4</i>	<i>7%</i>
<i>Compact (R-3)</i>	<i>5.1</i>	<i>9%</i>
<i>Rural Character (RR-2)</i>	<i>16.0</i>	<i>27%</i>
<b>Total</b>	<b>59.44</b>	<b>100%<sup>2</sup></b>

The Residential areas are planned to accommodate a population of around 600-650 people<sup>3</sup>. In calculating residential densities two methods are used, below:

- Net residential density is 12.2 units per hectare (4.9 units per acre) of residential land.<sup>4</sup>
- Gross residential density is 8.1 units per hectare (3.3 units per acre).<sup>5</sup>

The existing residential density is 0.5 units per hectare. The proposed development represents a significant increase in the plan area density.

<sup>2</sup> Figures may not tally due to rounding

<sup>3</sup> Population and density estimates are based on an estimated yield of 129 multi-family units and 172 single family units. Persons per unit calculations were estimated at 2.55 people per detached dwelling and 1.5 people per attached dwelling. Actual yields and persons per unit may vary based on development proposals and changes in local socio-economic and demographic trends.

<sup>4</sup> Net residential density includes only those lands intended to become residential in nature.

<sup>5</sup> Gross residential density includes the GDA less Environmental Reserves, and regional facilities (recreation use and water reservoir).

## 4.1 GENERAL DEVELOPMENT POLICIES

The following general policies apply to any development in the Plan Area.

### 4.1.1 COMPLIANCE WITH THIS PLAN, ADDITIONAL APPROVALS AND OFF-SITE LEVY

- Policy 1 All development, redesignation and subdivision applications must meet the regulations and standards established by the Town of Turner Valley, including especially (but not limited to) the Turner Valley Municipal Development Plan and the Turner Valley Land Use Bylaw.*
- Policy 2 All future subdivision and development in the Plan Area shall comply with the intent of the Development Concept Plan described in this ARP, or as amended by Council.*
- Policy 3 Applications for the development of lands within the Plan Area that do not comply with the intent of the policies established in this ARP will require an amendment to the ARP.*
- Policy 4 Any cost incurred by the Town for the provision of utilities shall be apportioned to the benefitting lands or development areas and may be recovered through off-site levies, local improvement levies, or other cost recovery methods approved by bylaw.*
- Policy 5 The Town may require a developer to provide a Historic Resource Clearance prior to approval of subdivision.*
- Policy 6 The Town may require an Outline Plan in order to approve a subdivision, the boundaries of which shall be determined by the Town and may encompass multiple properties. An Outline Plan shall address:*
- .1 Stakeholder or public engagement, as may be required by the Town.*
  - .2 Adherence to municipal policy, including that set out within this plan.*
  - .3 Subdivision design concept, including justification of any changes from the conceptual lot scheme set out in the Development Concept Plan.*
  - .4 Preliminary design for transportation, site grades, stormwater, municipal services, and utilities.*
  - .5 Landscape concept plan prepared by a Landscape Architect.*
  - .6 Other matters as the Town may require, including but not limited to architectural design and/or controls, preservation of existing residences if beneficial, and technical supporting studies such as geotechnical, traffic, historic, or environmental assessments.*

#### 4.1.2 NATURAL AND BUILT ENVIRONMENTAL HAZARDS

- Policy 7 No development shall occur within the floodway or within the escarpment setbacks, including a 30 metre setback from the top of escarpment, excepting for municipal works including parks and trails.*
- Policy 8 All development plans must follow Alberta Energy Regulator (AER) requirements including any development setbacks and pipeline rights-of-way. At the Development Authority's discretion, applications shall be circulated to the AER and any pertinent oil and gas companies for further information and/or comment.*
- Policy 9 The Development Authority should not approve any subdivision application that does not conform to the AER setback requirements, unless the AER gives written approval to a lesser setback distance.*
- Policy 10 A developer shall be responsible for ensuring that any abandoned pipelines that create a safety hazard or constraint to development are removed from the property, and that any abandoned wells are capped in accordance with AER procedures, prior to any development encroachment into required setbacks.*



## 4.2 RESIDENTIAL LAND USE POLICIES

The intent of the policies is to describe the conceptual designation of three residential land use districts – low density, standard Town density and compact density – and to provide policies that will guide development in a financially responsible, environmentally sustainable and context sensitive manner.

### 4.2.1 POLICIES FOR ALL RESIDENTIAL AREAS

The following policies apply to all residential developments.

*Policy 11 Development of residential dwellings shall create an attractive, orderly and efficient use of the Town's land resources. As identified in the Development Concept Plan a, variety of housing types shall be encouraged, including single detached dwellings, secondary suites, and medium density multi-unit developments.*

*Policy 12 Applications for development that include suites and/or multi-family development (including duplex, fourplex, and other attached housing types) should make reference to Turner Valley's Residential Infill Guidelines (September 11, 2014), as may be updated from time to time.*

*Policy 13 Buildings should have architectural features and patterns that are visually interesting and that reduce the appearance of the building mass while recognizing local character.*

*Policy 14 All development shall front onto a public road*

*Policy 15 All roadways shall be designed and constructed to Town roadway standards and policies.*

*Policy 16 Mature tree and shrub removal is not supported unless, and only to the extent required, for the building site and driveway.*

*.1 At the time of subdivision the applicant must provide a tree protection plan for the Subdivision Authority's endorsement. This plan shall indicate which trees and shrubs shall be preserved and how they will be protected during construction.*

*.2 Applications for Development Permits shall demonstrate adherence to the tree protection plan, where one applies.*

*Policy 17 Pedestrian walkways and public open space shall be incorporated into the overall residential subdivision design in accordance with the overall Development Concept Plan.*

*Policy 18 On-site stormwater management should be maximized through the use of plant and landscaping materials that impede run-off and that allow infiltration.*

*Policy 19 Landscaping of all properties is required and should include the use of low-water tolerant and native species to reduce irrigation requirements.*

#### **4.2.2 RURAL CHARACTER RESIDENTIAL AREA**

The purpose of the low density residential district is to provide for single detached residential development with a rural character.

##### **Development Objectives**

- Respond to existing residents' desire to preserve the low density, rural character of the neighbourhood while allowing for municipal servicing in a financially sustainable manner.
- Larger lots with lower density than conventional residential development provided for in the plan to reflect the rural fringe location.
- Provide for an interface with natural areas including the riparian margins of the Sheep River, open spaces such as those in the western extent of the plan area, or at the Town's boundaries with the MD of Foothills at the south.
- Comply with the "RR-2" – Residential Restricted Single Detached District in Land Use Bylaw No. 03-869, as amended.

The Concept Plan has designated low density residential parcels predominantly in Cuffling Flats and the southern part of Okalta. Such designation is consistent with the objective to provide a tranquil rural character for this district: parcels are located adjacent to the natural areas of the Sheep River escarpment, and residential density declines with increasing distance from both the town (to the north) and from the activity node envisioned for Okalta Road SW.

##### **4.2.2.1 Rural Character Residential Area Policies**

*Policy 20 Buildings shall be situated and designed so that driveways, parking areas and garages do not dominate the front yard.*

*Policy 21 New buildings should be located and oriented in a manner that ensures optimal use of site conditions, including existing topography, passive solar potential and vegetative conditions.*

*Policy 22 Single detached dwellings shall be the housing type generally encouraged.*

*Policy 23 Secondary suites shall be permitted.*



### 4.2.3 TOWN DENSITY (CONVENTIONAL) RESIDENTIAL AREA

The purpose of the standard density conventional residential district is to provide for single detached residential development equal in density to standard urban neighbourhoods found elsewhere in the Town with standard lot sizes of around +/- 0.05 ha.

#### Development Objectives:

- Responds to residents' expressed preference for single detached residential dwellings, while accommodating projected population growth in the area and allowing for municipal servicing in a financially sustainable manner.
- To be of a relatively intensive form similar to nearby development in Schmaus Meadows or Everwood Estates, while maintaining a single detached residential form.
- Comply with the "R-1" – Residential Single Detached District in Land Use Bylaw No. 03-869.

The Concept Plan has designated standard density residential parcels along Okalta Road SW, mostly on the north side of the street, extending north to the planned municipal park and the escarpment. This designation attempts to concentrate residential density closer to existing main transportation routes or nodes of activity, i.e. Okalta Road SW, and the planned municipal park that may attract regular activity from recreational users.

#### 4.2.3.1 Town Density Residential Area Policies

*Policy 24 The standard density residential district shall be developed substantially in accordance with the Concept Plan included in this ARP.*

*Policy 25 Single detached dwellings shall be the housing type generally encouraged.*

*Policy 26 Secondary suites shall be encouraged.*

### 4.2.4 COMPACT RESIDENTIAL AREA

The Compact Density Residential area provides for a mixture of multi-unit residential dwellings in order to increase residential density within a compact area and urban form.

#### Development Objectives

- Responds to residents' desire for a diversity of housing types that can accommodate aging-in-place, anticipates projected population growth in the area, and allows for municipal servicing in a financially sustainable manner.
- Provide for multi-family development of a contextual nature, the design of which reflects the small town character and scenic natural setting.
- Locate compact housing nearby parks (municipal and environmental reserve lands).
- Comply with the "R-3" – Residential Multi-Unit District in Land Use Bylaw No. 03-869.

The Development Concept Plan has designated medium density residential areas along Okalta Road SW: one south-east of the intersection of Okalta Road and Turner Gate SW, the other opposite the planned municipal park near the intersection with Main Street. This allocation concentrates increased residential density closer to existing routes or nodes of activity, minimizing nuisance effects such as increased traffic to the lower density residential further west and south, i.e. Okalta Road SW and a proposed road connection through Schmaus Meadows to the town centre; the planned municipal park that will attract regular activity from recreational users; and the Calkins Place subdivision beyond the eastern boundary of the Plan Area. These development sites back onto the public utility lot and a proposed Environmental Reserve to further mitigate the effects of denser development (e.g. activity, shadowing) on neighbouring low density areas while also providing outdoor amenities for the residents.

An additional compact residential area is identified in Cuffling Flats adjacent to a storm pond and environmental reserve related to the Sheep River. This compact residential area provides housing diversity within the Cuffling Flats community, takes advantage of a pristine setting on the riverbank, and increases density within this area to reinforce the economics of providing public water and wastewater services.

