BY-LAW 8-2017
OF THE
TOWN OF VERMILION
(hereinafter referred to as the "Municipality")
IN THE PROVINCE OF ALBERTA

BEING A BYLAW TO AMEND THE TOWN OF VERMILION BRENNAN NORTH AREA STRUCTURE PLAN BY-LAW #13-2013

WHEREAS Council for the Town of Vermilion deems it necessary to revise the Brennan North Area Structure, being Bylaw 1199-09 and amendments thereto, to reflect current market demand for low density residential, reduce the amount of medium/high density residential designation and realign internal local roadways accordingly;

AND WHEREAS Council deems it necessary to amend the Brennan North Area Structure Plan Bylaw 13-2013, pursuant to Section 636(2) of the Municipal Government Act;

AND WHEREAS it is Council's intention to pass the By-Law and to hold a Public Meeting will be published in the Vermilion Standard on August 22 and 30, 2017 in accordance with Section 606 of the Municipal Government Act, R.S.A. 2000, ch. M-26, as amended;

AND WHEREAS a Public Meeting will be held on September 5, 2017 at the Town Hall and all persons and groups who wished to make a presentation to Council was heard.

NOW THEREFORE under the authority of the Municipal Government Act, the Council of Town of Vermilion, in the Province of Alberta, duly assembled enacts as follows:

1. Schedule "A", attached hereto, be adopted and form the revised Brennan North Area Structure Plan, being Bylaw #8-2017.

2. If any Section or parts of this bylaw are found in any court of law to be illegal or beyond the power of Council to enact, such Section or parts shall be deemed to be severable and all other Sections or parts of this bylaw shall be deemed to be separate and independent there from and to be enacted as such.

3. That this Bylaw becomes effective upon the date of the final passing thereof.

READ A FIRST TIME IN COUNCIL THIS 15th DAY OF August, A.D. 2017

Mayor — Interim Town Manager

READ A SECOND TIME IN COUNCIL THIS 3 DAY OF October, A.D. 2017

Mayor — Interim Town Manager

READ A THIRD TIME IN COUNCIL THIS 3 DAY OF October, A.D. 2017

Mayor — Interim Town Manager

Brennan North Area Structure Plan
Bylaw 13-2013, as amended

prepared by
PlanFirst Consulting Group
Updated by Red Willow Planning August 2017

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1.0 Introduction

1.1 Purpose

The Brennan North Area Structure Plan (the ASP) is intended to provide a development concept for residential land use to facilitate orderly, staged, economic development of the ASP area in response to market demand, servicing realities and sound principles of community planning.

1.2 Location and Area

The ASP abuts the west boundary of the Town of Vermilion with easy access to downtown area amenities about two kilometers away via 50th Avenue. See **Figure 1. Regional Context**.

The ASP lies within the Northeast Quarter of Section 36, Township 50, Range 7 West of the Fourth Meridian. It is bounded to the north and east by Vermilion Provincial Park and on the south by the Brennan Park/Brennan South neighbourhood. Lands to the west are within the County of Vermilion River. See **Figure 2. Local Context**.

The plan area comprises 26.67 ha (66.14 ac) within two separate parcels, as summarized below in **Table 1. ASP Areas**.

Table 1. ASP Areas

LEGAL DESCRIPTION	AREA (Hectares)	AREA (Acres)
Block 1, Plan 802 0532, Certificate of Title 922 128 941	26.26 ha	65.14 ac
Lot 8 MS, Block 6, Plan 802 2872	0.40 ha	1.00 ac
TOTALS	26.67 ha	66.14 ac

1.3 Shadow Plan

1.3.1 Location & Purpose

A 'Shadow Plan' has been prepared for abutting land to the west, lying within the same quarter section and within the jurisdiction of the County of Vermilion River, having an area of 23.66 ha (58.45 ac).

The purpose of the Shadow Plan is to provide consistency and continuity to future land use and street patterns. It has no statutory effect and may be revised prior to development to reflect circumstances at the time.

The Shadow Plan area comprises two parcels as detailed below in **Table 2. Shadow Plan Areas**. The larger parcel is in private ownership. Plan 932 0684 is owned by the County of Vermilion River as a road right-of-way.

Table 2. Shadow Plan Areas

LEGAL DESCRIPTION	AREA (Hectares)	AREA (Acres)
NE 36-50-7-4, Certificate of Title 082 091 842+3	22.74 ha	56.18 ac
Plan 932 0684 (roadway plan north of CN line)	0 .92 ha	2.27 ac
TOTALS	23.66 ha	59.45 ac

1.3.2

1.4 Statutory Context

The proposed Area Structure Plan complies with the respective designations of all pertinent legislation, statutory plans and the Town's Land Use Bylaw, as demonstrated in the following sections.

1.4.1 Municipal Government Act

The statutory basis for an Area Structure Plan is Section 633 of the *Municipal Government Act*. Section 633 states that, "An ASP:

(a) must describe

(i) the sequence of development proposed for the area,

(ii) the land uses proposed for the area, either generally or with respect to specific parts of the area,

(iii) the density of population proposed for the area either generally or with respect to specific parts of the area, and

(iv) the general location of major transportation routes and public utilities, and

(b) may contain any other matters the council considers necessary."

1.4.2 Vermilion Intermunicipal Development Plan

The Vermilion Intermunicipal Development Plan, adopted by the Town as Bylaw 9-2009, as amended, in conjunction with the County of Vermilion River, designates the Shadow Plan area to the west as 'Country Residential.'

That being noted, it is feasible these lands would, over the very long term, convert to urban-standard residential as the Town's land base develops out and urban expansion is contemplated. Thus, the Shadow Plan has been designed, and all related discussion crafted, to reflect urban residential development.

1.4.3 Town of Vermilion Municipal Development Plan

The Town of Vermilion Municipal Development Plan (MDP) Bylaw 18-2011, as amended, designates the ASP area for residential land use in the 'Future Land Use Concept', Figure 4. The ASP area is also

designated for short and medium term development by Figure 5, 'Conceptual Residential Growth Staging.'

The MDP also contains requirements for Area Structure Plans, which are presented in Appendix 2. This Area Structure Plan has been prepared in accordance with these requirements.

1.4.4 The Town of Vermilion Land Use Bylaw

The Town of Vermilion Land Use Bylaw identifies the ASP area as 'Urban Reserve District.' This designation signifies that the land is intended for urban development sometime in the future.

2.0 Site Analysis

2.1 Current Land Use

The historical and present use of the ASP area is pasture land for livestock. As such it is characterized by open, grassy fields with a few remnant aspen groves scattered throughout. See **Figure 3. Site Analysis**.

The major physical feature of the area is a double overhead power line crossing from east to west just south of the centre of the property. The power lines occupy two rights-of-way that together are about 35 mm wide and account for approximately 1.89 ha (4.67 ac) of the plan area. They are a prominent visual element in the landscape and a major consideration in preparing a residential development plan for the area.

The ASP area also includes a parcel of Municipal School Reserve located within the Brennan Park neighbourhood, between 53rd Avenue and the south boundary of the quarter section. The parcel is grassed with a few trees, but has had little development potential for school or open space purposes. If surplus to the needs of the Town and School Boards, the land is suitable for residential development as it has frontage on an existing serviced, paved street.

2.2 Topography and Drainage

The land has a gentle downward slope toward the north-northeast and the Vermilion River Valley. The highest point is in the southwest corner, at just above 614 m above sea level (asl). The lowest point is along the north boundary at just below 609 m asl. The resulting difference in elevation is approximately 5 m (16.4 ft), resulting in an overall gradient of nearly three per cent (3%) from south to north, which is suitable for urban development. See **Figure 3**.

A shallow swale extends through the centre of the site from south to north towards Vermilion Provincial Park. At the north end it has eroded a channel that is as deep as approximately two meters. This swale conveys stormwater and meltwater from Brennan Park in the south to the Trout Pond within the Provincial Park to the north. A shallow pond exists about 100 m to the north of the southern boundary of the ASP. The swale provides an opportunity for upgrading and enhancement as an integral part of the open space and stormwater management systems.

2.3 Adjacent Areas

2.3.1 Vermilion Provincial Park

Vermilion Provincial Park defines the northern and eastern boundary of the ASP Area (see **Figure 3**). The Park encompasses about 750 ha (1,850 ac) for a considerable distance along the Vermilion River Valley and encompassing the reservoir. It is open year-round and is popular for its scenery, birding, cross-country skiing, fishing and camping.

