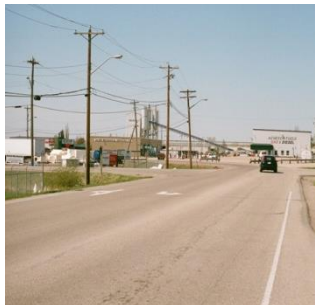


2014

Acheson Industrial Area Structure Plan DRAFT



DRAFT – DECEMBER 17, 2014 Version 7 (Final)



This page is intentionally left blank.

ACKNOWLEDGEMENTS

Parkland County would like to thank the following individuals and organizations for their generous assistance in helping prepare the Acheson Industrial Area Structure Plan.

- Mayor and Council
- Government of Alberta
- Acheson Area Structure Plan Steering Committee members
- Acheson Business Association
- Osborne Acres Association
- Wagner Natural Area Society
- Landowners and developers
- Local residents

- Ross W. Sharp & Associates
- Emerge Solutions Inc.
- GENIVAR
- POPULUS Community Planning Inc.

Parkland County would like to thank all members of the community who participated in the Public Visioning Session and the Acheson Area Structure Plan Open House. Your insight and feedback is valued and assisted greatly in helping develop the plan.

1. INTRODUCTION	6
1.1. PURPOSE	6
2. REGIONAL AND POLICY CONTEXT	7
2.1. CAPITAL REGION GROWTH PLAN (2010)	7
2.2. MUNICIPAL GOVERNMENT ACT	8
2.3. COUNCIL STRATEGIC PLAN.....	8
2.4. MUNICIPAL DEVELOPMENT PLAN	9
2.5. OTHER PLANS IN EFFECT	9
3. PUBLIC ENGAGEMENT	11
4. SITE DESCRIPTION	12
4.1. LOCATION	12
4.2. PHYSICAL CONDITIONS.....	12
4.3. LAND USES.....	14
5. ISSUES AND OPPORTUNITIES	16
5.1. INDUSTRIAL DEVELOPMENT	16
5.2. SERVICING.....	17
5.3. LANDS AVAILABLE FOR DEVELOPMENT	20
5.4. SHALLOW UTILITIES.....	23
5.5. TRANSPORTATION.....	23
5.6. PROTECTIVE SERVICES.....	27
5.7. ENVIRONMENT.....	28
5.8. RESIDENTIAL	30
5.9. RECREATION AND OPEN SPACE.....	31
5.10. AGRICULTURE	31
5.11. OIL AND GAS	33
6. OBJECTIVES AND POLICIES	34
6.1. INDUSTRIAL AND COMMERCIAL	34
6.2. AVAILABLE LANDS FOR DEVELOPMENT	38
6.3. SERVICING.....	39
6.4. TRANSPORTATION.....	44
6.5. PROTECTIVE SERVICES.....	47
6.6. ENVIRONMENT.....	48
6.7. RESIDENTIAL	52
6.8. RECREATION AND OPEN SPACE.....	53
6.9. AGRICULTURE	54
6.10. OIL AND GAS DEVELOPMENT	57
7. DEVELOPMENT STAGING	59
8. NEXT STEPS AND IMPLEMENTATION	61
8.1. NEXT STEPS.....	61
8.2. IMPLEMENTATION.....	61

9. APPENDIX ONE: PLAN STATISTICS	62
9.1. LAND USE STATISTICS	62
9.2. EMPLOYMENT STATISTICS	63

LIST OF FIGURES

Figure 1 – Existing Land Use Districting.....	68
Figure 2 – Area Structure Plan Boundary.....	69
Figure 3 – Topography.....	70
Figure 4 – Soil Capability.....	71
Figure 5 – Development Status Map.....	73
Figure 6 – Future Land Use Concept.....	74
Figure 7 – Acheson Overlay Boundaries.....	75
Figure 8 – Wagner Natural Area and Recharge Zone.....	76
Figure 9 – Existing and Ultimate Water Network.....	77
Figure 10 – Existing and Ultimate Sanitary Network.....	78
Figure 11 – Existing Stormwater Network and Drainage Paths.....	79
Figure 12 – Future Transportation Improvements.....	80
Figure 13 – Service Road Improvements – Zone 1.....	81
Figure 14 – Existing Oil and Gas Fields.....	82
Figure 15 – Development Staging.....	83

MAPS

Map 1 – Exploration Restricted Area No. 89.....	29
Map 2 – ASP Location	67
Map 3 – Acheson Industrial Zones.....	72

1. INTRODUCTION

1.1. Purpose

The Acheson Area Structure Plan (ASP) will guide the development of the Acheson area for the next twenty (20) to thirty (30) years. The ASP sets out the general locations for major land uses (e.g. industrial, commercial, residential, open space and parks), major roadways, trails and utility servicing. The ASP also sets out the direction for planning the interface between differing land uses, and addresses future transportation and servicing issues and opportunities.



The objectives of this ASP include:

- Establish an orderly and efficient approach to planning for the Acheson area that balances existing and future land uses.
- Capitalize on the strategic location of Acheson in the Capital Region to support the regional economy and prosperity.
- Establish policies that support future industrial and commercial “serviced” development in Acheson that are sensitive to non-industrial uses that currently exist within the ASP area.
- Recognize and protect the Wagner Natural Area Environmentally Significant Area and Recharge Zone.
- Enhance open space opportunities by maximizing the use of Municipal and Environmental Reserve areas for community and recreational uses, and new trail networks.
- Recognize the importance of existing and future transportation and servicing plans, and the need to phase development in a systematic manner.

The County will review the Area Structure Plan once every five (5) years to ensure the ASP remains current.

2. REGIONAL AND POLICY CONTEXT

The Acheson area has been identified in *The Capital Region Growth Plan* as one of the Capital Region's major employment areas. Major employment areas in the Region include:

- Alberta Industrial Heartland
- Port Alberta and Edmonton International Airport
- Nisku Industrial Area – Leduc County
- Acheson Industrial Area – Parkland County
- Edmonton Energy and Technology Park and Horsehills Industrial Area
- Southeast Edmonton Industrial Area and Northwest Edmonton Industrial Area
- Edmonton Central Business District (CBD), and South Campus area

Parkland County has the responsibility to ensure planning of Acheson effectively connects and supports this regional network of employment centres. Planning in Acheson must also support regional economic growth and prosperity, while complying with principles and objectives of the Capital Region Growth Plan, regulations in the Municipal Government Act, and other various municipal plans, policies and procedures.

2.1. Capital Region Growth Plan (2010)

Parkland County is a member of the Capital Region Board which comprises of twenty four (24) municipalities in the Alberta Capital Region. Under Capital Region Board Regulation 38/2012, Parkland County must ensure the Acheson Area Structure plan complies with *the Capital Region Growth Plan*. The Growth Plan (Land Use Plan section) outlines relevant principles and policies that are applicable to planning for in the Acheson area. These include:

Principle: Protect the Environment and Resources

Policies: Preserve and Protect the Environment

Preserve Agricultural Lands

Minimize the Impact of Development on Regional Watersheds and Airsheds

Principle: Minimize Regional Footprint

Policies: Identify, Protect and Prioritize Lands for Regional Infrastructure

Concentrate new growth within Priority Growth Areas

Principle: Strengthen Communities

Policies: Support Healthy Communities

Support Public Transit

Principle: Increase Transportation Choice

Policies: Integrate Transportation Systems with Land Use

Support the Expansion of Transit Service in Various Forms

Principle: Ensure Efficient Provision of Services

Policies: Design Integrated Physical Infrastructure within the Region

Maximize Utilization of Existing Infrastructure

Principle: Support Regional Economic Development

Policies: Ensure a Supply of Land to Sustain a Variety of Economic Development Opportunities

Support Regional Prosperity

Position the Capital Region Competitively on the World Stage

The Growth Plan is currently silent on providing guidance for the development of employment centres in existing Priority Growth Areas (PGAs). That said, the Acheson ASP has attempted to meet the above principles and policies, and adapt them to guide future industrial and commercial development in the ASP area. Parkland County anticipates that the current review of the Growth Plan (2013-2015) will provide greater direction for planning in regional employment areas.

The Acheson Area Structure Plan will be submitted for approval to the Capital Region Board once the ASP has received second reading from Parkland County Council.

2.2. Municipal Government Act

Parkland County is authorized under the Municipal Government Act (MGA) to adopt area structure plans that provide a framework for the future subdivision and development of land. Section 633 of the MGA state that an area structure plan:

- (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,
 - (iv) the general location of major transportation routes and public utilities; and,
- (b) may contain any other matters Council considers necessary.

The MGA also requires the ASP to conform to Municipal Development Plan (MDP) Bylaw No. 37-2007.

2.3. Council Strategic Plan

Continued growth in Acheson aligns with Parkland County Council's Strategic Plan for 2014-2018. Council recognizes the value of the County's economic base while ensuring that development is balanced with other focus areas including Environment, Governance, Agriculture, Infrastructure and Quality of Life. Council's Strategic Plan 2014-2018 Vision states that:

The land is the tie that binds us. As innovative and responsible land stewards, we are progressive enablers of economic prosperity. We respect the distinctiveness of rural and urban populations. We are, at our core, a reflection of strong rural values.

The ASP specifically aligns with Council's four-year commitments and the 20 year goal for economic development outlined in *Strategic Plan 2014-2018*.

2.4. Municipal Development Plan

The MDP (and any amendments thereto) provides guidance for the County's growth and future development. Key MDP principles include:

1. Support Environmental Sustainability
2. Support Fiscal Sustainability
3. Support Social Sustainability
4. Emphasize Economic Development
5. Respect Communities Character
6. Land Use Certainty

The Acheson ASP also conforms to the goals, objectives and policies of the MDP. The following MDP sections have been considered in developing this ASP.

- Agricultural Lands (MDP section 2)
- Residential Development (MDP section 3)
- Industrial and Commercial (MDP section 5)
- Environmental Management (MDP section 6)
- Transportation and Utilities (MDP section 10)
- Fringe Area Development (MDP section 11)

2.5. Other plans in effect

Parkland County Land Use Bylaw (and amendments thereto)

The County Land Use Bylaw (and amendments thereto) establishes specific land use districts and regulations for the use of land and buildings in Acheson. While the Land Use Bylaw is implemented County wide, all areas within the Acheson Area Structure Plan have existing districting in place. Development policies and standards in this ASP may require amendments to the Land Use Bylaw. See Figure 1 for current districting in place for the Acheson plan area.

Parkland County Integrated Community Sustainability Plan (ICSP)

Parkland County's Integrated Community Sustainability Plan (ICSP) is a "long term plan which provides direction for the Community to realize sustainability objectives that it has for the environmental, social/cultural, governance and economic dimensions of its identity" (Parkland County ICSP, 2011). The ICSP looks at sustainability based on five principles: environmental, economic development, social and cultural life, and governance. The ICSP outlines goals and strategies that the County and its developers can take to ensure principles work in balance. Where applicable, developers in Parkland County will be expected to meet all ICSP goals and strategies.

Adjacent Area Structure Plans

Approved adjacent Area Structure Plans need to be considered to minimize future land use conflicts. Adjacent areas structure plans in effect include:

Big Lake Area Structure Plan (Parkland County)

This plan borders the northern limit of the Acheson ASP area with the primary land use being estate residential. The plan area has experienced substantial growth in serviced estate residential lots over the last two decades.

Pioneer Lands Area Structure Plan (City of Spruce Grove)

The area included in this ASP is a part of the land annexed from Parkland County in September 2007 and aligns with the western boundary of the Acheson ASP and south of Highway 16. Residential development comprises 60% of the gross developable area with a build-out of 4,364 units, and a population of 12,764 residents. The concept depicts residential, neighbourhood commercial, and storm management uses adjacent to the western boundaries of Acheson.

East Pioneer Area Structure Plan (City of Spruce Grove)

Adopted by Spruce Grove Council in 2014, the East Pioneer ASP area is located immediately south of the Pioneer Lands ASP area. The southern boundary of the East Pioneer ASP is Highway 16A. Approximately 34 % of net lands in the ASP are identified for future residential uses. Total (proposed) population for the ASP are is approximately 2,904 residents. A large component of the ASP area bordering Parkland County has been designate as natural area (Environmental Reserve).

Lewis Farms Area Structure Plan (City of Edmonton)

The Lewis Farms ASP is the western limit of Edmonton's urban development. The ASP defines land uses to Hillview Road (231 Street) between Highways 16A and 628. The approved ASP reflects residential uses to the eastern perimeter of the Acheson ASP with a large commercial site proposed at the intersection of Highway 16A and Hillview Road. Lewis Farms is also on the eastern edge of the Acheson oil and gas fields.

Secord Neighbourhood Structure Plan (City of Edmonton)

The Secord NSP represents a more detailed plan for the northwest part of Lewis Farms and is bordered by Highway 16A to the north, Hillview Road to the west, Winterburn Road to the east and 87 Avenue to the south. The land uses are low and medium density residential, with a large commercial site proposed for the corner of Hillview Road and Highway 16A.

Winterburn Area Structure Plan (City of Edmonton)

This plan originally covered eight sections of land; however, four sections lying east of Hillview Road between Highways 16 and 16A were annexed by the City of Edmonton and have been developed for industrial purposes. The plan area is complemented by a large manufactured home park.

3. PUBLIC ENGAGEMENT

The engagement activities for this ASP included:

Steering Committee Consultation

Meetings with the Steering Committee occurred throughout the planning process. Members of the committee included four representatives from Alberta Transportation, members of the Acheson Business Association, the Osborne Acres Association, Wagner Natural Area Society, and members of County Administration.

Public Visioning Session

This input session was an opportunity for key stakeholders and the community to share their vision for the Acheson ASP. The format included a group presentation and focus group discussions facilitated by key consultants who worked on the plan.

Open House

The open house provided key stakeholders and the community with the opportunity to review and comment on the draft Acheson ASP. This Open House occurred prior to December 2011.

Stakeholder Meetings

Parkland County Administration undertook additional consultation with stakeholder groups between March 2012 and August 2012. Feedback from stakeholder sessions assisted the County in finalizing the draft ASP.

Facilitated meetings – adjacent municipalities

In May 2014, Parkland County retained POPULUS Community Planning Inc., to facilitate five sessions with staff from the City of Spruce Grove and the City of Edmonton. Structured meetings focused around resolving outstanding concerns that both municipalities had with the draft ASP.

Public Open Houses – 2014

Two Public Open houses occurred in October and November 2014 to highlight changes to the draft ASP that were undertaken after facilitated meetings with the City of Spruce Grove and the City of Edmonton. Minor mapping and text revisions were undertaken based on feedback from residents and stakeholders.

Public Hearing

The Public Hearing represents the last opportunity for public comment on the draft Acheson ASP before it receives second and final reading by County Council.

More information on public engagement undertaken as part of the ASP process can be found in the Acheson Industrial Area Structure Plan – Background Consultation Document.

4. SITE DESCRIPTION

4.1. Location

The ASP area is located on the eastern edge of Parkland County and encompasses approximately 5019 ha (12,402 acres) of land (see Map 1 – Acheson Industrial Area Location).

The ASP area is bounded by Provincial Highway 16 to the north, Hillview Road and the City of Edmonton boundary to the east, Provincial Highway 628 and the Stony Plain Indian Reserve #135 to the south, and the City of Spruce Grove to the west. The ASP is composed of the following lands:

- Sections 26, 27, 28, 29 (part), 31 (north half), 32, 33, 34 and 35; Township 52, Range 26 west of the 4th Meridian;
- Part of Section 29, Township 52, Range 26 west of the 4th Meridian;
- Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11; Township 53, Range 26, west of the 4th Meridian; and.
- East ½ of Sections 1 and 12; Township 53, Range 27, west of the 4th Meridian.

Approximately 16 ha of land in NW 29-52-26-W4M is not included in the ASP area. The ASP area is shown in Figure 2 – Area Structure Plan Boundary.

4.2. Physical Conditions

Topography

The ASP area consists of gently rolling to rolling pitted deltaic plain, lying between 670 and 725 metres above sea level. The highest point is in the south central portion and the lowest point in the northwest corner of the ASP area.

Generally, the area is divided into two drainage areas. Areas north of Highway 16A drain towards Big Lake and areas south of the Highway have no defined natural outlet. Figure 3 provides the topography and stormwater runoff flow direction for the ASP area.

Surface and sub-surface characteristics

The ASP area is located on the southern bank and on the plain above the Beverly Buried Valley. The Beverly Buried Valley is a pre-glacial river valley that travels from a southwest to northeast direction and underlies most of the Town of Stony Plain and the City of Spruce Grove. A small portion of the buried valley is located near the Wagner Natural Area. The buried valley has regional significance to Parkland County and is sensitive to point and non-point sources of contamination.





Superficial Deposits

The superficial geological strata is classified as pitted deltaic deposits from the past upstream sources of glacial water from historic Lake Edmonton. These deposits are variable and consist of sands, silts and some clays with surface pits or depression resulting from large stranded ice blocks melting. The general soil stratum consists of superficial silts and clays to depths of 4 to 8 metres where silts and sands are then encountered. The bedrock surface is 30 to 40 metres below the ground surface. There are occasional small areas with depths of peat greater than 1 metre but these are generally confined to the poorly drained northwestern portion of the ASP area.

Soils

Soils within the ASP area have a moderate to good capability for agriculture. Most of the ASP area comprises a mixture of Winterburn, Rimby, and Carvel Loam with capability ratings varying from Class 1 to Class 4. Figure 4 identifies the soil capability classifications according to the Canada Land Inventory Soil Capability for Agriculture.

Class 4 in the low-lying poorly drained areas in the northwest corner of the plan area are classified as "O" Organic soils. These soils have limited agricultural value and suitability for development. However, the area sustains an ecosystem of diverse and rare plant species.

Subsurface conditions provide the foundation for any development in the ASP area. The soil conditions are considered good for roads and moderate size buildings. Large buildings or structures in organic soil areas may be difficult to locate due to lack of any capable soil bearing strata. Underground utilities may encounter variable conditions and perched water tables that may moderately increase costs.

