

**TOWN OF OLDS
BYLAW NO. 2016-33
A BYLAW TO ADOPT THE (2017) CORNERSTONE AREA STRUCTURE PLAN**

NOW, THEREFORE, THE MUNICIPAL COUNCIL OF THE TOWN OF OLDS, IN THE PROVINCE OF ALBERTA, DULY ASSEMBLED, ENACTS AS FOLLOWS:

WHEREAS Chapter M-26.1, Part 17, Division 5, Section 633(1) of the *Municipal Government Act*, as amended, for the purpose of providing a framework for subsequent subdivision and development of an area of land, a Council may by bylaw adopt an area structure plan; and

WHEREAS Chapter M-26.1, Part 5, Division 9, Section 191 of the *Municipal Government Act*, as amended, allows the Council of a municipality the power to pass a bylaw, amend, and/or repeal a bylaw; and

WHEREAS the (2011) Cornerstone Area Structure Plan has been prepared in accordance with the requirements of Part 17 of the *Municipal Government Act*, as amended, and adopted as Bylaw 2011-19; and

WHEREAS Council deems it desirable to repeal the (2011) Cornerstone Area Structure Plan and replace it with the (2017) Cornerstone Area Structure Plan;

NOW THEREFORE, THE MUNICIPAL CORPORATION OF THE TOWN OF OLDS IN COUNCIL DULY ASSEMBLED ENACTS AS FOLLOWS:

1. That Bylaw 2011-19, the (2011) Cornerstone Area Structure Plan, be repealed, and
2. That the (2017) Cornerstone Area Structure Plan, be adopted.
3. Citation: This bylaw may be cited as "Bylaw 2016-33"
4. This Bylaw comes into force on the date it is passed.

Read for a first time on the 12 day of December, 2016

Public Hearing held on the 13 day of February, 2017

Read a second time on the 13 day of February, 2017

Read a third and final time on the 13 day of February, 2017



Judy Dahl,
Mayor



Pat Vincent,
Interim Chief Administrative Officer

SIGNED by the Chief Elected Officer and the Chief Administrative Officer this 17 day of February, 2017.

Schedule 'A'



CORNERSTONE

AREA STRUCTURE PLAN



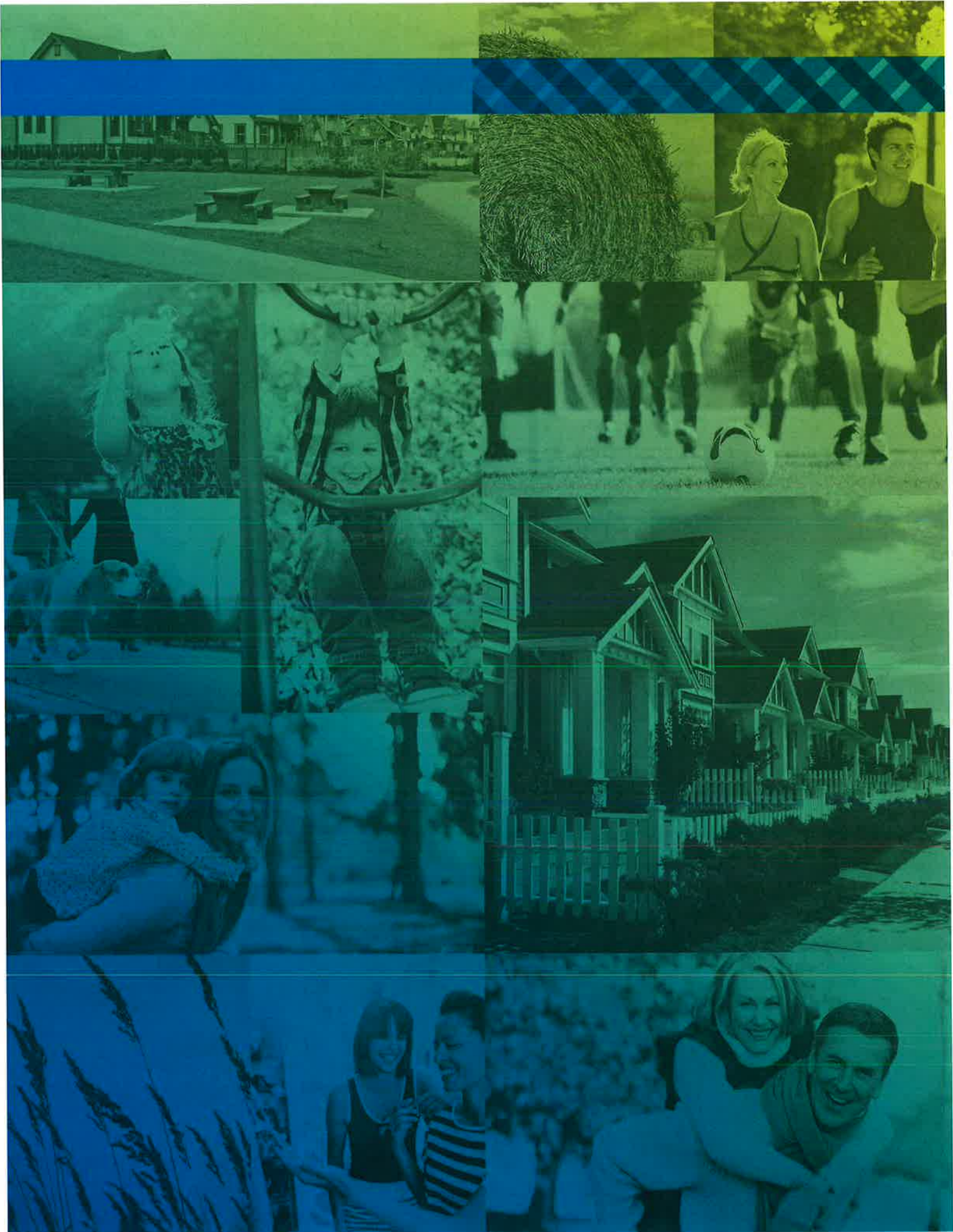
FEBRUARY 2017



Town of Olds



springwood





CORNERSTONE

AREA STRUCTURE PLAN

Submitted to: Town of Olds

Submitted by: Springwood Developments

Prepared by: B&A Planning Group

Date: February 13, 2017



Table of Contents

1.0 Regulatory Framework	01		
1.1 Purpose of the Plan	01		
1.2 Authority of the Plan	01		
1.3 Policy Direction	01		
1.4 Timeframe of the Plan	01		
1.5 Amendment of the Plan	01		
2.0 Plan Area & Background Info	02		
2.1 Location	02		
2.2 Land Ownership	04		
2.3 Site Context	06		
2.4 Surrounding Context	08		
2.5 Existing Land Use	10		
2.6 Existing Rights-of-Way	10		
2.7 Topography and Drainage	12		
2.8 Supporting Information	12		
3.0 Land Use Concept	14		
3.1 Vision	14		
3.2 Land Use Concept	14		
3.3 Residential	16		
3.4 Commercial	16		
3.5 Mixed Development by Others	17		
		3.6 Industrial	17
		3.7 Institutional (FUTURE Operations Centre)	17
		3.8 Waste Transfer Station	17
		4.0 Community Amenities	18
		4.1 Municipal Reserve Requirements	18
		4.2 Recreation Site	18
		4.3 Neighbourhood Park	18
		4.4 Linear Stormwater Detention Facility	20
		4.5 Pathways	20
		5.0 Transportation Network	21
		5.1 Overview	21
		5.2 Regional Road Network & Site Access	21
		5.3 Internal Street Network & Circulation	22
		5.4 Potential Transit Roads	24
		6.0 Servicing	26
		6.1 Water Supply and Distribution	26
		6.2 Sanitary Servicing and Waste Water Collection	28
		6.3 Storm Water Management	30
		6.4 Shallow Utilities	31
		7.0 Implementation	34
		7.1 Phasing	34

1.0 Regulatory Framework

1.1 Purpose of the Plan

The Cornerstone Area Structure Plan (ASP) is a statutory document that provides a land use and servicing framework to guide development of approximately ± 86.8 hectares (± 214.4 acres) of land in northwest Olds. The intent of this ASP is to refine and implement the broader policies found in the Town of Olds Municipal Development Plan and to provide direction for more detailed planning stages, including future land use amendment and subdivision applications.

1.2 Authority of the Plan

The Cornerstone Area Structure Plan has been developed in collaboration with Town of Olds administration and represents the goals and objectives of plan area landowners and the Town. The ASP was adopted on February 13, 2016 under Bylaw 2016-33, passed by Council in accordance with the Municipal Government Act (MGA).

1.3 Policy Direction

1.3.1 Municipal Development Plan (MDP)

The Town of Olds MDP is the overarching planning document for the Town and outlines the general growth and development goals for the municipality as a whole. The MDP is intended to direct future land use and development at a high level. Area Structure Plan's should be consistent with the general policy guidance provided in the MDP.

The Town's Vision Statement envisions Olds as a community that offers a good balance between economic opportunities and high quality of life, providing housing options, community facilities, amenities, and social opportunities for residents. The Cornerstone ASP supports the Town's goals by providing a range of commercial, residential, and recreational land uses that interact and complement each other to create

a vibrant and active community.

1.3.2 Provincial Legislation

Provincial legislation will apply to two areas within the Cornerstone ASP:

- All development and subdivision adjacent to Highway 27, on the south boundary of the ASP, requires the approval of Alberta Transportation. Applicants may require the proponent to submit an acceptable Traffic Impact Assessment (TIA) for review by the department, as well as any other information that is deemed necessary by Alberta Transportation.
- Any residence or food establishment within 300 metres of the Waste Transfer Site requires the consent of Alberta Environment & Water to vary the setback distance. The decision to vary the setback will be considered at the subdivision stage.

1.4 Timeframe of the Plan

The ASP establishes the overall pattern for how Cornerstone is to be developed over an extended period of time. Development is expected to occur over the next 10 years, however, the exact timing of build-out remains subject to market demand and other factors.

1.5 Amendment of the Plan

To make any change to the text or maps within this ASP, an amendment to the ASP shall be in accordance with the Municipal Government Act. If an amendment to this ASP is requested by an applicant, the applicant shall be required to submit the justification and information necessary to support the amendment.



2.0 Plan Area & Background Info

2.1 Location

The ASP is located in the north-west portion of the town of Olds, on the western limit of the town boundary, as illustrated in **Figure 1: Location**. The plan area is bordered by Highway 27 to the south, 70th Avenue and the town boundary to the west, future residential lands to the north, and future and existing residential and industrial uses to the east.



Site context: Looking west from the mid-point of the eastern boundary of the subject site.