The Claude N. Brennan Memorial Trout Pond occupies a 6 ha (15 ac) parcel within the Park and within the same quarter section as the ASP area. It is surrounded by a walking trail and provides a scenic amenity adjacent to the ASP area.

Vermilion Provincial Park, generally, and the Trout Pond, in particular, provide significant recreational and scenic features nearby to enhance the quality of life of future residents in Brennan North. Direct and convenient connections to and from the Provincial Park are most important in this ASP.

2.3.2 Brennan Park/Brennan South

The existing Brennan Park/Brennan South neighbourhood defines the southern boundary of the ASP Area (see **Figure 3**). Brennan North is effectively a northern extension of the existing Brennan Park/Brennan South residential neighbourhood. There were five particular concerns that were discussed and addressed in the process of preparing this ASP:

- Creating a roadway/street network that minimizes traffic 'filtering' through the potential roadway connections of 65th Street in the existing neighbourhood,
- Ensuring that land use in the new area is compatible with existing land use, in terms of residential type and density,
- Addressing elevation differences and drainage along the lots that back onto the ASP area;
- Extending the existing open space/stormwater swale corridor in the western part of Brennan Park north to connect with Vermilion Provincial Park, and
- Integrating the new neighbourhood as effectively as possible with the older neighbourhood to benefit both current and future residents.

2.3.3 County of Vermilion River

The land to the west of the ASP area, part of Section 36, is farmland within the County of Vermilion River (see **Figure 3**). However, this land is designated for future residential development by the Vermilion Intermunicipal Development Plan, as stated previously. Therefore a Shadow Plan was prepared to demonstrate land use compatibility in the future, as discussed in Section 1.3 above.

2.4 Roads & Access

There are two potential points of roadway access into the ASP area:

1. From 62nd Street/Beckie Scott Trail at the southeast corner. This is an arterial street connecting to the Yellowhead Highway to the south and to downtown via 50th Avenue to the east. This street could be extended north along the east side of the ASP area to improve access into the Provincial Park and, at the same time, provide an alternate access to the ASP area north of the power line corridor.

2. From 65th Street in Brennan Park north into the ASP area. This is a collector street with a 24 m right-of-way, which has been built out to the north limit of the Brennan Park neighbourhood and extends south to 50th Avenue.

A 30 m right of way (Plan 932 0684) has been dedicated along the south limit of the Shadow Plan area in the County of Vermilion River. This would allow for the extension of 50th Avenue in the future to access the balance of the northeast and northwest quarter sections of Section 36 to the north and west. As stated previously, a main goal of the ASP is to minimize the effect of traffic on existing residential areas.

An emergency access/egress is proposed for the northeast area immediately south of Vermilion Provincial Park and the Trout Pond via a minimum 3 m wide PUL located at the southeastern boundary. This PUL will be primarily used by pedestrians, cyclists and others as part of the trails network providing access into the Vermilion Provincial Park, with the intent of eventually connecting it to the existing Vermilion River Provincial Park trails system in coordination with Alberta Environment and Parks. The PUL will have a reinforced base to accommodate vehicular use during emergency situations. The PUL exits east into a wooded area that is an existing, undeveloped road right-of-way. Prior to occupancy of this neighbourhood a suitable swath of vegetation should be removed from the undeveloped road right-of-way and maintained as a cleared path for access and egress. During non-emergency times, vehicular access should be controlled with a locking gate or break-away/removable bollards located at appropriate locations.

2.5 Utility Servicing

2.5.1 Water and Wastewater

The Brennan Park/Brennan South neighbourhood is serviced with Town of Vermilion water and wastewater systems, which could be extended north to service the proposed Brennan North ASP area.

A study done by Focus Engineering in 2012[1] evaluated solutions to the downstream capacity issues associated with the wastewater trunk that conveys flows from the built-up area of the Town to the wastewater treatment plant located in the Vermilion River Valley east of 44th Street, just over two miles east of the ASP area. A series of upgrades are identified and cost estimates presented for both current and projected wet weather flows. Development of the ASP area has been included in the calculations.

2.5.2 Stormwater

As stated previously, the ASP area generally drains to the north/northeast. Much of the overland surface water flows into the north-south drainage corridor that enters the Trout Pond. This corridor, or swale, also conveys stormwater flows from Brennan Park/Brennan South and from agricultural lands to

[1] *Town of Vermilion Sanitary Trunk Flow Monitoring and Upgrading.* Focus Engineering, Geomatics, Planning, Edmonton. March, 2010.

the south of the CNR line. The more northerly land within the ASP area drains directly to the north into Vermilion Provincial Park.

Northwest Hydraulic Consultants Ltd. conducted a preliminary stormwater management study for the ASP area and the entire drainage basin in which it is located. The *Interim Draft Report*[2] provides an overview of the existing drainage (see **Figure 4. Interim Pre-Development Drainage Model**), a hydrologic assessment of flows under peak rainfall events, a review of the Trout Pond capacity, and a stormwater management concept for future development based on a hypothetical future development concept.

[2] *Interim Draft Report – Stormwater Management Concepts for the Brennan North Area Structure Plan.* NHC Northwest Hydraulic Consultants, Edmonton. September 2013.

3.0 Future Land Use Concept

3.1 Overall Patterns

The Brennan North ASP envisions a complete residential neighbourhood in a beautiful natural setting that responds to the wide ranging needs of the marketplace by offering a mix of housing forms from apartments to exclusive single family homes. The overall layout promotes access to outdoor recreational amenities, in particular Vermilion Provincial Park, with extensive trail system linkages throughout the neighbourhood and to points beyond.

The design focuses on a central open space corridor, running north from the existing Brennan Park subdivision, which features the stormwater management pond and two playgrounds. Another dominant feature of the area is the overhead power line that crosses the neighbourhood from east to west. This utility corridor has strong recreational potential, with trails and greenways. Together the central open space corridor and the utility corridor effectively divide the area into four unequal quadrants or precincts.

The overall road layout offers a mix of efficiency and exclusivity, while the minor collector directs traffic entering and existing the neighbourhood to use 62nd Street/Beckie Scott Trail. Local road access is maintained to the existing Brennan Park neighbourhood to promote connectivity and continuity between neighbourhoods.

The total ASP area is 26.82 ha (66.27 ac) and comprises primarily low density residential designation. In addition to low density residential, there are three pockets designated for future medium/high density residential use, a one-acre site for commercial development at the northwest corner of 62nd Street/Beckie Scott Trail and future 54th Avenue, and municipal reserve /open space. See **Figure 5. Future Land Use Concept**.

3.2 Residential

3.2.1 Low Density

Low density residential designation may include one-family and two-family dwellings. Each of the four quadrants contains land designated for low density residential uses. There is approximately 14.25 ha (35.21 ac) of low density residential land identified in light yellow on **Figure 5**.

A mix of housing form is encouraged to respond to a range of market sectors and shifting demographics, including but not limited to houses with detached garages/parking pads and small, well-designed single storey homes. Lot sizes are generally consistent with those found in Brennan Park; however, exact dimensions will be determined at the time of subdivision, reflecting current market demand.

3.2.2 Medium/High Density

Medium/high density residential designation may include uses described in the Land Use Bylaw, including two-family dwellings, triplexes and fourplexes, townhouses, rowhousing, stacked rowhousing and apartment buildings to a maximum height as specified in the Land Use Bylaw.

There is approximately 2.39 ha (5.9 ac) of land designated for medium/high density residential uses, identified in beige on **Figure 5**. The medium/high density designation is intended to satisfy current and projected market demand for housing that accommodates singles, students, couples, young families and seniors. Three of the four quadrants contain some amount of medium/high density residential, with the southeast quadrant containing the most. The northeast quadrant does not contain any medium/high density residential land.

3.3 Commercial

A 0.41 ha (1.0 ac) commercial site is located at the northwest corner of 62nd Street/ Beckie Scott Trail and future 54th Avenue, just inside the ASP boundary. This location may be suitable for a small, neighbourhood scale commercial development to meet the daily convenience needs of the local residents; however, market uptake potential is unknown at this time. Therefore, the ASP supports the future redesignation of the commercial site to medium/high density residential should commercial development prove to be unviable at this location.