#### **4.2.4.1 Compact Residential Area Policies**

*Policy 27 Multi-unit dwellings shall be the housing type generally encouraged, including attached house (i.e. town house), duplex, triplex, and similar dwelling groups, and low-rise apartment buildings in accordance with the Land Use Bylaw.*

*Policy 28 Developments shall have regard for adjacent lower density areas with regards to setbacks, landscaping, massing, shadow impacts, parking areas, servicing and utility areas.*

*Policy 29 Development shall provide landscaped buffers at the interface between Compact Residential Areas and those adjacent properties of a lower planned or existing residential density in order to mitigate potential nuisance impacts.*

*Policy 30 Building design, location of recreational facilities, landscaping, and the maintenance plan for these shall be executed to the satisfaction of Council.*

*Policy 31 Architectural character and appearance of multi-unit dwelling groups and low-rise apartment buildings shall take into account the rural character and setting of the Town of Turner Valley.*

*Policy 32 An Outline Plan, or a Comprehensive Site Plan, shall be required for development taking place in the Compact Residential Area and include building elevation, colours and materials.*

*Policy 33 A development within the Compact Residential Area shall:*

- .1 Include a landscaped open space for use by residents.*

- .2 *Provide bicycle parking in a secure location.*
- .3 *Apply Crime Prevention through Environmental Design principles to the site and building designs.*
- .4 *Situate and design buildings so that driveways, parking areas and garages do not dominate the front yard.*
- .5 *Locate and orient buildings in a manner that ensures optimal use of site conditions, including existing topography, passive solar potential and vegetative conditions.*
- .6 *Be oriented to a public street.*

### 4.3 ENVIRONMENTAL STUDY OVERLAY AREA

The overlay area recognizes that the western portion of Cuffling Flats has a uniquely complex set of topographic and natural features that merit additional detailed geotechnical and biophysical investigation to further refine the extents of the natural constraints to development.

The extent of Environmental Reserve shown in Figure 12: Development Concept Plan is therefore expected to shift and may become larger or smaller. This reflects Policy 33 of this Plan that allows for the adjustment of any Environmental Reserve boundary subject to appropriate technical evidence.

#### Development Objectives

- Provide for refinement of the Environmental Reserve boundaries in western Cuffling Flats.
- Ensure that development respects subsections 4.1.2 Natural and Built Hazards and 4.4.1.1 Environmental Reserve while acknowledging the potential for enlargement or reduction of the developable land area based on further technical study.

#### 4.3.1 SPECIAL STUDY AREA POLICIES

*Policy 34 Any application for subdivision, redesignation or development within the Special Study Area shall be accompanied by a geotechnical study, biophysical assessment, or other relevant study completed by a qualified professional and to the Town's satisfaction.*

*Policy 35 Should studies indicate that the lands subject to proposed subdivision, redesignation or development do not interfere with environmentally sensitive or hazardous areas, then the boundaries of the Environmental Reserve shall be adjusted accordingly.*

*Policy 36 The Town may request such studies it believes necessary to ascertain the subject lands conform with the intent of the Plan and other municipal policy.*

## 4.4 PARKS, TRAILS AND OPEN SPACE

The intent of this subsection of the Plan is to describe the conceptual designation of Municipal Reserve and Environmental Reserve parcels, including spaces for public parks, natural areas, and a proposed multi-use trail network. Accompanying policies are intended to guide the development of these parcels in a manner that protects distinctive natural areas (e.g. the Sheep River valley and escarpments); avoids steep slope or flood plain hazards; and improves access to natural and recreational amenities for residents and visitors.

### Development Objectives

- Recognize existing recreational uses in the plan area.
- Enhance and preserve the riparian areas, especially around the Sheep River.
- Provide for implementation of the *Recreation Master Plan*.
- Build on the existing multi-use trail network to connect the development internally, and to the town centre.

The Development Concept Plan and **Figure 14: Trails and Open Space Concept Plan** show large areas of the neighbourhood proposed for parks, natural areas and a multi-use trail network. In total three Municipal Reserves for a total MR area of 8.85 ha – or 14.9% of the total plan area. This exceeds the allowable 10% MR dedication set out in the MGA; however the Town already owns 8.85 ha of the proposed MR lands so the lands required are only 0.57 ha. As this is only 1% of the developable lands, most landowners should be required to make their MR contribution as cash-in-lieu.

The proposed trails, parks and open spaces are described below in general.

- Municipal Reserve 1: A large park (designated Municipal Reserve) is located north of Okalta Road SW and south of Everwood Estates. The land is owned by the Town and is intended for development and/or preservation for recreational use. This use is consistent with the imminent need for additional recreational space in Turner Valley (as identified by both the Recreation Master Plan and by residents during consultation for this plan), and with area residents' hope that a strong nucleus for recreation in their neighbourhood might help further advance a sense of community solidarity.
- Municipal Reserve 2: Currently used for parking to access the river's edge, the parking area could be formalized and tied into the proposed multi-use trail through the use as a pocket park.
- Municipal Reserve 3: The primary purpose of this park is to integrate a stormwater management facility into the development through the use of landscaping, and a walking trail that meanders around the exterior of the pond and connects to the wider multi-use trail network.

- **Multi-Use Trail Network:** A proposed multi-use trail network extends throughout the Plan Area, particularly across the top of each escarpment of the Sheep River, around the reservoir, and between residential, recreational and natural areas. A footbridge is also proposed across the Sheep River to connect Okalta with Cuffling Flats. This use is consistent with the promotion of regional interconnectivity and recreation in the Economic Development Plan; and with residents' desire for improved connectivity, recreational opportunities, and access to natural areas and the Sheep River.
- **Environmental Reserve:** The Environmental Reserve encompasses the escarpments and their setbacks, and the environmentally sensitive riparian areas in the Sheep River valley. The designation of Environmental Reserve is consistent with municipal policy that intends to minimize risk to life and property from steep slope or flooding hazards; and with residents' appreciation for the environmental resources in their neighbourhood, and their support for conservation of wooded and riparian areas.

Within the Environmental Reserve area in Cuffling Flats along the west boundary of the plan, there are small pockets of potentially developable lands surrounded by escarpment areas. The inability to provide efficient municipal services or site access by way of a public road, along with the impacts of setbacks from top of slope and potential environmental impacts of the infrastructure required to develop the sites, led to including these areas within the Environmental Reserve area. Pursuant to Section 4.3 Environmental Study Overlay Area the development of these areas requires an amendment to this plan and justification by way of technical studies, and is at the discretion of the Council.

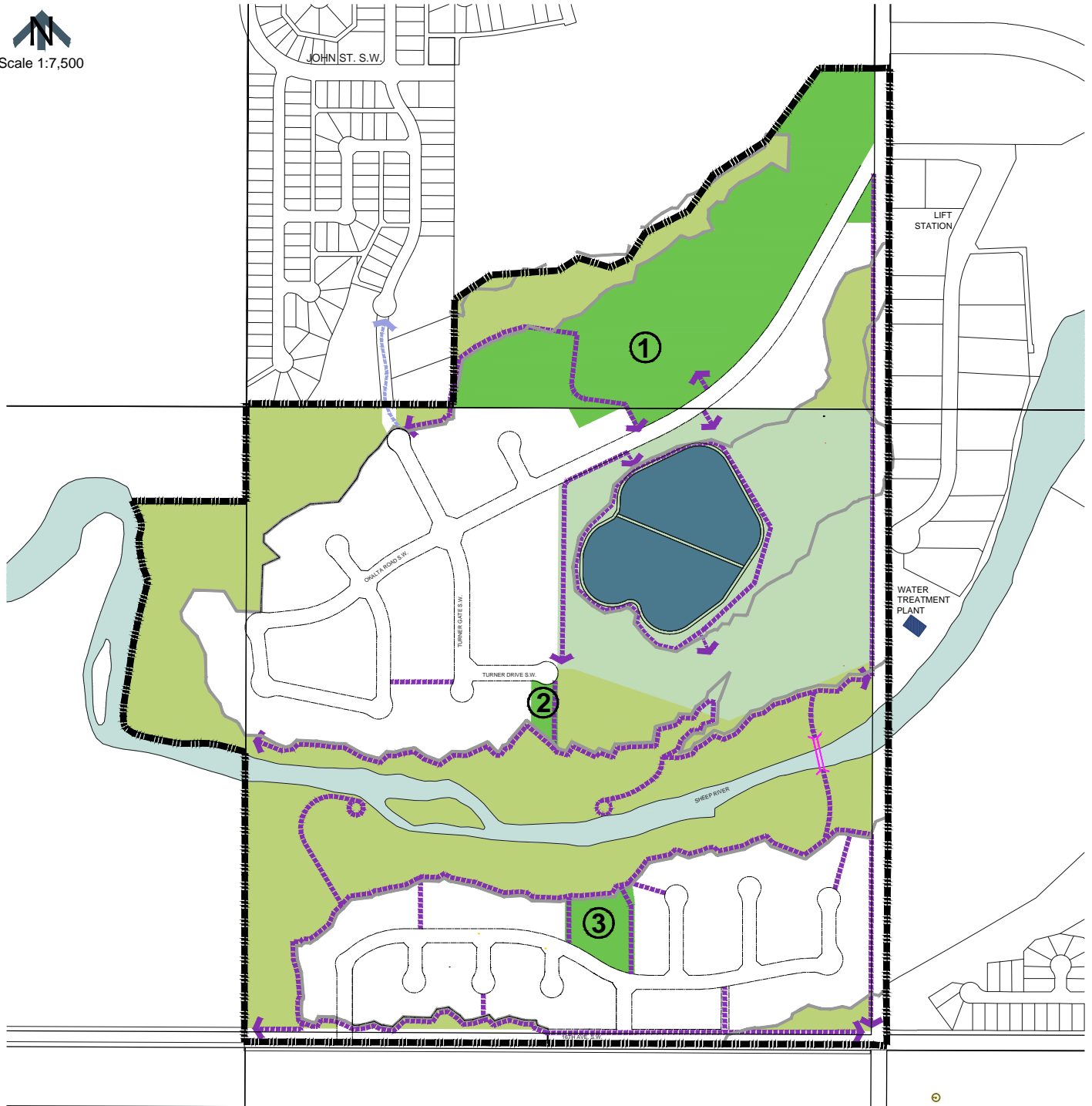
The policies provided below establish criteria for developers' contributions to Environmental and/or Municipal Reserves, and other recommendations of a general nature.



# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

- |  |                     |  |   |  |                   |
|--|---------------------|--|---|--|-------------------|
|  | PLAN AREA BOUNDARY  |  | PROPOSED MULTI-USE TRAIL                              |  | PROPOSED MR       |
|  | ESCARPMENT SETBACK  |  | PROPOSED OFFSITE MULTI-USE TRAIL AND EMERGENCY ACCESS |  | PROPOSED ER       |
|  | RAW WATER RESERVOIR |  | POTENTIAL FOOTBRIDGE                                  |  | PROPOSED SWMF PUL |

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#### **4.4.1 PARKS, TRAIL AND OPEN SPACE POLICIES**

##### **4.4.1.1 Environmental Reserve**

*Policy 37 Environmental Reserves shall be located according to the Concept Plan included in this ARP.*

- .1 An applicant may submit a Wetland and/or Biophysical Assessment prepared by a qualified professional in order to more clearly delineate Environmental Reserve extents, or to propose alternative boundaries to those shown by this plan.*

*Policy 38 A 30 metre setback applies to the top of escarpment where slope exceeds 15%.*

- .1 At the Town's discretion this setback can be relaxed based upon the recommendations of a geotechnical study prepared by a qualified professional engineer in accordance with the Town Land Use Bylaw.*

*Policy 39 The Town may request a detailed geotechnical investigation adjacent to lands identified as environmental reserve prior to subdivision.*

*Policy 40 Additional Environmental Reserves or environmental reserve easements may be required for the following, pursuant to Division 8 of the MGA:*

- .1 Swamp, gully, ravine, coulee or natural drainage course*
- .2 Land subject to flooding*
- .3 Land considered unstable*
- .4 Land abutting the bed and shore of a lake, river, stream or other body of water.*

*Policy 41 The Town may require a developer to submit a Water Act Approval application to Alberta Environment and Parks to determine any permanent or semi-permanent wetlands prior to subdivision or development. Removal and compensation of wetlands will be determined by the Town and/or Alberta Environment and Parks on a case by case basis.*

##### **4.4.1.2 Municipal Reserves**

*Policy 42 Municipal Reserves shall be located according to the Concept Plan included in this ARP.*

*Policy 43 A Municipal Environmental Impact Statement (MEIS), prepared by a qualified environmental consultant, may be required at the discretion of Council in order to*

*determine the impacts of development in potentially environmentally significant locations.*

**Policy 44** *At the time of subdivision of parcels greater than 0.8 hectares the applicant shall provide to the Town:*

- .1 Either land or money (at the discretion of Council) for the purpose of dedication to Environmental and/or Municipal Reserves, if a dedication has not already been provided for under a prior subdivision of the same land.*
- .2 The Town shall be entitled to the full 10% dedication for Municipal Reserve provided for by the Municipal Government Act.*
- .3 If Council requires that money be provided in lieu of land, the value of the contribution is determined by reference to a current (within 60 days of subdivision application) market value appraisal provided by the landowner.*
- .4 Council may require the dedication of reserve land (or money in lieu) that has previously been deferred by caveat on a land title.*
- .5 Some land owners in the plan area shall be required to contribute in excess of their full 10% Municipal Reserve contribution set out in the MGA, and they shall be compensated for the value of that land through cash-in-lieu of Municipal Reserve contributions collected from other landowners by the Town for this purpose.*

## 4.5 TRANSPORTATION

The intent of this subsection of the Plan is to describe the conceptual layout of the road network as identified in **Figure 15: Transportation Plan**. Accompanying policies are intended to provide for convenient and safe site access and egress for residents and emergency vehicles, and to document the standards for new and upgraded roads.

The Concept Plan shows that Okalta Road SW shall remain as the primary collector for the Plan Area. However, new roads will be required to provide access to new infill areas. Due to physical constraints (e.g. the Sheep River, and escarpments) the proposed roads include a number of cul-de-sacs. Additional pedestrian connectivity will be provided through the use of the recreational trail network to connect different clusters of development, across the Sheep River, and between cul-de-sac nodes. This includes a walking trail (doubling as emergency services access) connection north to Schmaus Meadows from Turner Gate Drive SW that lies outside of the Plan area.

Road sections (**Figures 15A, 15B, and 15C**) are provided as examples of the intended road design. These may vary to reflect existing public road right of way widths and existing infrastructure locations. They may be refined through the completion of a traffic impact assessment as per **5.2.2 Further Studies Required**.

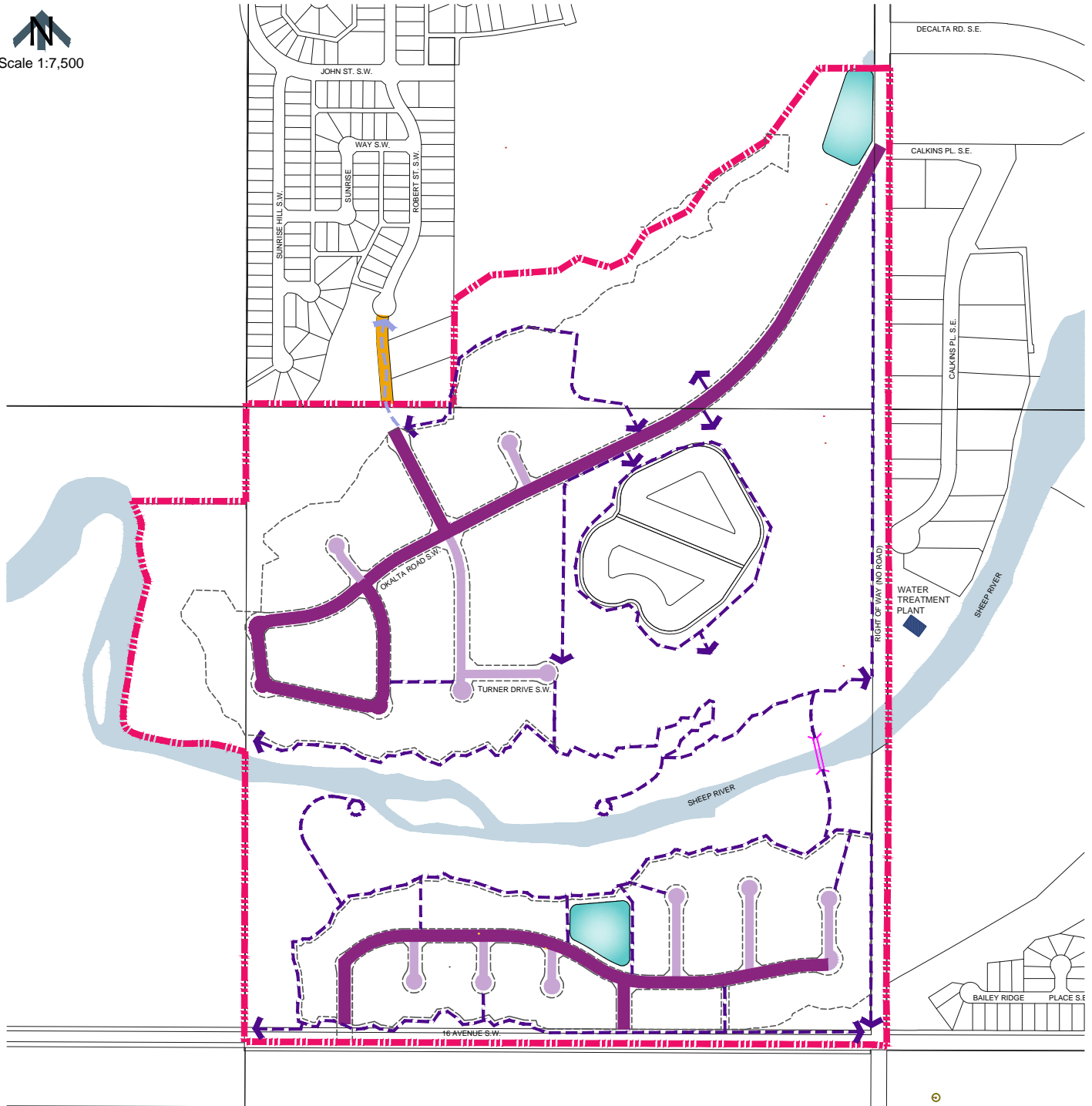
**Figure 15D: Conceptual Trail Design** identifies the intended design of walking trails throughout the plan.

The following policies establish guidelines for the development of a safe, integrated and accessible transportation network in the Plan Area.

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

- - - - - PLAN AREA BOUNDARY
- RESIDENTIAL ROAD
- PROPOSED FUTURE ROAD CONNECTION, INTERIM MULTI-USE TRAIL AND EMERGENCY SERVICES ACCESS
- - - - - PROPOSED MULTI-USE TRAIL
- - - - - PROPOSED OFFSITE MULTI-USE TRAIL AND EMERGENCY ACCESS

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Figure 15A: Residential Road, Full Right of Way (Includes Sidewalk Options)