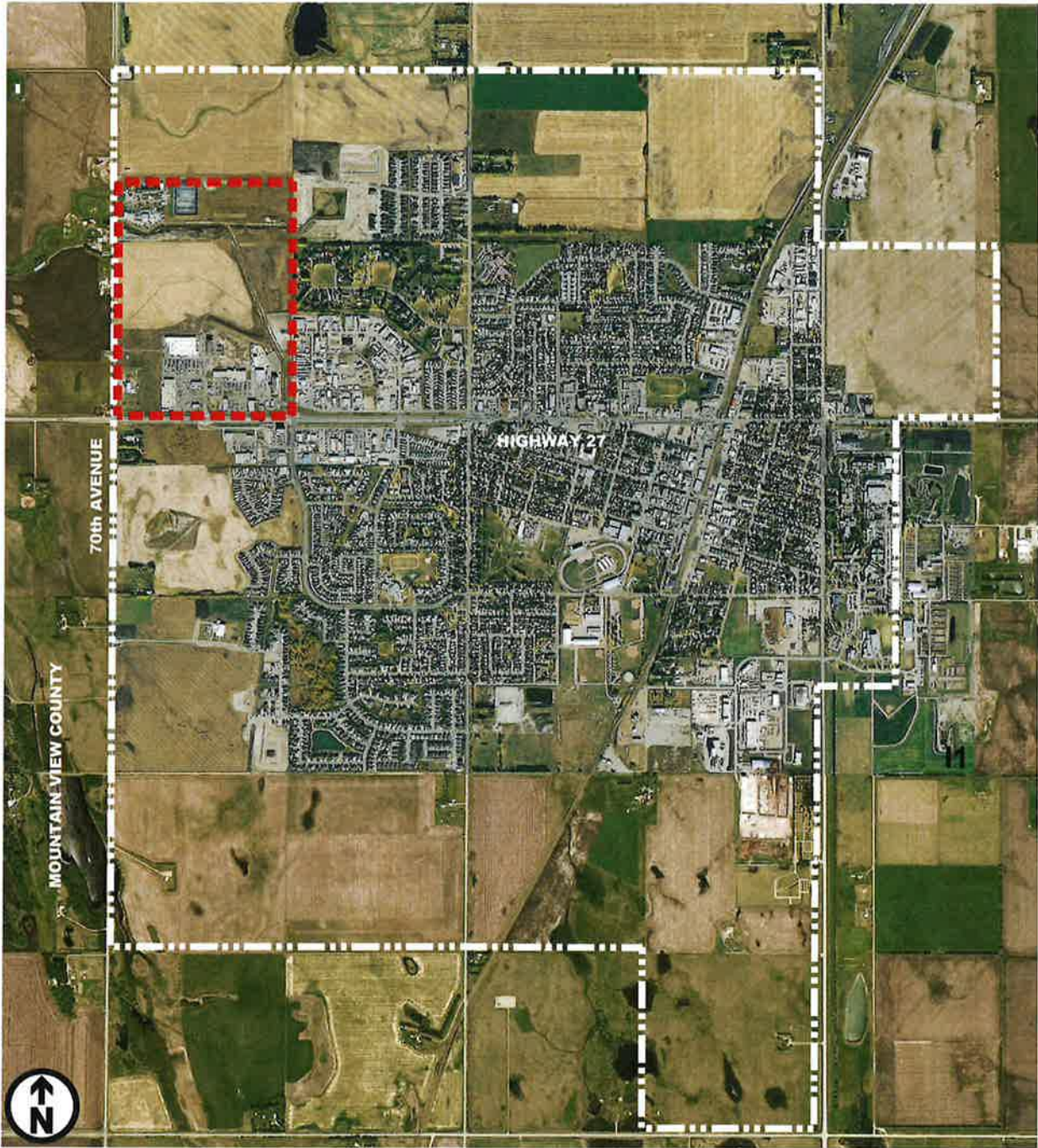
Site context: Looking northeast from the intersection of 67th Avenue and Highway 27





Site context: Looking northeast from the intersection of 70th Avenue and Highway 27.



Figure 1: Location



-  Cornerstone Area Structure Plan Boundary
-  Town of Olds Boundary

2.2 Land Ownership

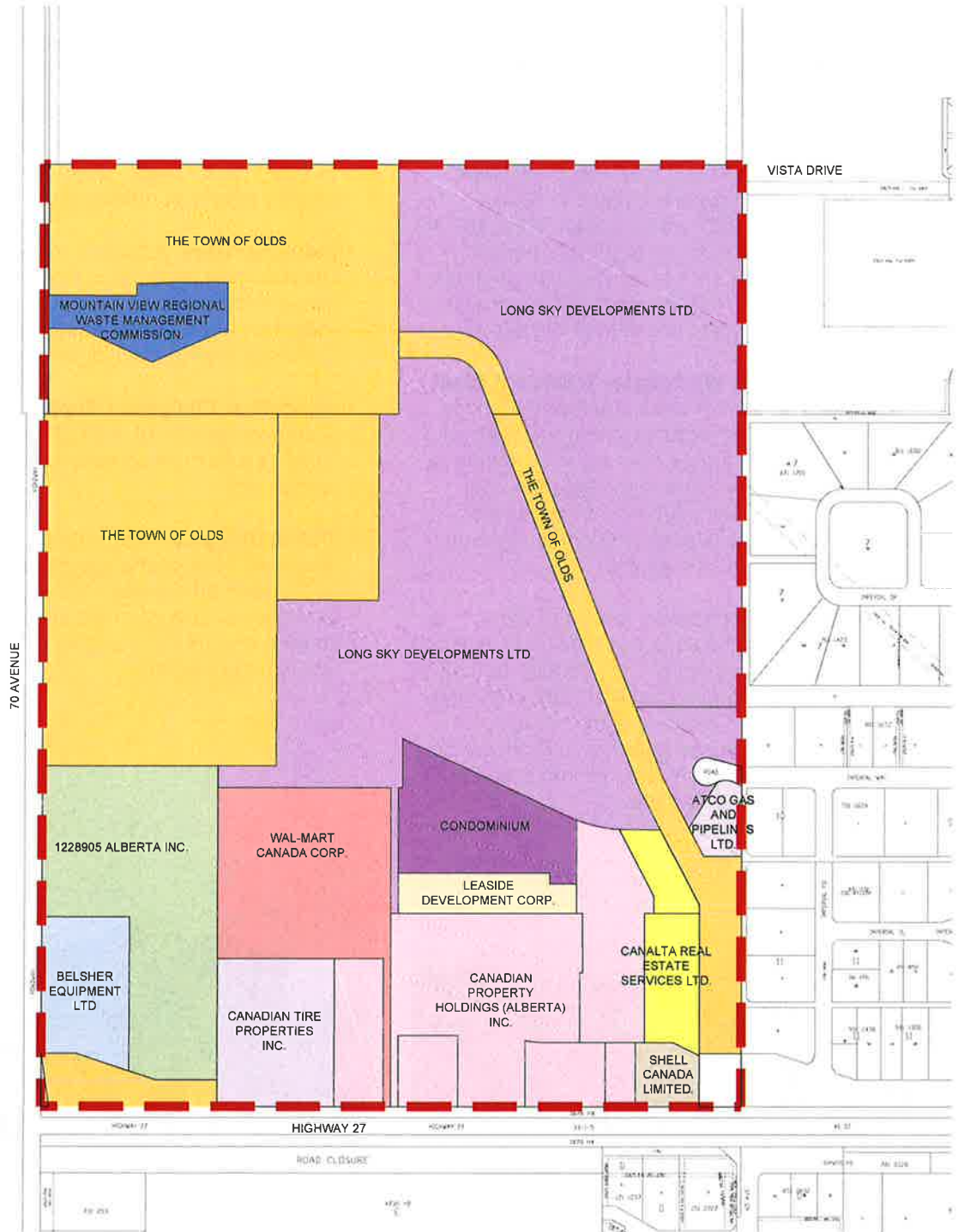
The ASP area comprises approximately \pm 86.8 hectares (\pm 214.4 acres) of land located within SW 6-33-1-5 and NW 6-33-1-5. Existing land ownership within the ASP area is illustrated on **Figure 2: Land Ownership**, and detailed in **Table 1: Land Ownership and Legal Description**.

Table 1: Land Ownership and Legal Description

Owner	Legal Description	Hectares	Acres
The Town of Olds	Plan 1211718 Block 1: Lots 4, 8PUL, 3MR Plan 0712788 Block 1: Lot 6 Plan 9211048 Block 1: Lot 2PUL Plan 1211718 Block 1: Lot 8PUL Plan 1211718 Block 1: Lot 3PUL Plan 8610563	34.80	68.81
Mountain View Regional Waste Management Commission	Plan 0712788 Block 1: Lot 5	1.250	3.09
Long Sky Developments Ltd.	Plan 1211719 Block 1: Lots 9, 10 Plan 1310591 Block 8: Lot 11	22.213	74.66
ACTO Gas and Pipelines Ltd.	Plan 1310591 Block 8: Lot 12	0.405	1.00
1228905 Alberta Inc.	Plan 8610563 Block A	5.331	13.17
Belsher Equipment Ltd	Plan 9411869 Block 1	1.629	4.03
Canadian Tire Properties Inc.	Plan 0710120 Block 12: Lot 5	2.285	5.65
Wal-mart Canada Corp.	Plan 0710120 Block 12: Lot 1	4.058	10.03
Canadian Property Holdings (Alberta) Inc.	Plan 0710120 Block 12: Lots 6, 7, 8 Plan 0713625 Block 12: Lots 10, 13 Plan 0710777 Block 12: Lot 9	8.052	19.90
Shell Canada Limited	Plan 0713625 Block 12: Lot 11	0.517	1.28
Canalta Real Estate Services Ltd.	Plan 0714552 Block 12: Lots 15, 16	1.419	3.51
Leaside Development Corp.	Plan 0714552 Block 12: Lot 16	0.904	2.23
Multiple Owners (Condominium)	Multiple Titles	2.22	5.49
Province of Alberta		0.6	1.55
Total Area		86.8	214.4



Figure 2: Land Ownership



2.3 Site Context

The Cornerstone plan area contains a number of different land uses in various stages of planning and development. As illustrated in **Figure 3: Existing Site Features**, current site features include:

- Waste Transfer Station-** located in the northwest corner of the plan area, the Waste Transfer station, owned by Mountain View Regional Waste Management Commission, is a place for local residents to deposit their waste prior to the materials being loaded and transported to the end point of disposal or treatment. Due to Provincial regulations, a 300-metre setback from the edge of the transfer site applies to all residential and food-related uses.
- Former Town of Olds Wastewater Treatment Plant-** the site previously contained a wastewater lagoon and associated infrastructure to treat the Town of Olds wastewater discharge. The site is currently being decommissioned and re-mediated. A 300 metre setback from the edge of the Wastewater Treatment Plant applies to all residential uses until the site has been fully re-mediated.
- Commercial Uses-** A previous version of the Cornerstone ASP, dated June 2011, helped guide the planning and development of the south portion of the subject site as commercial and medium-density residential land uses. Existing commercial uses within the ASP are located adjacent to Highway 27 and include a grocery store, a hotel, and a variety of retail, restaurants, and services.
- Residential Uses-** Directly north of the commercial area is a medium-density residential site consisting of apartment and semi-detached housing forms at various stages of development.
- Industrial Uses-** A portion of the southeast corner of the plan area is currently designated and subdivided for light industrial development, similar to existing industrial uses directly east of the plan area. Currently there are no industrial users on the site.
- Agriculture Equipment Supplier-** Located in the southwest corner of the ASP is a site currently used as a farm equipment sales and maintenance dealership.
- Public Utility Lot-** an existing easement runs diagonally across the subject site, consisting of an engineered drainage channel that conveys stormwater through the subject lands. At this point in time, the drainage channel has been design for utility purposes only.