3.4 Open Space

3.4.1 North-South Corridor

Open space defines the ASP's central area, forming a north-south corridor that links Brennan Park, Brennan North and Vermilion Provincial Park. The corridor contains the primary stormwater management facility, two small playgrounds and part of the trails system. All quadrants of the ASP area have trail access to this open space corridor and, via the trails system, to the amenities of Vermilion Provincial Park. See **Figure 5**.

3.4.2 Playgrounds

There are three small playgrounds proposed within the ASP boundary to offer convenient access to informal play opportunities for local families. Larger scale recreational spaces have not been provided within the ASP area due to the proximity of extensive recreational opportunities offered by Vermilion Provincial Park.

3.4.3 Stormwater Management Facility

The minimum area for the stormwater management facility, or detention pond(s), is approximately 0.71 ha (1.75 ac). This area is subject to modification upon completion of the final stormwater management

study, analysis and design. The pond should be designed as a naturalized wetland that functions to both improve runoff water quality and provide wildlife habitat, as encouraged in the Municipal Development Plan. A naturalized design for the stormwater pond will encourage and support recreation and wildlife viewing opportunities. The primary function of the pond(s) is to manage stormwater runoff from built up residential areas, and therefore ice skating, swimming and other water recreation activities are prohibited due to public health and safety precautions.

3.5 Land Use Summary and Population Statistics

3.5.1 Land Use Summary

The following is a summary of the distribution of land use in the ASP. The ASP area has a Gross Developable Area (GDA) of 26.82 ha (66.27ac). This information is also tabulated in **Table 3 Land Use Summary**.

Roads:

- Local roads and the minor collector comprise 19.6% of the GDA.
- This is a relatively efficient allocation of land for roadways.

Public Utility Lots:

- The power line easement will become a public utility lot.
- At 6.6% of the GDA, it occupies a disproportionate amount of land that is removed from development potential.

Park/Municipal Reserve:

- The land set aside for parks shows an under-allocation of Municipal Reserve at 5.2% of the GDA.
- This reflects the presence of extensive recreational activities in the nearby Provincial Park as well as the allocation of a future school/park site within the Shadow Plan area to the west.
- There is a shortfall in Municipal Reserve of 1.24 hectares, which is proposed to be made up in the future school/park site located in the Shadow Plan area.

Residential:

- Residential land use will be the largest land use category, comprising 62.% of the GDA.
- Low density represents 53.1% of the GDA.
- Medium/high density represents 8.9% of the GDA.

Commercial:

- A small commercial lot will occupy a one acre site, 1.5% of the GDA, at the east entry to the neighbourhood.

Table 3. Land Use Summary

LAND USE	AREA (ha)	AREA (ac)	% of GDA	# of UNITS	POPULATION POTENTIAL
GROSS AREA	26.82	66.27			
Environmental Reserve	0.00	0.00			
Gross Developable Area (GDA)	26.82	66.27	100.0%		
Roads - Collectors and Locals	5.26	13.00	19.6%		
Public Utility Lot - Power Line	1.77	4.37	6.6%		
Public Utility Lot - Storm water management	0.71	1.75	2.6%		
Public Utility Lot - Walkways/utility corridors	0.63	1.56	2.3%		
Park/Municipal Reserve	1.40	3.46	5.2%		
Total - Parks, Roads and PULs	9.77	24.14	36.4%		
Net Developable Area	17.05	42.13	63.6%		
Residential	16.64	41.12	62.0%		
Low Density	14.25	35.21	53.1%	284	908
Medium/High Density	2.39	5.91	8.9%	95	171
Commercial	0.41	1.01	1.5%		
GDA – TOTALS*	**26.82**	**66.27**	**100.0%**	**379**	**1,079**

* Areas and percentages may not match totals due to rounding

3.5.2 Population Statistics

Typically a new suburban neighbourhood experiences vigorous population growth until build-out as younger families move in, followed by a stable population, and then later a population decline as families grow older and children leave home. Eventually, however, the population decline may be reversed as young families start to replace older couples and singles who are 'downsizing.' The following population statistics represent the first phase cycle of neighbourhood growth to full build-out. The summary is also tabulated in **Table 3**.

Assumptions:

1. Low Density Residential: 20 units per net hectare, based on an average frontage of 14.3 m, and 3.2 persons per housing unit.

2. Medium/High Density Residential: 40 units per net hectare and 1.8 persons per housing unit.

Calculation Outcomes:

- The total number of residential units will be 379 units.
    - 284 (75%) will be low density residential.
    - 95 (25%) will be medium/high density residential (including town houses and apartment units).
- This yield is based on an assumed 20 units per hectare for low density residential, and an assumed 40 units per hectare for medium/high density residential.
- The actual number of units built will depend on market preferences, development costs and lot sizes.

Population Projection:

- Projected population potential is 1,079 persons.
- Population potential is based on an assumed 3.2 persons per housing unit for low density residential and 1.8 persons per housing unit for medium/high density residential.

This population potential may vary according to actual family and household size, in turn related to age distribution. These projections are for planning purposes only, and are subject to change over time.

3.6 Reserve Land and PULs

3.6.1 Municipal/School Reserve Dedication

Allocation and location of reserve dedication is determined using the following information:

1. An existing Deferred Reserve Caveat exists on Title 802 277 184 in the amount of 2.64 ha (6.52 ac).
2. Municipal Reserve (MR) applies to the lands in the central open space corridor that are above the 1:100 year flood plain/high water line for the storage pond(s).
3. The total amount of MR dedication within the open space corridor area will be determined upon confirmation of the final design of the stormwater management facility.
4. It is likely the ASP area will be under-dedicated in terms of municipal/school reserve.
5. It is anticipated that MR will be re-allocated to the future school site identified in the Shadow Plan area as shown in **Figure 5**.

It is anticipated that through collaboration with the County of Vermilion River, and with the Buffalo Trail Schools Division a suitable location for a future school site can be confirmed within the Shadow Plan area.

If at the time of subdivision neither the Town nor the County owns the land on which the potential future school/park site has been identified in the Shadow Plan, then the reserve owing from the ASP area will be taken as a combination of land dedication and cash-in-lieu of land. Cash in lieu money will be put into a reserve specifically to acquire land for the development of a school/park site within the Shadow Plan area.

3.6.2 Public Utility Lots (PULs)

Public utility lot (PUL) dedication will be as follows:

1. Power line easements at the time of dedication of the adjacent subdivisions,
2. Area of stormwater management ponds below the 1:100 year flood/high water line, and
3. Linear open space, buffers and connections that have a utility function, such as a water or wastewater line, or a drainage corridor.

3.7 Transition and Integration

The ASP provides for an approximate 10 m wide buffer between the existing homes in Brennan Park along the north side of 53rd Avenue and the proposed low density residential to the north (see **Figure 5**). This buffer functions as a public utility lot (PUL) to carry overland drainage from the existing lots in Brennan Park, as well as part of the trails system within the ASP area. The PUL also provides trail connections to 62nd Street/Beckie Scott Trail in the east and the central open space corridor in the west.

Additionally, there is an existing undeveloped road allowance along the north boundary of the ASP area, extending east into Vermilion Provincial Park some distance. This undeveloped road allowance is currently within the jurisdiction of the County of Vermilion River. There is no identified need or any justification to ever develop this road allowance, so it is likely to remain undeveloped indefinitely. As such, this road allowance will serve well as a 'green buffer' between developed backyards and the Park long into the future. It is hoped this road allowance could be incorporated into the local trails system in the future, offering additional value to both the Brennan North neighbourhood and the community as a whole.

There is a strip of Municipal School Reserve land within the existing Brennan Park neighbourhood, located north of the intersection of 53rd Avenue and 67th Street. Should this land be deemed surplus to the needs of the Town and/or School Board(s), and available for residential development, new housing should be sensitive to the existing housing form and lot sizes of residential development across 53rd Avenue and within the Brennan Park neighbourhood.

A uniform developer's fence will be constructed at the backs of lots along the ASP boundary at each phase. Lots backing onto open spaces, such as stormwater facilities, parks and certain public utility lots, will be black chain link or other suitable non-solid, low maintenance fencing material.

3.8 Roadway Network

The potential future road network is illustrated in **Figure 5**, and allows for a combination of convenient access and exclusivity of highly desirable residential lots. The northeast quadrant offers two cul-de-sacs without opportunity for through traffic; therefore, an emergency access road is identified across the central open space corridor from the west to provide a secondary access if needed. Access via this road would be for emergency vehicles only, and would be controlled with suitable devices such as knock-down bollards. The default use of this emergency access will be as part of the trails system.