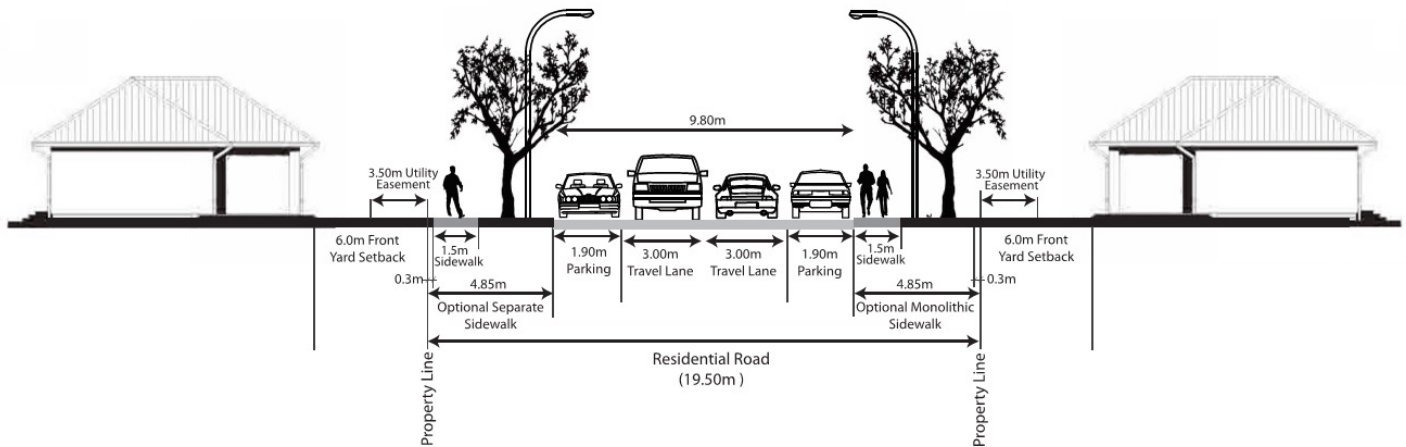


Figure 15B: Residential Road – For Constrained Right of Way, or Cul-De-Sac

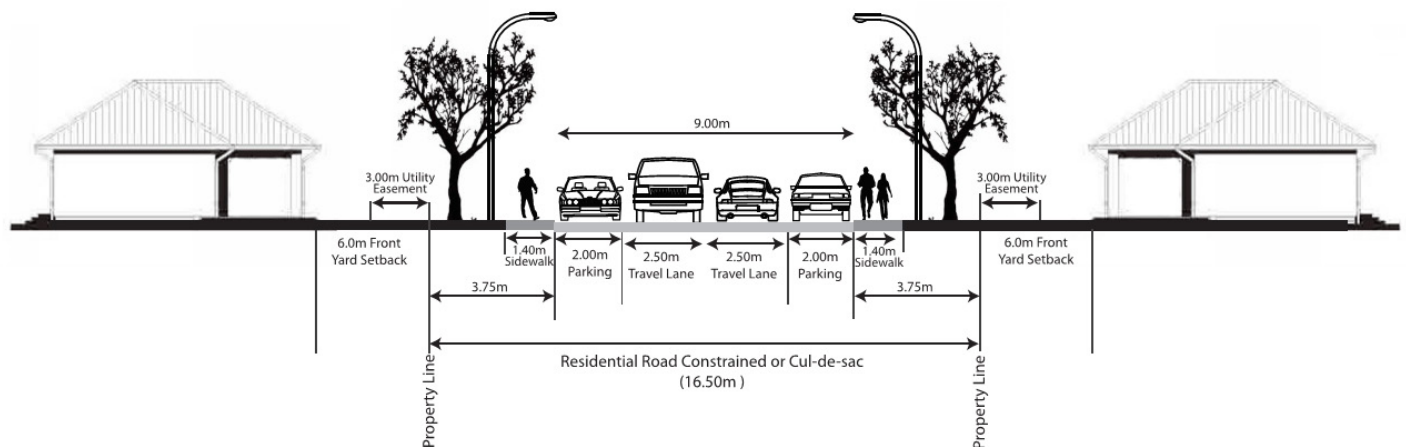
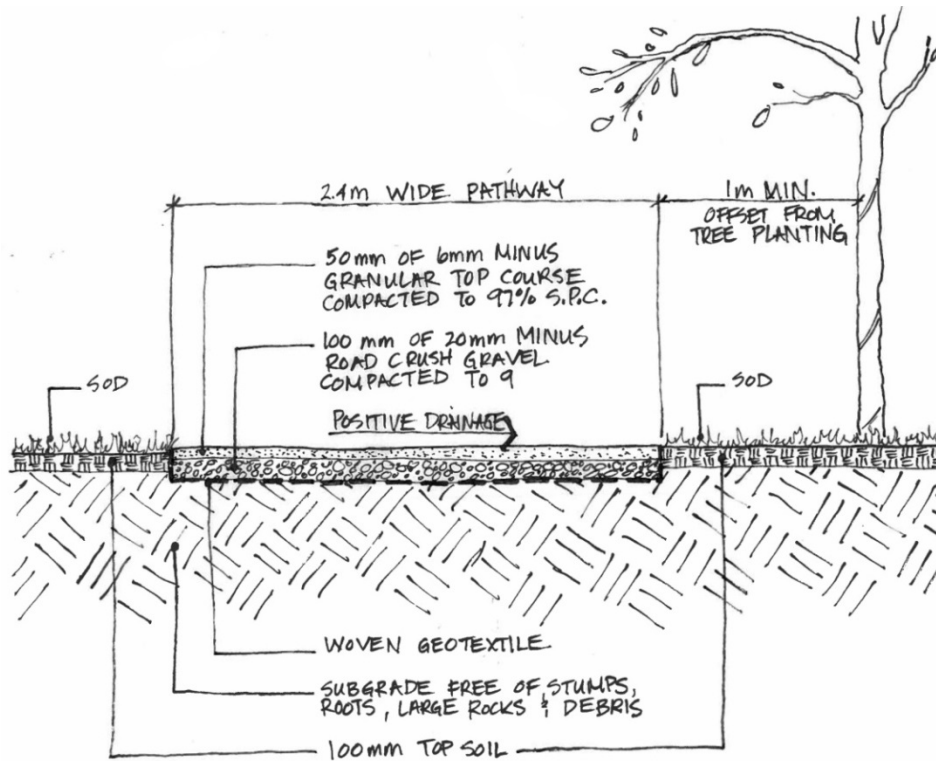




Figure 15C: Conceptual Trail Design



#### 4.5.1 TRANSPORTATION POLICIES

*Policy 45 Roads, intersections and crossings shall be designed to promote pedestrian comfort, safety and accessibility.*

*Policy 46 Any new street ornamentation (e.g. light fixtures or benches), where applicable, should be uniform in design and reflect a rural residential character and shall adhere to best practices in safety and environmental design.*

*Policy 47 New street lights shall follow industry best-practices for energy conservation and safety standards. An LED light fixture should be used, designed to minimize glare, light trespass and sky glow.*

*Policy 48 The road network shall include provisions for interconnectivity with and access to the proposed multi-use trail network.*

*Policy 49 No development shall take place without public road access being provided to the satisfaction of the Town's Director of Engineering and Operations.*

*Policy 50 Roads shall be located and aligned roughly according to the Concept Plan included in this ARP.*

*Policy 51 All new roads shall be either funded or constructed at the expense of the benefiting Developer(s).*

*Policy 52 Council may require the provision of rights-of-way or easements that had previously been deferred by caveat on a land title.*

*Policy 53 Emergency vehicular access to the Plan Area shall be provided to the satisfaction of the Director of Engineering and Operations.*

*Policy 54 Roads shall be designed and built to the appropriate municipal and provincial standards, as specified by the Director of Engineering and Operations.*

*Policy 55 Pathway connections to the proposed multi-use trails are the developers' responsibility.*

## 4.6 MUNICIPAL SERVICES, AND UTILITIES

This section details a proposed wastewater and water servicing concept for the Development Concept Plan and sets out policies to guide development of such services.

### Development Objectives

- Provide an efficient water and wastewater network, including planned expansion of service capacity.
- New development will benefit from full municipal services.
- Create a visually attractive development.
- Use common rights-of-way for multiple utility services (water, sanitary, storm, electric, gas, etc.) to increase efficiencies in service delivery.

#### 4.6.1 WASTEWATER SERVICING

The sanitary sewage generated from the Plan Area is conveyed to the Town of Turner Valley sewage collection system. The portion of the Plan Area north of the Sheep River will be serviced by a gravity sanitary collection system that connects to the Calkins Place wastewater collection system as shown in **Figure: 16 Municipal Services**. The estimated peak sewage flow generated from the north portion of the Plan Area is approximately 20 L/s.

The southern portion of the Plan Area, which includes Cuffling Flats and the lands immediately west, will be serviced by an on-site gravity sanitary collection main that uses either a siphon or a lift station system to transfer the sewage to the Calkins Place wastewater collection system.<sup>6</sup> The estimated peak sewage flow generated from the south portion of the Plan Area which includes the Cuffling Flats and the adjacent western lands is approximately 12 L/s.

The above estimates are based on the following assumptions for residential subdivision:

- Lot Density = 12.2 units /ha.
- Population Density= 2.55 persons/unit
- Average Daily Demand (ADD) of sewage flow = 430 Litres/person/day
- Infiltration & Inflow allowance = 0.28 L/s/ha.

Confirmation of the available capacity on the existing Calkins Place lift station and any potential upgrades, as well as the final sizing and detailed alignment of the sanitary sewer system will be part of a Master Servicing Plan developed in conjunction with an Outline Plan.

<sup>6</sup> This servicing strategy was identified in the Cuffling Flats Water & Wastewater Servicing Study completed by MPE in January, 2014.

#### 4.6.2 POTABLE WATER SERVICING

The water supply for the Plan Area will come from the Town's Water Treatment Plant located just south of Calkins Place near the Sheep River. **Figure: 16 Municipal Services** provides conceptual design details.

All developments within the Plan Area will be designed to be serviced with an approved piped potable water service that is capable of providing the required fire flow via hydrant suppression system to the satisfaction of the Town.

The northern portion of the Plan Area will be serviced by a looped water distribution system that runs along Okalta Road SW and connects to the existing 250mm distribution pipe, which feeds water to the existing Schmaus Meadows Phase 2 residential subdivision.

A 250mm pipe will connect to the existing water distribution stub along Okalta Road SW and west of Turner Gate SW, to service the southern portion of the plan area via river crossing. The water distribution main will then turn ninety degree and head to the east, cutting across Cuffling Flats and connecting to the existing 250mm distribution main that runs along the existing road allowance, on the eastern boundary of the Plan Area to create a looped system.