Hydrogeology

Groundwater flows through sandy aquifers above the bedrock in a northerly direction for most of the ASP area. The exception is the southeast corner and extreme portions of the ASP area that flow easterly. The regional groundwater table is relatively deep in the sands above the bedrock however; there are some wet soils near the surface that are probably a result of localized, perched water tables.

The major constraints to development in the ASP area are the ice block depressions and the need to minimize impacts on the Wagner Natural Area and Recharge Zone. The low-lying, ice block, depressions are expected to contain soft soil conditions and possibly steep or marginally stable side-slopes that should generally be avoided.

Vegetation

The ASP area is located within the Aspen Parkland Ecoregion of Alberta. This Ecoregion is distinguished by its Chernozem soils formed under the interspersed grassland and forest plant communities.

Much of the original vegetative cover has been removed through agricultural and other development. A number of forest bluffs are scattered throughout the ASP area. The largest single area of relatively undisturbed forest cover is in the northwest corner adjacent to the Wagner Natural Area.

Wagner Natural Area

Located in the northwest corner, the Wagner Natural Area comprises a rich and diverse array of fauna and flora. Its distinctiveness is due in part to the mineral springs that flow year round at a relatively constant temperature and creates a microclimate which favors plants and animals unique to the area. These springs are fed by the regional groundwater aquifer that is recharged by infiltration to the lands to the south of the Wagner Natural Area.



The Natural Area is one of 10 peatlands found in Alberta where boreal spring fen and marl ponds are a characteristic feature to the area. A number of orchid species are present with upland plant and animal communities adding to the diversity of the natural area. These peatlands extend beyond the formally defined Natural Area, and can be impacted by development elsewhere in the ASP area.

4.3. Land Uses

While the majority of land in the ASP is currently used for agricultural purposes, approximately 2,489 hectares (6,150 acres) is districted BI (Business Industrial), MI (Medium Industrial District), or IRD (Industrial Reserve District) in the County's Land Use Bylaw. A small portion, 12.46 hectares (30.79 acres) is districted RIC (Rural Industrial / Commercial District).

Growth has occurred in recent years within the ASP area, specifically north of the Canadian National Rail (CNR) line on both the east and west sides of Highway 60. The Northview Business Park on the west side of Highway 60 has a number of major industries occupying large parcels, including SMS Equipment, Suncor, AltaLink, and Navistar.

Residential development in Acheson is primarily contained within Osborne Acres, a 41-lot independently serviced subdivision located south of Provincial Highway 16 and east of Spruce Valley Road. Larger farmsteads and acreages are also found in the ASP area. Osborne Acres accounts for approximately 70.7 hectares of land in the ASP area.

Wagner Natural Area accounts for approximately 253.3 hectares (625.9 acres) of land. The remainder of the ASP area is interspersed with low lying areas, kettle depressions and wetland areas.

Acheson is serviced by provincial highways 16, 16A, 60 and 628. A series of local arterial and collector roads, coupled with a developing internal road network provides good access for industrial, commercial and residential users. Acheson is also located west of Canadian National Rail's

Edmonton Intermodal Yard. The CNR's main line transects Acheson with several spurs providing rail access to Acheson. Acheson is located 32 kilometres from Edmonton International Airport.

Water is supplied by a water supply line that is operated by the Capital Region Parkland Water Services Commission (CRPWSC). Parkland County operates a series of pipelines and two reservoir-pumphouses in the ASP area. Sanitary servicing for Acheson is provided by two main trunks. The Acheson Road Trunk runs parallel to Range Road 264, servicing lands primarily west of Provincial Highway 60. The Bevington Road Trunk services the majority of developments east of Provincial Highway 60. Both the Acheson Road and Bevington Road trunks convey sewage to the Alberta Capital Region Wastewater Commission's (ACRWC) west transmission line.

There are ten separate drainage basins in the ASP area. Most of these basins drain naturally to Atim Creek or Big Lake to the north east of the ASP area. Stormwater servicing is currently provided by several stormwater management facilities located in the ASP area.

Open space and recreational uses in the ASP area account for a small percentage land use. Current districting in the Land Use Bylaw (and any amendments thereto) have not designated any lands for exclusive recreational use. That said, a number of potential sites provide the potential for recreational development including the Cholla landfill site (discussed below), the existing Ranch Golf Course (NE 27-52-26-W4M), and portion of SW-9-53-26-W4M Municipal Reserve (MR).

The ASP contains two dry landfills. The Cholla landfill will be redeveloped into a regional soccer facility for Edmonton Minor Soccer. The second landfill, located north of Provincial Highway 16A and west of Hillview Road may be contemplated for future industrial land uses once reclamation has been completed. Geotechnical and structural engineering studies to determine the range of industrial and commercial developments that are suitable for this site will need to be completed prior to development.

5. ISSUES AND OPPORTUNITIES

5.1. Industrial Development

As one of the Capital Region's major employment centres, Parkland County is responsible to establish an orderly and efficient approach to development for the ASP area.

Development in Acheson needs to highlight its strategic location as a means to support the regional economy and prosperity. Development will focus on:



- **Emphasizing the strategic transportation network:** Acheson is bordered by several of the Region's major highways that provide direct access to provincial and national business centres. These include provincial highways 16, 16A, 60 and 628. In addition, the CNR main line travels through Acheson. Linkages to markets are also facilitated by existing infrastructure on Provincial Highway 60 to support high load carriers.
- **Supporting regional and international transport hubs:** - Acheson is approximately 8 kilometres west of the CNR Intermodal facility, 4 kilometres west of Anthony Henday Drive, and 32 kilometres north-west of Edmonton International Airport. Acheson is also located approximately 15 kilometres south of the Villeneuve Airport, and south west of the Alberta Industrial Heartland. Ensuring connections to these critical transportation hubs in the City of Edmonton, Leduc County and Sturgeon County will ensure efficient movement of goods and services to northern and western markets. This benefits all Capital Region municipalities.

Local service commercial retail will also be required in strategic nodes to provide local commercial services for Acheson employees and residents. Hotels, restaurants and general retail would be anticipated at these key locations to support these local service needs.

5.2. Servicing

Water Servicing

Water is supplied to the ASP area by a water supply pipeline operated by the Capital Region Parkland Water Services Commission (CRPWSC). The CRPWSC water supply generally runs along the north side of Highway 16A. Within Acheson, water is distributed through Parkland County operated distribution lines that are fed by two Parkland County operated water reservoir-pumphouses. The County distribution pipe network contains pipes that range in size from 150 mm to 410 mm diameter. The Acheson Zone 3 Water Reservoir (located west of Highway 60 and south of Ellis Drive) has capacity for 5,300 cubic metres of storage. The Acheson Zone 4 Reservoir that is located east of Provincial Highway 60 and south of Acheson Road, has capacity for 4,000 cubic metres of storage. The County operates one truck fill station which is located at the Acheson Zone 3 Reservoir. There is one dedicated pump for this truck fill station. Both reservoirs comply with storage volume requirements (including fire requirements) identified in Alberta Environment Standards and Guidelines for Municipal Waterworks and Storm Drain Systems (2006).



The "Acheson and Big Lake Area Water Servicing Study 2011" (AECOM, October 2011) was received by Council in 2012. The report indicates that in order to accommodate the "full build out" of Acheson (ultimate development) expansion of the current reservoirs and the construction of new reservoirs will be required in the future.

Sanitary Servicing

Sewage generated in the ASP area is directed to the Alberta Capital Region Wastewater Commission (ACRWC) sewage transmission line that is located just outside the ASP area to the north of Provincial Highway 16. To convey sewage to the ACRWC line, Parkland County operates two main sewage trunk lines in the ASP area; the Acheson Trunk and the Bevington Road Trunk.

The Acheson Trunk is a gravity sewer line that runs in the Range Road 264 road allowance. The trunk size ranges from 200 mm to 675 mm in diameter. The Acheson Trunk services all of the lands west of Provincial Highway 60, including Acheson Zones 1, 3, 5 and 7, as well as a small portion of the land immediately east of Provincial Highway 60 in Zones 2 and 4.

The Bevington Road Trunk runs in the Range Road 262 road allowance. The trunk size ranges from 450 mm to 750 mm in diameter. The majority of the trunk is 600 mm in diameter. The Bevington Road Trunk services all of the lands east of Highway 60 – including the majority of Acheson Zones 2 and 4, as well as the entire Zones 6 and 8.

The "Acheson and Big Lake Area Sanitary Sewer Servicing Study 2011" (AECOM, February 2012) identified a number of general issues and potential upgrades for sanitary servicing including:

- the modeling that was completed by AECOM showed several areas, typically around Parkland Business Park, and northeast section of Sherwin Industrial Park that may

experience higher capacity flows and higher surcharging (within 2 m of ground level) during four hour rainfall events. The existing system will require upgrades to convey high peak flows; and,

- for the near future and ultimate systems, AECOM has made several recommendations regarding at what stage improvements are required so that the near future and ultimate systems are adequately serviced by the sewer system.

Long Term (ultimate development) of the sanitary sewer system in the ASP area will require the upgrading or twinning of both the Acheson and Bevington trunks.

The construction of a third trunk line to service the lands in the west portion of the ASP area, the Atim Road Trunk, is also anticipated for long term (ultimate development). This trunk will run parallel to Range Road 270 (Atim Road) road allowance, and, once completed, service all lands west of Range Road 265 that are north of Provincial Highway 16A (except for part of SE 6-53-26-W4M that is south of the CNR mainline).

Both the water and sewer servicing studies indicated that care must be taken by developers when installing servicing on sites within the Wagner Area Natural Recharge Zone.

The 2011 AECOM Water Servicing and Sewer Servicing study boundaries fall within the boundaries of the ASP area except for NW and NE 31-52-26-W4M which was not contemplated in both servicing studies. The residential areas identified north of Highway 16 in both servicing studies fall outside the ASP area and are not discussed in the ASP.

Storm Servicing

In August of 2011, AECOM completed the "Acheson/Big Lake Area Master Drainage Plan – Amendment 2011" for Parkland County (AECOM, August 2011). The purpose of the plan was to apply to Alberta Environment and Sustainable Resource Development for a Water Act Approval for managing the construction, maintenance and reclaiming of stormwater management facilities in the Acheson / Big Lake Areas. On December 21, 2011, Parkland County received this approval from Alberta Environment and Sustainable Resource Development (Approval No: 00287756-00-00).

Parkland County's Water Act approval (fenceline boundary) area consists of the ASP area excepting the N ½ 31-52-26 W4M, SE 34-52-26 W4M, (the Ranch Golf Course, NW 35-52-26 W4M (Cholla landfill site), a portion of the S ½ 27-52-26 W4M, a portion of S ½ 26-52-26 W4M, as well as the Wagner Natural Area (majority of Section 7-53-26-W4M and portion of W ½ 8-53-26-W4M). The Water Act approval reduces the need for individual applications to Alberta Environment and Sustainable Resource Development for the placing, constructing and managing of stormwater facilities, and sets criteria that must be followed by developers when initiating stormwater planning, construction, operation and remediation. As the approval holder, Parkland County is responsible to ensure that all new developments in the approval area comply with the Water Act approval criteria. Developments outside of the approval area will be required to obtain a separate Water Act approval prior to stormwater related developments commencing on their site.

The Wagner Natural Area is a very sensitive natural area defined as a conservation area under the Alberta Wilderness Areas, Ecological Reserves and Natural Areas Act. The Natural Area is extremely sensitive to changes in water level; whether from groundwater recharge or surface runoff.

Therefore, it is extremely important to properly manage stormwater in the areas to the south of Wagner Natural Area that are considered to be part of the natural area's recharge zone.

The AECOM study suggests that infiltration should be used as much as naturally possible within the area's recharge zone. Also, before development is undertaken, developers must undertake soil investigations, under the supervision of a professional experienced in hydrogeology to determine the infiltration capability of their sites. Additional stormwater management requirements relating to protecting the groundwater recharge to the Wagner Natural Area can be found in the AECOM Master Drainage Plan. Developers must also consider implementing best management practices that ensure runoff that is generated simulates pre-development conditions. This is to ensure that additional surface runoff is not directed into the Natural Area.

The AECOM Master Drainage Plan also examined the capacity of Morgan Creek, which runs through Acheson Zones 3 and 1. The study suggests that the total flow of Morgan Creek should not exceed 1.4 m³/s as this has been determined to be the bank full capacity of Morgan Creek, and that lands south of Provincial Highway 16A will not be permitted to discharge into Morgan Creek. As additional developments occur along Morgan Creek, developers will be required to assess the stability of the creek bed and may be required to provide rip rap or armouring of the banks to protect them against erosion.

The AECOM Master Drainage Plan also recommends that developers consider retaining wetlands, and design their stormwater management facilities to enhance water quality. All stormwater management facilities are required to have control structures that can completely shut off the discharge in the event of a spill to prevent contamination of downstream lands.

The Master Drainage Plan discussed how best management practices and green technologies should be encouraged to reduce the amount of storage that is required and to reduce runoff. These practices and technologies will also help promote infiltration of stormwater.

Future developments in Acheson will require the construction of multiple new stormwater management facilities (SWMF) throughout the ASP area. SWMF design and construction shall follow all the Water Act approval criteria, and all applicable, federal and provincial regulations, Municipal Engineering Standards, the Municipal Development Plan, Land Use Bylaw (and any amendments to both plans), and this Area Structure Plan.

Detailed information on the proposed locations of future stormwater management facilities and alignment for storm pipes should be obtained through Parkland County by developers prior to initiating development.

5.3. Lands available for Development

Parkland County contends that only 26.6 % of the ASP area is available for future industrial or commercial development (see Section 9.1 – Land Use Statistics). To identify Gross Development Area (GDA), the County mapped and analyzed all lands in the ASP area. ASP lands (identified in Figure 5 – Developments Status Map) were generally categorized into one of five categories:

<ul style="list-style-type: none"> Developed Land 	<i>Land in the ASP area that is currently districted under the County's Land Use Bylaw for Industrial or Commercial development, serviced by municipal servicing, and with an approved Development Permit issued for industrial or commercial development *</i>
<ul style="list-style-type: none"> Districted and Serviced Land ("shovel ready lands") 	<i>Land in the ASP area that is currently districted under the County's Land Use Bylaw for Industrial or Commercial development and serviced by municipal servicing, Land in this category <u>does not have</u> an issued Development Permit for industrial or commercial development.</i> <i>Parkland County has also identified land where a Development Permit is expected by the end of 2014. This land is labelled under this category as "14."</i>
<ul style="list-style-type: none"> Constrained Lands 	<i>Land in the ASP area under this category have current (on-site) land use activities, environmental constraints or servicing constraints that either limit their development opportunities or that will delay their future (ultimate) development opportunities.</i>
<ul style="list-style-type: none"> Parkland County owned lands 	<i>Land in the ASP area that is owned by Parkland County. These lands include Municipal Reserve, and Public Utility lots typically used for storm water facilities. These lands will not be developed for industrial or commercial uses.</i>
<ul style="list-style-type: none"> Available for Development 	<i>Land in the ASP are considered vacant (minimal existing development) and available for future industrial or commercial development.</i>
<i>* Alberta Spruce Industries Ltd. (Lot 2 and Lot 3 of Plan 9420960) and the AltaLink substation site (Plan 4745 TR) is included in the "Developed land" category</i>	

*Note: In addition to the above constraints, Policy 6.6.2.28 prohibits **future development** in the Wagner Natural Area, and Policy 6.7.2.1 allows only for existing residential uses in Osborne Acres to continue.*

Analysis completed in September 2014, and based on current development permitting timelines, Parkland County estimates that ASP lands "**Available for Development**" will be absorbed in approximately 17 years – or by 2032.

Approximately 44 % of ASP lands have existing land use or environmental constraints that limit their development potential, or, have current on-site activities or servicing issues that will delay their ultimate development. Lands fall under one of two categories:

- Environmental & Land constraints – Limited development (includes lands where future development is limited to current regulations under the County's Land Use Bylaw due to environmental, future servicing and transportation issues, or land compatibility constraints):
- Constrained & Delayed Development - (includes lands where future development is delayed due to current land uses or servicing constraints (lands in this category will be reviewed for their development potential at the next review of the ASP and are categorized as "Outside ASP timelines" in Figure 6 – Future Land Use Concept).

Environmental & Land constraints – Limited development lands include:

Agricultural Area A lands (505.3 ha)

Parkland County has identified land immediately south and west of Wagner Natural Area as “Agricultural Area A”. Constraints related to lands in Agricultural Area A include:

- proximity of Agricultural Area A lands to the Wagner Natural Area and Recharge Zone, and the need (in the *Capital Region Growth Plan*) to undertake an ecological assessment to determine setbacks from the Natural Area;
- transportation network issues;
- residential development in Spruce Grove and transition of land uses from existing residential development; and,
- extension of servicing to Agricultural Area A lands.

Industrial Use Setback (86.3 ha)

A 200 M industrial use setback exists north, south, and east of Osborne Acres. Under the County's Land Use Bylaw, these lands are districted AGR – Agricultural Restricted. These areas have very limited development potential with development limited only to uses defined in this ASP and the Land Use Bylaw. Portions of these lands (SE 8-53-26-W4M) will be redistricted to ANC – Agricultural Nature Conservation in the County's Land Use Bylaw.

Environmental lands – N of Osborne Acres (Pt of SW 8-53-26-W4M, and SE 8-53-26-W4M) (22.6 ha)

Portions of SW 8-53-26-W4M, and SE 8-53-26-W4M (located north of the Osborne Acres) have limited development potential. These lands, in addition to the north portion of the industrial use setback were identified in the 2014 Environmental Conservation Master Plan as part of the Wagner Natural Area Environmentally Significant Area (ESA). Additional constraints for development include proximity to Wagner Natural Area, prevalence of organic soils, and sensitive and shallow groundwater level. Any proposed development on these lands will be limited by existing zoning under the Land Use Bylaw, and shall comply with all policies in this ASP.