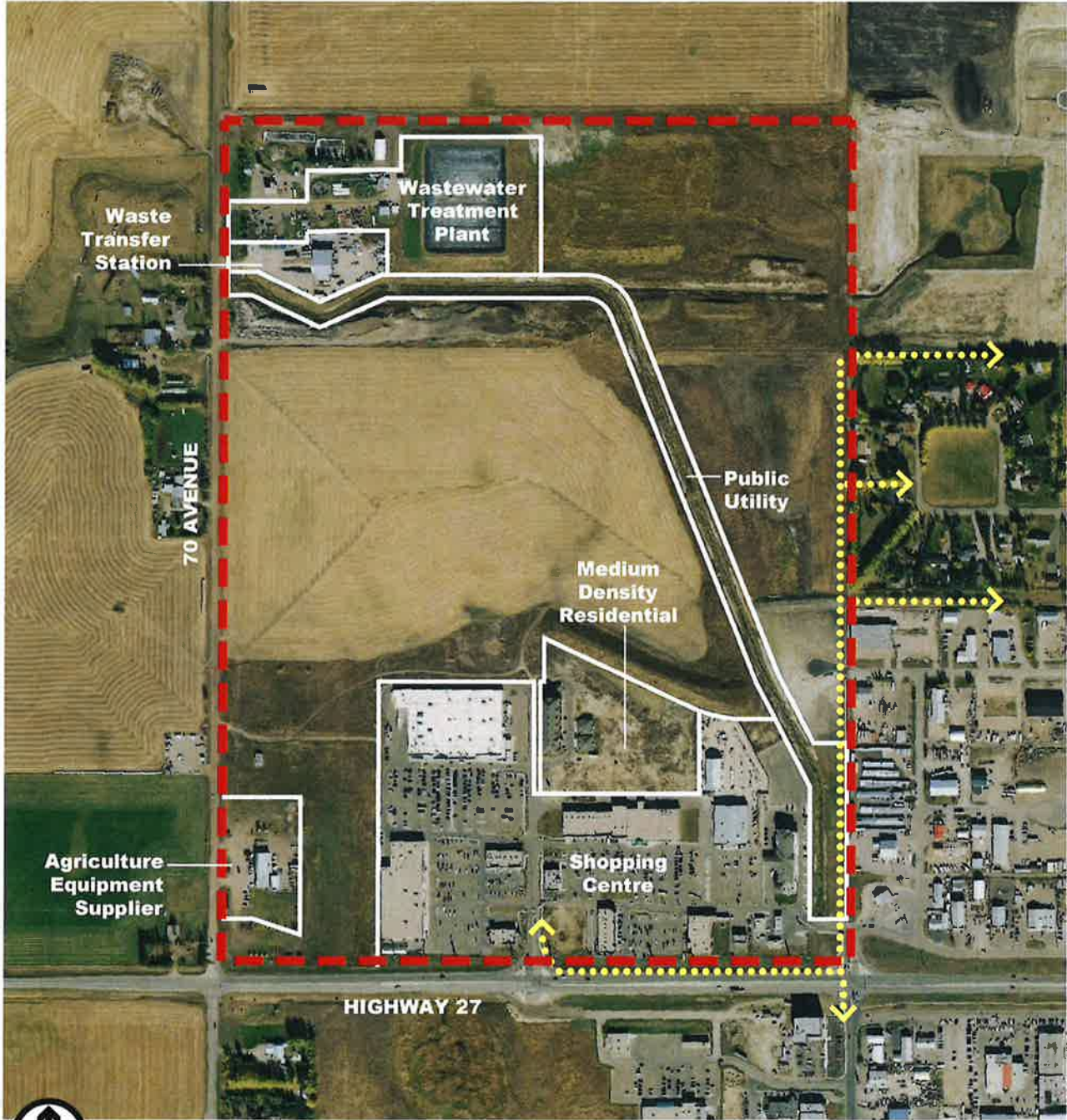
Existing commercial uses adjacent to Highway 27.



Existing residential uses north of commercial site.



Figure 3: Existing Site Features



- Cornerstone Area Structure Plan Boundary
- ⋯ Pathway

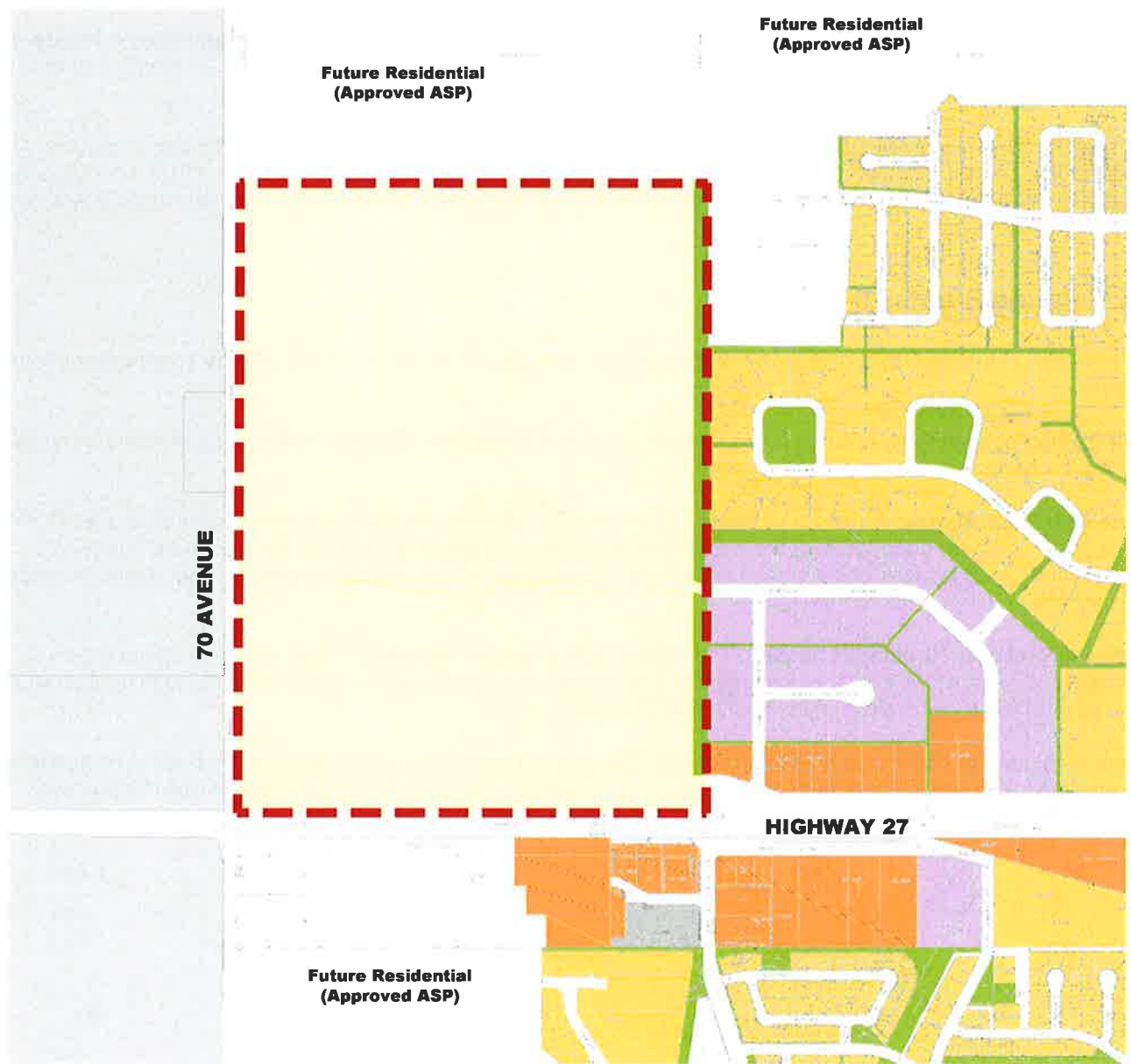
2.4 Surrounding Context

The Cornerstone plan area is adjacent to a number of different land uses in various stages of planning and development. As illustrated in **Figure 4: Surrounding Context**, adjacent uses include:

- **North** of the Cornerstone ASP is agricultural land identified for future residential development within the West View Area Structure Plan. These lands will include low and medium density residential uses and parks and open space.
- **East** of the ASP area is the developing residential community of The Vistas and the established community of Imperial Estates. The southeast portion of the ASP is bordered by light industrial uses. A multi-use pathway that connects the plan area to adjacent communities, Highway 27, and the Olds pathway system borders the entire east boundary of the ASP area.
- **South** of the plan area is Highway 27, a provincial highway that traverses east-west through the town of Olds. Commercial uses and lands earmarked for future commercial development border the south side of Highway 27.
- **West** of the Cornerstone area is 70th Avenue and the western boundary of the town of Olds. Lands adjacent to the plan area, within Mountain View County, are used for agricultural purposes and rural residential development, and are included within the Town of Olds- Mountain View County Intermunicipal Development Plan boundary.



Figure 4: Surrounding Context



- Red dashed line: Cornerstone Area Structure Plan Boundary
- Green: Existing Open Space
- Orange: Existing Commercial Development
- Yellow: Existing Residential Development
- Purple: Existing Industrial Development
- Grey: Agricultural Development within Mountain View Cunty

2.5 Existing Land Use

Existing land use districts within the Cornerstone ASP are illustrated on **Figure 5: Existing Land Uses & Rights-of-Way**. The north portion of the plan area is designated as Urban Reserve (UR). The UR district is intended to hold land for future subdivision and development until an overall plan is approved by Council.

The south portion of the ASP area has been given land use designations through previous planning approvals. These designations include Shopping Centre Commercial District (C-SC), Medium Density Residential (R3), Low Density Residential (R1), General Residential (R2), General Residential Narrow Lot (R2N), Recreation Facility (RF), and two Direct Control (DC) sites.

2.6 Existing Rights-of-Way

The plan area is bisected by a number of existing registered rights-of-way as shown on **Figure 5** and described as follows:

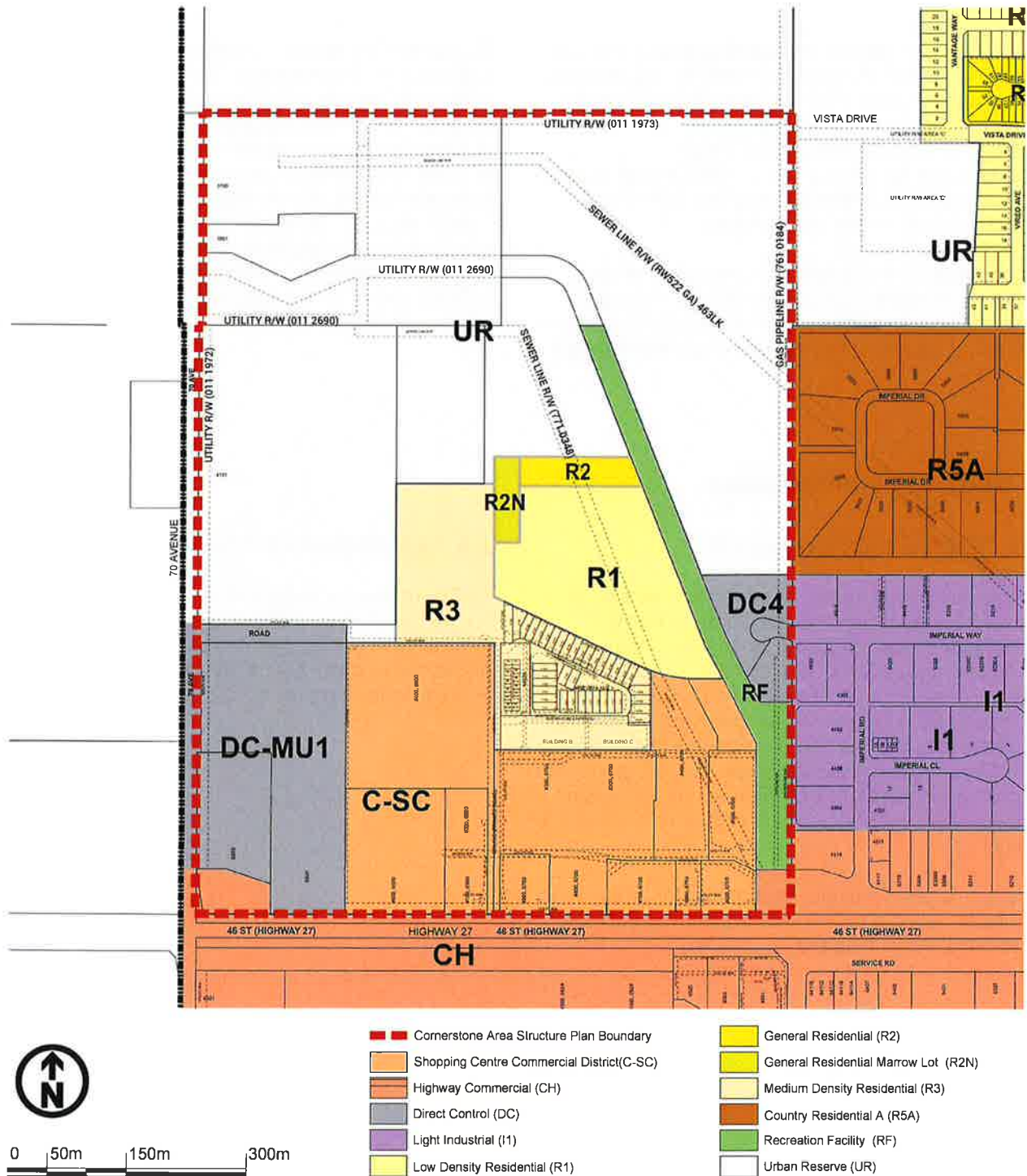
Gas Pipeline Right-of Way: Located along the east boundary of the plan area, the ROW is for a natural gas pipeline distribution system.