The projected maximum daily water demand for the Plan Area is approximately 1,100 cubic metres. This estimate is based on the following assumptions for residential subdivision:

$$\text{Average Daily Demand (ADD)} = 430 \text{ Litres/person/day}$$

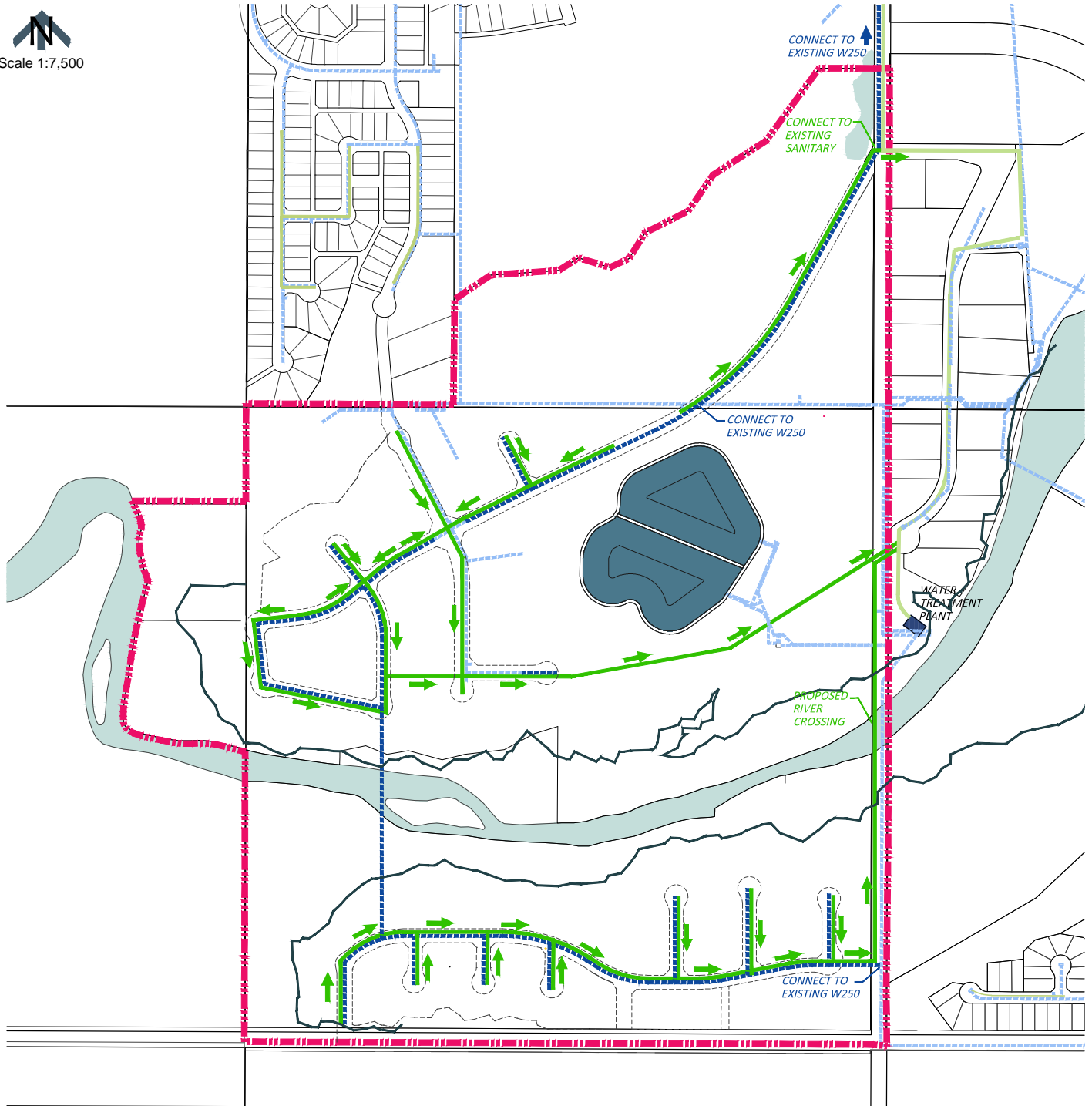
$$\text{Maximum Daily Demand} = 2.5 \times \text{ADD}$$

The hydraulic network analysis, final sizing and detailed alignment of the water distribution system will be part of a Master Servicing Plan developed in conjunction with an Outline Plan, or the Town may choose to carry out this study for the development area.

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

- - - - - PLAN AREA BOUNDARY
- TOP OF ESCARPMENT
- - - - - EXISTING WATER MAIN
- - - - - PROPOSED WATER MAIN

- EXISTING SANITARY MAIN
- PROPOSED SANITARY MAIN
- ← SANITARY FLOW DIRECTION

- RAW WATER RESERVOIR
- EXISTING HYDROLOGY
- - - - - PROPOSED ROAD LAYOUT

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#### 4.6.3 MUNICIPAL SERVICES AND UTILITIES POLICIES

*Policy 56 No development shall be permitted to exceed the servicing capabilities of the Town's municipal water supply or sewage treatment facilities.*

*Policy 57 Sanitary sewer servicing shall be designed to connect to regional servicing systems.*

*Policy 58 Internal servicing systems and networks shall be in accordance with Town of Turner Valley/City of Calgary standards for connection to regional systems.*

*Policy 59 Cost recovery will be implemented from future development cells to assist in oversizing of mains. Cost may be recovered through the Infrastructure Cost Recovery Policy established by Council.*

*Policy 60 The Plan Area shall be serviced with an approved water distribution system in accordance with the Town of Turner Valley / City of Calgary Servicing Standards.*

*Policy 61 The water distribution system shall provide for fire flow requirements via a hydrant suppression system in accordance with the Town of Turner Valley / City of Calgary standards.*

*Policy 62 Development and Servicing Agreements between the Town of Turner Valley and any developer regarding lands within the planning area shall ensure that:*

- .1 Suitable arrangements have been made for the provision of water and sewer facilities, storm water drainage, and any other service or utility deemed appropriate by the approving authority; and*
- .2 Where subsoil, topographic, or drainage conditions warrant special consideration, the design standards required to overcome these particular problems or impediments to development are incorporated as part of the agreement.*

*Policy 63 No development shall occur without the provision of municipal services pursuant to a Master Servicing Plan, the scope and extents of which are to be approved by the Town, that is prepared as part of an Outline Plan.*

*Policy 64 Shallow utility services shall be located underground and at the cost of the developer.*

*Policy 65 Extension of utilities shall occur in a sequential manner, unless otherwise approved by the Town and the costs of such non-sequential extension are carried by the developer.*

*Policy 66 Pipeline rights of way and utility easements should be co-located with multi-use trails wherever possible.*

*Policy 67 Effort shall be made to encourage infrastructure provision to result in visually attractive streetscapes and development, including landscape improvements to the Water Reservoir Public Utility Lot to create visual amenity for surrounding residential properties.*

## 4.7 STORMWATER MANAGEMENT

The intent of this subsection of the Plan is to describe existing stormwater infrastructure and identify an overall approach to the management of stormwater throughout the plan area (see **Figure 17: Proposed Stormwater Concept**). Policies are provided to guide developers' provision of a coordinated approach towards stormwater management in a manner that creates an efficient and low maintenance solution for the Town of Turner Valley.

### Development Objectives

- Create a visually attractive development.
- Protect existing water bodies from erosion and flooding.
- Maintain pre-development and post-development flow rates at the same level.

#### 4.7.1 EXISTING DRAINAGE SYSTEM

The study area is situated within a catchment area that comprises existing residential dwellings, flat open spaces and escarpments, active and abandoned oil wells and pipelines, and roads. The Sheep River bisects and drains the site.

- Excluding the escarpment, the average ground slopes for the area north of Sheep River are 2.5% from west to east and 1.5% from north to south. As a result, the natural runoff drains to the south and east.
- The ground slope for the area south of Sheep River is from south to north with average slope 2.3% except at the southwest corner where the slope is steeper 5.5%.

The existing developed portions of the study area have a semi-conventional drainage system (surface and pipe systems). There is offsite runoff from the north and south that drain into the Sheep River through the plan area.

- Schmaus Meadows development, northwest of the study area, is served by a combined stormwater system and storage facility located north of the plan extents along Robert Street Southwest. An outflow from Schmaus pond flows to a ditch which in turn flows into the plan area along Turner Gate Road, ultimately reaching a spread dam at the Sheep River north bank. This ditch, which will also accommodate the local runoff from the area west of Turner Gate Road, will drain out to Sheep River at 508 L/s.<sup>7</sup>
- Offsite runoff from the north drains into the plan area and ponds in a depression at the north side of the intersection of Okalta Road and Main Street. The spill from this depression drains east through an existing culvert under Main Street.

<sup>7</sup> Schmaus Meadows Development PH2, T. Fenton Consulting Ltd., 2002.

- From the south boundary of the study area, there is an offsite flow draining toward Cuffling Flats through an existing culvert with an unknown flow rate.

#### 4.7.2 PROPOSED DRAINAGE SYSTEM

The study area could be serviced by a combination of surface and conventional piping, with two ponds. One pond is proposed for the northeast of the plan area, within the Towns proposed park space, and another is proposed in the Cuffling Flats area. Both are intended to be integrated into the surrounding development through the use of landscaping and natural design.

The general approach to the drainage system focuses on using several smaller or medium sized stormwater management facilities. The drainage design will be structured such that developers (independently or as a group) will have to manage runoff within their site boundaries, and can only discharge off-site at the location, rate, volume, and water quality standards specified by the Town and all concerned authorities (such as Alberta Environment and Parks, Department of Fisheries and Oceans, Ducks Unlimited). This approach will minimize the number of public facilities that would need to be maintained by the Town, and will also reduce maintenance on public conveyance infrastructure such as storm sewer trunks, and drainage channels.

The drainage strategy plan takes an “integrated” stormwater management approach focusing on sustainability, and minimizing impacts on the environment. The surface stormwater management will be accommodated through implementation of roadside ditches, overland drainage swales and detention facilities to ensure the quantity of surface run-off exiting the site respects all Provincial and municipal regulatory requirements. The underground stormwater system will be accommodated through implementation of pipes, manholes and/or underground tanks.