Constrained & Delayed Development lands include:

Rogers Communication Tower (62.6 ha)

Rogers Communication Inc. owns and maintains a telecommunication tower on SW 33-52-26-W4M. Rogers has indicated that they are uninterested in future development on the quarter-section.

Agricultural Area B lands (323.8 ha)

Agricultural Area B lands are located immediately west of future residential development in the Secord Neighbourhood (City of Edmonton), and south of the Ranch Golf Course. Development of these lands is premature due to land use compatibility issues near future residential development. Planning for Agricultural B lands will require future joint planning initiatives with the City of Edmonton to determine future compatible land uses. In addition, existing Penn West oil production on each quarter-section is still occurring and forecasted to continue until approximately 2030.

Table 1 shows approximate production operation timelines for the Penn West Acheson fields.

<i>Table 1 – Production timeline of Acheson fields</i>	
Legal Address	Forecasted oil production timeline*
Section 11-53-26W4	Continued until 2040
Section 2-53-26W4	Continued until 2036
Section 35-52-26W4	Continued until 2030
Section 26-52-26W4	Continued until 2029
<i>*Penn West Production Forecast (2013)</i>	

Penn West lands and operations (364.0 ha)

Penn West owns several quarter-sections north of Highway 16A and east of Highway 60 and operates extensive well sites, well pads and pipelines on their lands. Operations also extend to several quarter sections immediately north and south of their existing lands. The production life of the Acheson fields will continue until approximately 2040. Development on the Acheson fields (table 1) is premature until the production life of these fields are expended and until land remediation is complete. *Note: W ½ Section 11-53-26-W4M is not included in this category.*

Included under this category is the Northlands landfill currently in operation (SE 2-53-26-W4M). Development approvals allow for continued landfill operation into 2015. Extension of the landfill operation may occur, with timelines for possible extension and site remediation currently being unknown. Development on this site is premature until landfill operation has ceased, and all remediation activities are completed.

Highway 628 re-alignment (507.7 ha)

Eight quarter-sections north of Highway 628 are premature for development due to Alberta Transportation's plans to re-align Highway 628 between the City of Edmonton and the Town of Stony Plain. Construction of the re-alignment is outside of the three-year construction program from Alberta Transportation. In addition, the land acquisition for lands east and west of Highway 60 has not been completed to date. Development of these lands is premature until Alberta Transportation has completed all land acquisitions for the re-alignment. Lands in this category do not include Alberta Spruce Industries Ltd. located on Lot 2 and Lot 3 of Plan 9420960, and the existing AltaLink substation site. Future expansion of these lands will require prior Alberta Transportation approval and will need to comply with all policies outlined in the ASP.

Parkland County expects that resultant lands remaining once the Highway 628 road alignment has been acquired will be identified for future industrial and commercial development opportunities. This will be reviewed at the next update to the ASP.

NOTE: Constrained & Delayed Development lands are identified in Figure 6 – Future Land Use Concept as “Outside ASP timelines”. The development potential of Constrained & Delayed Development lands will be reviewed at the next ASP review by Parkland County

5.4. Shallow Utilities

Fortis supplies power to the ASP area with power extended to businesses along Bevington Road. The entire ASP area is serviced by Atco Gas and Telus. Telus also supplies fibre optic services to the Ellis-Sherwin Industrial Parks from its main optics cable running along Highway 16A. The extension for fibre optics into the park is made at Range Road 264. Altalink currently operates an existing sub-station located at NW 28-52-26-W4M, and is presently constructing a second sub-station near Kalwin Business Park (NW 9-53-26-W4M).

Telecommunication towers are becoming more commonplace in Acheson and throughout Parkland County. Tower installations are required to be installed and operated in compliance with the Health Canada Safety Code which defines safe levels of radio frequency exposure.

5.5. Transportation

Acheson is served by four provincial highways. These include: Provincial Highway 16, Highway 16A, Highway 60 and Highway 628. The Canadian National Rail (CNR) mainline runs from Edmonton to Vancouver through Acheson and has rail spurs that service businesses in Acheson. Future transportation improvements in Acheson include:

- upgrading the highway and road network to access all ASP lands;
- upgrading and widening Provincial Highway 60, particularly between Provincial Highway 16 and Provincial Highway 16A;
- development of the grade separated crossing of the CNR line;
- ensuring local road network connection to external networks and surrounding areas; and,
- upgrading Provincial Highway 628 between the City of Edmonton boundaries and the Town of Stony Plain.

Capital Region Ring Road

In March 2012, the proposed Regional Ring Road design was stopped by the Minister of Transportation. As such, land requirements west of Atim Road for the potential road alignment are no longer required. The decision to cancel the Regional Ring Road will have implications on the transportation network in the ASP area by limiting the number and location of highway access points into Acheson. Transportation planning for the ASP area will have to consider the need for additional intersections to ensure an effective transportation network for the ASP area.

Provincial Highway 60 Improvements

Provincial Highway 60 is projected to be a four lane divided roadway between Provincial Highway 19 and Provincial Highway 16 with both grade and grade separated interchanges. Completion to four lanes will require a 90 metre right of way which Alberta Transportation has been in the process of acquiring on the west and east sides of Highway 60 over the past few years.

Traffic congestion both north and south along Provincial Highway 60 has become a major issue due to the increasing frequency and length of trains using the CNR main line.

Alberta Transportation recently purchased a large parcel of land, the remnant of SW 3-53-26-W4M, at the intersection of Provincial Highways 60 and 16A that will provide additional acres for the expanded right of way and a storm management facility.

Critical improvements to Provincial Highway 60 include the construction of the overpass to replace the at grade CNR railway crossing. The overpass is critical to ensure safe flow of commercial and residential traffic, and response times for emergency vehicles accessing the southern extents of the ASP area. The overpass will necessitate the closure of the Highway at Northview Road, with existing at grade intersections at Acheson Road and Township Road 531A being retained and improved.

An at grade intersection has been constructed on Provincial Highway 60, approximately 1 kilometre south of the Provincial Highway 16A intersection. An additional intersection (1.5 kilometres south of Highway 16A) is also contemplated for Highway 60 between Highway 16A and Provincial Highway 628 to support continued development. This access requires final approval from Alberta Transportation (see Figure 12 – Future Transportation Improvements).

The designation of Provincial Highway 60 as a high load corridor should be explored since infrastructure (such as swivel light standards) to support high loads is currently in place along the Highway.

Provincial Highway 16

Alberta Transportation is the road authority for Highway 16 from west of Anthony Henday Drive to City of Edmonton west limits. Any decision on future improvements to the intersection of Highway 16 and Hillview Road requires coordination with Alberta Transportation.

The current approved interchanges along Provincial Highway 16 have been set by Order in Council. Interchanges have also been allocated for Provincial Highways 44 and 60.

Provincial Highway 16A

Provincial Highway 16A is classified as a Major Expressway with accesses onto Bevington Road Acheson Road, Pinchbeck Road, RR 264 (south of Highway 16A), Sandhills and Atim Road intersections scheduled to be closed in the future by Alberta Transportation. See Figure 12 – Future Transportation Improvements.

Alberta Transportation indicates that a future overpass may be developed at the intersection of Spruce Valley Road and Provincial Highway 16A. The extension of Acheson Drive to Spruce Valley Road will add traffic to this particular intersection and increase the need for future intersection improvements. This intersection may be maintained in the interim as an all directional unsignalized intersection until traffic flow increases.



The Range Road 264 and Highway 16A intersection will be closed by Alberta Transportation with no timeline identified for closure. The County encourages Alberta Transportation to keep this access open to ensure traffic flow into, and out of Acheson Zone 3. The County also encourages continued access from Highway 16A onto Bevington Road to allow for future development of Zone 4.

Access closures from Provincial Highway 16A necessitate the construction of a minimum three east/west arterial roads that will direct traffic to at grade intersections or interchanges. The locations of these proposed roads are identified in Figure 12 – Future Transportation Improvements. An interchange at Hillview Road and Provincial Highway 16A is also proposed for the future.

Provincial Highway 628

The realignment of Provincial Highway 628 remains a regional priority for Alberta Transportation and Parkland County.

The Highway 628 Function Planning Study (2008) proposes that Highway 628 be ultimately upgraded to a six-lane freeway extending from Anthony Henday Drive to Provincial Highway 60 with major interchanges located at Hillview Road and Highway 60. West of Provincial Highway 60, Highway 628 is proposed to be a four-lane expressway to the Town of Stony Plain. In August 2012, Alberta Transportation confirmed an at grade split diamond interchange at Highway 60 and Highway 628, with Provincial Highway 60 passing over Highway 628. The old Highway 628 alignment will be retained as a service road on the south side of the realigned highway, and provide access to the Stony Plain Indian Reserve #135.

The recommended alignment option (Figure 12 – Future Transportation Improvements) proposes that the freeway right of way be located approximately 400 metres to the north of the existing right of way. The proposed Future Land Use Concept Map (Figure 6) recommends that the land adjacent to Provincial Highway 628 be considered “constrained” (with the exception of the existing development of Alberta Spruce Industries Ltd. located on Lot 2 and Lot 3 of Plan 9420960) until all land acquisitions for Provincial Highway 628 in the ASP area has been acquired and detailed construction drawings approved by Alberta Transportation. Any future expansion of Alberta Spruce Industries will require prior Alberta Transportation approval and need to comply with all policies outlined in the ASP).

Northview Road Intersection Closure

With the development of the Fath subdivision (SE 9-53-26-W4M) and continued development in Zone 1, there is the potential for non-residential traffic travelling through Osborne Acres. With Alberta Transportation’s closing of the Northview Road intersection with Highway 60, the County should review traffic volume when needed, and explore the potential to upgrade Range Road 263A (Vanderwell Road) which currently connects Township Road 531A to Northview Road. Traffic travelling through Osborne Acres should remain local residential in nature.

Township Road 531A right-of-way widening

Parkland County is in the process of widening the Township Road 531A road shoulders between Highway 44 to its juncture with Highway 16. Shoulder widening will occur on both sides of Township Road 531A, and be completed by fall 2014.

Township Road 531A and Provincial Highway 60 Intersection

Parkland County will be undertaking extensive improvements to the intersection of Township Road 531A and Provincial Highway 60. Proposed improvements are identified for a construction period of 2016 – 2017. As part of this update, the *Acheson Zone 1 and Zone 2 Highway 60 / Parkland Avenue Intersection Assessment* (Bunt & Associates, 2014) proposed changes to the Township Road 531A service road intersection west of Provincial Highway 60. Changes include the potential closure of the

service road immediately east of the existing truck stop, and the potential closure of existing accesses onto Township Road 531A. As part of these improvements, a new north and south access road is being considered immediately west of the existing truck stop to provide new access to the Kal Tire, the truck stop and a several parcels north of Township 531A (see Figure 13 – Service Road Improvements –Zone 1).

Kalwin Business Park Road Improvements

A number of narrow parcels exist west of Kal Tire between Highway 16 and Township Road 531A. It is recommended that a new east/west road be constructed from Kalwin Business Park west to the Edmonton Truck & Trailer site. This would allow the eventual subdivision of the narrow parcels to have access off an internal road, rather than Township Road 531A (see Figure 12).

Hillview Road upgrades

The City of Edmonton is the road authority for Hillview Road. The City expects the eventual upgrading of Hillview Road to an urban four-lane divided arterial. City of Edmonton anticipates the costs of upgrading Hillview Road (231 Street) to an urban four-lane divided arterial standard will be a shared and equal responsibility between the City of Edmonton and Parkland County. Discussions related to cost-sharing should be initiated between the City and the County in advance of future County subdivisions or developments which require access, both directly and indirectly, to Hillview Road (231 Street).

An interchange is planned at Hillview Road and Highway 16A. Timings for this project is unknown. The City of Edmonton recommends interim measures to reduce potential traffic conflicts due to increased traffic volumes. Improvements include restricting through movements on Hillview Road (across Provincial Highway 16A) and left turn movements from Hillview Road onto Provincial Highway 16A (eastbound and westbound). Intersection movements from Provincial Highway 16A onto Hillview Road will be maintained in the interim. The City of Edmonton and/or its developers may approach Parkland County to discuss intersection upgrades to the Hillview Road (231 Street) and Highway 16A intersection the future.

Under Bylaw 01-2010, Parkland County has committed to collecting for the future intersection improvements of existing and proposed accesses to Hillview Road. All proposed accesses or roadway intersections to Hillview Road requires the review and approval of the City of Edmonton. The location of the accesses or road intersections should be compatible with proposed roadways into Lewis Farms ASP and Winterburn Industrial ASP areas. Turnbay and traffic signal construction along Hillview Road may be required with access or intersection construction/modifications. The County also commits under the subdivision process to continue acquiring right-of-way lands for the Hillview Road improvements.

The Province of Alberta, City of Edmonton and Parkland County need to work together to develop a funding strategy for improvements to Whitemud Drive, west of Anthony Henday Drive, including addressing the potential need for additional interchanges and land requirements. Currently, no approved funding has been identified to address these improvements.

The City of Edmonton and Parkland County will continue to meet to discuss potential improvements to Hillview Road.

5.6. Protective Services

Fire services

Fire services for the ASP area will be provided from the Acheson Fire Station operated by Parkland County (SW-9-53-26-W4M). The 20,000 square foot facility will be completed in late Fall 2014. The facility will house an Engine, Tanker, Rescue Vehicle and Squad truck. Staffing levels are expected to be approximately 30-40 paid on-call firefighters. Secondary services will be provided through the Parkland Village Fire station.

The County maintains mutual aid agreements for fire service with all adjacent municipalities and those that are bordered on all four sides by the County. In 2010, Parkland County, as a member of the Capital Region Board (CRB) entered into a joint fire and disaster agreement with all CRB members to provide assistance in emergency situations.

The cities of Edmonton, Spruce Grove and St. Albert provide aerial ladder vehicles which may be required for industrial related fire incidents. As part of a Memorandum of Understanding (MOU) signed in 2012, the City of Spruce Grove, Town of Stony Plain and Parkland County are cost-sharing the purchase of three aerial ladder vehicles with each municipality coordinating the purchase of one vehicle. Parkland County will be purchasing its vehicle as part of this MOU in approximately 2014.

Continued development of the ASP area may also warrant a satellite station be constructed in the SE corner of the ASP area once development levels require additional service. Issues related to emergency response times and the construction of the CNR rail overpass have been discussed in Section 5.5 – Transportation

Policing and Bylaw enforcement services

Policing in the ASP area is provided by K Division Stony Plain and Spruce Grove detachments. Future development in the ASP area would require Parkland County to liaise with both detachments to ensure that adequate policing services are provided to the ASP area.

Bylaw Enforcement services for the ASP area are provided by Parkland County through the County Centre Office on Provincial Highway 779. Bylaw Services enforces the County's Bylaws, as well as significant parts of provincial statutes such as the Traffic Safety Act. Future development of the ASP area will require the County to review call volumes on a regular basis to ensure that adequate enforcement services are provided for the ASP area.

5.7. Environment

Existing and future businesses in the ASP area will be expected to conserve the natural environment and promote the use of environmentally friendly technologies. Simultaneously, policies need to be established to ensure that key environmental and natural areas in the ASP area are protected from incompatible uses. These areas shall be protected at all stages of development including construction and operation. Where required by the County, additional hydrological, geotechnical and environmental assessments may need to be prepared as part of the development process.

The ASP area contains two hundred and twenty-one (221) wetlands as described in the 2011 AECOM Acheson and Big Lake Master Drainage Plan – Amendment. Potential developments adjacent to wetlands will have to take care in ensuring that wetlands are maintained, or where wetlands are impacted or removed, compensation and remediation complies with Alberta Environment and Sustainable Resource Development requirements.



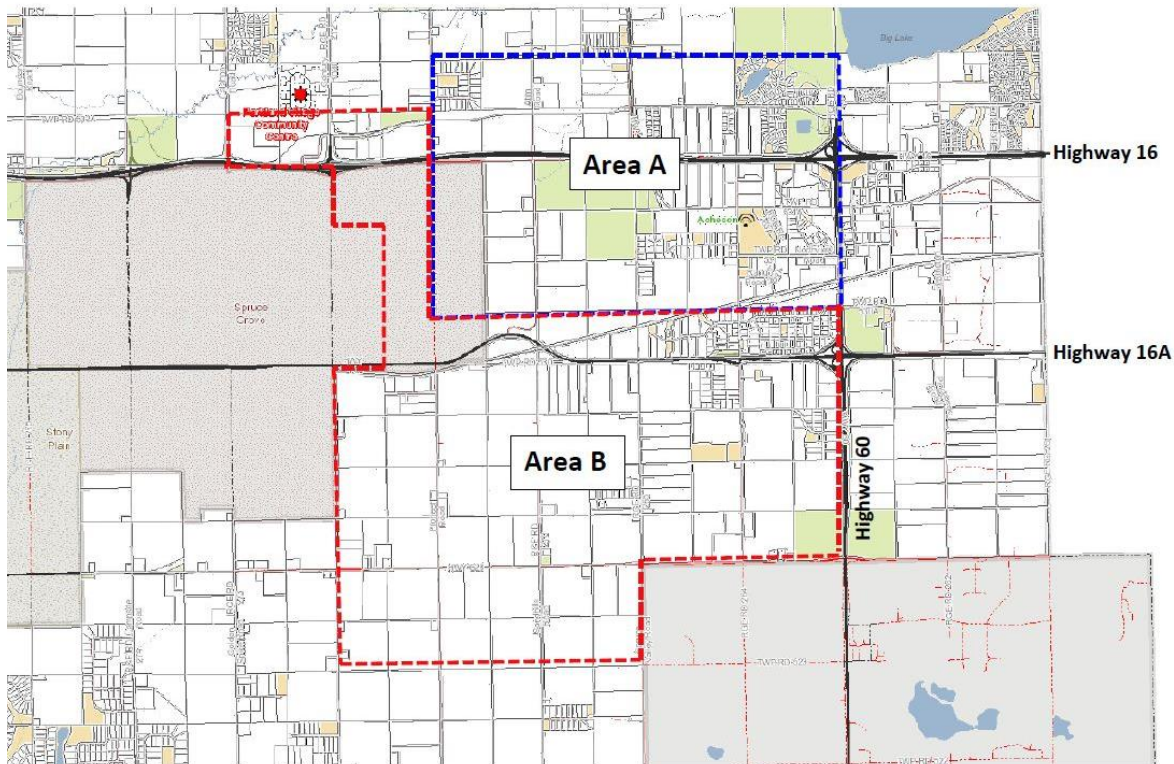
Wagner Natural Area

The Wagner Natural Area is a valuable scientific, educational and tourism resource. The Wagner Natural Area Society has leased the natural area from the Province since 1983. The lease was renewed in 2004 for another 10 years. Since 1997, another 253 acres have been added to the Natural Area and the Nature Conservancy of Canada has become involved.