Sewer Line Right-of-Way: A number of sewer ROW's are located within the Cornerstone area; this includes ROW's on the north and west boundaries of the site and ROW's traversing diagonally across the plan area. The ROW's contain sewer lines with various pipe size diameters. Some sewer ROW's will be removed in order to accommodate development within the Cornerstone ASP.

Utility Right-of-Way (Drainage Channel): This Utility ROW traverses the centre of the plan area and contains a stormwater drainage channel. The drainage channel currently collects overland runoff from the plan area as well as some runoff from other areas outside the Cornerstone ASP.

Future development of the plan area shall consider the existing rights of way and accompany registered agreements and shall be taken into account during the land use amendment, subdivision and development permit process.

Figure 5: Existing Land Uses & Rights-of-Way



2.7 Topography and Drainage

As illustrated on **Figure 6: Natural Conditions**, the site is relatively flat with 3 metres of elevation change from north to south. The existing drainage channel is lower than surrounding lands and lands generally slope to drainage channel or to the western portion of the site where there is a natural low point. The drainage channel and low point collect the majority of the overland drainage currently within the ASP area.

A constructed berm is located directly north of the existing commercial and medium-density residential site. In addition, an earthworks material pile is located south of the drainage channel, as indicated in **Figure 6**.

Burrow pits are located east of the drainage channel and along the berm adjacent to the existing medium-density residential site. The burrow pits contain buried organic materials associated with the initial phases of development of the plan area. Future development of lands impacted and adjacent to the existing burrow pits shall take into account the development limitations associated with these lands and shall ensure appropriate geotechnical conditions to support foundational elements or requirements associated with building and/or infrastructure construction are in place prior to development.

2.8 Supporting Information

2.8.1 Geotechnical Evaluation

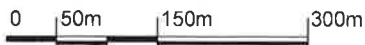
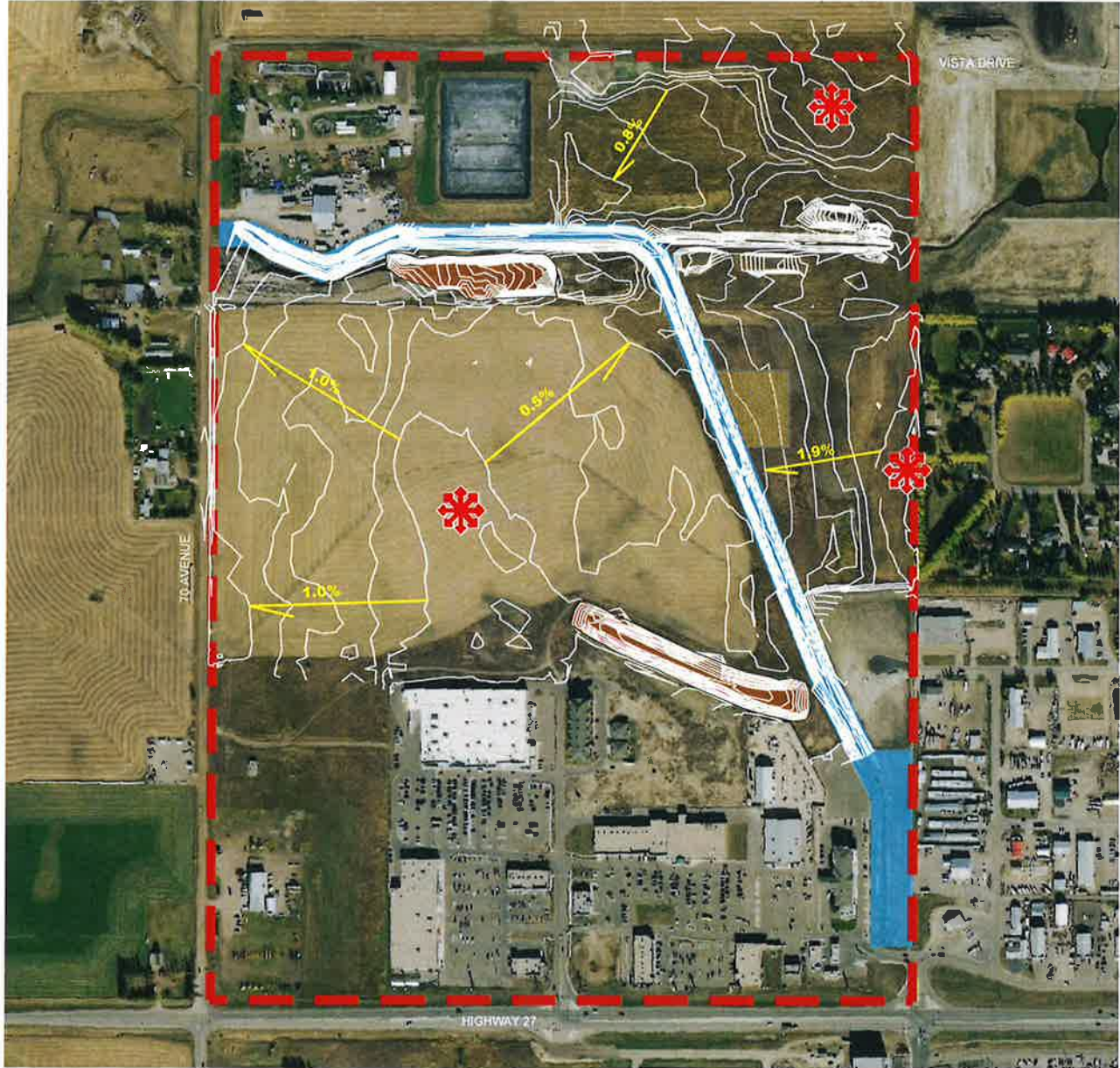
A Geotechnical Evaluation was submitted as part of the June 2011 application of the Cornerstone ASP. The evaluation was completed by Thurber Engineering Ltd. for a portion of SW 6-33-1-5 and for lands east of the drainage channel. The report describes the soil stratigraphy as "a layer of topsoil overlying silt or clay till, underlain by shallow bedrock with the depth ranging from 1.2 metres to 3.4 metres below existing grade". No extraordinary construction considerations with regard to the development of roads or foundations are noted in the report.

In addition, a geotechnical investigation for the existing commercial development was completed by Parkland Geotechnical Consulting Ltd.

2.8.2 Environmental Site Assessment (ESA)

An Environmental Assessment for a portion of SW 6-33-1-5 and for Plan 9211048 was completed by Komex International Ltd. as part of the June 2011 submission of the Cornerstone ASP. A Phase 2 analysis was also completed at that time by Komex International Ltd.

Figure 6: Natural Conditions



- - - Cornerstone Area Structure Plan Boundary
- Burrow Pit Area
- ✱ High Point
- Contour Interval 0.5m
- Slope
- Existing Drainage Channel
- Existing Pile/ Berm

3.0 Land Use Concept

3.1 Vision

Cornerstone will be a complete community that creates a distinct sense of place for both residents and visitors. A diversity of land uses that include industrial, commercial, residential, and recreational development will promote a community that is livable and healthy. Variation in housing form will offer choice to Olds residents and allow people to remain in the community through all stages of life. Existing commercial uses will be integrated within the plan area to provide local residents with a variety of services. An interconnected pathway system will promote active transportation to the various amenities the community offers and integrate the Cornerstone area with existing neighbourhoods. The central recreation site will be a focal point for athletics, providing a variety of areas for both recreational and competitive sporting activities.

The Cornerstone community will be a vibrant place to live, work, and play; where daily services are met within walking distance to the majority of residents and where community identity is recreation and activity- focused.

3.2 Land Use Concept

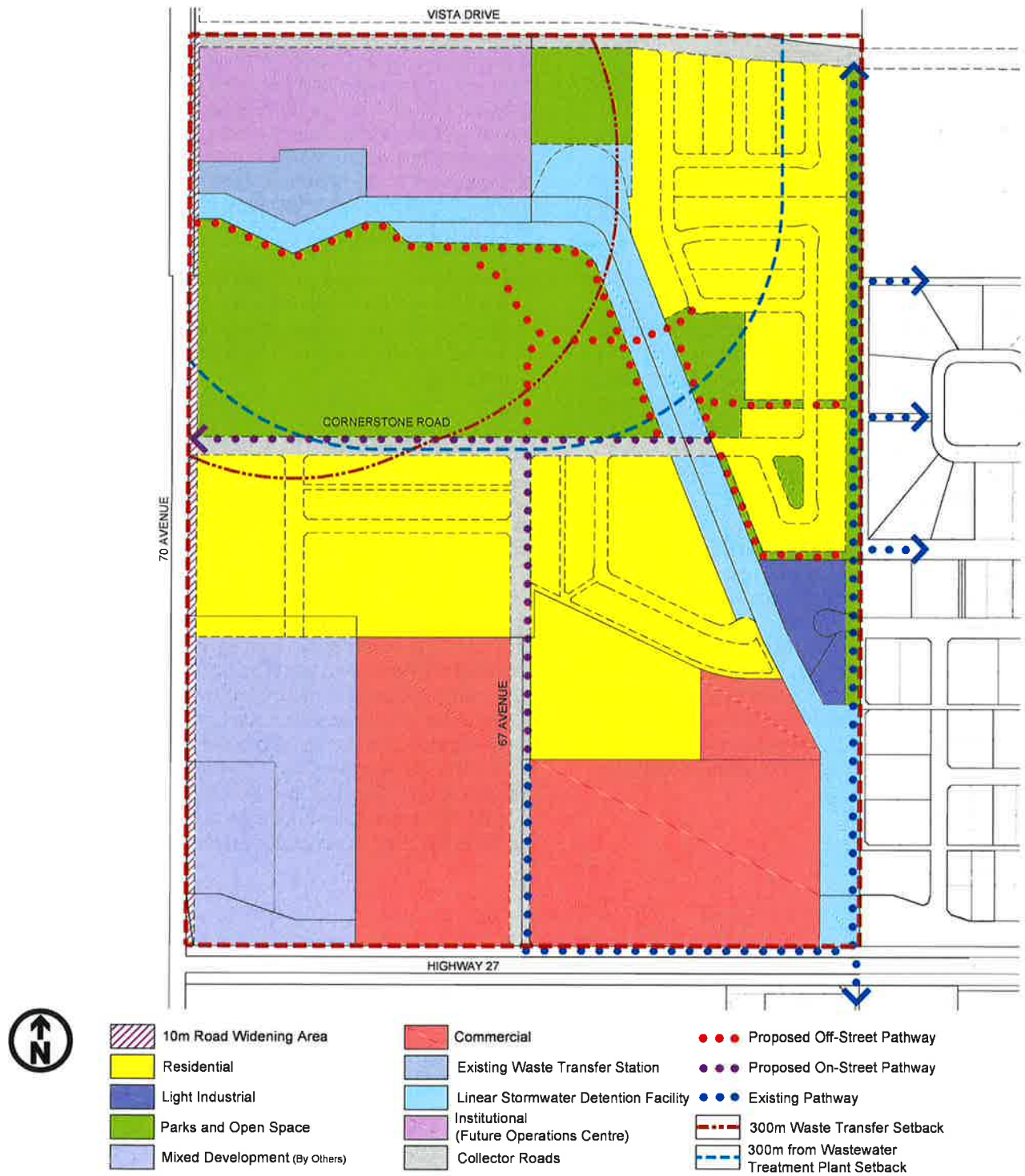
Figure 7: Land Use Concept provides the overall land use and transportation network envisioned to support the development of a complete community within the Cornerstone ASP. **Table 2: Land Use Statistics** provides the approximate area of the land uses presented in **Figure 7**.