The Minor Collector Road is aligned to direct major traffic flows to 62nd Street/Beckie Scott Trail and avoid 'filtering' through the existing Brennan Park neighbourhood. One additional access is proposed from the future northern extension of 62nd Street/Beckie Scott Trail along an existing right-of-way within the Town's boundary to service the northeast quadrant of the area and improve access to Vermilion Provincial Park

The road network is shown extending through the Shadow Plan area and just into the quarter section to the west of the Shadow Plan, again for conceptual purposes. Although these lands are outside the ASP area, it is important to note that the western extent of the Minor Collector Road is shown intersecting with a north-south road just west of the Shadow Plan boundary. This intersection is shown to indicate that future traffic generation west of the ASP area should be directed southward to the future western extension of 50th Avenue, instead of eastward through the ASP area.

The local road network is shown for conceptual purposes only and, with the exception of the Minor Collector Road (future 54th Avenue), is subject to change upon final subdivision design and approval. Non-substantive local road layout changes will not constitute an amendment to this ASP. However, the location of the Minor Collector Road (future 54th Avenue) is fixed and shown with a solid line edge; an amendment to this ASP is required to alter its location.

3.9 Utility Servicing

3.9.1 Water & Wastewater

Existing utilities in Brennan Park will be extended north along 65th Street to service the Brennan North neighbourhood. **Figure 6. Conceptual Utility Servicing** is interim and subject to change. Exact utility servicing alignments and flow directions will be confirmed prior to development as part of the subdivision and development approval processes.

The water servicing will need to loop across the central open space corridor under the stormwater management facility to reduce flushing and offer better water quality. At a later stage of development it is likely that a lift/pumping station would be required in the wastewater servicing system because of the northward downhill slope of the land. The lift station would be required to lift wastewater flows up to existing manholes where drainage by gravity would then take over. The location of the lift station

depends on the grading plan, which is contingent on the completion of the overall stormwater management plan, and on overall development staging.

3.9.2 Stormwater Management & LID

As mentioned in a previous section, Northwest Hydraulic Consultants prepared an *Interim Draft Report* providing high-level information on stormwater management for a representative Brennan North development concept. A preliminary drainage model is shown in **Figure 7. Interim Post-Development Drainage Model**.

The *Interim Draft Report* suggests that:

- the incremental increase in runoff due to development will be 24,000 cubic metres,
- a detention pond footprint of 0.71 ha (1.75 ac) is adequate to manage peak runoff,
- the detention pond be located upstream of the Trout Pond, and
- stormwater 'Best Management Practices' be implemented to retain flows near source and to improve water quality.

The report also suggests a phased implementation strategy whereby initial storage capacity is provided while further work is done to evaluate the feasibility of using the Trout Pond for storage.

Some of the 'Best Management Practices' referred to in the *Interim Draft Report* represent low impact development techniques. Low impact development (LID) is neighbourhood scale stormwater management that involves capturing and using stormwater, mimicking natural systems of runoff management, and preventing negative impact on existing watercourses and wetlands. This approach to stormwater management does not exclude engineered solutions; rather it integrates small-scale surface water controls with larger scaled management systems to better protect water quality.

Low impact development techniques may be integrated into the ASP's stormwater management program, and could include any or all of the following elements:

- green roofs
- permeable pavement
- residential rainwater harvesting systems
- bioswales (vegetated ditches)
- rain gardens (landscaped areas designed to hold and retain water for short periods of time)

Implementation of a number of the above listed elements consistently throughout the entire ASP area could reduce the size of the stormwater management pond required to service the ASP area, thus reducing costs and freeing up land for development of parks and/or residential uses.

4.0 Policy Framework & Implementation

4.1 Interpretation

Policies are written using "shall", "should" or "may" statements. The interpretations of "shall", "should" and "may" that follow may provide the reader with a greater understanding of the intent of each policy statement:

'shall' – denotes compliance or adherence to a preferred course of action.

'should' – denotes compliance is desired or advised but may be impractical or premature because of valid planning principles or unique/extenuating circumstances.

'may' – denotes discretionary compliance or a choice in applying policy.

4.2 Amendments

General housekeeping of the document including, but not limited to, spelling, syntax and grammar corrections do not constitute an amendment to this ASP.

A proposed substantive change to the text or figures of this ASP will constitute an amendment to the bylaw except in the following circumstances:

1. Re-configuration of the central open space corridor and stormwater management facility/detention pond(s) to reflect the recommendations of the final stormwater management study.
2. Re-alignment of the local road network that is shown with a dashed line in **Figure 5 Future Land Use Concept** at the time of subdivision.
3. Relocation and width of the PULs/trails shown on **Figure 5 Future Land Use Concept** to reflect the requirements of the final stormwater management study.
4. Relocation of the playgrounds.

Applications to substantively amend this ASP must be supported with sound planning rationale and founded on generally accepted planning principles.

4.3 Implementation

4.3.1 Development Staging

Development will commence in the northeast and southeast quadrants. In other words, all land east of the central open space corridor constitutes Stage 1. Subsequent development Stages lie to the west of the corridor.

Stage 1 is anticipated to commence within the next five years, and will include low density and medium/high density residential, a potential commercial node, and preliminary stormwater management facility within the open space corridor and initial trails system.

This staging represents a logical extension of existing utilities and road infrastructure, offers a range of housing form at development commencement and provides immediate access to recreational opportunities offered by the open space corridor and trails systems, as well as the immediately adjacent Vermilion Provincial Park.

4.3.2 Next Steps

This section outlines the short term implementation tasks required for this ASP area:

1. Confirm stormwater management requirements.
2. Confirm status of Trout Pond for use in stormwater management and requirements for utilization in consultation with Alberta Environment and Parks.
3. Confirm status of reserve dedication requirements in consultation with County of Vermilion River and the School Division(s).

5.0 Policies

The following policies will be used by the Town of Vermilion, including Administration and Council, to provide guidance and direction when making decisions on land use, subdivision and development on lands within the ASP boundary.

General

1.0 Land Use Designations within the ASP boundary shall conform to **Figure 5 Future Land Use Concept**.

2.0 The Town of Vermilion shall ensure this ASP, and any subsequent amendments, is consistent with all other statutory plans adopted by the municipality, per Section 638 of the *Municipal Government Act*.

3.0 The Town of Vermilion shall ensure compliance with the provisions of this ASP.

Public Spaces

4.0 The Town of Vermilion should promote the use of landscaping, including edible plants, in public spaces.

5.0 The Town of Vermilion shall ensure that public spaces are inclusive and accessible.

Land Use

6.0 The Town of Vermilion shall support the redesignation of the approximate 0.41 ha (1 ac) commercial site, as shown on **Figure 5 Future Land Use Concept**, to medium/high density residential should commercial development at the location prove unviable.

7.0 The Town of Vermilion shall interpret low density residential housing form and type in accordance with the Land Use Bylaw.

8.0 The Town of Vermilion shall interpret medium/high residential housing form and type in accordance with the Land Use Bylaw.

Reserve Land

9.0 The Town of Vermilion shall require the dedication of reserve land per the policies of the Municipal Development Plan.

Subdivision & Development

10.0 The Town of Vermilion shall require subdivision and development applications completed in accordance with the Municipal Development Plan and Land Use Bylaw.

Low Impact Development (LID)

11.0 The Developer should implement stormwater management best practices, as recommended by the final stormwater management plan, including Low Impact Development (LID) techniques including, but not limited to, bioswales, rain gardens, residential rainwater harvesting, and permeable hard surfacing.

Transportation & Roads

12.0 The Town of Vermilion may require the preparation of a Traffic Impact Assessment in support of a subdivision application.

13.0 The Developer may alter the local road configuration illustrated in **Figure 5 Future Land Use Concept** at the time of subdivision without triggering an amendment to this ASP.

14.0 The Developer shall not alter the Minor Collector Road configuration as illustrated in **Figure 5 Future Land Use Concept** at the time of subdivision without amending this ASP accordingly.

15.0 The Town of Vermilion should consider requiring that sidewalks be separated from the carriageway by a landscaped and/or treed boulevard, particularly on minor collector roads.

Utilities

16.0 The Developer shall ensure adequate capacity of required utility services for each stage of development.

17.0 The Town of Vermilion may require the Developer to design utility capacity to take into consideration subsequent development stages, and in this circumstance, shall ensure appropriate cost-recovery mechanisms are invoked, as appropriate, to the benefit of all involved parties.