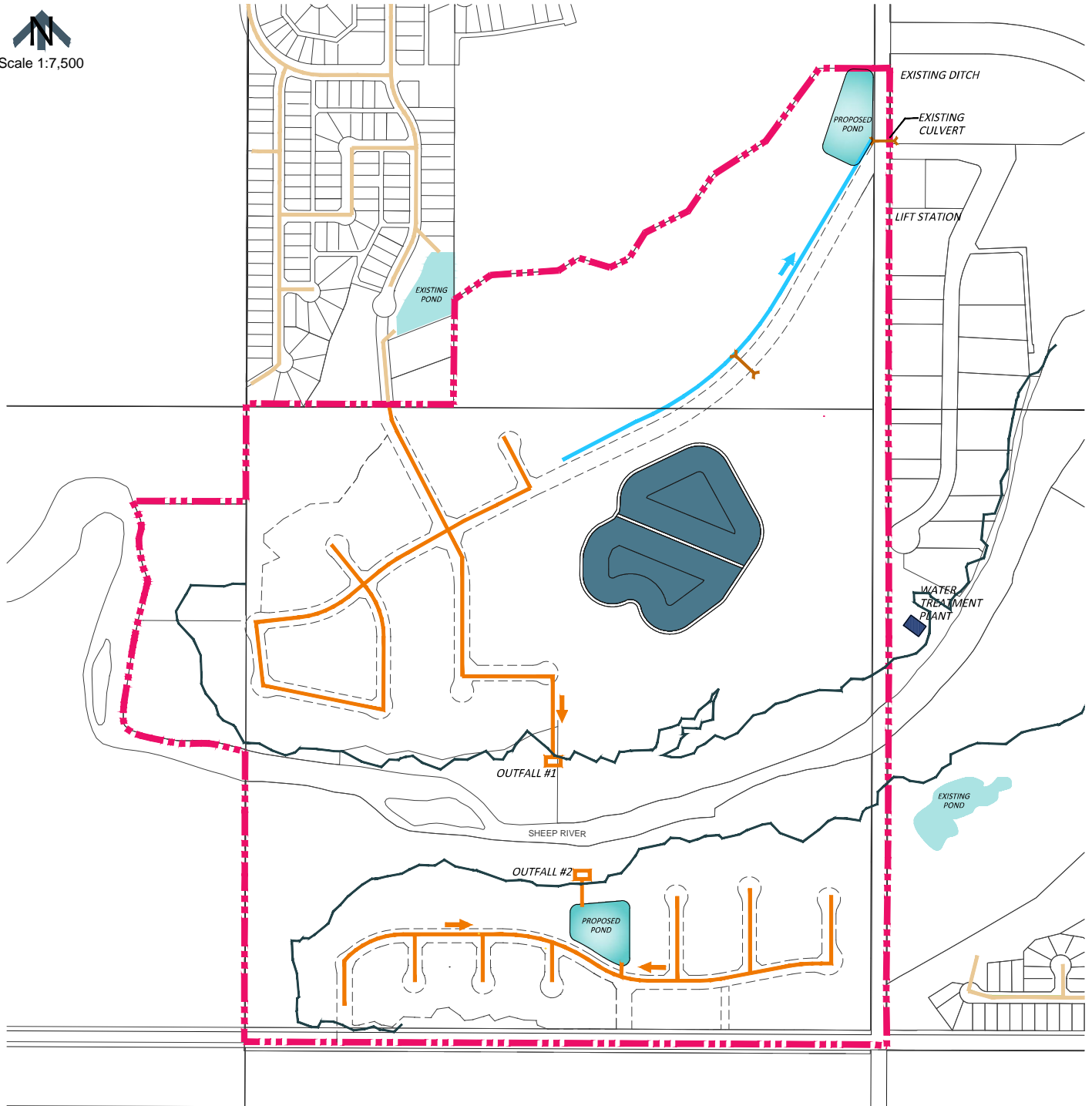
Concepts on water re-use, bio retention, and other volume control techniques are recommended to assist the developers in meeting on-site stormwater management goals. Post-development water quality must comply with Alberta Environment’s (AENV’s) design guidelines.

A primary high-level analysis was conducted for the Plan in respect of the Sheep River at Turner Valley and Black Diamond. This included a simulated hydrological model and continuous event analysis for the region to estimate the maximum release rate to the Sheep River and the required on-site storage. The results of analysis showed that the maximum allowable release rate to the river should not be more than 6.8 L/s/ha. Also, the minimum runoff storage requirement will be 550 m<sup>3</sup>/ha (about 5-6 % of the development area).

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

<span style="color: red;">---</span>	PLAN AREA BOUNDARY	<span style="color: orange;">---</span>	EXISTING STORM MAIN		CULVERT
<span style="color: black;">---</span>	TOP OF ESCARPMENT	<span style="color: orange;">---</span>	PROPOSED STORMWATER SYSTEM		RAW WATER RESERVOIR
<span style="color: blue;">---</span>	EXISTING DITCH		FLOW DIRECTION	<span style="color: grey;">---</span>	PROPOSED ROAD LAYOUT

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### 4.7.3 STORMWATER MANAGEMENT POLICIES

*Policy 68 Developers shall maintain existing or natural surficial drainage flow paths to promote low impact development principles and cost efficiencies.*

*Policy 69 Pre and post-development peak flow, and runoff volume calculations shall be based on a 1 in 100 years 24 hours rainfall event.*

*.1 The design storm hyetograph shall be the Chicago distribution with time to peak ratio equal 0.3.*

*.2 The intensity-duration-frequency curves developed by the Meteorological Service of Canada (MSC) shall be used.*

*Policy 70 The duration of the design rainfall event for systems with storage shall be at least 24 hours. Longer durations shall be used, if necessary, to properly assess the post-event drainage of the detention facility.*

*Policy 71 Post-development rate of discharge to a point must be the same as pre-development rate at that point.*

*Policy 72 Post-development discharge directly or indirectly into the Sheep River will require approval from Alberta Environment and Parks.*

*Policy 73 Any required stream crossings shall be constructed by the least intrusive methods wherever practical, in accordance with Alberta Environment and Parks' Codes of Practice.*

*Policy 74 The Town supports the implementation of Low Impact Development techniques and Best Management Practices in accordance with all applicable Provincial regulatory requirements and municipal engineering design standards. These practices will retain the volume of run-off within the Plan area and improve its quality prior to eventual release to downstream areas.*

*Policy 75 Detail design criteria of major/minor stormwater systems and storage facilities shall be to the satisfaction of the Town.*

*Policy 76 No untreated water will be allowed to discharge offsite or to infiltrate underground.*

*Policy 77 Any development existing prior to an approved stormwater plan will be considered as post-development.*

*Policy 78 All design criteria, material, installation and testing shall be in accordance with the latest editions of the followings:*

*.1 Standards and Guidelines for Municipal Waterworks and Storm Drainage Systems by Alberta Environment and Parks.*

- .2 *Stormwater Management and Design Manual – The City of Calgary.*
- .3 *Environmental Guidelines for Review of Subdivisions in Alberta.*
- .4 *AEP Standards and Guidelines for the approval and design of natural and constructed treatment wetlands for water quality improvement.*
- .5 *Plumbing and Drainage Act of Alberta.*
- .6 *Code of Practice for Outfall Structures on Water Bodies.*



## 5 MAKING IT HAPPEN

This section of the plan sets out the recommended processes, tasks and considerations for the Town to implement the plan.

### Legislative and Procedural Considerations

#### 5.1 ADOPTING AND AMENDING THE PLAN

This plan will be adopted through a bylaw pursuant to section 634 of the MGA. Proposals that do not meet the policies and guidance contained in this plan require a plan amendment to be adopted by Council. In considering such an amendment, Council should have regard to:

- How well the proposed amendment supports the vision and objectives of the plan.
- Potential impacts from the proposed changes on the environment and existing development.
- The ability of municipal infrastructure to support the type of development envisioned.
- Public opinion gathered through a consultation program.

This ARP must conform to the policies of the MDP, which may change from time to time. This plan should be reviewed for compliance each time the MDP is updated or otherwise amended and updated accordingly.

##### 5.1.1 OKALTA AREA STRUCTURE PLAN

The Okalta Area Structure Plan By-Law No. 94-692 should be repealed in a timely manner following the adoption of the Okalta Cuffling Flats ARP by Council.

##### 5.1.2 TIME FRAMES

The Town may wish to perform a review of the ARP on a 5-year basis to establish its success, as indicated by redevelopment in the plan area, or to identify changes to the plan that can encourage redevelopment to take place considering current development trends and future growth objectives. The intended duration for implementing the ARP is 20-years; however this will ultimately be driven by timing of public sector investment in infrastructure, level of interest by property owners to redevelop, and the strength of the property market during this timeframe. It could therefore be shorter or longer.

## 5.2 STAGING, FURTHER STUDY AND LAND USE

### 5.2.1 BOUNDARY DEFINITION

This ARP was based on a high level analysis of environmental and man-made constraints, and provision of municipal services. Developers making applications may choose to clarify the contents of this plan through more detailed study as applies to their development proposal, and such policies or plans related to constraints and servicing may be relaxed or changed on the basis of such further study at the Town's discretion. Changes may require an amendment to this ARP.

### 5.2.2 FURTHER STUDIES REQUIRED

The following additional studies are recommended to inform the implementation of a coordinated approach to development.

- Overall Stormwater Management Plan.
- Master Servicing Plan,
  - Describes a hydraulic network analysis, final sizing and detailed alignment of the water distribution system and which confirms the available capacity on the existing Calkins Place lift station and any potential upgrades, as well as the final sizing and detailed alignment of the sanitary sewer system.
- Transportation impact assessment.
- Trails, parks and open space concept plan.

The above studies will enable the town to understand the costs of providing infrastructure for the development set out in this plan, such that the costs can be factored into cost recovery initiatives.

### 5.2.3 LAND USE BYLAW AMENDMENT

Once the “further studies” are complete the Town administration may develop a Land Use Bylaw amendment for Council's consideration. The amendment should ensure that the land use regulations and districts within the plan area reflect those uses identified in this plan.

Undertaking a land use amendment will encourage redevelopment to take place by removing a barrier to redevelopment. Ensuring that the appropriate engineering studies are completed before the redesignation takes place will enable the Town to appropriately manage its risks and investments in developing the area by making informed decisions.

### 5.2.4 STAGING

Staging of development within the Okalta and Cuffling Flats ARP area will depend upon a number of factors, including market forces, market demand, efficient sequencing and financing of infrastructure and roadways, and timing of private developments.

**Figure 18: Staging Concept** presents a logical order to the provision of infrastructure within the planning area. This figure is provided for the information of the Town and developers. While

development may proceed in a different order, the timing of some infrastructure upgrades will be critical to provide before development can take place. The provision of infrastructure should be identified through the studies set out in **5.2.2 Further Studies Required**.

Development stages 1, 1A, 2 and 3 represent a progression for development that uses existing infrastructure in a cost effective manner while deferring major infrastructure upgrades (e.g. river crossings of services) for stage 3. Should there be strong interest in developing out of sequence this can take place, recognizing the greater costs of infrastructure potentially associated with stage 2 and in particular stage 3.

Stage 1A includes the regional recreational facility. As a public project and with most required infrastructure already in place Stage 1A could proceed independently of other stages.