Table 2: Land Use Statistics

	AREA		
	Hectares	Acres	Percentage
 Residential	26.9	66.4	31.0%
 Commercial	15.5	38.5	18.0%
 Industrial	1.2	2.8	1.3%
 Mixed Development by Others	6.2	15.2	7.1%
 Parks & Open Space	16.3	40.2	18.8%
 Waste Transfer Site	1.2	3.1	1.4%
 Institutional (Future Operations Centre)	6.1	15.0	7.0%
 Linear Stormwater Detention Facility	7.2	17.9	8.3%
 Collector Roads	5.1	12.7	5.9%
 Road Widening	1.1	2.6	1.2%
Total Area	86.8	214.4	100%



Figure 7: Land Use Concept



3.3 Residential

The residential portion of the Cornerstone ASP will contain a diversity of housing forms and densities that cater to a variety of residents. The residential area is designed around the central recreation site that will provide a distinct identity and focal point for the neighbourhood. Residential development will be linked to the extensive open space system through an efficient road and pathway network.

The gross residential area, including roads, consists of approximately 31.5 hectares within the ASP area. The minimum residential density for the Cornerstone ASP is 12.35 units per gross developable hectare, as per the Olds Municipal Development Plan. Assuming an average of 2.8 people per household, the minimum population for the Cornerstone ASP is 1,089 people. Higher densities are encouraged within the ASP area, specifically adjacent to the commercial centre and the recreation site.

Residential uses east of the drainage channel will consist of predominantly low density housing forms, mainly single-detached dwellings, that respect and complement existing and future residential development to the east of the plan area. Main access to this NW residential area is anticipated via the east-west collector (Cornerstone Road) on the south and by Varsity drive on the north. Connections to the existing pathway on the east side of the plan have been accommodated, providing a link between existing neighbourhoods and the Cornerstone area.

A combination of low and medium density residential development is envisioned for lands north of the shopping centre and south of the recreation site. Higher densities will be positioned within close proximity to commercial services and key open space features and may consist of a variety of attached housing forms, including semi-detached, townhouses, and apartment style dwellings. An existing medium density residential site adjacent to the shopping centre is actively developing and consists of apartment and semi-detached dwellings.

The residential area situated between the commercial and recreation sites will be served by two collector roads that connect to the regional road network and allow for the efficient movement of people through the community.

3.4 Commercial

Existing commercial uses within the Cornerstone ASP are located in the south portion of the plan area and are designated as Shopping Centre Commercial District (C-SC). The commercial site consists of approximately 15.5 hectares (38.5 acres) and includes a hotel, grocery store, restaurants, and a variety of retail and other services. The commercial area serves both local and regional residents and benefits from the high visibility and traffic volumes along Highway 27. In addition to serving the travelling public, the commercial area will be integrated and connected to the residential lands within the Cornerstone ASP. The placement of medium density residential uses and an interconnected pathway system will encourage residents to walk and cycle to the commercial area to serve daily needs.

3.5 Mixed Use Direct Control Development

Lands located directly west of the commercial area, adjacent to Highway 27 and 70th Avenue, have been identified as "Mixed Use Development" and are intended to be developed as highway commercial uses similar in form to existing commercial development along Highway 27, and may also include a residential component. The nature and specific composition of land uses shall be refined through the land use amendment, subdivision and development permit process.

3.6 Industrial

A portion of the southeast corner is proposed for industrial development under an existing direct control designation. The 1.2 hectares (2.8 acres) of light industrial development will be oriented towards existing industrial uses to the east and will be serviced with a separate road and cul-de-sac entering onto Imperial Way, as shown on **Figure 7**. Uses will be limited to internal and self-contained operations exclusive to the facilities constructed on each lot, as per the zoning by-law. Any operation requiring outside storage will be obligated to provide adequate screening and buffering both internal to the subject site and external to the adjacent residential development. In addition, the industrial area is buffered from proposed residential uses by the linear stormwater detention facility to the west and a linear green space and pathway to the north.

3.7 Institutional (FUTURE Operations Centre)

The Town of Olds has identified land in the northwest corner of the plan area to accommodate a future Operations Centre. The existing use on the site is a Wastewater Treatment Facility, however, the Town is currently in the process of decommissioning the treatment facility and associated infrastructure on the site. Once the wastewater treatment facility is decommissioned and a reclamation certificate has been issued, the 300m setback that applies to the site for residential uses will be removed. The future Operations Centre will be a municipal facility that is anticipated to accommodate fire training, an Olds Search and Rescue building, and storage. Additional land use and site design details will be determined at the land use amendment and subdivision stage.

3.8 Waste Transfer Station

The Mountain View Waste Transfer Station, owned by Mountain View Regional Waste Management Commission, is an existing use within the ASP area which has been earmarked to stay in its current location in the foreseeable future. The transfer station is a place for local residents to deposit their waste prior to the materials being loaded and transported to the end point of disposal or treatment. Due to Provincial regulations, a 300-metre setback from the edge of the transfer site applies to all residential and food-related uses. The design of the Cornerstone ASP has taken the 300m setback into account by creating open space and recreation facilities within the setback area. Future land use amendment and subdivision applications for residential or food-related services within the setback area will be required to coordinate with the associated provincial authority and apply for a setback variance.

4.0 Community Amenities

4.1 Municipal Reserve Requirements

Municipal Reserve (MR) requirements for the plan area are outlined in **Table 3: Municipal Reserve Requirements**. Provincial regulation requires 10% MR dedication for gross area. The Cornerstone ASP requires a total MR dedication of approximately 8.6 hectares (21.2 acres). The Town's land ownership and requirements for a regional recreation site have impacted the amount of MR within the plan area. The proposed amount of dedicated parks and open space includes 16.3 hectares (40.2 acres) of land and consists of approximately 19% of the ASP area. The exact configuration and utilization of MR is subject to further refinement at the land use amendment and subdivision stage.

Table 3: Municipal Reserve Requirements

	AREA	
	Hectares	Acres
Total Plan Area	86.8	214.4
Non-Developable Area (Road Widening)	1.1	2.6
Gross Developable Area	85.7	211.8
Total Municipal Reserve Requirement (10%)	8.6	21.2
Total Municipal Reserve Provided in the Cornerstone ASP	16.3	40.2

4.2 Recreation Site

The recreation site, illustrated on **Figure 8: Community Amenities**, is located in the central portion of the plan area and is a main focal point of the Cornerstone community. Owned and operated by the Town of Olds, the recreation site will be a multi-use regional facility that will accommodate various sports fields for both recreational and competitive play. The recreation site may include multi-purpose athletic fields (soccer and football), baseball diamonds, horseshoe pits, a playground, and an indoor multi-use building. The recreation site will be well integrated with the surrounding community through a series of on-street and off-street pathways that provide direct connections to the site. In addition, pathway networks within the recreation site will tie various uses together and allow efficient movement through the site.

The future delineation and layout of recreation uses will be determined at the subdivision and detailed design stage. The recreation site will be developed by the Town of Olds in response to overall community recreation needs.

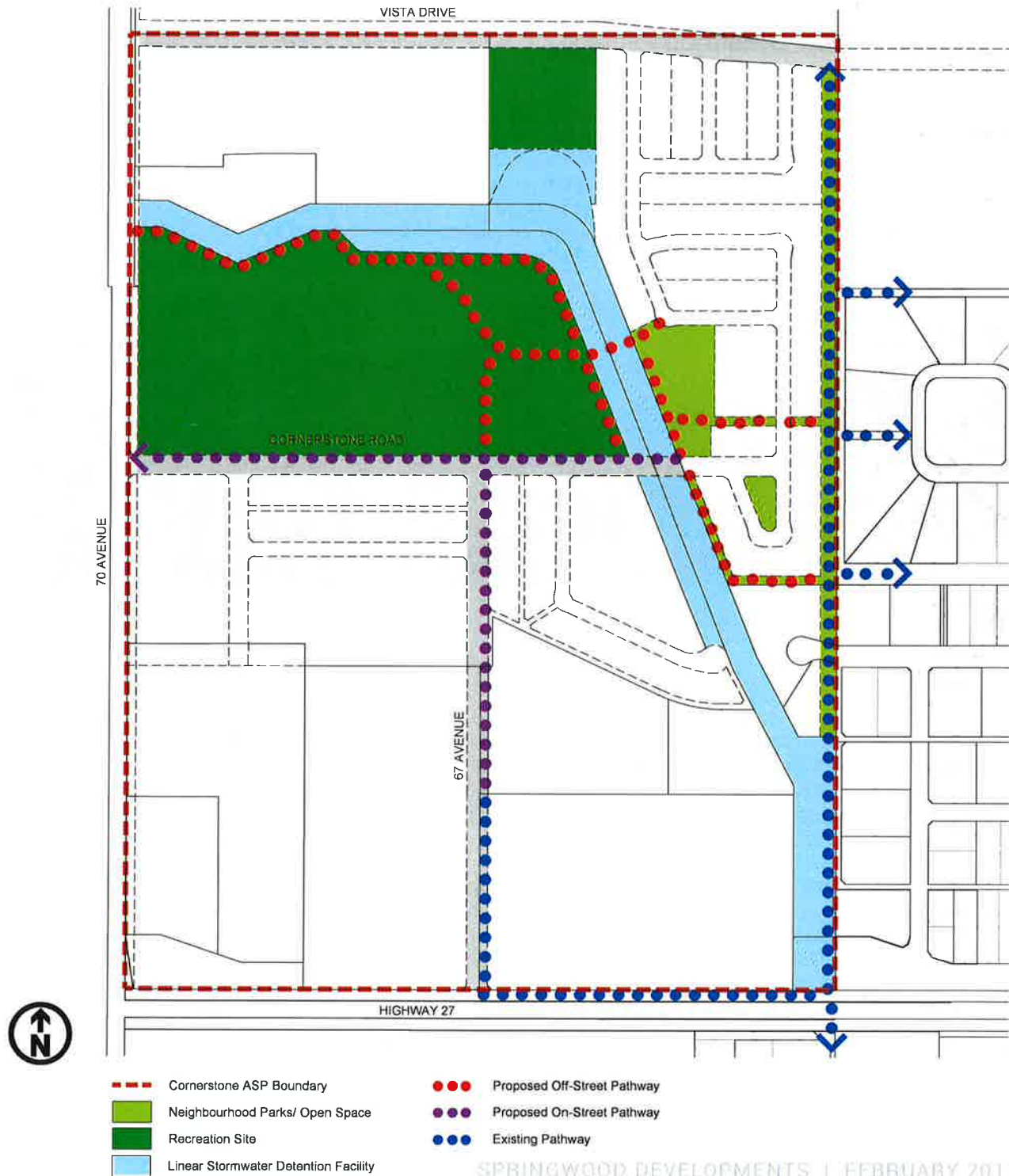
4.3 Neighbourhood Park

In addition to the recreation site, a neighbourhood park is proposed on the east side of the linear stormwater detention facility. The intent of the neighbourhood park is to provide a range of active and passive recreation opportunities for neighbourhood residents. The neighbourhood park may include a toboggan hill, a playground, open play areas, or other areas for gathering and socializing. The neighbourhood park is centrally located within the community and is integrated with the surrounding park and pathway system.

The Neighbourhood Park east of the linear stormwater detention facility, and north of Cornerstone Road, shall not support any residential or building structures due to organic material deposits that have created geotechnical conditions unsuitable for building foundations.