Engineering

18.0 All roads and utilities shall be designed and constructed in accordance with the Town of Vermilion's Engineering Standards, or in the case of LID techniques not covered by the Town's Engineering Standards, widely accepted and geoclimatic-specific engineering practices.

Sour Gas Facilities

19.0 The Town of Vermilion shall not support the development of sour gas facilities within the ASP boundary nor within 1.5 km of the ASP boundary.

Agriculture

20.0 The Town of Vermilion may allow the use of land within the ASP boundary not identified for near future development to be used for certain non-offensive agricultural purposes at its sole discretion.

21.0 The Town of Vermilion should support certain aspects of urban agricultural pursuits in developed residential areas within the ASP boundary, including but not limited to, the use of vacant lots for community gardening, growing food in place of front lawns, landscaping public spaces with edible and food-bearing plants; and, as allowed for in the Municipal Development Plan and Land Use Bylaw, small scale animal husbandry such as backyard chickens and honey bees.

Amendment

22.0 Amendment applications shall conform to the requirements set by the Town of Vermilion.

Monitoring & Review

23.0 The Town of Vermilion may review and update this ASP as required.

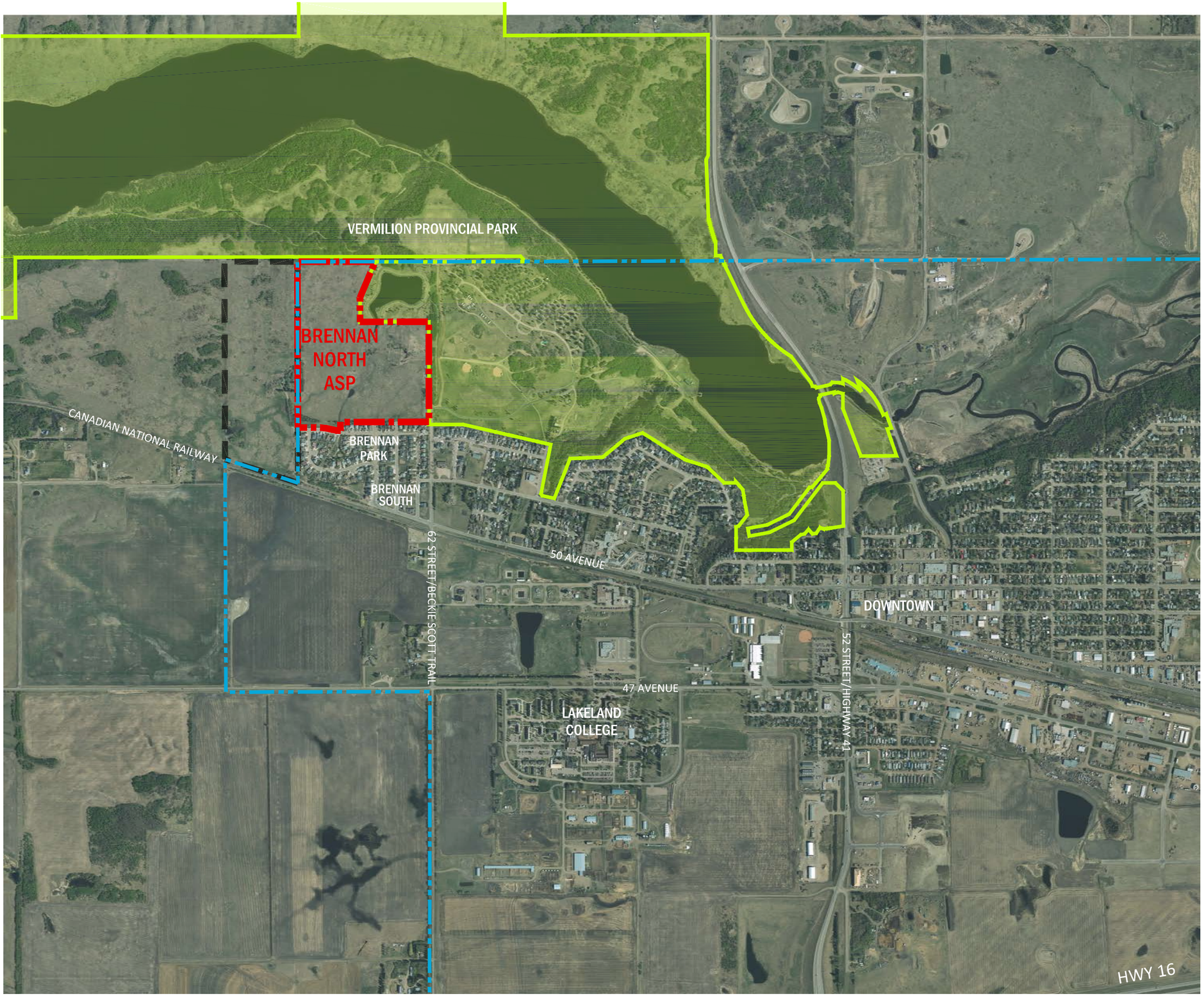
Name / Plot Date: Mbrulotte June 16, 2017