## 5.3 FINANCIAL CONSIDERATIONS

The following section provides a discussion on options available to the Town in funding the infrastructure improvements related to the plan.

### 5.3.1 APPLICABLE FUNDING MECHANISMS

Funding of improvements within the Plan Area should be based on the philosophy that those lands benefiting from the improvements should bear a proportionate cost burden for the improvements. This may be put into effect through one or more of the options described below at Council's Discretion by way of a Cost Recovery Policy.

Due to the multiple land owners in the plan area, the Town may wish to undertake servicing and drainage studies to facilitate a coordinated approach to development, and may choose to install critical infrastructure upgrades to remove barriers to redevelopment for landowners. The approach to assisting redevelopment by undertaking this work upfront and the estimated costs of these projects should be factors when Council considers a Cost Recovery Policy.

**Servicing and Development Agreements:** Pursuant to the MGA Division 6: Development Levies and Conditions and Division 7: Subdivision of Land a municipality may require that a condition of a subdivision or development permit being issued is that the applicant enter into an agreement with a municipality to pay for such items as the construction of roadways, walkways, public utilities, telecommunications systems, parking facilities and similar items.

There are several deferred servicing agreements registered against the titles of lots within the Plan Area. Some of the deferred agreements enable the town to require development agreements upon further subdivision to pay for related infrastructure costs, while others require connection to municipal services upon further subdivision.

**Redevelopment Levy:** Section 647 of the MGA provides for a redevelopment levy to be imposed and collected in accordance with the adoption of an area redevelopment plan. Funds can be collected for land for parks, new and expanded recreation facilities under this levy.

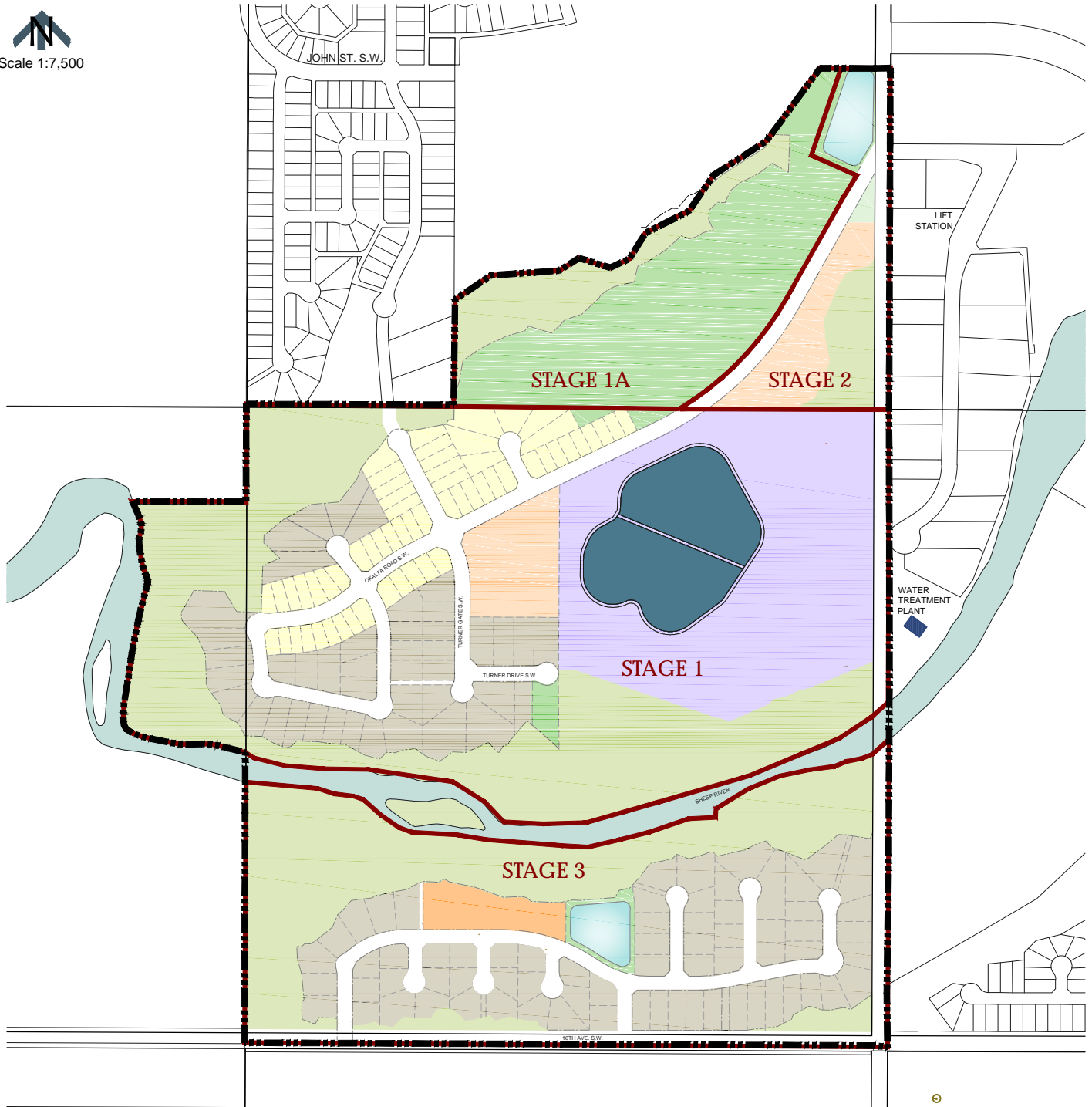
**Local Improvement Assessment Tax:** Division 7 of the MGA enables municipalities to pass a local improvement bylaw to fund in part or in whole a project which is perceived as a benefit to a portion of the municipality as opposed to the entire municipality. If a local improvement tax is proposed, then the Town would have to prepare a local improvement plan as set out in section 395 of the MGA.

**Offsite Levy Bylaw:** Section 648 of the MGA enables a municipality to pass an off-site levy bylaw to impose a funding mechanism for capital costs related to water infrastructure, sanitary sewage infrastructure, stormwater management infrastructure, and roads and related land acquisition that are located off-site of a development area but are necessary for development to occur (may include oversizing of pipes/ facilities, lift station, water storage/ treatment, sanitary/ stormwater infrastructure).

# Okalta & Cuffling Area Redevelopment Plan

## The Town of Turner Valley

Scale 1:7,500



### LEGEND

- PLAN AREA BOUNDARY
- PROPOSED STAGING BOUNDARY
- RAW WATER RESERVOIR

- RESIDENTIAL - TOWN DENSITY
- RESIDENTIAL - COMPACT
- RESIDENTIAL - RURAL CHARACTER
- PROPOSED PUL

- PROPOSED MR
- PROPOSED ER
- PROPOSED SWMF

**NOTE:**  
These design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract.

May 2016

## APPENDIX A: POLICY REVIEW



## Land Use Policy, Plans and Bylaws

### The South Saskatchewan Regional Plan (SSRP)

The SSRP establishes social, environmental and economic goals for the South Saskatchewan region in alignment with the provincial Land Use Framework, and describes the strategies required to achieve these goals. In particular, it acknowledges future growth in the region, and emphasizes the importance of sustainable development that reinforces the value of natural and cultural heritage, provides ample recreation opportunities, promotes the efficient use of land, and anticipates community needs through collaborative planning processes. Although the SSRP contains implementation strategies, most of its recommendations are non-statutory.

The ARP, by directing new development to an area of existing low density development encourages the efficient use of land. The policies of this plan intend to provide for ample recreation opportunities, in keeping with the character of Turner Valley and desires of residents established through the consultation process.

### The Calgary Metropolitan Plan (CMP)

The CMP is a framework of shared goals and commitments that is intended to guide the members of the Calgary Regional Partnership (CRP) toward sustainable growth in the region. Especially relevant to the Okalta-Cuffling Flats ARP, the Town of Turner Valley has committed to:

- Protect riparian areas,
- Follow provincial water and storm water management best practices,
- Enhance landscape connectivity,
- Orient new development to achieve efficient use of land and infrastructure,
- Accommodate one-quarter of new population growth in existing developed areas,
- Provide a range of housing types, and
- Encourage rural residential growth in areas with the least impact on agriculture and environment.

These objectives are intended to be achieved through collaboration with other CRP members, and through the implementation of supportive local plans and policies. The ARP draws guidance from the above mentioned commitments, especially in respect of preserving riparian areas around the Sheep River that enhances landscape connectivity, providing for a diverse housing stock encouraging new development in an already built area, and finally in providing for efficient infrastructure solutions.

### The Intermunicipal Development Plan (IDP)

An IDP establishes long-term growth and land management objectives in areas of common interest between adjacent municipalities. The Town of Turner Valley prepared its IDP jointly with the Town of Black Diamond and the Municipal District (MD) of Foothills. Under the IDP, development within Okalta-Cuffling Flats must consider impacts on adjacent land uses and traffic within the MD of Foothills and on natural areas in general; account for a potential

continuous open space system in the Sheep River valley; preserve the quality of river valleys and significant natural habitat; and duly regulate development in the Flood Risk Area.

The signatory municipalities began a review process in early 2014 with the intention of updating the IDP, but community feedback prompted the two Towns to pursue a Joint Growth Strategy (currently under development) instead.

The ARP (and any amendments) must be referred to the MD of Foothills prior to adoption.