The Wagner Natural Area is provincially owned and protected from future development. The legal boundary includes NW-7-53-26-4, NE-7-53-26-4, SE 7-53-26-4, Pt. NW-8-53-26-4 West of Highway 44 and the Northwest Pt. SW-8-53-26-4. The East half of SW-7-53-26-4 is also considered to be a part of the natural area and is owned by the Nature Conservancy of Canada. Parkland County's 2014 ECMP identifies the Northeast Pt. SW-8-53-26-4 and the North half of SE-8-53-26-4 to the east of the Wagner Natural Area as containing environmentally significant features.

Parkland County's 2014 Environment Conservation Master Plan (ECMP) identifies the Northeast Pt. SW-8-53-26-4 and the North half of SE-8-53-26-4 to the east of the Wagner Natural Area as part of the Wagner Natural Area Environmentally Significant Area (ESA) complex. Although not legally part of the Wagner Natural Area, development on these lands shall be in compliance with policies in this Area Structure Plan, the County's Municipal Development Plan and Land Use Bylaw, and best practices for development as outlined in the 2014 ECMP.

Map 1 – Exploration Restricted Area No. 89



In 2001 the Government of Alberta imposed a directive to restrict drilling and surface energy activities over the entire Natural Area and a majority of the North-west portion of the ASP area. Area “A” restricts drilling and surface energy activities, while Area “B” restricts drilling activity only.

The Wagner Natural Area must be protected. The Acheson/Big Lake Area Master Drainage Plan – Amendment 2011 stated that:

“.. the Area is extremely sensitive to changes in water level; whether it is from groundwater recharge or surface runoff. Development South of the Wagner Natural Area will lead to increased surface runoff that has the potential to enter the natural area. This may have a similar effect on the natural ecosystem as decreasing the groundwater recharge, as flooding of the area will disrupt the existing plant communities. Increasing the total volume of surface runoff should be avoided as much as possible. Any future developments located within the groundwater recharge zone or the natural surface drainage basin for the Wagner Natural Area must be diligent to maintain the surface and groundwater conditions that exist today.”

Threats to the Wagner Area come from changes within its watershed and groundwater recharge area. Two distinct areas will need to be addressed with future development:

- ensuring new development does not impact the groundwater recharge area through increases in surface runoff levels, fluctuations in water levels flowing into the Natural Area, or altered drainage patterns; and,

- ensuring adequate land use buffers are in place to protect the Natural Area from incompatible land uses.

The Wagner Natural Area recharge zone boundaries are identified in Figure 8 – Wagner Natural Area and Recharge Zone.

5.8. Residential

Osborne Acres consists of 41 independently serviced country residential homes on lots ranging in size from 3.7 to 5 acres. Two Municipal Reserve parcels exist in the subdivision and have been retained in their natural state.



A 200 metre wide agricultural area on the north, east and south sides of Osborne Acres buffers existing residential development from future industrial uses. The Acheson Industrial Commercial Area Overlay (defined in the County's Land Use Bylaw) also minimizes conflicts between land uses by outlining regulations for developers locating adjacent to Osborne Acres.

Traffic safety concerns may increase in the Osborne Acres area with increasing industrial development. Traffic and safety issues will need to be addressed through municipal standards and regulations. Extensions of water and sanitary services, and stormwater system and drainage improvements may also be addressed as development levels increase.

Approximately 16 ha (40 acre) of land south of Provincial Highway 16A and east of Spruce Valley Road has been identified for future residential uses. This area is not contained in the ASP boundary.

5.9. Recreation and Open Space

Recreational and planned open spaces are encouraged to improve the health, wellbeing and number of amenity spaces available to both workers and residents in the ASP area. Two potential areas for future development include:

- the redevelopment of the Cholla landfill as a soccer facility; and,
- development of the MR east of Range Road 264 for recreational uses.

The Cholla landfill site (NE 35-52-26-W4M) will be redeveloped as a minor soccer league facility for Edmonton Minor Soccer. The redevelopment of this site creates an important recreational amenity for the Capital Region.



Part of the Municipal Reserve (MR) parcel east of Range Road 264 (part of SW-9-53-26-W4M) can be developed for recreational purposes to benefit both nearby Osborne Acres residents and employees in Acheson. The parcel size and proximate location near Osborne Acres and Wagner Natural Area may also lend to the development of additional community service uses on the parcel.

The Ranch Golf and Country Club (SE 34-52-26-W4M) is an existing club located within the ASP area. The Golf and Country Club is designated as “recreational” in Figure 6 – Future Land Use Concept.

Other recreational opportunities

Future industrial and commercial subdivision in the ASP area will necessitate the designation of Municipal Reserve (MR) lots. MR lots may be used for the purposes of parks and public recreation areas. Where appropriate, MR lots should be linked in the ASP area through an active trail system. Lands surrounding stormwater management facilities in Acheson can also be developed as active trails with seating areas, or with other recreational (sporting and non-sporting) amenities.

5.10. Agriculture

Agriculture is the most dominant land use in the ASP area. Soils have moderate to good capability for agriculture with Canada Land Inventory (CLI) ratings varying from Class 1 to Class 4.

The best rated soils in the ASP area are in the extreme southeast and southwest, with lower class soils prevalent in the northeast sector. Soils in the northwest sector include organic, Class 3 and Class 1 soils. A mixture or predominantly organic and Class 1 soils are found in the extreme northwest corner of the ASP area. Fringe areas immediately east of the City of Spruce Grove and west of Spruce Valley Road continue to be farmed.



The majority of agricultural lands are characterized by grain and hay operations, however, potato farming, nursery stock and fruit crop operations are active in the area. Cattle and horse farming operations also exist in the southeast and southwest sectors of the ASP area. Lilydale Poultry, the only intensive agricultural operation located within the ASP area, is located adjacent to Highway 16A and Spruce Valley Road.

Several plans for transportation improvements by Alberta Transportation, including the planned expansion of Highway 628, and road widening and

collector road development along Highway 60 and 16A will make the retention of larger tracts of continuous agricultural land in the ASP area unfeasible.

Existing agricultural uses in the ASP area will be allowed to continue until lands are converted for commercial and industrial purposes. Existing uses shall continue to comply with all Land Use Bylaw regulations. The timing for the conversion of agricultural lands for commercial and industrial purposes shall comply with Section 7 and Figure 15 – Development Staging.

Agricultural Area A and B lands

Two specific agricultural areas have been identified in the ASP. **Agricultural Area A lands** have been identified for limited development opportunities due to environmental issues, transportation and servicing issues, and proximity to Spruce Grove and existing residential development. Ultimate development of **Agricultural B lands** are considered premature due to existing site servicing, current land uses (oil production) and land compatibility issues that need to be addressed before further development. Future (potential) uses of Agricultural Area B lands *will be reviewed at the next review of the ASP by Parkland County and in conjunction with the City of Edmonton.*

Agricultural uses in both Agricultural Area A and Agricultural Area B areas will be allowed to continue as outlined in this ASP and the County's Land Use Bylaw and any amendments to the Land Use Bylaw.

Agricultural Area A and Agricultural Area B lands are identified in Figure 6 – Future Land Use Concept.

Agricultural Area A – lands south and west of Wagner Natural Area

Agricultural Area A lands have been identified for limited development opportunities and retention for agricultural uses.

Lands south and west of Wagner Natural Area (N ½ 6-53-26 W4M, portion of S ½ 6-53-26-W4M north of the rail road, portion of SW 6-53-26-W4M that is bound by the rail road to the north, Highway 16A to the east, Atim Road to the west, and Township Road 530 to the south, the E ½ 1-53-27 W4M, E ½ 12-53-27 W4M, and W ½ of SW 7-53-27 W4M) are currently designated as Agriculture and Fringe in the Parkland County MDP Bylaw. These same lands are districted as AGG – Agriculture General District and AGR – Agriculture Restrict District in the County's Land Use Bylaw.

A portion of these lands are assumed to be in the Wagner Recharge Zone which feeds groundwater recharge into the Natural Area. This area is also the eastern limit of the City of Spruce Grove residential development. Transportation network and servicing issues, as well as proximity to existing residential development in Osborne Acres are other factors that future land use planning in this area will need to consider.

Agricultural Area B – lands adjacent to Edmonton

Lands adjacent to Edmonton (S ½ 35-52-26 W4M, N ½ 26-52-26 W4M, and NE 27-52-26-W4M) are currently designated as Fringe in the Land Use Concept Map 2 of the Parkland County MDP. These same lands are districted as AGR – Agricultural Restricted District in the County's Land Use Bylaw. In addition to existing districting, these lands are encumbered by existing pipelines and oil production. Lands immediately east of S ½ 35-52-26 W4M and N ½ 26-52-26 W4M are located in the City of Edmonton, and fall within the Lewis Farms ASP. Under this ASP, residential uses will be developed up to the eastern boundary of Hillview Road – adjacent to the Acheson ASP boundaries.

5.11. Oil and Gas

Figure 14 shows that most of the Acheson oil and gas fields are located in the eastern half of the ASP area. There are approximately 16 wells with access roads and associated flow lines and pipelines per section. The oil produced within the Acheson area contains small concentrations of sour gas. Sour gas is natural gas that contains measureable amounts of hydrogen sulphide (H₂S).

The development of gas and oil resources is the responsibility of the Alberta Energy Regulator (AER). Existing easements for infrastructure, as well as separation setbacks from public spaces or residences have been regulated to avoid risk to the public health and safety from sour gas. Safety separation distances are further reinforced through Provincial Subdivision and Development Regulations which requires that all applications for subdivision and development permits within 1.5 km of a sour gas facility be submitted for comments with regard to appropriate setbacks. AER regulations also require the preparation and approval of an Emergency Response Plan that covers the Emergency Planning Zone that has been issued for a significant component of the north half of the ASP area. Development constraints in the plan area include:

- separation distances from sour gas facilities and permanent residences;
- avoiding infrastructure flow lines and pipelines that can complicate or increase infrastructure spending; and,
- maintaining land reserves for service roads for the operation and maintenance of wells or batteries.

Based on the information in Table 1, and assuming the use of conventional technologies, the Acheson fields are expected to remain viable until approximately 2040 (Penn West 2013).

Future development adjacent to the Acheson fields will need to follow existing (regulated) AER setbacks from well sites and from pipeline infrastructure. Simultaneously, area operators will be expected to communicate with the County on a regular basis as to the status of their operations, and on any updates to information including safety and evacuation procedures.

6. OBJECTIVES AND POLICIES

Figure 6 shows the future development concept for the ASP area. Figure 6 also shows lands whose development potential will be reviewed at the next ASP review by Parkland County.

6.1. Industrial and Commercial

6.1.1. Parkland County's Industrial and Commercial Objectives are to:

- 6.1.1.1 Support economical and orderly expansion of the ASP area for business industrial and medium industrial development.
- 6.1.1.2 Support local service commercial development at strategic commercial nodes in the ASP area to provide local services to employees and residents.
- 6.1.1.3 Ensure that all future development in the ASP area is fully serviced as defined within the policies of this Area Structure Plan.
- 6.1.1.4 Ensure development in the ASP area aligns with the Capital Region Growth Plan.
- 6.1.1.5 Ensure industrial and service commercial developments are compatible with other land uses as prescribed in Figure 6 – Future Land Use Concept.
- 6.1.1.6 Ensure development in the ASP area is compatible with future transportation infrastructure.
- 6.1.1.7 Promote environmentally sensitive and aesthetic development in the ASP area.

6.1.2. Industrial and Commercial Policies-Parkland County will:

- 6.1.2.1 Prohibit heavy industrial uses in the ASP area.
- 6.1.2.2 Direct serviced, light industrial development that requires high-visibility from major roadways to areas designated Business Industrial Area in Figure 6 – Land Use Concept. Appropriate Business Industrial uses are uses which require provincial highway or major road visibility, and are characterized by having higher quality building and site design standards, and higher landscaping standards. Business Industrial uses have nuisances contained inside the building envelope.

Typical uses in Business Industrial Areas include manufacturing, research and testing facilities, processing facilities, and logistics and distribution centres. Notwithstanding the above, on-site servicing for future industrial and commercial developments shall be permitted on Lot 2 and Lot 3, Plan 9420960 only.

- 6.1.2.3 Require all developments in the Business Industrial area to comply with BI- Business Industrial District regulations in the County's Land Use Bylaw and any amendments thereto.
- 6.1.2.4 Direct serviced, general industrial uses not requiring high visibility from major roadways, and which are characterized by larger lots with extensive outdoor storage to the Medium Industrial Area designated in Figure 6 – Land Use Concept. Appropriate uses in Medium Industrial areas are characterized as being of a heavier industrial nature than in Business Industrial Areas, and typically have less landscaping requirements due to their location away from provincial highways and roads. Land uses where on-site nuisances may extend beyond the building envelope will be directed to Medium Industrial Areas.
- Typical uses in Medium Industrial Areas include primary manufacturing and processing facilities, and extensive product warehousing and storage facilities (interior and exterior).
- 6.1.2.5 Locate future Medium Industrial uses away from provincial highways and major roads as identified in Figure 6 – Land Use Concept.
- 6.1.2.6 Require all developments in the Medium Industrial area to comply with MI - Medium Industrial District regulations in the County's Land Use Bylaw and any amendments thereto.
- 6.1.2.7 Direct local commercial and retail services to local service nodes identified in Figure 6 – Land Use Concept. Uses in Local Service Commercial Nodes are located in high-visibility areas, and require visibility and access to provincial highways and roads. Appropriate developments in these areas are characterized by higher building, site, and landscaping standards. Nuisances associated with developments are minimal, and do not extend beyond the building footprint. Developments in Local Service Commercial Nodes do not require extensive outdoor storage.
- Typical uses in the Local Service Commercial Nodes include commercial and service retail, accommodation services, convenience stores, eating establishments and service stations.
- 6.1.2.8 Require all developments in Local Service Commercial Nodes to comply with HC – Highway Commercial District as defined in the County's Land Use Bylaw and any amendments thereto.
- 6.1.2.9 Review the County's Land Use Bylaw to ensure land uses and regulations under the existing BI, MI, and HC land use districts align with the intent and purpose of this ASP. Where required, the County will amend the Land Use Bylaw to ensure uses and regulations are appropriate for the ASP area.
- 6.1.2.10 Establish Floor-Area-Ratio (FAR) standards for the ASP area by amending the County's Land Use Bylaw. FAR values, when established, will be based on factors including, but not limited to, lot size and proposed land use as defined in this ASP.

- 6.1.2.11 At the discretion of the Development Authority, require developers in the ASP area to report FAR standards to ensure compliance with Policy 6.1.2.10.
- 6.1.2.12 Discourage developments which do not provide a financial benefit to the County.
- 6.1.2.13 Amend the County's Land Use Bylaw to include new Design Overlays for the ASP area. Design Overlays will be established for the following areas:
- (a) Industrial frontages – industrial lots along highway corridors; and,
 - (b) Local service commercial nodes – strategic lots at highway intersections / interchanges.
- 6.1.2.14 Establish, by amending the County's Land Use Bylaw, the overall purpose and goals of new Design Overlays for the ASP area. The overall purpose of new Design Overlays for the ASP area are to:
- (a) establish guidelines for the siting of development on a site to avoid potential incompatibly issues with adjacent developments and land uses;
 - (b) address landscaping for high-visibility areas that are adjacent to highways in the ASP area;
 - (b) establish appropriate sign regulations that promote business visibility and marketability without diminishing site aesthetics, and, which remain compliant with existing provincial and municipal safety standards; and,
 - (c) establish parking, loading and outside storage regulations to promote overall aesthetics for sites located along major highways in the ASP area.
- 6.1.2.15 Require new developments and expansions to existing developments to comply with Design Overlay regulations outlined in the Land Use Bylaw.
- 6.1.2.16 Define the Industrial Frontages Overlay Boundary in the County's Land Use Bylaw as:
- (a) industrial lots with a front, side, or rear lot lines adjacent to Highway 16, 16A, and Highway 60; and,
 - (b) on un-subdivided quarter sections, irregular shaped lots, or lots extending the entire length of a quarter section, the first 400 m of the lot length measured from the nearest highway right-of-way boundary.
- 6.1.2.17 Define the Local Service Commercial Overlay Boundary in the County's Land Use Bylaw as:
- (a) parcels identified in Figure 7 – Acheson Overlay Boundaries; and,
 - (b) on un-subdivided quarter sections, irregular shaped lots or lots extending the entire length of a quarter section, the first 400 m of the lot length measured from the nearest highway right of way boundary.
- 6.1.2.18 Maintain the Acheson Industrial Commercial Area Overlay as currently identified in the County's Land Use Bylaw.