TOWN OF VERMILION ALBERTA

BRENNAN NORTH AREA STRUCTURE PLAN

FIGURE 1

REGIONAL CONTEXT



LEGEND

- TOWN OF VERMILION BOUNDARY
- AREA STRUCTURE PLAN BOUNDARY
- SHADOW PLAN BOUNDARY
- VERMILION PROVINCIAL PARK

AIRPHOTO: 2015

N

0 150 300 450 m

SCALE 1:15,000

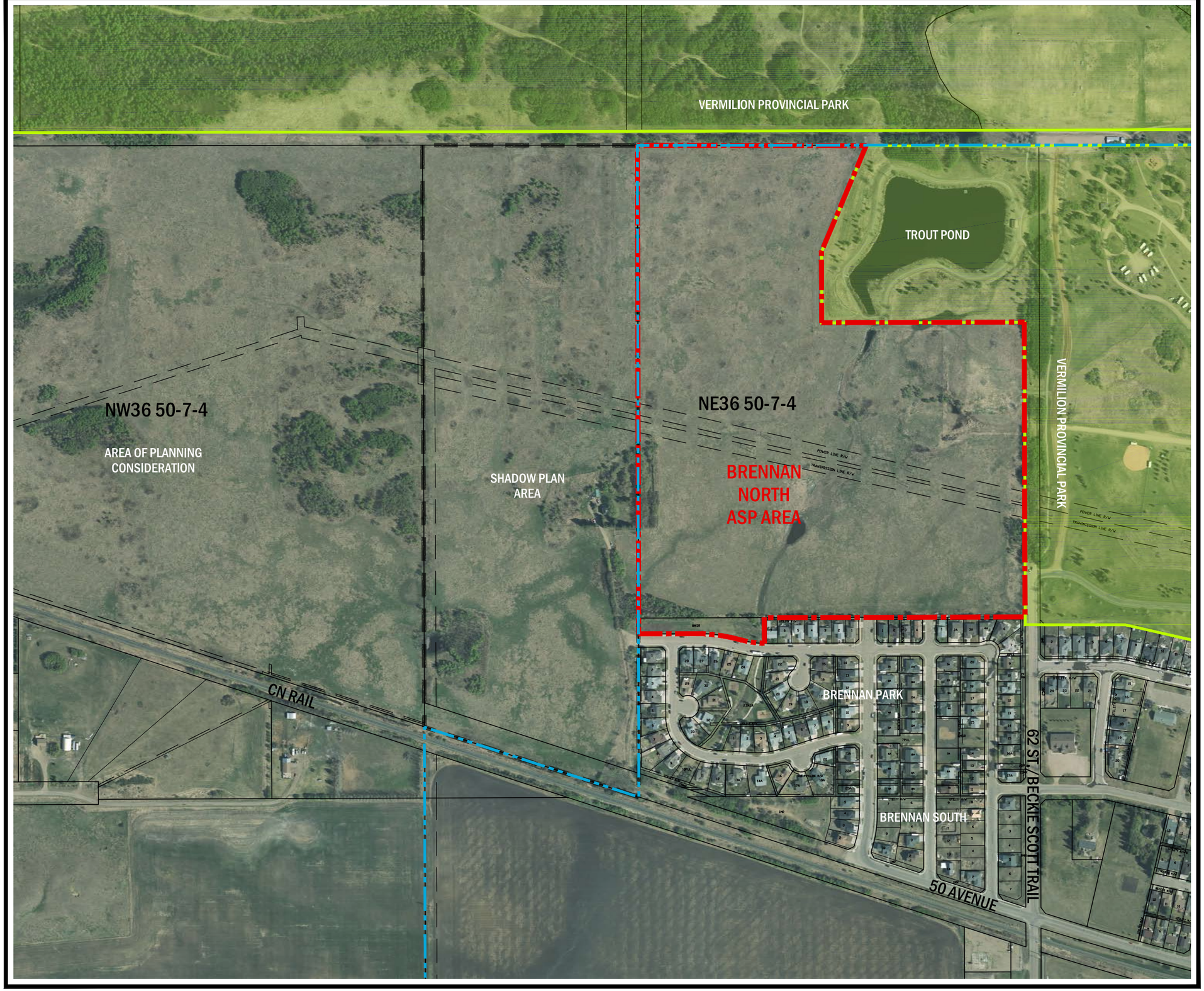
File Name: 0123-13010_02_PRF001.DWG

TOWN OF VERMILION ALBERTA

BRENNAN NORTH AREA STRUCTURE PLAN

FIGURE 2

LOCAL CONTEXT



LEGEND

- TOWN OF VERMILION BOUNDARY
- AREA STRUCTURE PLAN BOUNDARY
- SHADOW PLAN BOUNDARY
- VERMILION PROVINCIAL PARK

AIRPHOTO: 2015

N

0 50 100 150 m

SCALE 1:5000

Name / Plot Date: Mbrulotte June 16, 2017

File Name: 0123-13010_02_PRF002.DWG

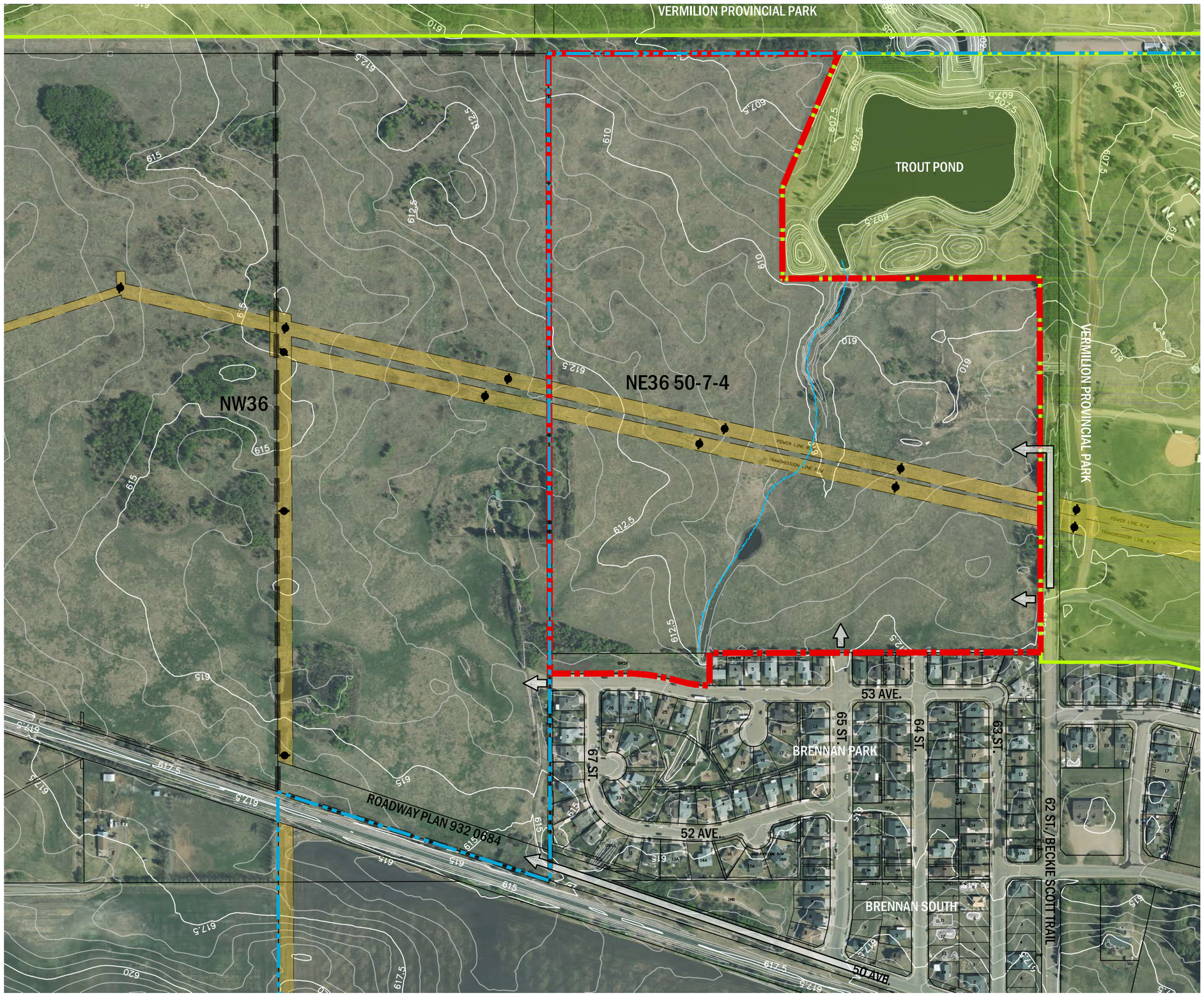
Name / Plot Date: Mbrulotte June 16, 2017

TOWN OF VERMILION
ALBERTA

BRENNAN NORTH AREA STRUCTURE PLAN

FIGURE 3

SITE ANALYSIS



LEGEND

- TOWN OF VERMILION BOUNDARY
- AREA STRUCTURE PLAN BOUNDARY
- SHADOW PLAN BOUNDARY
- VERMILION PROVINCIAL PARK
- 0.5 m CONTOUR INTERVAL
- UTILITY EASEMENT
- POWER POLE
- DRAINAGE SWALE
- POTENTIAL ACCESS POINT

AIRPHOTO: 2015

N

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SCALE 1:4000

File Name: 0123-13010_02_PRF003.DWG

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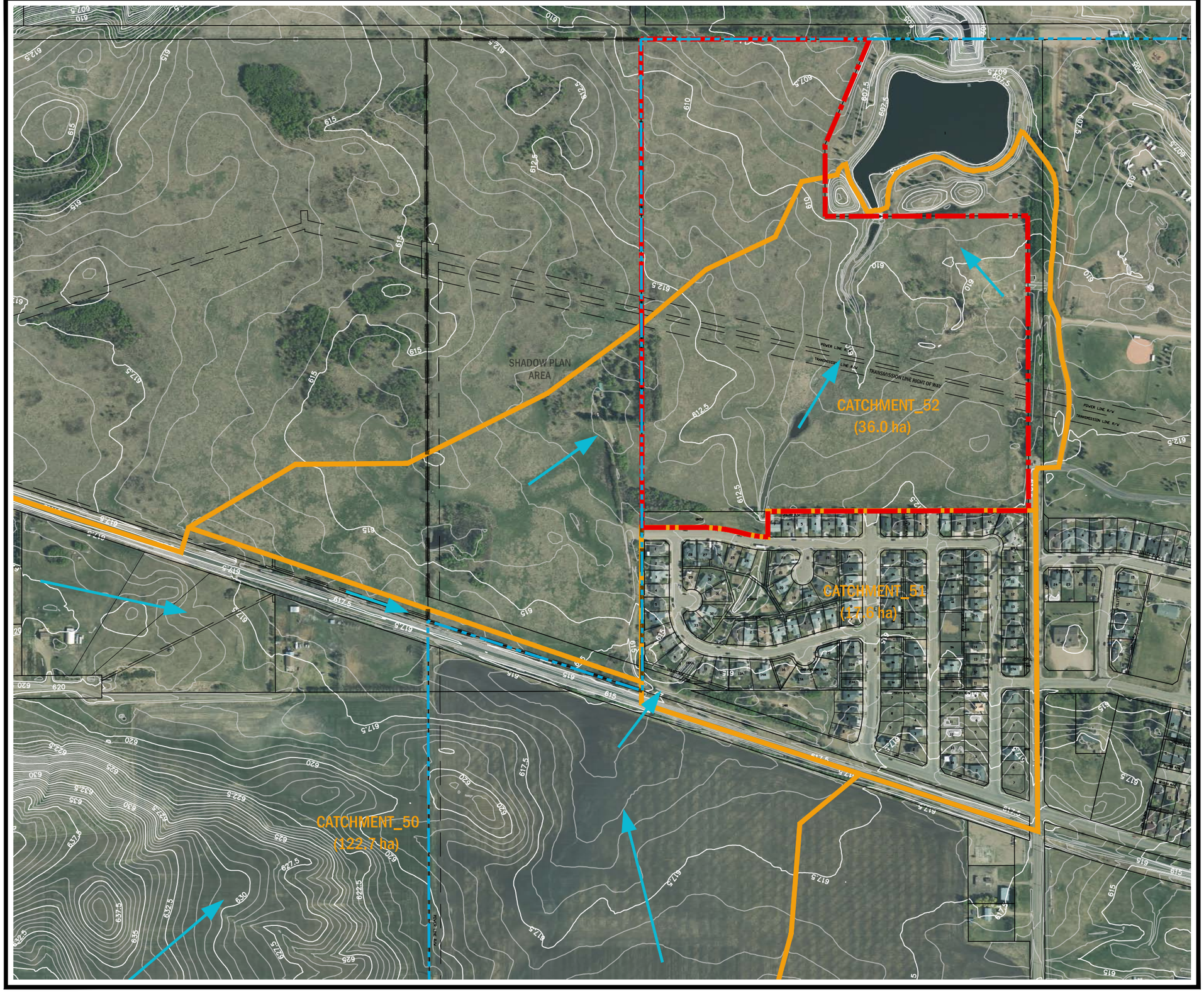