### **The Town of Turner Valley Municipal Development Plan (MDP)**

The MDP (Bylaw 04-894 from 2004) is the primary planning policy document for use at the municipal level, and provides a framework for future growth and development in the Town. All other statutory municipal plans – including ARPs – must be consistent with the MDP and its policies. The following objectives and policies provided guidance for the Okalta-Cuffling Flats ARP:

#### **(5.0) Growth management**

Objectives:

- *To encourage, enhance and maintain the community's small town quality of life and its safe living environment.*
- *To encourage residential development, ensuring that it occurs in a manner which is consistent with a responsible and sustainable growth strategy.*
- *To provide and maintain a range of community recreational, cultural and tourism opportunities in the Town of Turner Valley.*
- *To promote community spirit and to maintain and preserve the friendly atmosphere which exists within the community.*

#### **(6.0) Development constraints and environmental protection**

Objectives:

- *To ensure public safety is protected and development is safeguarded from areas of known hazard.*
- *To identify and protect environmentally significant and ecologically sensitive areas, which contribute to the maintenance of natural processes and the quality of urban environment, including escarpment areas, watercourses and significant views and vistas.*
- *To ensure that public access to unique areas, including lands adjacent to watercourses and escarpment areas, is retained.*
- *To recognize environmental responsibilities and to strive to achieve and maintain the highest environmental standards possible.*
- *To identify lands that have inherent natural, cultural and/or recreational value and to maintain and enhance the natural quality of such environments for human passive and/or active recreational use.*
- *To minimize potential flood damage in all areas which are subject to flooding.*
- *To maintain high standards of surface and groundwater quality within the Sheep River watershed through sound environmental planning and protection.*

## Policies:

- *Development/Subdivision near Pipelines and Wells: A comprehensive study of the proposed area must be performed to document and analyze all active or abandoned pipelines or wells, and subdivision regulations must be followed regarding separation distance (setbacks).*
- *Municipal Environmental Impact Statement: A MEIS must be prepared by a qualified environmental consultant for any development or subdivision applications adjacent to watercourses or escarpments.*
- *Preservation of Natural Features: Natural features (including landforms and vegetation) that contribute to the ecosystem, aesthetics, continuity of tree cover and screening of development should be preserved.*
- *Floodway and Flood Fringe Restrictions: Development in the flood plain shall be limited per the Alberta Flood Reduction Program.*
- *Access to Water Courses: At the time of subdivision (i.e. area structure plan or outline plan), a reserve dedication is required adjacent to watercourses in order to preserve public access.*

(7.0) Residential development

## Objectives:

- *To promote and provide the development of safe, attractive and functional neighbourhoods that will meet the household accommodation needs of a full range of socio-economic groups.*
- *To maintain the general character and stability of established residential areas while allowing for a limited amount of higher density infill residential development and redevelopment in selected appropriate locations.*

## Policies:

- *Enhancement Initiatives for Developed Residential Areas: The Town will consider local improvement bylaws to provide or improve streetscape, lighting, storm water management systems, or municipal utility services.*

(10.0) Open space, park and municipal/school reserve

## Objectives:

- *To develop, maintain and expand a pathway system for Turner Valley.*
- *To maintain and enhance public access to the Sheep River.*
- *To provide a variety of open space opportunities ranging from formal parks to natural areas.*
- *To meet community open space and school requirements through appropriate reserve dedication.*
- *To meet the demand for recreational and cultural facilities within the financial resources of the Town of Turner Valley.*

## Policies:

- *The Town will maintain natural vegetation and site features throughout the open space system.*
- *Subdivision plans will incorporate public access to permanent water bodies and natural drainage features, provided access does not negatively impact sensitive natural areas.*
- *A pathway network should create a continuous system of walking and/or cycling trails.*
- *Pathway/trail development should be directed away from areas that are ecologically sensitive.*
- *Pathways should be located along or visible from streets and linked to local destinations.*

### **The Okalta Area Structure Plan (ASP)**

The Okalta ASP was adopted by the Town of Turner Valley in 1995 in response to subdivision activity and landowner interest at the time. Similar to an ARP, an Area Structure Plan is intended to guide growth and development in an efficient and orderly manner. Since its adoption, development activities within Okalta have conformed to the policies of the ASP. However, changing legislation and conditions in the area require a re-examination of the policies that ought to guide future growth and development – hence the need for the Okalta-Cuffling Flats ARP.

The new ARP will replace the old ASP, which should be repealed as part of the bylaw adoption process.

### **The Town of Turner Valley Land Use Bylaw (LUB)**

The LUB regulates and controls the development of land and buildings in the Town, and is the primary instrument through which the land use policies of the Okalta-Cuffling Flats ARP will be implemented. The LUB controls the types of uses and the forms of development permitted on individual properties based on their land use (i.e. zoning) designation. Different designations are assigned to different districts, and each district is assigned a list of *permitted uses* that are allowed outright, and *discretionary uses* that require explicit permission from the Development Authority. Direct Control districts are used to allow for unique developments that cannot conform to the regulations associated with any of the standard land use districts. The LUB also provides policy for the regulation of subdivision in each district.

The current patchwork of land use designations for Okalta-Cuffling Flats is indicated in **FIGURE 6**. Because of the restrictions associated with the existing land use districts, the Conceptual Plan proposed within this ARP would require the redesignation (through the bylaw amendment process) of nearly all the lands within the Plan Area, which would subsequently become subject to the rules and regulations of the newly-assigned land use districts.

### **The Town of Turner Valley Economic Development Plan (EDP)**

The EDP was adopted as a non-statutory policy document in 2012, and contains economic development strategies based on attracting people and business to a community where they can “recreate”, i.e. a town that provides recreation opportunities both locally and in nearby Kananaskis Country, and a cultural node for “independent and creative free spirits”. In support of this vision, the EDP outlines a Development Framework that includes recommendations to enhance “green” and recreational branding. In particular, the EDP suggests further integrating the pathway system both locally and regionally, and developing sports fields/facilities to position the Town as a regional sports hub (in partnership with Okotoks).

### **The Town of Turner Valley Recreation Master Plan Report**

A Recreation Master Plan was prepared for the Town in 2009, and although it was never formally adopted by Council, nevertheless it has provided guidance for a number of other plans and strategies, including the EDP discussed above. Based on an assessment of current and projected recreation usage in the community, the report notes an “imminent need” for

improvement and expansion of the pathway and trail system; additional baseball diamonds and rectangular sports fields; an indoor arena; and a tennis court. The following recommendations have particular relevance to the Okalta-Cuffling Flats ARP:

- Develop a contiguous pathway system that integrates residential districts with destinations.
- Incorporate park planning into development agreements.
- Construct a municipal park, adjacent to the pathway system with consideration to the recommendations of the Recreation Master Plan.
- Develop a large park on the municipal reservoir site as a major recreation node.

## APPENDIX B: CONSULTATION SUMMARY



## Consultation Summary

While a thorough review of technical studies and policy documents is important in developing an effective Area Redevelopment Plan, equally important is the information provided by area residents and stakeholders themselves. A comprehensive understanding of the issues and a vision for the future cannot be complete without the opinions, insights, and knowledge of the public. Therefore, a key part of the planning process involved a program of community engagement and feedback. Their input formed the foundation of the Vision Statement, the Policy Objectives, and the Land Use Concept Plan in this document.

### Visioning Workshop

First, a *Visioning Workshop* in April 2015 introduced local residents and stakeholders to the project and solicited information about their values and preferences for the area. Participants identified the positive and negative features of their community today, their vision for the community in 2030, and priority actions to achieve that vision:

Key benefits:		Key drawbacks:	
<ul style="list-style-type: none"><li>• Quiet, tranquil rural lifestyle</li><li>• Good access to amenities of town and Calgary</li><li>• Natural areas (wildlife, forest), reservoir and river</li><li>• Safe and family oriented</li><li>• Close-knit friendly community</li></ul>		<ul style="list-style-type: none"><li>• Water quality/supply</li><li>• Road and sidewalk condition</li><li>• Slow growth that delays development (residential and infrastructure)</li><li>• Air quality and pollution concerns from sour gas facility, pipelines</li><li>• Few amenities for youth and seniors</li></ul>	
Key development goals:			
Residential development:	<ul style="list-style-type: none"><li>• Balanced and phased development approach</li><li>• Similar development pattern (SFD on larger lots, low-density forms)</li><li>• Secondary suites, coach houses, maybe bungalow-style cluster condo housing</li><li>• Enhance infrastructure and reduce reliance on well water</li></ul>		
Recreation:	<ul style="list-style-type: none"><li>• More recreational amenities</li><li>• Multi-use trail system for active transportation, recreation and access to nature</li></ul>		
Natural areas:	<ul style="list-style-type: none"><li>• Avoid compromising environmental integrity of natural areas</li><li>• Preserve wildlife corridors and wooded areas</li></ul>		
Connectivity:	<ul style="list-style-type: none"><li>• Pedestrian access across river</li><li>• Increased connectivity to town and natural areas/ravines</li></ul>		
Community:	<ul style="list-style-type: none"><li>• Safety</li><li>• Maintain identity and rural lifestyle</li><li>• Community organizations related to recreation, e.g. sports leagues</li><li>• Town must attract business and jobs (e.g. tourism and branding) to expand tax base and provide access to commercial amenities</li></ul>		

The feedback from the Visioning Workshop was interpreted and summarized, and was subsequently incorporated into a draft Area Redevelopment Plan and proposed policy amendments.

## Stakeholder Feedback Session

Next, a *Stakeholder Feedback Session* in December 2015 presented local residents and stakeholders with a summary of the project to date and with highlights from the draft Area Redevelopment Plan. Participants were asked to provide their input on the proposed Plan, and the planning team were on hand to answer any questions.

Key themes heard during the Feedback Session include:

- Density of development. Some residents are wary that development will compromise the rural character of the area and/or reduce valued natural spaces. Others supported the proposed density and made suggestions for better explaining its rationale in the Plan.
- Land uses suggested in the Visioning Session. Residents in attendance at the Feedback Session questioned the designation of lots in Okalta and Cuffling Flats for sports fields and a temporary campground, respectively.
- Development timelines. Many residents were uncertain about the practical effects of the plan over time, e.g. how servicing would be implemented, how the development concept accounts for existing homes and property lines. Residents could not envision how the plan could be realized “within their lifetimes”.
- Required vs. flexible provisions. Residents wanted to know to what extent they would be required to conform with the plan (e.g. sequence of servicing, development concept, MR contribution) and whether there was any flexibility with regards to the proposed boundaries of the ER.

The project team responded to concerns raised at the time of the Feedback Session. In general, the Plan attempts to balance residents’ concerns about increased density and regulation of long-term development with the Town’s commitment to accommodate population growth in a more compact residential form and to plan future infrastructure in a sustainable manner. Certain concerns, such as opposition to proposed sports fields and a desire for closer examination of development potential in western Cuffling Flats, have been reflected in subsequent changes to the draft ARP.

## Public Open House

A public open house was held September 24, 2016 and was advertised in a local paper. There were 24 attendees, and a total of five open house surveys were completed. Most comments related to the ability of the Town to provide municipal services, constraints to development and how people can address these on their property through additional study, and in general how development will be implemented. Comments received had already been addressed through the content of the ARP and so no resultant changes were made.