- 6.1.2.19 Explore the potential to incorporate landscaping along the right-of-ways of existing major highways and existing and new municipal roads in the ASP area. Landscaping, if provided, shall respect existing signage and display of sales materials associated with the existing business from the highway or road.
- 6.1.2.20 Undertake, on a regular basis throughout the year, the mowing and maintenance of existing County road right-of-ways in the ASP area.
- 6.1.2.21 Require all parcels that are districted for industrial or commercial uses under the Land Use Bylaw to be serviced by water, sewer and shallow utilities. The County will not support subdivision, redistricting or development which does not provide full municipal site servicing. All site servicing shall comply with adopted engineering standards and good engineering practices.
- Notwithstanding the above, on-site servicing for future industrial and commercial developments shall be permitted on Lot 2 and Lot 3, Plan 9420960 only.
- 6.1.2.22 Encourage the clustering of compatible businesses that support the sharing of information, products and linkages to resource and transportation networks.
- 6.1.2.23 Encourage infill development on existing vacant or underutilized lots.
- 6.1.2.24 Require developers in the ASP area to secure roadside development permits as required by Alberta Transportation.
- 6.1.2.25 Require all industrial and commercial developments to comply with landscaping standards in the County's Land Use Bylaw. Landscaping shall be provided to the satisfaction of the Development Authority.
- 6.1.2.26 Require buffers, landscape or fence screening, setbacks, or other controls to minimize nuisances between adjacent properties and land uses where appropriate. Screening will be required for properties adjacent to residential uses and public roadways along the length of front, side or rear yards for trash collection, loading, and outdoor storage areas.
- 6.1.2.27 Encourage developers in the ASP area to enhance the landscaping on all development sites.
- 6.1.2.28 Encourage developments with higher nuisance levels in terms of light, dust, noise and traffic to locate in medium industrial areas.
- 6.1.2.29 Require an Outline Plan as part of the subdivision or redistricting process for subdivisions or developments which do not have a previously approved Outline Plan by Parkland County. Outline Plans shall conform to the County's Outline Plans Policy and Procedures.

- 6.1.2.30 Require, at the discretion of the Manager of Planning & Development, a fiscal impact analysis to show the potential benefit of a proposed development to the County at the Outline Plan stage, or at time of redistricting under the County's Land Use Bylaw.
- 6.1.2.31 Ensure the Lilydale confined feeding operation continues to comply with all Natural Resources Conservation Board (NRCB) regulations, the Agricultural Operation Practices Act (AOPA), and other applicable federal, provincial and municipal regulations and plans.
- 6.1.2.32 Encourage the use of green technologies and LEED, BUILT Green or other green building standards for developments. All new developments should strive to meet green building standards from a recognized standards program.
- 6.1.2.33 Ensure the orderly and logical extension of municipal infrastructure and road networks when contemplating future redistricting or subdivision.
- 6.1.2.34 Develop design guidelines for industrial / commercial properties located along Provincial Highways 16 and 60.

6.2. Available lands for Development

6.2.1. Parkland County's Objectives are to:

- 6.2.1.1 Ensure development respects environmental and land compatibility constraints, and that development does not occur until current land uses and servicing constraints have been addressed.

6.2.2. Lands Available for Development - Parkland County will:

- 6.2.2.1 Limit future development on "Environmental & Land Constraints – Limited Development" lands as identified in Figure 5 – Development Status Map, to uses currently prescribed in this ASP and under the County's Land Use Bylaw.
- 6.2.2.2 Allow for continued uses on "Constrained & Delayed Development" lands as identified in Figure 5 – Development Status Map, to uses currently prescribed in this ASP and under the County's Land Use Bylaw.
- 6.2.2.3 Allow on-site servicing for lands identified in Policy 6.2.2.1 and 6.2.2.2 where existing or proposed development complies with the parcel's existing Land Use Bylaw district regulations. The developer as part of the subdivision or development process shall identify how on-site servicing addresses existing site constraints identified in this ASP, and is compliant with all relevant ASP policies.
- 6.2.2.4 Review the future development opportunities for lands identified as "Constrained & Delayed Development" lands at the next review of the ASP.

- 6.2.2.5 Ensure all development in Constrained Lands continue to comply with policies in this ASP, the County's Land Use Bylaw, and all other relevant municipal, provincial or federal plans, policies or studies.

6.3. Servicing

6.3.1. Parkland County's Servicing Objectives are to:

- 6.3.1.1 Ensure a safe and secure servicing network that complies with federal, provincial and municipal health, safety and environmental standards.
- 6.3.1.2 Ensure the full servicing of all industrial and commercial sites in Acheson through the orderly and effective extension of servicing infrastructure as defined within the policies of this Area Structure Plan.
- 6.3.1.3 Locate future servicing infrastructure into regional corridors identified by the Capital Region Board, and to protect corridors from incompatible development.
- 6.3.1.4 Implement recommendations from the Acheson and Big Lake Area Water Servicing Study and Acheson and Big Lake Area Sanitary Servicing study where applicable.
- 6.3.1.5 Investigate the extension and costing of water and sanitary servicing to Osborne Acres.

6.3.2. Servicing Policies-Parkland County will:

- 6.3.2.1 Require all water and sewer infrastructure be designed to conform with existing development criteria, adopted engineering standards and good engineering practices.
- 6.3.2.2 Require all new and existing developments to comply with federal and provincial regulations for health, safety, and environmental protection when constructing, operating or expanding servicing systems.
- 6.3.2.3 Require all parcels in the ASP area that are districted for industrial and commercial uses under the Land Use Bylaw to be serviced by full municipal water, sewer, and shallow utility servicing.
- Notwithstanding the above, on-site servicing for future industrial and commercial developments shall be permitted on Lot 2 and Lot 3, Plan 9420960 only.
- 6.3.2.4 Ensure, upon next review of Parkland County's engineering standards, that servicing standards in the ASP area are comparable, or exceed those of regional partners.

- 6.3.2.5 When existing developments wish to expand, subdivide, or change uses as prescribed in the Land Use Bylaw, require developments to connect to the County's water and sewer systems when these systems are within close proximity of the parcel as determined by Parkland County.
- 6.3.2.6 Require all costs associated with the construction of water and sewer infrastructure on a private site to be borne by the landowner or developer. The landowner or developer shall install connections to the County's water and sewer system to a point and elevation determined by Parkland County.
- 6.3.2.7 Require all industrial and commercial developments in the ASP area to contribute proportionately to the installation and expansion of municipal water and sewer upgrades. Exact contributions will be determined at the time of subdivision and / or re-development, and as specified in the County's Offsite Levy Bylaw(s).
- 6.3.2.8 Ensure that all new developments in the Wagner Natural Area Recharge Zone do not damage the Recharge Zone, or alter natural drainage channels when installing new underground infrastructure.
- 6.3.2.9 Implement recommendations for water servicing as identified in the Acheson and Big Lake Water Servicing Study (2011) where applicable.
- 6.3.2.10 Prioritize, where applicable, the completion of all upgrades to the water distribution system for the ASP area as identified in the Acheson and Big Lake Water Servicing Study (2011). In addition to this policy, the County will prioritize:
- (a) improving fire flow rates by exploring water network looping options in specific locations outlined in the Water Servicing Study;
 - (b) when demand warrants, explore the potential to expand the Zone 3 and Zone 4 reservoirs; and;
 - (c) when demand warrants, explore the construction of an additional reservoir in Zone 3 once expansions to the existing Zone 3 and 4 reservoirs have been upgraded.
- 6.3.2.11 Implement, where applicable, recommendations for sanitary servicing improvements identified in the Acheson and Big Lake Sanitary Servicing Study (2011).
- 6.3.2.12 Require sanitary sewer improvements to comply with Figure 10 – Existing and Proposed (Ultimate Development) Sanitary Sewer Improvements, and the Acheson Area and Big Lake Sanitary Sewer Servicing Study (2011).
- 6.3.2.13 Plan for the ultimate development of the sanitary system in the ASP area. Long term development (ultimate development) of the sanitary system will require the expansion of the Acheson and Bevington Trunks, and the construction of the Atim Road Trunk.

- 6.3.2.14 Explore potential scenarios to provide water and sewer services to Osborne Acres In conjunction with residents. Servicing scenarios will consider cost sharing agreements to offset municipal costs to provide services.

6.3.3. Parkland County's Storm Servicing Objectives are to:

- 6.3.3.1 Ensure storm servicing systems comply with all applicable Alberta Environment and Sustainable Resource Development Water Act approvals.
- 6.3.3.2 Ensure developers in the ASP area reduce runoff quantity, improve runoff quality and protect recharge areas from extreme fluctuations and cumulative decreases in groundwater levels.
- 6.3.3.3 Ensure developers in the ASP area reduce potential non-point sources of pollution from entering stormwater systems, drainage courses and natural areas.
- 6.3.3.4 Pursue the implementation of the general design criteria and recommendations from the Acheson and Big Lake Area Master Drainage Plan – Amendment (2011).

6.3.4. Storm Servicing Policies-Parkland County will:

- 6.3.4.1 Require all developments that fall under Parkland County's Water Act Approval (Approval No. 00287756-00-00) to comply with approval criteria prior to commencing work related to stormwater system construction and operation.
- 6.3.4.2 Require all developments in the ASP area that fall outside of Parkland County Water Act approval area (fenceline boundary) to obtain a separate Water Act approval from Alberta Environment and Sustainable Resource Development prior to commencing work related to stormwater system construction and operation.
- 6.3.4.3 Require all developments in Acheson to comply with the County's Stormwater Management Facility Naturalization Policy when developing on-site stormwater management facilities.
- 6.3.4.4 Require all developers in the ASP area to provide a Stormwater Management Plan as part of the subdivision or development process. Stormwater management plans submitted to meet existing Parkland County Water Act approval requirements, or separate Water Act approval requirements for areas outside of the fenceline boundary may be accepted by the County.
- 6.3.4.5 Require all developers in the ASP area to construct and operate on-site stormwater facilities in compliance with Alberta Environment and Sustainable Resource Development Water Act approval requirements.

- 6.3.4.6 Require the retention of stormwater on site, and discharge at a rate that does not exceed pre-development release rates. In cases where this policy conflicts with the County's Water Act approval, or other Alberta Environment and Sustainable Resource Development Water Act approval, Water Act approval criteria will prevail.
- 6.3.4.7 Require a hydrological assessment be completed for any new development or expansion to existing development considered significant by the Development Authority for developments in the Wagner Recharge Zone, Additional studies identified in Policy 6.6.2.22 may also be required by the Development Authority with all costs and mitigation work identified in any assessment borne by the developer.
- 6.3.4.8 Require all costs associated with the construction of on-site stormwater facilities on a private site to be borne by the developer / landowner. Stormwater facilities shall be constructed to the satisfaction of Parkland County.
- 6.3.4.9 Require that any on site, private stormwater infrastructure that connects to municipal stormwater systems is developed to a point and elevation determined by Parkland County.
- 6.3.4.10 Require all industrial and service commercial developments in the ASP area to contribute proportionately to the installation and expansion of municipal storm servicing facilities. Contributions will be determined at the time of subdivision and / or re-development as specified in the County's Offsite Levy Bylaw.
- 6.3.4.11 Require all developments in the ASP area to follow the general design criteria and Best Management Practices outlined in the Acheson and Big Lake Area Master Drainage Plan – Amendment (2011) when planning and constructing on-site stormwater management facilities.
- 6.3.4.12 Review findings from the Acheson Big Lake Master Drainage Plan – Amendment (2011) to determine how to reduce surface runoff from Kalwin Pond, Ellis, West Acheson and Sherwin stormwater facilities.
- 6.3.4.13 Identify an appropriate outlet and effective discharge system for stormwater runoff for areas south of Provincial Highway 16A.
- 6.3.4.14 Develop an implementation strategy for reducing surface runoff and erosion along Morgan Creek based on the recommendations from the Acheson and Big Lake Area Master Drainage Plan – Amendment (2011).
- 6.3.4.15 Encourage developers in the ASP area to use existing wetlands and low-lying depressions for on-site stormwater management.

- 6.3.4.16 Require the remediation of subsurface drainage channels that are damaged or altered through the installation of on-site stormwater systems. Mitigation on damaged subsurface drainage channels shall be undertaken with work and costs borne by the developer.
- 6.3.4.17 Encourage the development community to reduce potential non-point sources of pollution from entering the stormwater system. All potential non-point pollution sources shall be managed on-site and not released into the County's stormwater system.
- 6.3.4.18 Encourage developers in the ASP area to use green infrastructure when developing their sites. Techniques include, but are not limited to, green (eco-roofs), bioswales, vegetated curb extensions, landscaped ditches, rainfall harvesting and bioretention cells to reduce the amount of surface runoff, sedimentation, and pollution.
- 6.3.4.19 Encourage developers in the ASP area to maximize groundwater infiltration by using permeable surfacing materials when constructing all on-site parking, outdoor storage areas, drive lanes, and loading areas.
- 6.3.4.20 Continue to investigate suitable green technologies which can be used to reduce the amount of impervious materials used in the development process.
- 6.3.4.21 Ensure stormwater servicing improvement recommendations identified in the Acheson and Big Lake Master Drainage Plan – Amendment (2011) have been considered, and where applicable, implemented at the time of subdivision or development permit approval.
- 6.3.4.22 Explore potential scenarios to address stormwater management issues in Osborne Acres in conjunction with residents. Any potential solutions shall consider cost sharing agreements to offset improvements.

6.3.5. Parkland County's Shallow Utilities Objectives are to:

- 6.3.5.1 Support the orderly, logical, and effective extension of all shallow utilities in the ASP area to support future development.
- 6.3.5.2 Encourage the use of alternative energy infrastructure for all developments.
- 6.3.5.3 Locate shallow utilities into existing infrastructure corridors, and regional corridors where they exist, and protect such corridors from incompatible development.
- 6.3.5.4 Control the location, appearance, installation and alteration of communication towers in the ASP area.

6.3.6. Shallow Utilities Policies-Parkland County will:

- 6.3.6.1 Promote joint partnerships between developers and utility providers to achieve cost reductions and to minimize disruptions in infrastructure service provision.
- 6.3.6.2 Support the use of alternative energy sources, including solar, wind and geothermal to minimize the dependency on existing utility infrastructure.
- 6.3.1.2 Require the cost of installing and providing shallow utilities on-site to be borne by the developer, and addressed at the subdivision or development permit process.
- 6.3.1.3 Require utility companies to avoid damage to existing natural areas, wetlands and subsurface drainage channels during installation. Mitigation work to repair damages shall be undertaken and paid for by the Utility Company.
- 6.3.1.4 Require utility companies to locate shallow utility infrastructure in existing infrastructure corridors where possible.
- 6.3.1.5 Require a development permit for the location, construction and modification of communication towers. Industry Canada is responsible for regulating the wireless spectrum and communication towers.
- 6.3.1.6 Work with the Acheson Business Association and Acheson businesses to implement the County's Intelligent Community Plan in the ASP area.

6.4. Transportation

6.4.1. Parkland County's Transportation Objectives are to:

- 6.4.1.1 Provide for the safe and efficient movement of traffic on highways, collector and local roads in the ASP area.
- 6.4.1.2 Keep apprised of Alberta Transportation network improvements for the ASP area, and to plan Acheson's transportation network accordingly.
- 6.4.1.3 Create an internal road network that plans for optimal access management.
- 6.4.1.4 Promote and maximize access to the CNR main line.
- 6.4.1.5 Explore the potential for developing transit service in the ASP area.
- 6.4.1.6 Collaborate with the City of Edmonton to address outstanding infrastructure issues with Hillview Road.

6.4.2. Transportation Policies-Parkland County will:

- 6.4.2.1 Liaise with Alberta Transportation regularly to ensure that the County's information on provincial transportation plans is relevant and up to date.
- 6.4.2.2 Review traffic or safety concerns identified by Acheson businesses or residents, and work with Alberta Transportation to address these issues where applicable.
- 6.4.2.3 Implement the construction of roadways based on the recommendations from the Parkland County Transportation Master Plan.
- 6.4.2.4 Require all industrial and service commercial developments in the ASP area to contribute proportionately to the construction and expansion of new and existing municipal roads. Exact contributions will be determined at the time of subdivision and / or development as specified in the County's Offsite Levy Bylaw.
- 6.4.2.5 Complete a Transportation Master Plan for Acheson. This Master Plan shall incorporate all proposed transportation improvements required by Alberta Transportation, while anticipating future growth needs for the ASP area.
- 6.4.2.6 Assist with planned upgrades to Provincial Highways 60 and 628 by assisting with right-of-way land acquisition, and providing technical assistance to Alberta Transportation and the City of Edmonton when required.
- 6.4.2.7 Undertake a transportation study to determine spacing and intersection improvements for the Provincial Highway 60 and Provincial Highway 628 interchange.
- 6.4.2.8 Work with landowners on the west side of Hillview Road to ensure that additional right-of-way land requirements are secured at time of subdivision. Off-site levies collected for subdivisions or developments adjacent to Hillview Road will go towards future intersection upgrades for intersections onto Hillview Road.
- 6.4.2.9 Work with Alberta Transportation to designate Provincial Highway 60 as a High Load Corridor through the ASP area.
- 6.4.2.10 Work with Alberta Transportation to identify possible short term improvements for the intersection of Provincial Highway 16A and Spruce Valley Road, and the potential for an ultimate (future) interchange at this location.
- 6.4.2.11 Encourage Alberta Transportation to keep critical accesses onto Highway 16A open as long as possible to traffic. This includes, but is not limited to, the Zone 3 access at Range Road 264, and the Zone 4 access onto Bevington Road.
- 6.4.2.12 Upon closure of the Northview Road / Provincial Highway 60 intersection, review traffic volumes and consider future upgrades to Range Road 263A (Vanderwell Road) between Township Road 531A and Northview Road.