TOWN OF VERMILION
ALBERTA

BRENNAN NORTH AREA STRUCTURE PLAN

FIGURE 4

INTERIM PRE-DEVELOPMENT DRAINAGE MODEL

LEGEND

- TOWN OF VERMILION BOUNDARY
- AREA STRUCTURE PLAN BOUNDARY
- SHADOW PLAN BOUNDARY
- PRE-DEVELOPMENT CATCHMENT BOUNDARY
- PRE-DEVELOPMENT FLOW PATHS

SOURCE: NORTHWEST HYDRAULIC CONSULTANTS, INTERIM DRAFT REPORT - STORMWATER MANGEMENT CONCEPTS FOR THE BRENNAN NORTH AREA STRUCTURE PLAN , SEPTEMBER, 2013
AIRPHOTO: 2015

N

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SCALE 1:5000

File Name: 0123-13010_02_PRF004.DWG

Name / Plot Date: Mbrulotte June 16, 2017

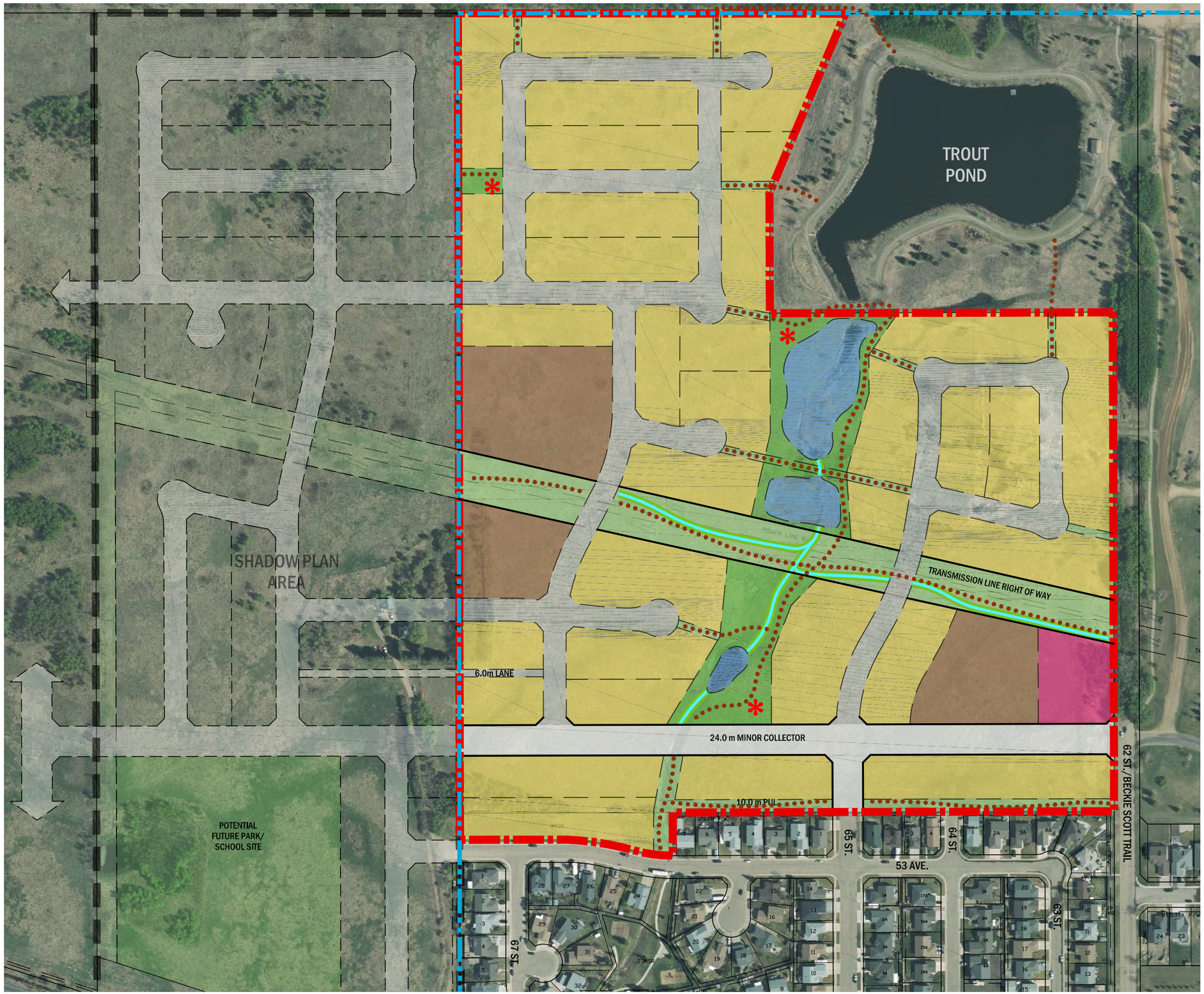
File Name: 0123-13010_02_PRF006.DWG

TOWN OF VERMILION
ALBERTA

BRENNAN NORTH AREA STRUCTURE PLAN

FIGURE 5

FUTURE LAND USE CONCEPT



LEGEND

- TOWN OF VERMILION BOUNDARY
- AREA STRUCTURE PLAN BOUNDARY
- SHADOW PLAN BOUNDARY
- MINOR COLLECTOR ROADWAY
- POTENTIAL LOCAL ROAD NETWORK
- PARKS/OPEN SPACE
- PUBLIC UTILITY LOT
- STORMWATER MANAGEMENT POND
- LOW DENSITY RESIDENTIAL
- MEDIUM/HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- PLAYGROUND
- TRAIL SYSTEM
- NATURALIZED DRAINAGE CHANNEL