Figure 8: Community Amenities



4.4 Linear Stormwater Detention Facility

The linear stormwater detention facility diagonally traverses the plan area from the northwest to the southeast corner, creating an open space system that supports storm water detention, stormwater conveyance, and passive and active recreational opportunities. The existing stormwater drainage channel will be enhanced to create a community amenity, providing an attractive and safe green space that contributes to the community's pathway system. In combination with the recreation site, neighbourhood park, and existing pathway network, the linear stormwater detention facility will create a comprehensive open space system that links key land uses within the plan area and encourages active transportation modes throughout the community.



Examples of linear stormwater detention with pathway system.

4.5 Pathways

The Cornerstone ASP provides an extensive multi-use pathway system, illustrated on **Figure 7**, that connects key areas of activity and provides an attractive environment for pedestrians and cyclists to travel through the community. The on-street pathway system, integrated within the road right-of-way, will provide a central connection between the commercial area and the recreation site, and between 70th Avenue and the linear stormwater detention facility.

The off-street pathway system, integrated within the parks and open space system, provides residents with direct connections to major open space features within the community as well as links to existing pathways and neighbourhoods to the east of the plan area. In addition, the pathway system will cross the linear stormwater detention facility at two points to ensure connectivity between the ASP's open space features and to provide important pedestrian links to residents.



5.0 Transportation Network

5.1 Overview

The transportation concept for the Cornerstone community is illustrated on **Figure 9: Transportation Network**. The concept illustrates the high level street network within and adjacent to the plan area, identifying the surrounding regional road network, the internal collector streets, potential local streets, and potential signalized intersections. Detailed street design will be determined at the land use amendment and subdivision stage.

5.2 Regional Road Network & Site Access

The regional road network consists of major roadways carrying higher volumes of traffic and serving the surrounding regional area. The regional roads serving the Cornerstone ASP area consist of Highway 27 on the south boundary of the site, and the future 70th Avenue arterial road on the west boundary of the plan area. These roads will connect Cornerstone residents to local and regional uses outside the plan area.

Highway 27: a 4-lane provincial highway and the main east-west connection through the town of Olds. The highway is a major thorough-fare for commuters traveling between the town of Sundre, Olds, and Highway 2.

70th Avenue: currently a gravel road with a rural cross-section. Future improvements to 70th Avenue include paving and upgrading the road to an arterial standard. At full build-out, the proposed intersections on the boundary of the Cornerstone ASP include:

- **HIGHWAY 27:**

67th Avenue and Highway 27 – currently an all-directional (signalized) intersection that provides access to the existing shopping centre in the south portion of the plan area. 67th Avenue will extend northward into the community, providing future Cornerstone residents with access to Highway 27.

65th Avenue and Highway 27 – currently an all-directional (signalized) intersection that provides access to the southeast corner of the shopping centre and to the industrial area east of the Cornerstone ASP. This intersection also connects to existing residential communities south of Highway 27.

- **70TH AVENUE:**

Future improvements to 70th Avenue will require a 10 metre strip of land for road dedication along the entire west side of the plan area. This 10m road widening area encompasses approximately 1.1 hectares (2.6 acres) within the ASP area and will be used to accommodate travel lanes and necessary upgrades to 70th Avenue.

Vista Drive and 70th Avenue- a proposed east-west collector on the north boundary of the ASP will connect to 70th Avenue at an all-directional, signalized intersection. This intersection will receive traffic volumes from the proposed Operations Centre, proposed residential development to the north of the ASP, and a proposed residential development in the NW corner of the Cornerstone ASP.

East-West Collector and 70th Avenue- a proposed east-west collector in the centre of the Cornerstone ASP will connect to 70th Avenue at an all-directional, signalized intersection. This intersection will accommodate vehicle movement to and from the ASP area, with the main focus on connecting recreation site users and residential development to the broader regional road network.

Right-In-Right-Out Access – Access to the proposed “mixed development” in the southwest corner of the Cornerstone ASP will be via a right-in-right-out access from 70th Avenue. Additional access points to the proposed “mixed development” may be via an east-west access easement through the existing commercial site, as well as a potential access to the north, through future residential development.

Highway 27 and 70th Avenue – in conjunction with improvements to 70th Avenue, the intersection at Highway 27 will be reviewed for potential upgrades and signalization. All connections to Highway 27 are subject to Alberta Transportation standards and approval.

5.3 Internal Street Network & Circulation

The proposed street network within the plan area is intended to provide multiple routes and connections for the efficient movement of commuters through the community. The street network ensures a high degree of connectivity for vehicles, pedestrians, and cyclists to key activity nodes within the community as well as direct connections to the regional road network.

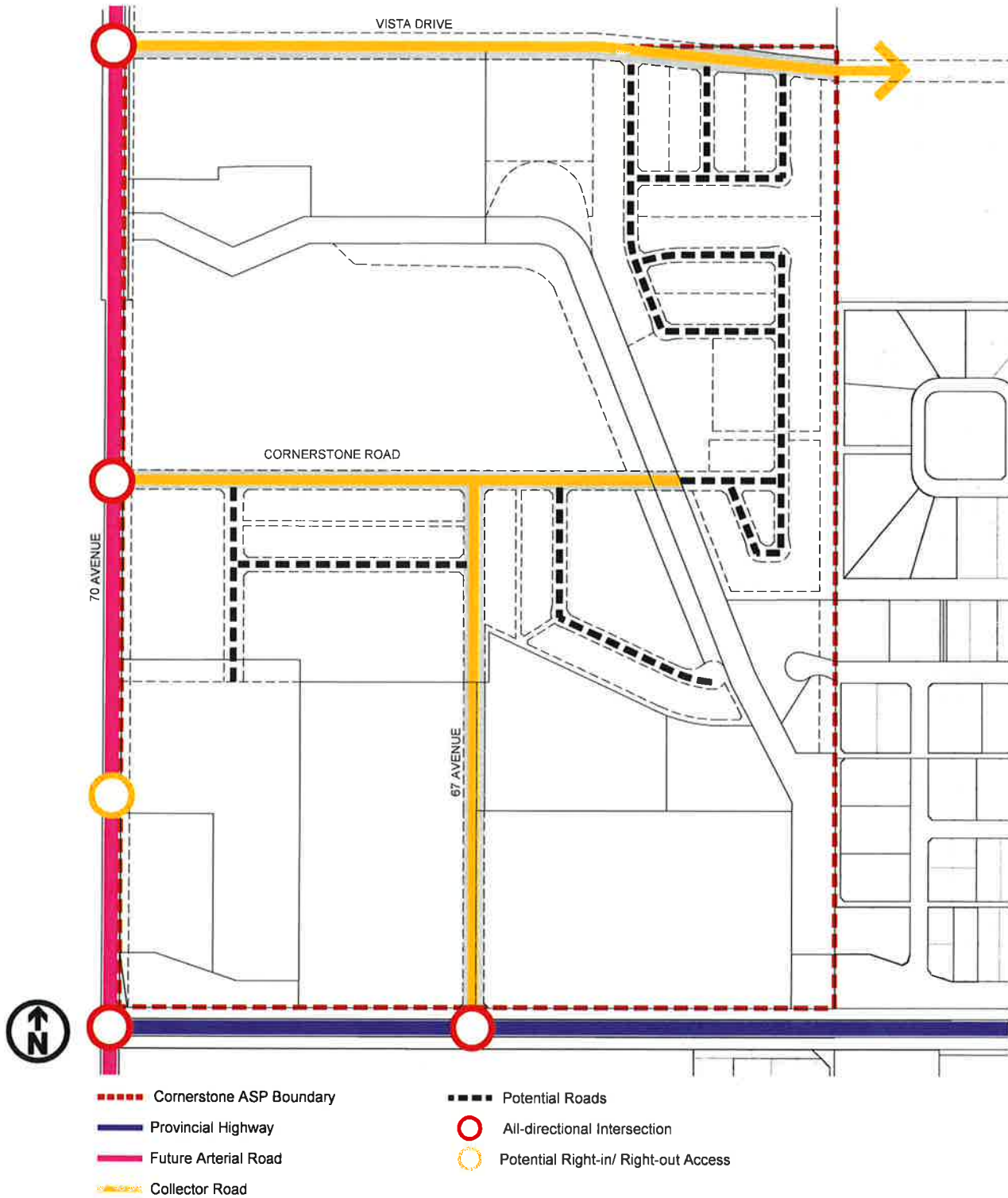
The collector road system consists of one main north-south route and two east-west connections:

- **67th Avenue** will continue northward from the commercial area, extend through the residential development and terminate at the recreation site. 67th Avenue will provide a direct connection between the recreation site, the shopping centre, and Highway 27. A proposed multi-use pathway within the road right-of-way will also promote multi-modal forms of transportation between these key activity areas.
- **Cornerstone Road (East-West Collector)**, located in the centre of the ASP, will provide access to the plan area via 70th Avenue. Cornerstone Road provides access to the recreation site and accommodates traffic from the proposed residential areas. Cornerstone Road will taper to a residential road standard on the east side of the linear stormwater detention facility. A proposed multi-use pathway within the road right-of-way will provide a pedestrian and cyclist connection between the linear stormwater detention facility, the recreation site, and the residential areas.
- **Vista Drive**, located on the northern boundary of the ASP area, will be developed to a collector standard to accommodate traffic from the residential development in the NW corner of the ASP, the Operations Centre, a portion of the recreation site, and some traffic volumes from future residential uses to the north and to the east of the plan area. Vista Drive will connect east of the plan area to the developing community of The Vistas.

Roads identified on **Figure 9** as ‘potential roads’, will be further delineated at the land use amendment and subdivision stage. These roads may be a local or collector standard. The exact alignment, road classification and design standard for roadways shall be determined as part of the subdivision process and vetted through the preparation of detailed engineering drawings following conditional subdivision approval.