- 6.4.2.13 Investigate the new construction or expansion of existing roads in the ASP area as identified in Figure 12 – Future Transportation Improvements:

Zone 1:

- (a) a new collector road extending west from Kalwin Business Park to the Edmonton Truck and Trailer sites located west of Range Road 264;
- (b) a new collector road from Northview Road to Spruce Valley Road, south of Osborne Acres;
- (c) extension of Acheson Road west of SW-5-53-26-W4M and west of Spruce Valley Road;

Zone 4:

- (d) extension of Acheson Road east of Provincial Highway 60 to Hillview Road;

Zones 5 and 6:

- (e) a new collector road connecting Spruce Valley Road to a new intersection approximately 1 Kilometre south of Provincial Highway 60 (approved by Alberta Transportation) and extending east past Pinchebeck Road and connecting to Hillview Road.
- (f) a new arterial road connecting Spruce Valley Road to a new intersection approximately 1.5 Kilometres south of Provincial Highway 60 and extending east past Pinchebeck Road and connecting to Hillview Road; and,
- (g) improvements to Range Road 264 south of Provincial Highway 16A to provide access to parcels in SE 29-52-26-4 and SW 28-52-26-W4M, and to connect proposed new roads identified in Figure 12 – Future Transportation Improvements to Spruce Valley Road.

- 6.4.2.14 Require the construction of internal roads in the ASP area to comply with the County's Municipal Engineering standards. The locations of all internal collectors and arterials shall generally comply with the locations as outlined in the Parkland Transportation Master Plan and this ASP.

- 6.4.2.15 Require new roads in the ASP area to be designed to minimize surface runoff from entering the stormwater system. Techniques such as landscaped ditches, bioswales and landscaped shoulders may be used to reduce surface runoff.

- 6.4.2.16 Review the amount of traffic volume on Northview Road and Osborne Drive to ensure engineering safety standards are maintained.

- 6.4.2.17 Ensure that appropriate traffic control devices are in place on Northview Road to manage non-local / non-residential traffic travelling through Osborne Acres. Potential traffic control and calming devices include, but are not limited to, advisory, regulatory and directional signage, and seasonal speed bumps located on Osborne Drive.

- 6.4.2.18 Encourage the creation of future spur lines in the ASP area by promoting businesses that require rail transport be located adjacent to the CNR main line.

- 6.4.2.19 Incorporate, at the subdivision stage, future roadside pullouts for signage, mailboxes and transit stops.
- 6.4.2.20 Participate in joint planning with Alberta Transportation, adjacent municipalities, and the Capital Region Board to explore the development of a transit system to service the ASP area.
- 6.4.2.21 Undertake a transit feasibility study to identify potential ridership numbers, transit network staging and potential transit stops, routes and stations.
- 6.4.2.22 Undertake a Traffic Impact Assessment (TIA) for each zone after the completion of the Parkland County Transportation Master Plan. Exact contributions to complete TIA's will be recovered from developers through the County's Offsite Levy Bylaw.
- 6.4.2.23 Refer future Traffic Impact Assessments (TIA's) which are adjacent to the City of Edmonton to the City's Transportation Department for review and feedback. Where appropriate, the City of Edmonton's Transportation Department may be asked to participate in the development of these TIA's.
- 6.4.2.24 Continue to collaborate with the City of Edmonton to resolve outstanding issues related to future road improvements for Hillview Road.
- 6.4.2.25 Continue to acquire right-of-way lands at the time of subdivision to assist the City of Edmonton with future road improvements to Hillview Road.

6.5. Protective Services

6.5.1. Parkland County's Protective Services Objectives are to:

- 6.5.1.1 Ensure reliable and efficient fire services for the ASP area.
- 6.5.1.2 Ensure reliable and efficient policing and bylaw service for the ASP area.
- 6.5.1.3 Encourage onsite surveillance in the ASP area, and support Crime Prevention through Environmental Design principles as part of the development process.

6.5.2. Protective Services Policies-Parkland County will:

- 6.5.2.1 Ensure fire services staff are trained and equipped to address fire incidents in the ASP area.
- 6.5.2.2 Maintain existing mutual aid agreements with adjacent municipalities to ensure fire protection coverage in the ASP area.

- 6.5.2.3 Review the Fire Services Master Plan prior to the next update of the ASP to ensure the Master Plan accurately reflects service demands, development levels and call volumes in the ASP area.
- 6.5.2.4 Consider a future satellite fire hall for the SE corner of the ASP area. The need for an additional fire hall will be reviewed at the next update of the ASP.
- 6.5.2.5 Liaise on a regular basis with the RCMP detachments in Spruce Grove and Stony Plain to ensure service levels are maintained in the ASP area.
- 6.5.2.6 Continue to monitor bylaw enforcement call volumes and call types to determine service changes. Additional enforcement resources may be required as development levels increase in the ASP area.
- 6.5.2.7 Encourage onsite security surveillance for industrial and commercial developments in the ASP area.
- 6.5.2.8 Encourage developers to consider Crime Prevention through Environmental Design (CPTED) principles to support on-site security. Principles that may be used include increasing natural surveillance through strategically placed glazing, reducing “blind spots”, lighting, and the use of appropriately sized landscaping and ground cover.
- 6.5.2.9 Continue to advocate for the completion of the Provincial Highway 60 overpass. This overpass is critical to ensure adequate response times for the south end of the ASP area.
- 6.5.2.10 Explore the conversion of the current rural addressing system to an urban addressing system that will benefit other Capital Region responders.

6.6. Environment

6.6.1. Parkland County’s Environment Objectives are to:

- 6.6.1.1 Encourage and promote energy efficiency and green building practices in building and site design.
- 6.6.1.2 Explore alternative energy sources and water conservation measures for all forms of development.
- 6.6.1.3 Minimize negative environmental impacts including air, water and surface pollution, and potential nuisances including light, noise and sound pollution that may be associated with industrial development.

- 6.6.1.4 Prohibit development in the Wagner Natural Area and protect the Recharge Zone from impacts which may include disruptions to the natural surface and sub-surface water balance.
- 6.6.1.5 Retain existing municipal and environmental reserve parcels as buffers between incompatible land uses.

6.6.2. Environment Policies-Parkland County will:

- 6.6.2.1 Promote the use of green building materials and energy efficient technologies to reduce environmental impacts and energy consumption. All developers should consider the following in their developments:
- (a) using non-toxic, biodegradable and recycled building materials;
 - (b) using energy efficient devices and building materials during construction;
 - (c) orientating buildings to maximize solar gains and minimizes weather impacts; and,
 - (d) building to LEED, BUILT Green or other green standards for building technology.
- 6.6.2.2 Encourage initiatives to reduce overall energy consumption including, but not limited to, cogeneration, district energy sharing systems, and the use of biomass energy sources for onsite or district heating.
- 6.6.2.3 Encourage developers in the ASP area to examine the recycling of by-products between compatible sectors.
- 6.6.2.4 Encourage individual and joint partnerships between developers in the ASP area that promote eco-industrial development and eco-industrial parks.
- 6.6.2.5 Promote water conservation and water recycling for all developments. All developments will consider site applications such as rain water harvesting and xeriscaping for landscaping.
- 6.6.2.6 Encourage developers in the ASP area to explore the use of alternative energy sources including solar, wind and geothermal energy sources to reduce energy consumption.
- 6.6.2.7 Require developers in the ASP area to meet the goals and strategies of the Parkland County Integrated Community Sustainability Plan (ICSP) where applicable. The County may request information showing how ICSP goals and strategies were met.
- 6.6.2.8 Encourage developers in the ASP area protect the environment at all stages of development including construction, operation and site reclamation.

- 6.6.2.9 Ensure that, at site construction stages (including site clearing, stripping, and grading) developers have installed techniques and controls to minimize erosion and silt depositing into existing watercourses and drainage systems.
- 6.6.2.10 Require developers in the ASP area to manage all environmental nuisances including light, sound, dust and noise pollution on-site. Developments shall adhere to federal and provincial policies related to air, soil and water pollution standards.
- 6.6.2.11 Require all developments in the ASP area to comply with the County's Dark Sky Outdoor Policy.
- 6.6.2.12 Require all developers in the ASP area to locate outdoor lights away from adjacent properties, and reduce the number of outdoor lights on sites where possible.
- 6.6.2.13 Require developers in the ASP area to identify all environmentally significant areas (Wagner Natural Area), kettle depressions, drainage courses, wetlands and recharge zones at the Outline Plan stage. Developers shall identify how the natural habitat, vegetation, soil and water (quality and quantity) of these areas will be protected and impacts minimized. Existing wetlands shall be identified and classified by a qualified aquatic biologist.
- 6.6.2.14 Require all costs associated with remediation or compensation for impacted or removed wetlands to be borne by the developer. Remediation and compensation shall comply with current Alberta Environment and Sustainable Resource Development Wetland Restoration / Compensation Regulations.
- 6.6.2.15 Require developments to be constructed in a way that protects existing wetlands on site and minimizes negative impacts on water quality, quantity and wetland habitat and vegetation.
- 6.6.2.16 Require stormwater, for developments in the Wagner Recharge Zone, to be retained on site with post-development release rates not exceeding that of pre-development flow rates.
- 6.6.2.17 Undertake an ecological assessment of Agricultural Area A. The assessment shall determine an appropriate buffer and transition of land uses from the Wagner Natural Area.
- 6.6.2.18 May require a biophysical assessment for any new subdivision or development which falls within 0.8 km of the Wagner Natural Area as defined in this ASP. Work and costs of the biophysical assessment shall be borne by the developer.
- 6.6.2.19 Require an additional development setback from the top of bank for Morgan Creek. Development setbacks will be determined, in part, through the use of the County's Riparian Setback Matrix Model.

- 6.6.2.20 Require onsite containment systems to be used by all developments in the ASP area to minimize seepage of oil, gas and other materials into the groundwater. Containment systems will allow for water infiltration, yet block all hazardous products from filtering into groundwater systems. Installation and maintenance costs for all containment systems shall be borne entirely by the developer.
- 6.6.2.21 Require a hydrological or hydrogeological assessment for any subdivision, development, or expansion to an existing development in the Wagner Recharge Zone that is deemed significant by the Development Authority.
- 6.6.2.22 Require, at the discretion of the Development Authority, additional hydrogeological, geological and / or environmental assessments be completed for any developments on, or adjacent to environmentally significant areas identified in Policy 6.6.2.13.
- 6.6.2.23 Require that assessments identified in policies 6.6.2.21 and 6.6.2.22 include mitigation measures required to repair or replace damaged natural conditions. Work and costs associated with remediation of damaged areas shall be borne by the developer.
- 6.6.2.24 Require all assessments identified in policies 6.6.2.21 and 6.6.2.22 be undertaken by a qualified hydrologist, biologist, geological or environmental specialist. Parkland County may require proof of credentials as part of the development process.
- 6.6.2.25 Ensure that any future development in the Wagner Natural Area Recharge Zone does not remove water from the subsurface drainage system, or alter subsurface water drainage channels during construction, operation or reclamation.
- 6.6.2.26 Require that any future development in the Wagner Recharge Zone is designed to promote groundwater infiltration. Developments in these areas shall consider maximizing landscaping, using permeable surface and paving materials, and using green technologies where applicable.
- 6.6.2.27 Require developers and landowners in the ASP area to comply with Alberta Environment and Sustainable Resource Development exploration restrictions for Restricted Area No. 89 (protection of Wagner Natural Area and Recharge Zone). Restricted areas are identified in Section 5.7 of this ASP.
- 6.6.2.28 Prohibit all types of industrial, commercial and residential development in the Wagner Natural Area.
- 6.6.2.29 Protect natural areas through Municipal Reserve or Environmental Reserve designation at the time of subdivision. Existing municipal and environmental reserve parcels shall continue to be used as buffers between incompatible land uses.
- 6.6.2.30 Investigate the potential to establish conservation easements to protect areas deemed to have environmental significance. Potential areas include, but are not limited to those identified in Policy 6.6.2.13.

6.7. Residential

6.7.1. Parkland County's Residential Objectives are to:

- 6.7.1.1 Allow existing residential land uses in the ASP area to continue, and prohibit the creation of new multi lot residential development.
- 6.7.1.2 Maintain appropriate setbacks between residential and industrial/commercial uses, and to minimize conflicts between land uses.
- 6.7.1.3 Reduce nuisance impacts between residential and industrial uses by maintaining the Acheson Industrial Commercial Overlay and reinforcing landscaping standards and controls for developments.
- 6.7.1.4 Minimize industrial/commercial traffic impacts on Osborne Drive.

6.7.2. Residential Policies-Parkland County will:

- 6.7.2.1 Allow for continued residential uses in Osborne Acres. Residential development in Osborne Acres will be limited to development on pre-existing lots.
- 6.7.2.2 Prohibit the creation of multi-parcel residential subdivisions in the ASP area.
- 6.7.2.3 Maintain the 200 metre industrial use setback on the north, east, and south sides of Osborne Acres as identified in the County's Land Use Bylaw.
- 6.7.2.4 Require that new developments which fall in the Acheson Industrial Commercial Area Overlay boundaries comply with all applicable County Land Use Bylaw regulations and any amendments thereto.
- 6.7.2.5 Undertake enforcement actions on developments that do not comply with Land Use Bylaw regulations.
- 6.7.2.6 Require site buffers which may include a combination of fencing, landscaping and berms to be located along property lines adjoining a residential area for industrial and service commercial lots. Site buffers shall be installed to the satisfaction of Parkland County.
- 6.7.2.7 Encourage developers in the Acheson Industrial Commercial Overlay area to consult with the Development Authority prior to initiating the subdivision or development process.
- 6.7.2.8 Encourage developments adjacent to Osborne Acres and other residential areas to locate outdoor storage away from residential uses.

- 6.7.2.9 Where appropriate, amend the County's Land Use Bylaw to limit the development potential for lands in the 200 m industrial use setback adjacent to Osborne Acres. Only uses in Policy 6.8.2.6 will be encouraged in this area.
- 6.7.2.10 Require developers in the ASP area to implement all Alberta Environment and Sustainable Development Fire Smart Policies where applicable.
- 6.7.2.11 Explore potential traffic safety improvements for Osborne Drive. Improvements should only proceed if traffic safety issues have been identified through a review of traffic volume for Northview Road and Osborne Drive as identified in Policy 6.4.2.16.
- 6.7.2.12 Explore potential scenarios to provide water and sewer services to Osborne Acres in conjunction with residents. Servicing scenarios shall consider cost sharing agreements to offset municipal costs for servicing.

6.8. Recreation and Open Space

6.8.1. Parkland County's Recreation and Open Space Objectives are to:

- 6.8.1.1 Develop facilities and park areas in the ASP area that offer recreational opportunities.
- 6.8.1.2 Develop a trail network that links natural areas, reserve parcels and storm management facilities in the ASP area.
- 6.8.1.3 Incorporate findings from the 2009 Recreation, Parks & Open Space Master Plan for the ASP area where applicable.

6.8.2. Recreation and Open Space Policies-Parkland County will:

- 6.8.2.1 Encourage the expansion of existing recreational facilities in the ASP area, including indoor, outdoor and publically and privately owned facilities.
- 6.8.2.2 Promote the continued redevelopment of the Cholla landfill into a regional soccer facility for Edmonton Minor Soccer, and work with Engineering Services and the City of Edmonton to determine site accessibility, servicing, project timelines and potential funding partnerships.
- 6.8.2.3 Explore potential opportunities to develop portions of the Municipal Reserve located at SW 9-53-26-W4M for recreational purposes in conjunction with local residents. Potential site amenities may include multi use sport fields, trail systems, off leash dog areas, picnic facilities and parking areas. Park development shall follow recommendations from the 2009 Recreation, Parks and Open Space Master Plan.

- 6.8.2.4 Continue to explore potential development opportunities for outdoor and indoor recreational facilities on municipal reserve parcels in the ASP area.
- 6.8.2.5 Retain the Municipal Reserve parcels in Osborne Acres as naturalized open space.
- 6.8.2.6 Consider, where appropriate, developing uses in the Osborne Acres 200 m industrial use setback area. Appropriate uses may include Municipal Reserve lots, stormwater management facilities, and non-motorized recreational trails.
- 6.8.2.7 Explore, in partnership and consultation with landowners, developers, and adjacent municipalities, the opportunity to develop a regional trail network. Alignment of the trail network shall require extensive consultation and permissions being granted by current land owners.
- 6.8.2.8 Consider, at the time of Municipal Reserve dedication, opportunities to receive cash-in-lieu for reserve dedications in the ASP area, or combinations of cash-in-lieu and land. Any decision for cash-in-lieu shall take into consideration the policies and intent of this ASP.
- 6.8.2.9 Incorporate trails into the construction of new stormwater management facilities. Trail construction should comply with Municipal Engineering Standards and the recommendations from the 2009 Recreation, Parks and Open Space Master Plan.
- 6.8.2.10 Update the County's Recreation, Parks & Open Space Master Plan, and review the potential to incorporate trails on MR lands, and on the existing and future right-of-ways in the ASP area.
- 6.8.2.11 Investigate the potential of entering into capital contribution agreements with developers to offset costs for the expansion and maintenance of public recreational amenities in the ASP area.

6.9. Agriculture

6.9.1. Parkland County's General Agriculture Objectives are to:

- 6.9.1.1 Encourage sustainable and environmentally responsible agricultural practices.

6.9.2. Parkland County's Agricultural Area A (lands south and west of Wagner Natural Area) Objectives are to:

- 6.9.2.1 Allow continued agricultural and limited development opportunities on lands south and west of Wagner Natural Area while respecting the sensitivity and natural characteristics of these lands.

- 6.9.2.2 Undertake an ecological study of the Wagner Natural Area and Recharge Zone lands.
- 6.9.2.3 Undertake future joint planning initiatives with the City of Spruce Grove to explore future compatible land uses.
- 6.9.2.4 Allow on-site servicing on Agricultural Area A lands for developments that comply with existing Land use Bylaw district regulations.