AIRPHOTO: 2015

N

0 30 60 90 m

SCALE 1:3000

Name / Plot Date: Mbrulotte June 16, 2017

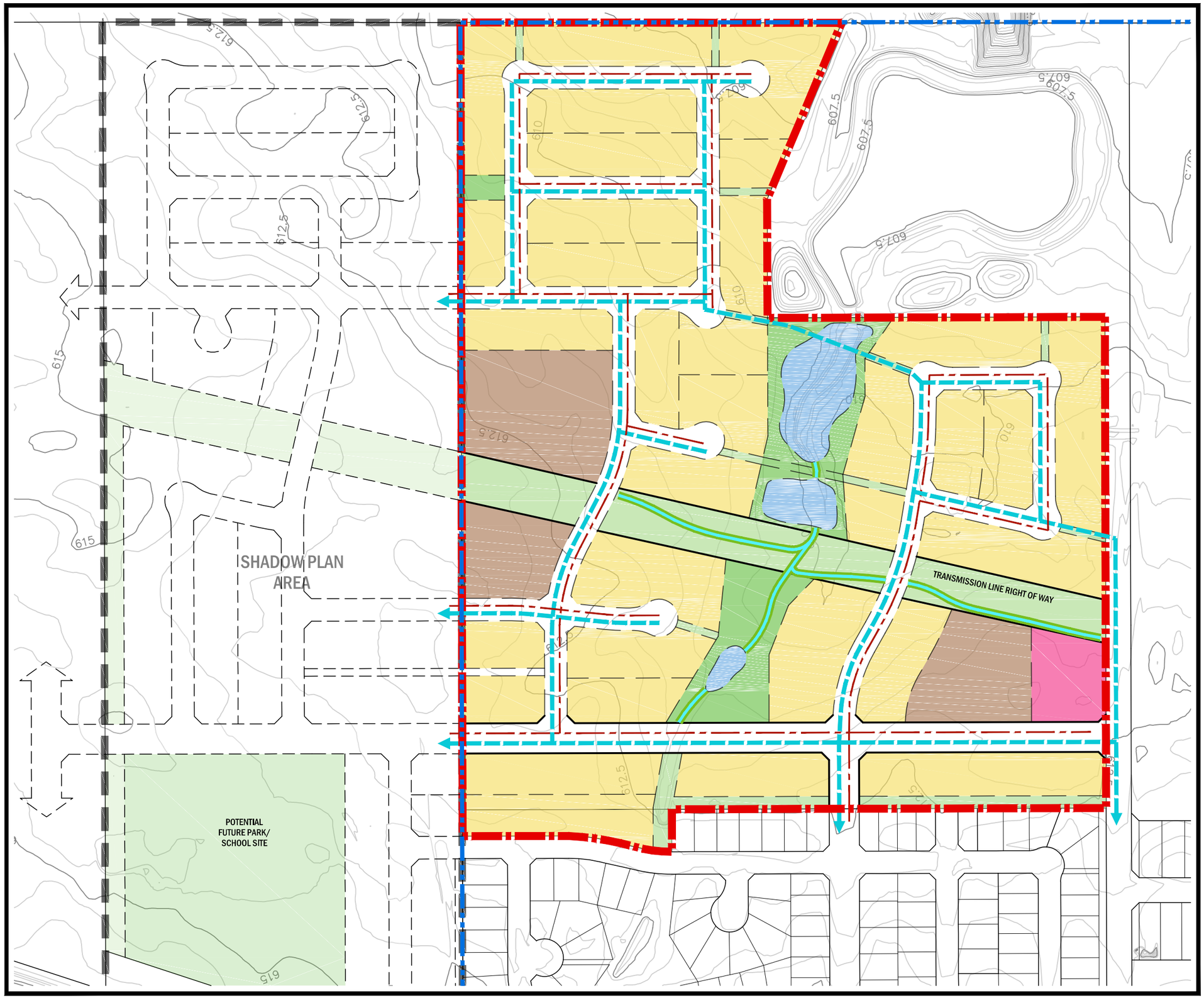
File Name: 0123-13010_02_PRF007.DWG

TOWN OF VERMILION
ALBERTA

BRENNAN NORTH AREA STRUCTURE PLAN

FIGURE 6

CONCEPTUAL UTILITY SERVICING



LEGEND

- TOWN OF VERMILION BOUNDARY
- AREA STRUCTURE PLAN BOUNDARY
- SHADOW PLAN BOUNDARY
- MINOR COLLECTOR ROADWAY
- POTENTIAL LOCAL ROAD NETWORK
- PARKS/OPEN SPACE
- PUBLIC UTILITY LOT
- STORMWATER MANAGEMENT POND
- LOW DENSITY RESIDENTIAL
- MEDIUM/HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- WATER MAIN
- SANITARY SEWER
- NATURALIZED DRAINAGE CHANNEL

N

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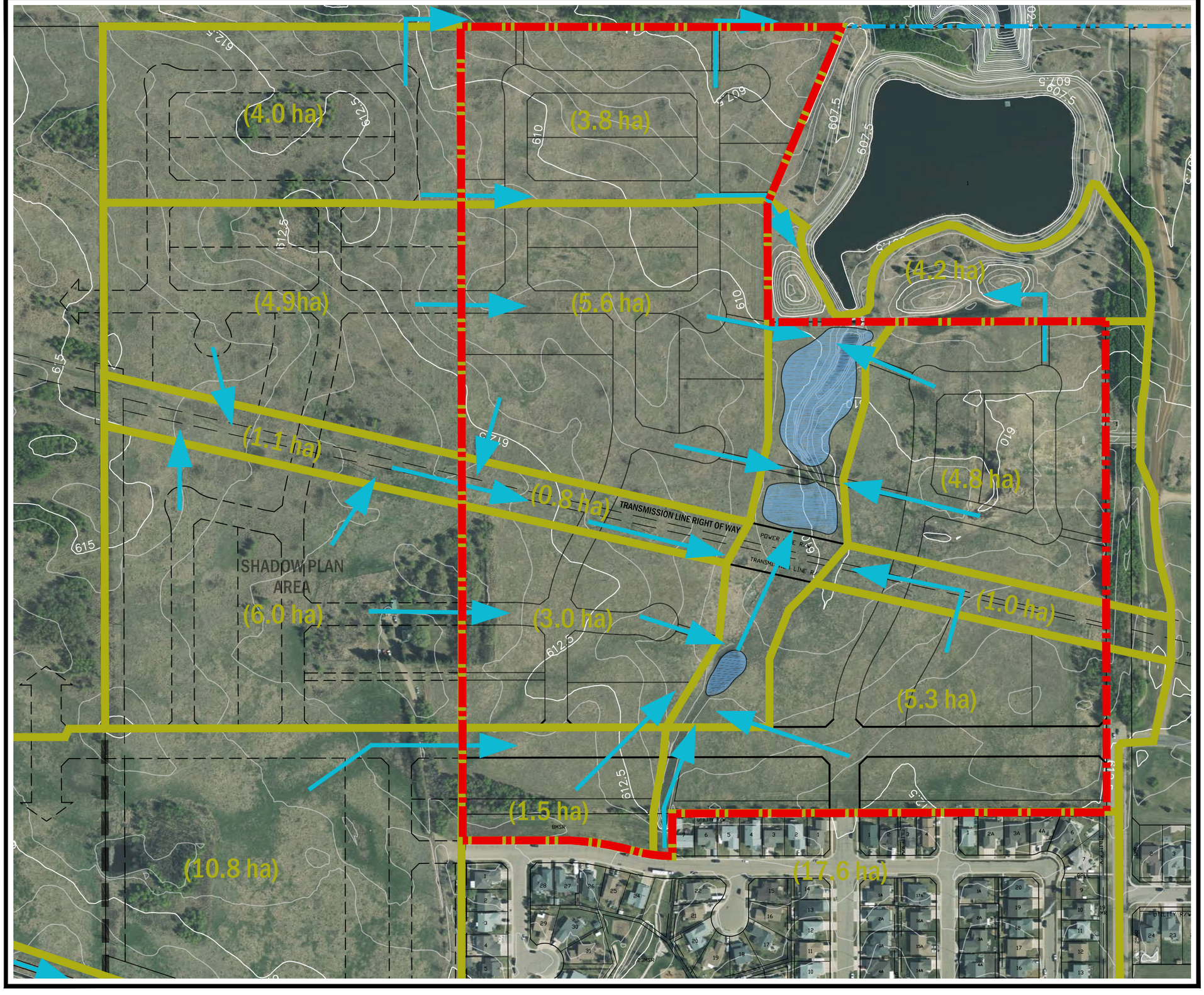
SCALE 1:3000

Name / Plot Date: Mbrulotte June 16, 2017



TOWN OF VERMILION ALBERTA

BRENNAN NORTH AREA STRUCTURE PLAN

FIGURE 7

LONG TERM POST-DEVELOPMENT DRAINAGE MODEL

LEGEND

- TOWN OF VERMILION BOUNDARY
- AREA STRUCTURE PLAN BOUNDARY
- SHADOW PLAN BOUNDARY
- POST-DEVELOPMENT CATCHMENT BOUNDARY
- POST-DEVELOPMENT FLOW PATHS

SOURCE: NORTHWEST HYDRAULIC CONSULTANTS, INTERIM DRAFT REPORT - STORMWATER MANGEMENT CONCEPTS FOR THE BRENNAN NORTH AREA STRUCTURE PLAN , SEPTEMBER, 2013
AIRPHOTO: 2015

N

0 30 60 90 m

SCALE 1:3000

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