Figure 9: Transportation Network



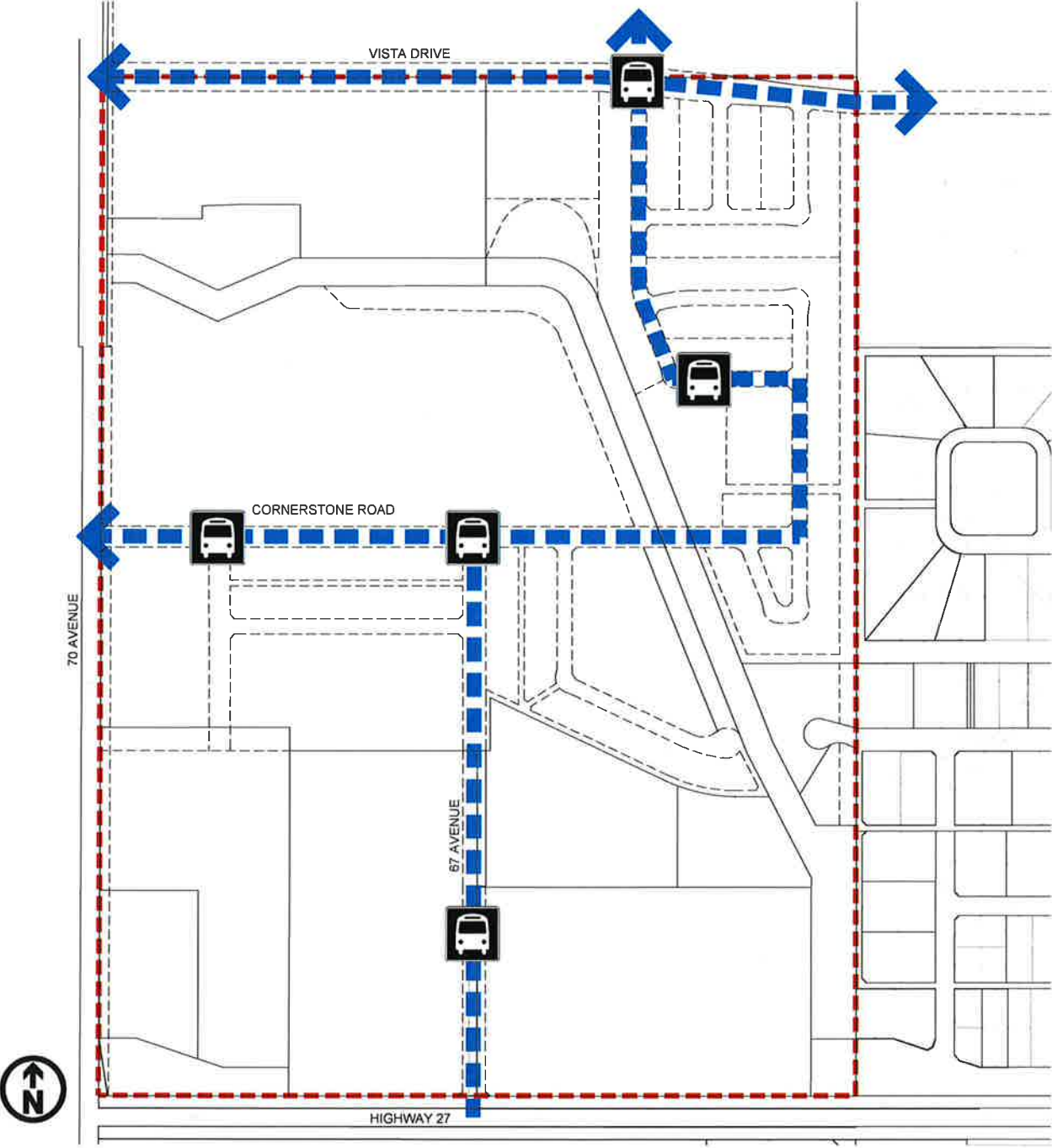
5.4 Potential Transit Roads




The proposed street network within the plan area will support potential future transit service through the Cornerstone community, as illustrated on **Figure 10: Potential Transit Roads**. Main transit routes will serve key areas within the ASP, including the commercial centre, higher density residential uses, and the recreation site. Transit routes will be integrated with the surrounding communities and the regional road network. Transit may be accommodated on all collector roads within the plan area.

Further planning for public transit routes and bus stops within the Cornerstone community will be determined at the detailed design stage and will be in compliance with the most recent Town of Olds transportation master plan and Town objectives.



Figure 10: Potential Transit Roads



-  Cornerstone ASP Boundary
-  Potential Future Transit Roads
-  Potential Future Bus Stop Location

6.0 Servicing

6.1. Water Supply and Distribution

As part of the existing commercial area development, a 300mm water main was installed along 67th Avenue. This 300mm water main will serve as the primary connection point to the lands north of the existing commercial area. **Figure 11: Water Distribution** illustrates the location of the existing 300mm water main connection point.

As part of the Town of Olds long range servicing plans, the 300mm water main will be extended north through the quarter section utilizing the proposed 67th Avenue road right of way. The 300mm water main will continue west towards 70th Avenue utilizing the proposed Cornerstone Road right-of-way. This will provide a future water main connection point for any future development west of 70th Avenue.

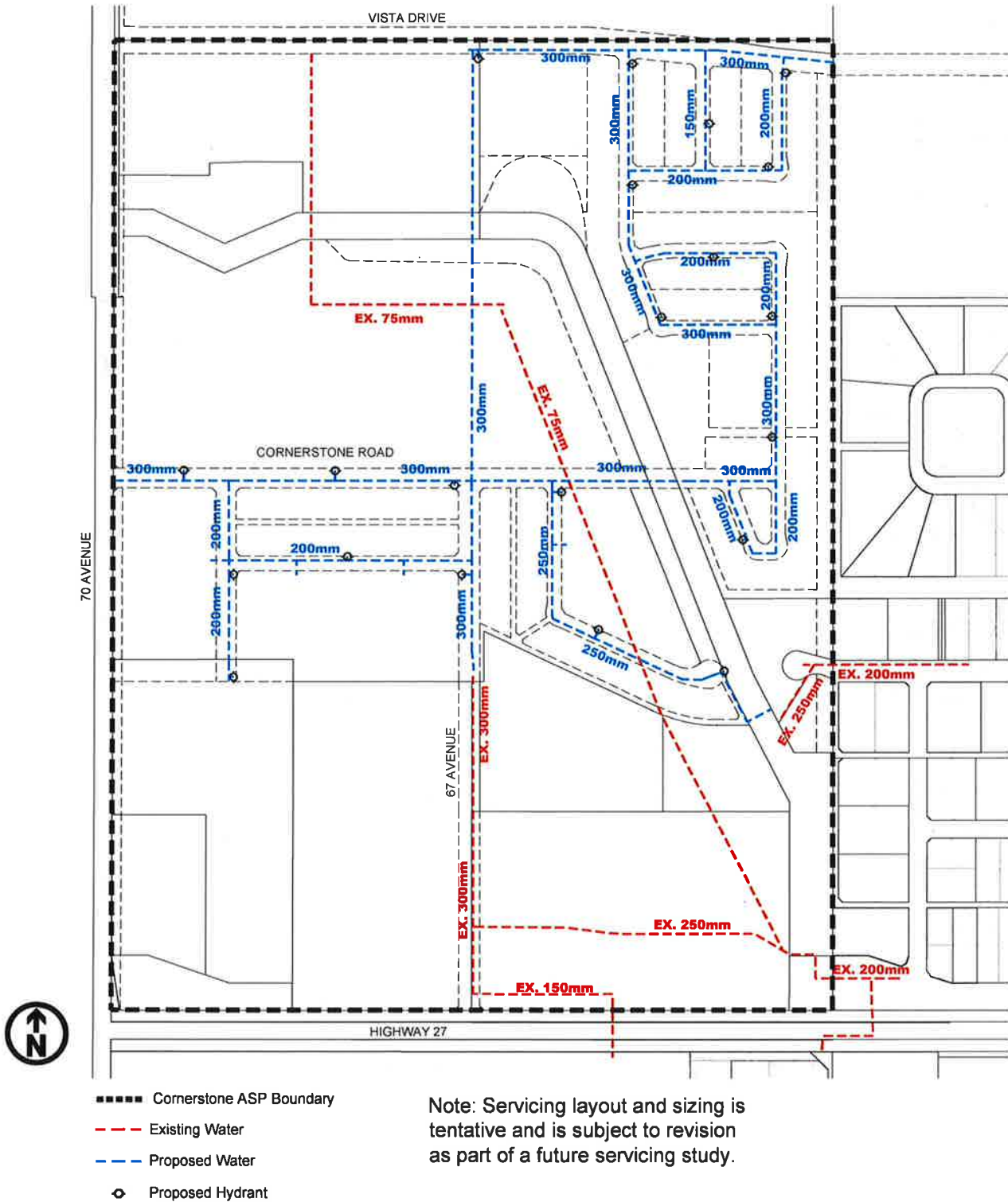
The 300mm water main will continue along Cornerstone Road east across the existing drainage channel. Once across the existing drainage channel, the 300mm water main will head northward utilizing the internal road right of ways of the east portion of the development. The 300mm water main will ultimately tie into the proposed 300mm water main from the Vista's development and will serve as this developments water looping system. A 300mm water main stub will be left in order to serve as a connection point for any future development of the lands to the north of the Cornerstone ASP area.

In addition to the proposed routing of the 300mm water main, the water **Figure 11** shows the proposed internal network of water mains that provides service to the development areas. As development of these future areas proceeds, the exact routing and sizing will need to be confirmed as part of the detailed engineering drawings.

An existing 75mm water main runs diagonally across the site towards the existing waste transfer station. This 75mm water main will need to be removed as it will interfere with development across the site. A 200mm water main will head north through the proposed recreation site. The purpose of this 200mm water main is to provide water service to the anticipated multi-use building located in the recreation area, to provide fire protection for the multi-use building and sports field area, and to serve as a connection point for the existing 75mm water service to the waste transfer station.

Full details of the water servicing may be provided through a servicing study if required and shall be confirmed through detailed engineering design following conditional subdivision approval.

Figure 11: Water Distribution



6.2. Sanitary Servicing and Waste Water Collection

Most of the plan area is surrounded by existing sanitary lines which are in good condition and serviceable. A 300mm main that was installed during the construction of the Shopping Centre and the existing multi-family site runs east-west along the north boundary of commercial site and ties into a 750mm gravity main running north-south along the west boundary of the quarter section paralleling 70th Avenue. An existing 450mm sanitary line runs parallel along the north boundary of the proposed recreation site. An existing 600mm sanitary line runs east-west along the proposed road right-of-way that will serve as a connection point to Vista drive at the very north end of the quarter section. All of these lines have sufficient capacity and will be connected to as detailed design requires.

As illustrated in **Figure 12: Sanitary Servicing**, the proposed residential area located on the west side of the ASP area will connect to the proposed 525mm line which ultimately drains towards the 900mm main. The portion of the proposed residential area east of 67th Avenue and west of the linear stormwater detention facility will be directed towards the existing 450mm sanitary main located along the north property line of the recreation area. Exact sizing and alignment will be determined in the detailed engineering design phase.

An existing 375mm sanitary main runs diagonally across the site towards the existing waste transfer station. This 375mm sanitary main will have to be removed as it will interfere with development across the site. The intent would be to install a new 525mm sanitary line which will follow the proposed internal road right-of-ways and ultimately tie into the existing 900mm sanitary line. This proposed 525mm sanitary line would continue northward through the proposed recreation area and tie into the existing 900mm main along the north property line of the proposed recreation site. The remaining existing sanitary main including existing manholes that would no longer be in use would have to be removed in order for development to take place. Exact sizing and alignment will be determined in the detailed engineering design phase.

The portion of the proposed residential development on the east side of the linear stormwater detention facility will be a separate sanitary main system from the west sanitary mains. The sanitary mains for the east side of the proposed residential development will be directed towards the existing 600mm sanitary line which runs east-west along the proposed road right-of-way that will serve as a connection point to Vista drive at the very north end of the Cornerstone ASP.

Figure 12 shows the potential sanitary alignments and sizing. The full details of the sanitary servicing may be provided through a servicing study if required and shall be confirmed through detailed engineering design following conditional subdivision approval.

6.3. Storm Water Management

The proposed storm water management system will consist of a gravity drainage system directing flow towards the drainage channel (linear stormwater detention facility).

Currently the existing commercial development utilizes the existing drainage channel that runs diagonally across the property. As part of the storm water management for the existing commercial development, two weirs were installed across the existing drainage channel. The first weir having two culverts 600mm in diameter. The second weir located directly south of the existing waste transfer station having four culverts 300mm in diameter. The purpose of the two weirs and the decreasing in size of the culverts in each weir is as a major storm water event occurs, the weir and smaller culverts act as a dam allowing the water to back up and as a result, controlling the release of the water downstream. During any minor storm water event where controlling the release rate of storm water is not a concern, the series of culverts through the weirs allows for the free flow of storm water that would naturally occur. All storm water collected in the existing commercial area is directed via piping through 2 storm treatment units. This allows for any sediment or contaminants to be removed from the storm water before being released into the existing drainage channel.

The storm water management system for the proposed residential area will operate similar to the existing commercial area. The proposed residential area will utilize the existing drainage channel that runs diagonally across the property along with the two weirs that were installed across the existing drainage channel as part of the commercial area development. In order to achieve the required storm water storage capacity for the proposed residential area, the capacity of the existing drainage channel will need to be expanded. Given that the depth of the existing drainage channel is dictated by the invert of the existing large diameter culvert that crosses 70th Avenue at the northwest corner of the ASP area, increasing the depth of the drainage channel is not

an option. As a result, the width of the existing drainage channel will need to increase and the two existing weirs expanded in order to provide the necessary storage capacity.