6.9.3. Parkland County's Agricultural Area B (lands adjacent to the City of Edmonton)

Objectives are to:

- 6.9.3.1 Allow for continued agricultural uses on lands adjacent to the City of Edmonton for the foreseeable lifespan of the Acheson ASP.
- 6.9.3.2 Allow for continued non-agricultural uses (oil production) until such time that compatible future land uses have been defined through joint planning with the City of Edmonton.
- 6.9.3.3 Allow on-site servicing on Agricultural Area B lands for developments that comply with existing Land use Bylaw district regulations.

6.9.4. General Agriculture Policies (all areas outside of Agricultural A and B lands) - Parkland County will:

- 6.9.4.1 Allow current uses that comply with existing Land Use Bylaw district regulations and this ASP to continue until phasing of development requires the land to be converted for industrial or commercial purposes.
- 6.9.4.2 Require new uses proposed in the ASP area to comply with this Area Structure Plan and the County's Land Use Bylaw where applicable.
- 6.9.4.3 Allow on-site servicing on agricultural lands where existing or proposed development complies with the parcel's existing Land Use Bylaw district regulations. Developers shall be required as part of the subdivision or development process to outline how on-site servicing complies with all relevant ASP policies.

6.9.5. Agricultural Area A (land south and west of Wagner Natural Area) Policies- Parkland County will:

- 6.9.5.1 Undertake an ecological study of Agricultural A lands to identify the appropriate buffers and transition of land uses from the Wagner Natural Area.
- 6.9.5.2 Reserve the right to undertake any additional ecological, biophysical and hydrogeological studies it deems appropriate for Agricultural A lands.

- 6.9.5.3 Maintain the agricultural districting of all Agricultural Area A lands under the County's Land Use Bylaw. Lands in Agricultural Area A districted AGR – Agricultural Restricted in the Land Use Bylaw will remain AGR – Agricultural Restricted. Lands in Agricultural Area A districted AGG – Agricultural General in the Land Use Bylaw will remain AGG – Agricultural General.
- 6.9.5.4 Require all new and existing land uses in Agricultural Area A to comply with existing district regulations for AGR – Agricultural Restricted and AGG – Agricultural General as outlined in the County's Land Use Bylaw, and in this ASP.
- 6.9.5.5 At the discretion of the Development Authority, require additional hydrological or hydrogeological studies to be completed to support subdivision or development permit applications that fall in Agricultural Area A lands.
- 6.9.5.6 Consistent with Policy 6.1.2.29, require an Outline Plan from developers interested in future development if proposed development is different than current development anticipated in this ASP. The Outline Plan will address:
- (a) proximity to the Wagner Natural Area and development on the Recharge Zone;
 - (b) existing transportation issues;
 - (c) proximity of development adjacent to the City of Spruce Grove, and proximity to existing residential development;
 - (d) servicing of lands if future development is anticipated.
 - (e) all other requirements as defined in the County's Outline Plan Policy and Procedures
- 6.9.5.7 Respect the potential wildlife corridor that connects the City of Spruce Grove to the Wagner Natural Area. The County will work with the City of Spruce Grove and landowners to conserve the natural areas that currently exist along this corridor.
- 6.9.5.8 Consider the development of a non-motorized recreational trail adjacent to the wildlife corridor between the City of Spruce Grove and Wagner Natural Area. The development of recreational trails is contingent upon timing of joint planning initiatives with the City of Spruce Grove and on extensive consultation with County landowners.
- 6.9.5.9 Require developments which are proposed on agricultural lands located within the Recharge Zone to comply with all Policies in this ASP and applicable Land Use Bylaw regulations.
- 6.9.5.10 Require developers in Agricultural Area A lands, as part of the development permit process, to identify how environmental damage will be mitigated during construction for any development.

- 6.9.5.11 In partnership with Wagner Natural Area Society, the City of Spruce Grove, and other stakeholders, continue to develop appropriate conservation and protection practices for the Wagner Natural Area and all other lands identified in Agricultural Area A.
- 6.9.5.12 Allow on-site servicing on Agricultural Area A lands where existing or proposed development complies with the parcel's existing Land Use Bylaw district regulations. Developers shall be required as part of the subdivision or development process to outline how on-site servicing addresses site constraints identified in Section 5.3 of this ASP, and complies with relevant ASP policies for Agricultural Area A lands.

**6.9.6. Agricultural Area B (lands adjacent to the City of Edmonton) Policies-
Parkland County will:**

- 6.9.6.1 Maintain the AGR – Agricultural Restricted districting in the County's Land Use Bylaw to allow landowners the ability to continue existing uses on Agricultural Area B lands.
- 6.9.6.2 Require that non-agricultural uses comply with the County's Land Use Bylaw and any amendments to the Land Use Bylaw.
- 6.9.6.3 Consult with the City of Edmonton and landowners to identify future compatible land uses on Agricultural Area B lands when oil production is no longer operational.
- 6.9.6.4 Explore joint planning initiatives and potential cost sharing of studies with the City of Edmonton in planning future compatible land uses for Agricultural B lands.
- 6.9.6.5 Prohibit redistricting of lands within Agricultural Area B from the AGR-Agricultural Restricted District until servicing studies and consultations between Parkland County and the City of Edmonton have been completed.
- 6.9.6.6 Allow on-site servicing on Agricultural Area B lands where existing or proposed development complies with the parcel's existing Land Use Bylaw district regulations. Developers shall be required as part of the subdivision or development process to outline how on-site servicing addresses site constraints identified in Section 5.3 of this ASP, and complies with relevant ASP policies for Agricultural Area B lands.
- 6.9.6.7 Review the ultimate development potential of Agricultural Area B lands at the next review of the ASP by Parkland County.

6.10. Oil and Gas Development

6.10.1. Parkland County's Oil and Gas Objectives are to:

- 6.10.1.1 Promote continued public health and safety around oil and gas infrastructure, and to avoid incompatible adjacent development until production is completed.
- 6.10.1.2 Protect oil and gas infrastructure from encroachment by abutting uses.

6.10.2.Oil and Gas Development Policies-Parkland County will:

- 6.10.2.1 Manage encroachment relative to oil and gas infrastructure through the use of easements or separately titled parcels that protect lands within setback areas from future development. Restrictive covenants shall also be used to protect oil and gas infrastructure from incompatible development and land uses.
- 6.10.2.2 Require all developments to comply with Alberta Energy Regulator (AER) setback requirements, and applicable federal and provincial health and safety regulations pertaining to development near oil and gas well sites.
- 6.10.2.3 Require applications for subdivision or development to comply with all regulations pertaining to development near abandoned wells as identified in the Province of Alberta Subdivision and Development Regulation, and AER Directive 079.
- 6.10.2.4 Establish a communication protocol for how the County communicates with oil and gas representatives. The protocol shall address how safety and evacuation procedures are communicated to the County and to the public.
- 6.10.2.5 Request all oil, gas and pipeline operators in the ASP area to forward updated copies of their Emergency Response Plans to assist with continued and appropriate emergency response planning for the ASP area.

7. DEVELOPMENT STAGING

The ASP area shall be developed in an orderly and logical manner. Development shall follow staging identified in Figure 15 – Development Staging. All developments shall comply with policies in this Area Structure Plan and any other applicable Municipal, Provincial and Federal policies, standards and legislation.

7.1.1. Parkland County's Development Staging Objectives are to:

- 7.1.1.1 Establish an orderly and logical development pattern for the ASP area that acknowledges:
 - (a) existing (and planned) infrastructure upgrades;
 - (b) approved Alberta Transportation and County plans;
 - (c) proximity to existing and serviced developments; and,
 - (d) existing AER setback requirements, and all applicable Federal and Provincial health and safety regulations pertaining to development near oil and gas infrastructure
- 7.1.1.2 Allow development on Constrained Lands only where development complies with policies in this ASP, existing district regulations in the County's Land Use Bylaw and any amendments thereto.

7.1.2. Development Staging Policies-Parkland County will:

- 7.1.2.1 Ensure that the development of the ASP area follows an orderly and logical development pattern as identified in Figure 15 – Development Staging. Development shall follow the hierarchy of staging:
 - (a) Stage 1 – development to occur from 0 – 24 months;
 - (b) Stage 2 – development to occur between 2 - 5 years;
 - (c) Stage 3 – development to occur from 5 – 10 years.
- 7.1.2.2 Focus immediate development and redevelopment opportunities in Stage 1. Development shall also contemplate infill redevelopment on existing parcels and development on underutilized parcels on lands identified as Stage 1.
- 7.1.2.3 Allow development to proceed to Stage 2 upon build out of Stage 1. Development timing for Stage 2 will be contingent on the extension of servicing from Stage 1, and approved Alberta Transportation plans. Development will generally occur on Stage 2 lands between 2 – 5 years.
- 7.1.2.4 Allow development to proceed to Stage 3 upon build out of Stage 2. Development timing for Stage 3 will be contingent on the extension of servicing from previous stages, and approved Alberta Transportation plans. Development will generally occur between 5 – 10 years.
- 7.1.2.5 Not support the creation of multiple, irregular shaped lots where individual site development opportunities are constrained by existing site conditions.

- 7.1.2.6 Allow development to occur outside of the development staging as long as the following criteria are met by developers:
- (a) the developer has provided full municipal servicing on their site;
 - (b) the developer has retained all Alberta Transportation approvals, and complies with all applicable Alberta Transportation plans;
 - (c) all AER setback requirements and applicable federal and provincial health and safety regulations for development near oil infrastructure have been met (if required);
 - (d) all on-site decommissioning or land reclamation required on a particular site has been completed, and copies of reclamation certificates provided to Parkland County;
 - (e) the developer has complied with the policies in this Area Structure Plan and with other applicable municipal, provincial and federal policies, standards, legislation and agreements; and,
 - (f) development is adjacent to a parcel, or portion of a parcel which has existing municipal servicing. Land considered adjacent includes contiguous parcels, and parcels that would be contiguous to the existing service land if not for a road right-of-way, rail right-of-way, utility right-of-way, or reserve land.
- 7.1.2.7 Require the following be provided in addition to existing County requirements for subdivision and development permit applications:
- (a) written proof of meeting AER setbacks from existing or abandoned oil infrastructure has been met;
 - (b) written proof that compliance with federal and provincial health and safety regulations pertaining to development near oil infrastructure has been met (where applicable); and,
 - (c) where oil and gas production has been expended, copies of signed reclamation certificates from Alberta Environment and Sustainable Resources.
- 7.1.2.8 Reserve the right to delay the development of an individual site, or development staging where:
- (a) municipal services cannot be adequately provided;
 - (b) Alberta Transportation approvals have not been issued; and,
 - (c) AER setback requirements have not been met; and land reclamation certificates have not been issued.
- 7.1.2.9 Any amendments to Figure 15- Development Staging will require an amendment to the Acheson ASP, and may require an amendment to the County's Municipal Development Plan, and the Land Use Bylaw.

8. NEXT STEPS AND IMPLEMENTATION

8.1. Next Steps

Capital Regional Board

The Acheson ASP will be referred to the Capital Region Board (CRP) as part of the Regional Evaluation Framework (REF), after public hearing and second reading by Parkland County Council. After comments have been received by the CRB, Council will then proceed with third reading and final adoption of the ASP.

8.2. Implementation

Municipal Development Plan and Land Use Bylaw amendments

Amendments to the County's Municipal Development Plan and the Land Use Bylaw will be required to ensure compliance with Section 633 of the Municipal Government Act. Municipal Development Plan amendments will be undertaken concurrently with the ASP approval. Land Use Bylaw amendments will be identified and undertaken after approval of the ASP and Municipal Development Plan amendments.

Implementation Matrix

County Administration will develop an Implementation Matrix identifying how policies in the Area Structure Plan will be implemented. The matrix will identify items including (but not limited to) lead and secondary organizations, potential (broad) timelines and additional resources required for implementation.

Review of Acheson Industrial Area Structure Plan

The Acheson ASP will be kept up-to-date. The County will review the ASP, at minimum, once every five (5) years to ensure the plan reflects development in the ASP area, and remains compliant with municipal, provincial and federal statutory plans, policies and standards.

9. APPENDIX ONE: PLAN STATISTICS

9.1. Land Use Statistics

The following table outlines the proposed land use statistics for the ASP area. Statistics have been broken down by land uses within the ASP area. No residential development is proposed in the ASP area at this time, and therefore no statistics related to density is provided.

	Area (ha)	% of Gross area
Gross Area	5,019 ha	100 %
Wagner Natural Area	253.3 ha	5.0%
Osborne Acres	70.7 ha	1.4%
Agricultural Area A	505.3 ha	10.0%
Environmental Lands (North of Osborne Acres)	22.6 ha	0.5%
Rogers Tower Location	62.6 ha	1.2%
Agricultural Area B	323.8 ha	6.5%
Penn West Lands	364.0 ha	7.3 %
Highway 628 Road Alignment Lands	507.7 ha	10.1%
Industrial Use Setback <i>(does not include 16.3 ha on the eastern setback which is included in existing County owner lands statistic)</i>	70.0 ha	1.4%
SWMF and proposed Alberta Transportation right-of-way on Pt. of SW 3-53-26-W4M	18.9 ha	0.4%
Miscellaneous Constrained Lands	13.7 ha	0.3%
Total Constrained Lands (gross) <i>(includes Wagner Natural Area and Osborne Acres in gross lands calculation)</i>	2,212.6 ha	44.1%
Road RW & CNR RW <i>(in constrained lands)</i>	55.1 ha	1.1%
Total Constrained Lands (net)	2,157.5 ha	43.0%
Developed Areas	881.6 ha	17.5%
Pending development - 2014	113.5 ha	2.3%
Existing County owned lands (MR, ER, PUL)	127.0 ha	2.5%
Existing roads and CNR right-of-way (current)	347.3 ha	6.9%
Gross Development Area	1,337.0 ha	26.6%
Future MR and road dedication – removed at 10% and 30% of lands)	534.8 ha	10.6%
Net lands available for development	802.2 ha	16.0%
TOTAL	5,019 ha	100%

Notes:

1. Numbers reported above are approximate. Specific land use numbers should be confirmed at the time of subdivision.
2. Future MR dedication was calculated by removing 10% of land from the Gross Development Area.
3. Future roads dedication was calculated by removing 30% of land from gross industrial commercial designation, industrial holdings and future recreational designation.

Disclaimer:

Net development calculations may be lower than reported due to using a maximum of 10% and 30% amounts to calculate MR and road allowance percentages outlined in the Municipal Government Act.

9.2. Employment statistics

9.2.1. Capital Region Board Employment projections – Parkland County

Employment projections for the Capital Region municipalities were updated by the Capital Region Board in the spring of 2014 as part of the planned update to the *Capital Region Growth Plan*.

The *Capital Region Employment Projections Update* (March 2014) prepared by Stokes Economic Consulting and Strategic Projections predict a steady increase in employment for Parkland County. The following employment projections (until 2044) were reported for Parkland County:

Parkland County employment generation (from <i>CRB Employment Projections Update</i>) (March 2014)				
2014	2044 (low)	2044 (high)	Avge change (low) between 2014-2044	Avge change (high) between 2014-2044
10,600	11,300	14,600	0.2 %	0.9 %

9.2.2. Parkland County – ASP area employment projections

Three scenarios for job growth in Acheson have been prepared. Scenarios use the following values:

- 6 jobs / net hectare (low scenario) – based on data from Parkland County (2014) this scenario is the average (rounded) number of jobs / net hectare for Zone 1 of the ASP area. Zone 1 reflects a zone with equal proportion of Business Industrial, Medium Industrial areas, and a large proportion of highway and major road frontage for future local service commercial lots.

The County estimates approximately 2,500 employees work in Zone 1 (full time, part time, seasonal) as of September 2014.

- 8 jobs / net hectare (medium scenario) – based on data from Parkland County (2014) this scenario is the average (rounded) number of jobs / net hectare for Zone 2 of the ASP area. Development currently observed in Zone 2 may be typical of future development occurring in Zones 5 and 6.

The County estimates approximately 2,300 employees work in Zone 2 (full time, part time, seasonal) as of September 2014.

- 10.5 jobs / net hectare (high scenario) – Parkland County calculated the total (estimated) jobs / net hectare for the ASP area by dividing the total jobs for current developed areas and dividing by available land for development in the ASP area (see table below) The high scenario reflects the highest potential job growth for the ASP area. *Note: The high scenario also factored in Zone 3, which, due to existing lot density, experiences a large job / net hectare value at 23.2 jobs / net hectare.*

Refer to Map 3 - Acheson Industrial Area Zones for a map outlining the economic zones in the ASP area.

Parkland County - Estimated current jobs / net hectare		
Estimated total jobs (2014)	Total current developed lands (S1 lands) (in net hectares)	Current estimated jobs / net hectare for ASP area (rounded up)
9,023	878.1 net hectares	10.5 jobs / net hectare
NOTE: S1 lands located in the W ½ of 11-53-26-W4M located south of Township Road 531A were not included in calculating this statistic.		

Projections and Analysis:

Utilizing approximately 636.1 ha of available land for the development, the following **new job** projections for the ASP area have been calculated:

Estimated employment generation: S2 – S3 designated lands (low, medium and high scenarios)				
	Hectares of available land for development (net)	Estimated new jobs		
		6 jobs/ net ha	8 jobs/ net ha	10.5 jobs /ha
Stage 2 (S2) lands	163.7 ha	982 jobs	1,310 jobs	1,719 jobs
Stage 3 (S3) lands	472.4 ha	2,834 jobs	3,779 jobs	4,960 jobs
Net lands	636.1 ha			
Total new jobs		3,816 jobs	5,089 jobs	6,679 jobs
Note: Lands designated Constrained Lands were not included in employment projection calculations due to pre-existing land use and environmental constraints, or delayed development due to current land use or servicing restraints.				