Since the lands north of the existing commercial area on both the west and east side of the existing drainage channel will consist of residential and open park space, the intent is to have the storm water discharge directly into the existing drainage channel, as illustrated on **Figure 13: Overland Drainage**. All storm water collected in the proposed residential area is to be directed towards the drainage channel by way of piping through two proposed storm outlets, shown on **Figure 14: Storm Sewers**. The first two outlets which would service the lands on the west side of the drainage channel, would be located near the proposed drainage channel road crossing of Cornerstone Road and near the south limits of the residential area. The other proposed storm outlet which would service the lands east of the existing drainage channel, would be located along the north boundary of the proposed neighbourhood park area on the east side of the drainage channel and at the crossing of Cornerstone Road. These outlets will be discharging into a vegetated drainage channel so the water quality should be sufficient to meet Alberta Environment requirements. However, during the detailed engineering design process, analysis will be completed to determine if a mechanical storm treatment unit is required in order to provide the required storm water quality.

The storage requirements for the proposed residential area and recreation site, the preliminary pipe sizing and, if required, the sizing of the mechanical storm water treatment unit, will be provided in detail as part of servicing study (if required) and detailed through engineering design following conditional subdivision approval.

The primary purpose of the proposed expansion to the existing drainage channel is to create the required



6.4. Shallow Utilities

storm water storage capacity required for the proposed residential area. However, during the design of the drainage channel expansion, an emphasis will be placed on moving away from the look of a traditional straight line drainage channel and work towards a more aesthetically pleasing linear stormwater detention facility that will be utilized as a storm water management facility and a community amenity inclusive of pathway and landscaping improvements.

The discharge rates from the expanded drainage channel and the undetained residential lots will not be higher than the pre-development rates.

Currently there is a temporary drainage ditch from the existing Vista quarter section to the east that ties into the existing drainage channel that runs thru the Cornerstone plan area. This drainage ditch from The Vista's will not be allowed to exist in its current location because it would significantly interfere with development on the east side. As a result, this drainage ditch will have to be filled in once development on the east side of the Cornerstone ASP takes place. Stormwater discharge from the Vista's stormwater pond will be accommodated through the Cornerstone stormwater system and conveyed to the linear stormwater detention facility. As a result, some of the Cornerstone storm sewer mains will have to be up-sized in order to take on the additional storm water from the Vista's. The proposed sewer main sizes are illustrated in **Figure 14**. The cost to up-size the storm sewers will be the responsibility of the Vista's development through an endeavour to assist, within a development agreement, at the time of subdivision .

Shallow utility serving in the form of electricity, gas, cable, and telephone will follow typical Town of Olds standards including shallow bury within road rights-of-way. Service providers are anticipated to be those currently servicing Olds.

As this proposed development is located in the Town of Olds and is bordered by the existing commercial area to the south and existing development to the east, it is anticipated that providing shallow utilities to the proposed development will not be an issue. All required alignments and designs of the shallow utilities would be completed by the service provide or qualified consultant and would be submitted to the Town of Olds at the time of detailed design.

Figure 13: Overland Drainage

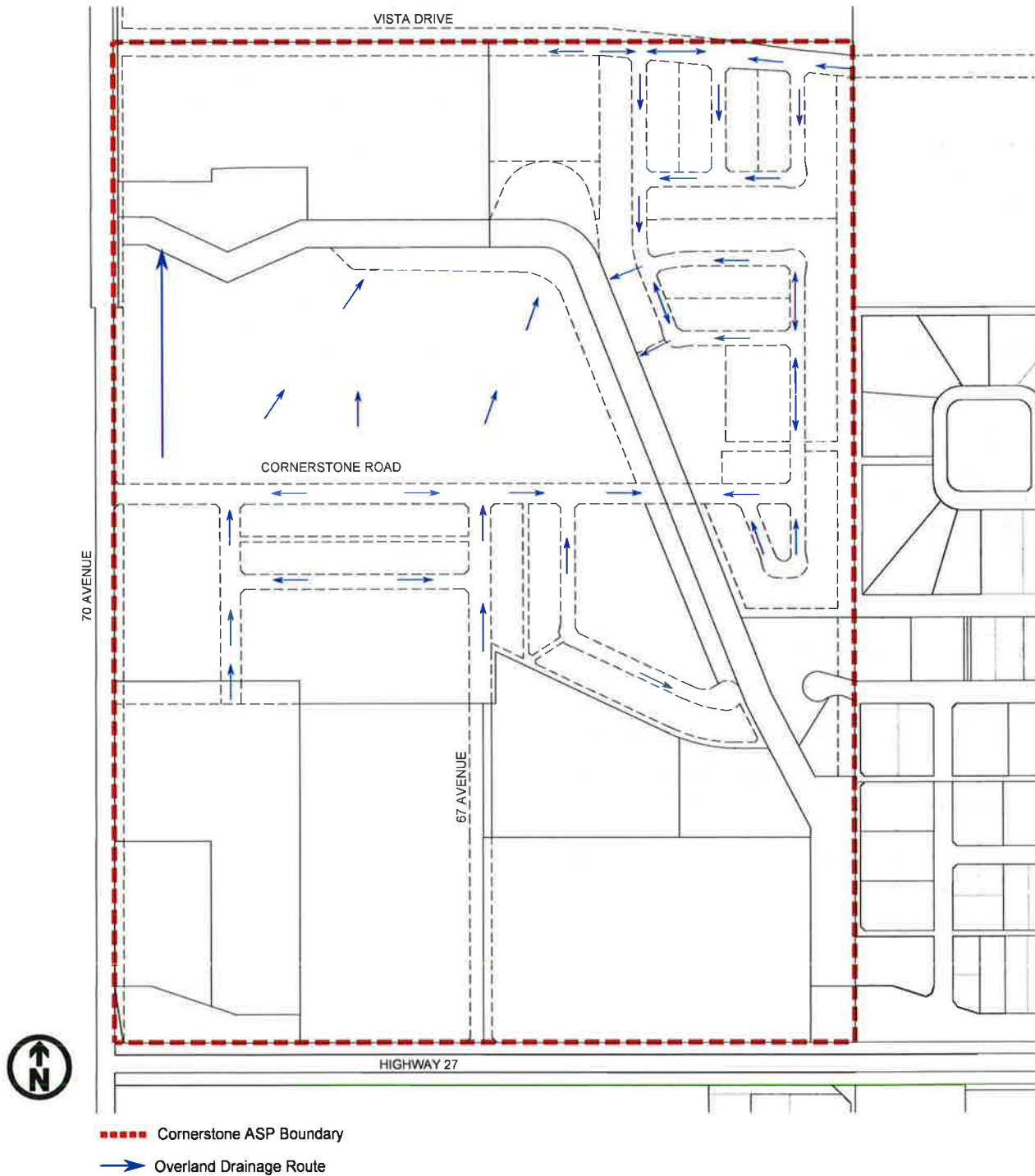
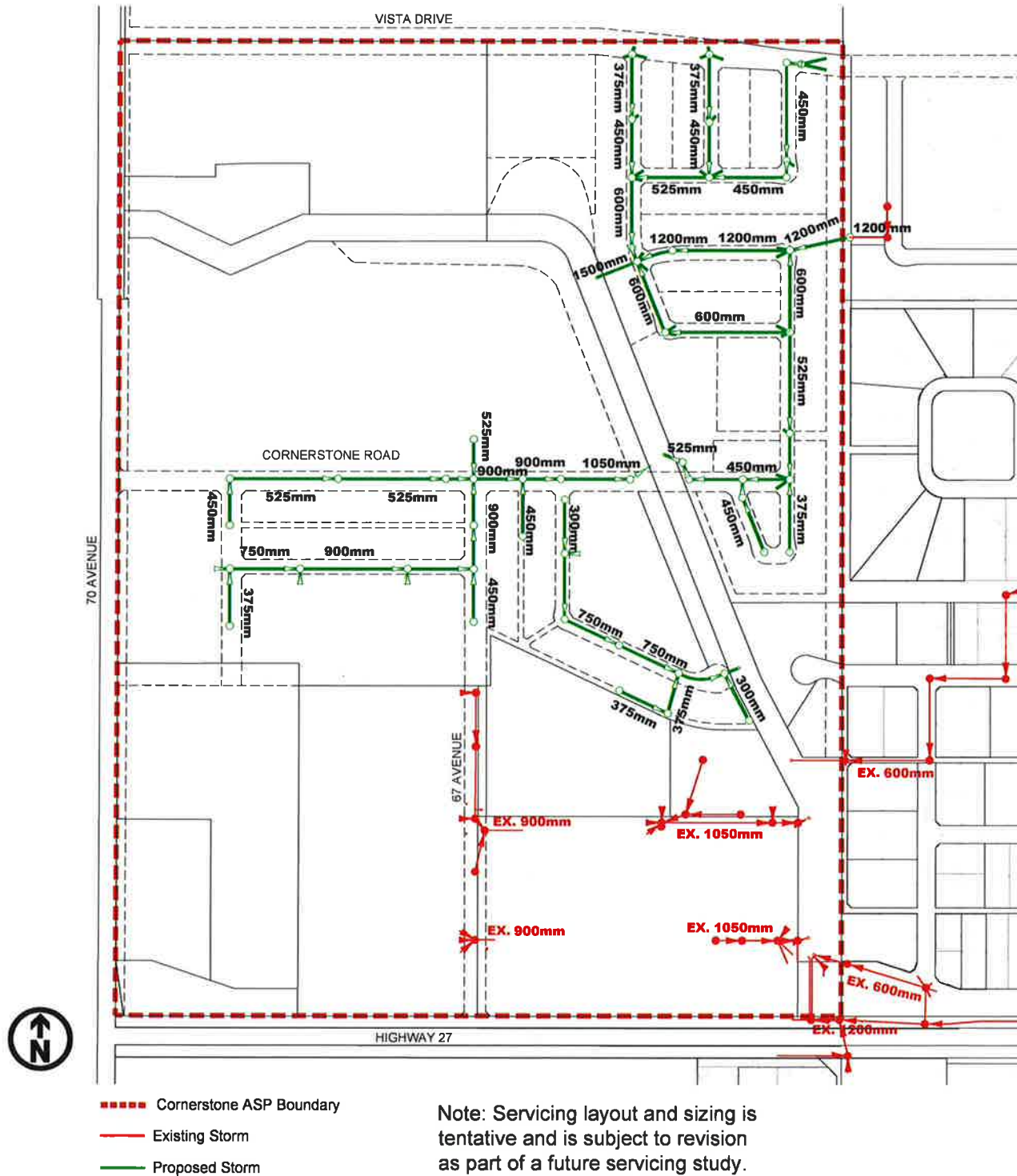


Figure 14: Storm Sewers



7.0 Implementation

7.1 Phasing

Development phasing boundaries are based upon existing development conditions, infrastructure considerations, and Town priorities. Phasing boundaries are identified on **Figure 15: General Phasing Plan**. Development phasing will generally occur from south to north within the ASP area.

Phase 1 lands are located directly north of existing commercial and residential development and are bound by the linear stormwater detention facility on the north and east boundaries of the phase. Phase 1 represents a logical extension of existing servicing and transportation infrastructure. This phase will comprise the proposed Town of Olds recreation site and a portion of the residential area. Within Phase 1, two collector roads are proposed; the northward extension of 67th Avenue and the construction of Cornerstone Road which provides access to 70th Avenue.

Phase 2 lands are located north of the linear stormwater detention facility and the Waste Transfer Station and include the proposed Operations Centre and the additional area for the recreation site. These lands are earmarked for near-future development and could proceed in concurrence or prior to the full build-out of Phase 1 lands. Development of the Operations Centre will largely be driven by the remediation of the existing Wastewater Treatment Plant and the requirements and time-lines set out by the Town of Olds for the construction of an operations facility.

Phase 3 lands are positioned on the east side of the linear stormwater detention facility and consist of residential uses. Development of Phase 3 lands are impacted by the decommissioning of the Wastewater Treatment and the 300m setback applied to residential uses. Priority and timing of development for these lands will be based on the provision of available municipal servicing and transportation infrastructure and market demand for housing products.

Phasing TBD (to be determined) encompasses those lands identified for future 'mixed development' and are situated in the southwest corner of the plan area. A time line for development of these lands remains uncertain and subject to landowner desire to proceed with development.



Figure 15: General Phasing Plan