Adding the current 9,023 jobs in Stage 1 (7,670 full time, 1,353 part-time jobs), the following full build-out estimates for the ASP are:

Total estimated ASP employment generation (full build-out) S1-S3 lands (low, medium and high scenarios) Full time positions calculated at 85% of total jobs.									
	6 jobs/ha			8 jobs/ha			10.5 jobs /ha		
	TOTAL	Full	Part	TOTAL	Full	Part	TOTAL	Full	Part
Stage 1 (S1) lands	9,023	7,670	1,353	9,023	7,670	1,353	9,023	7,670	1,353
Stage 2 (S2) lands	982	835	147	1,310	1,114	196	1,719	1,461	258
Stage 3 (S3) lands	2,834	2,409	425	3,779	3,212	567	4,960	4,216	744
Total by job type		10,914	1,925		11,996	2,116		13,347	2,355
TOTAL JOBS AT ASP BUILD-OUT	12,839			14,112			15,702		

Analysis: - Total employment (full time and part time) for the ASP area (high scenario) is above the estimated 14,600 total jobs for Parkland by 2044. Given current trends in development in the ASP area, the County estimates a modest employment growth for Acheson. As such, new employment values more consistent with the medium scenario are projected for the ASP area. Total values for the medium scenario are **slightly below** the estimated 2044 employment value of 14,600 jobs estimated by the Capital Region Board, and are estimated at **14,112 potential jobs for the ASP area for growth in S1 – S3 lands.**

Long Term Employment projections - Acheson:

In 2014, Parkland County retained Miller Dickenson Blais, and Watson & Associates Economists to undertake an Employment and Industrial Land review for Parkland County. The review – *Parkland County – Employment and Industrial Land Strategy* included future employment growth projections for the Acheson ASP area.

Parkland County – Employment and Industrial Land Strategy (Parkland County, 2014) reports that by 2044, approximately 14,080 additional industrial and commercial type jobs will be located in the ASP area. (Parkland County, 2014). Given current employment estimates (9,023 total jobs for the ASP area), total employment projections to 2044 for Acheson may equal approximately 23,103 total full time, part time, and seasonal jobs for the ASP area and Capital Region.

Note: The *Parkland County – Employment and Industrial Land Strategy* used a higher rate of employment growth over the CRB forecasted period ending 2044. CRB 2014 March Projections calculates future employment as a function of municipal population growth and not as proposed jobs created for employment centres.

Future Trends

Base data outlined in the ASP, along with other economic development data prepared by the County and Capital Region Board will be used to continue to track trends in employment generation for the ASP area.

DRAFT

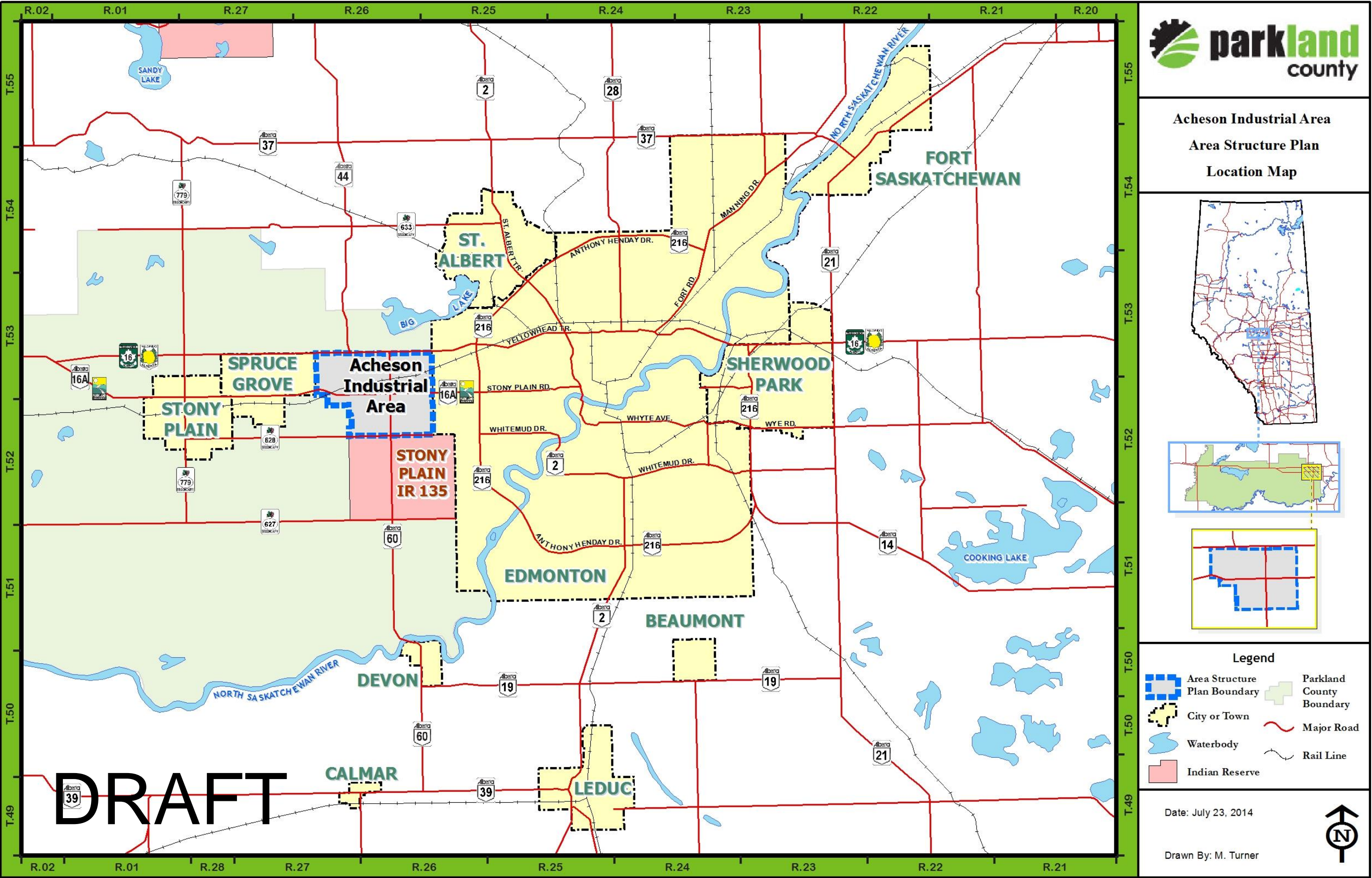


FIGURE 1 –EXISTING LAND USE DISTRICTING (Land Use Bylaw 20-2009) (December 2014, Version 7)

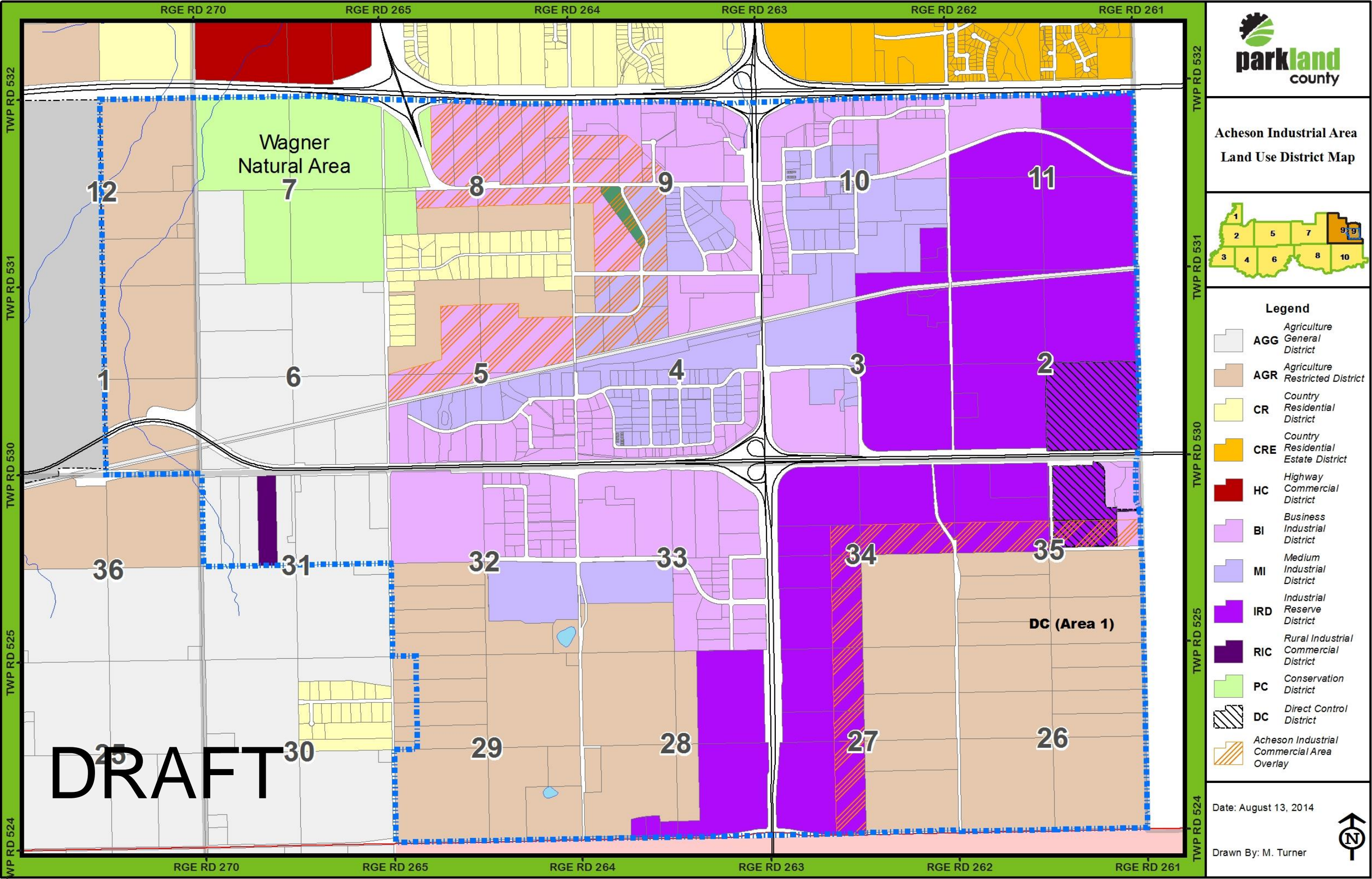


FIGURE 2 –AREA STRUCTURE PLAN BOUNDARY (December 2014, Version 7)

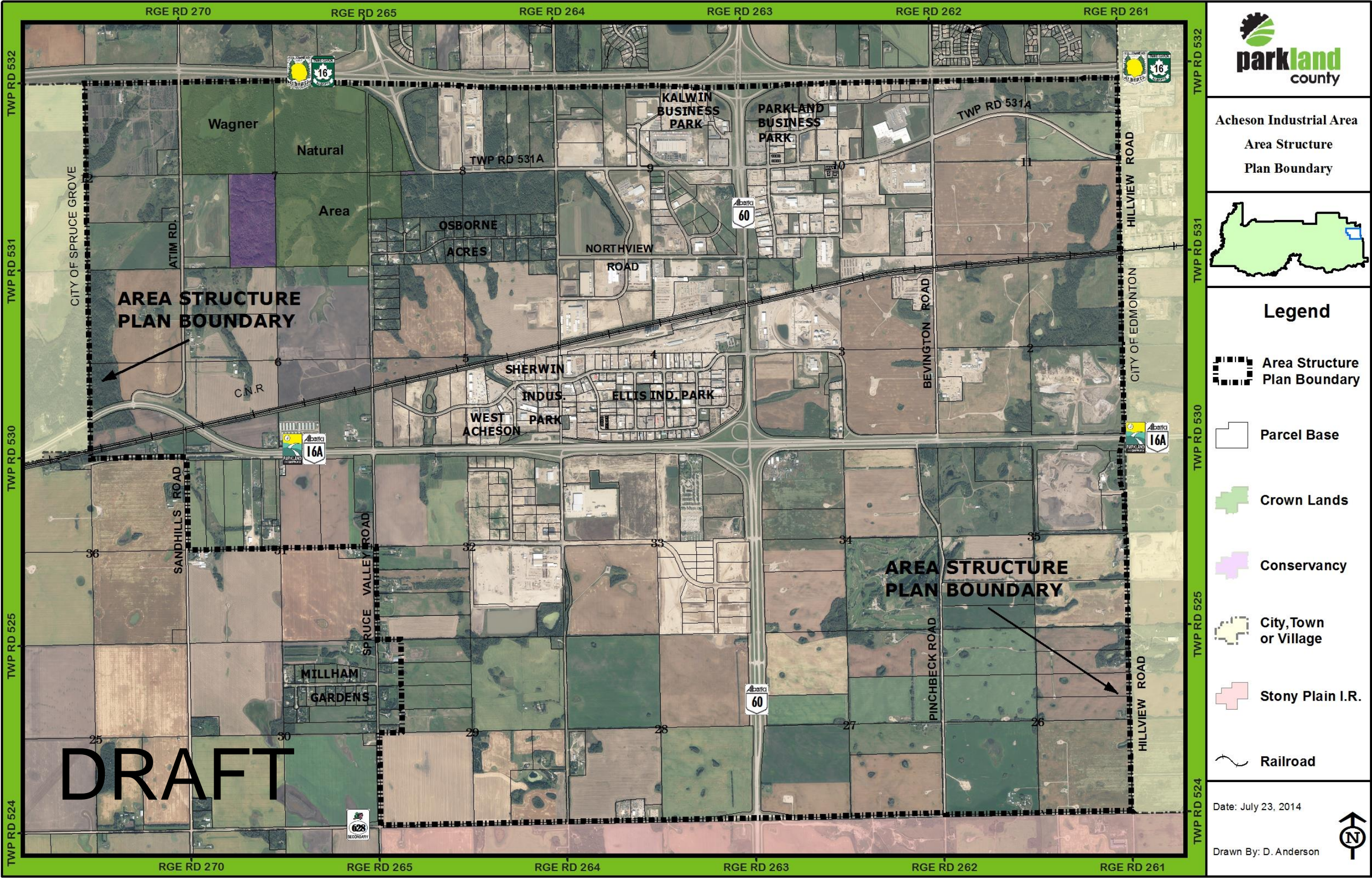


FIGURE 3 –TOPOGRAPHY (December 2014, Version 7)

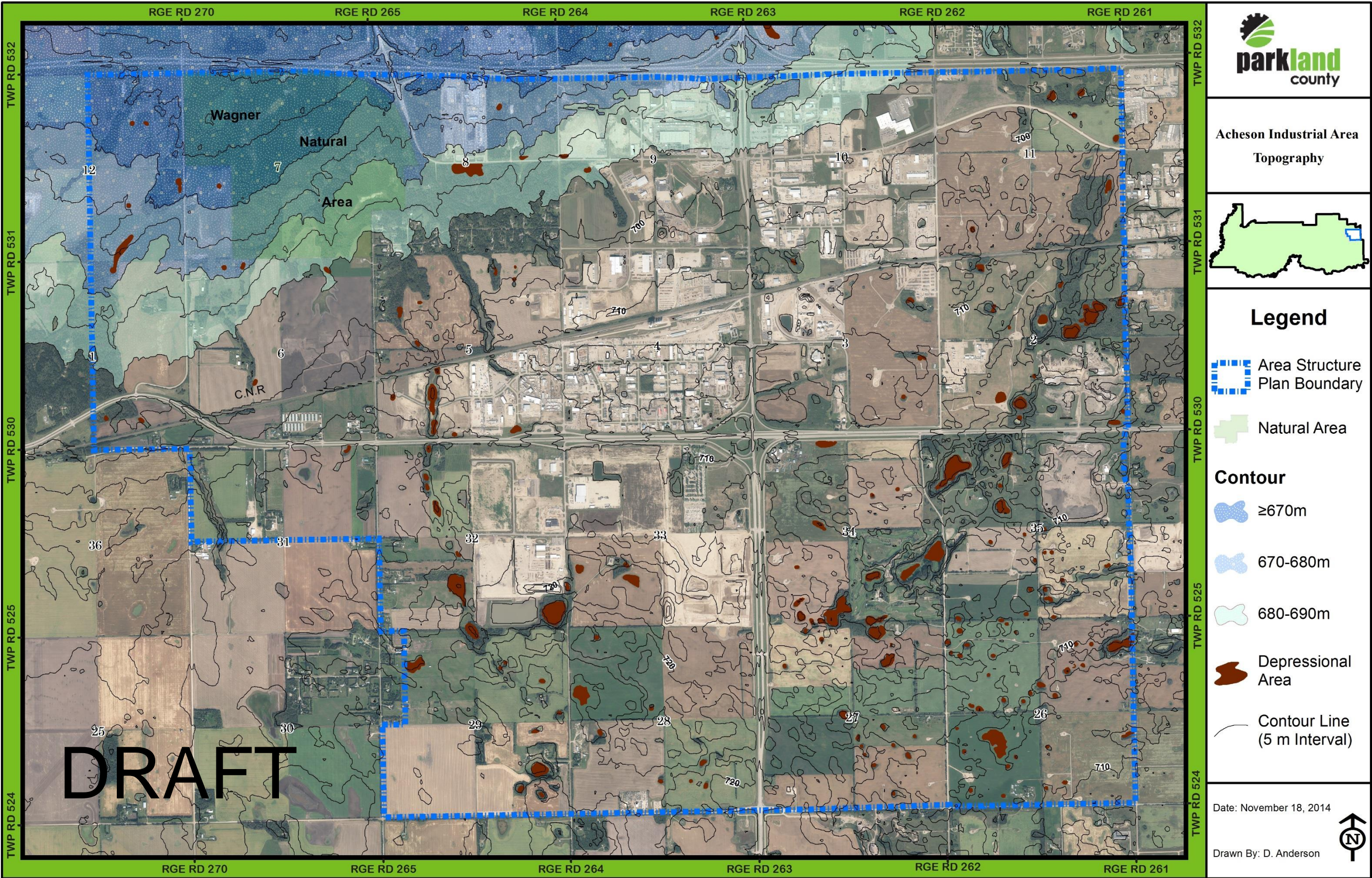
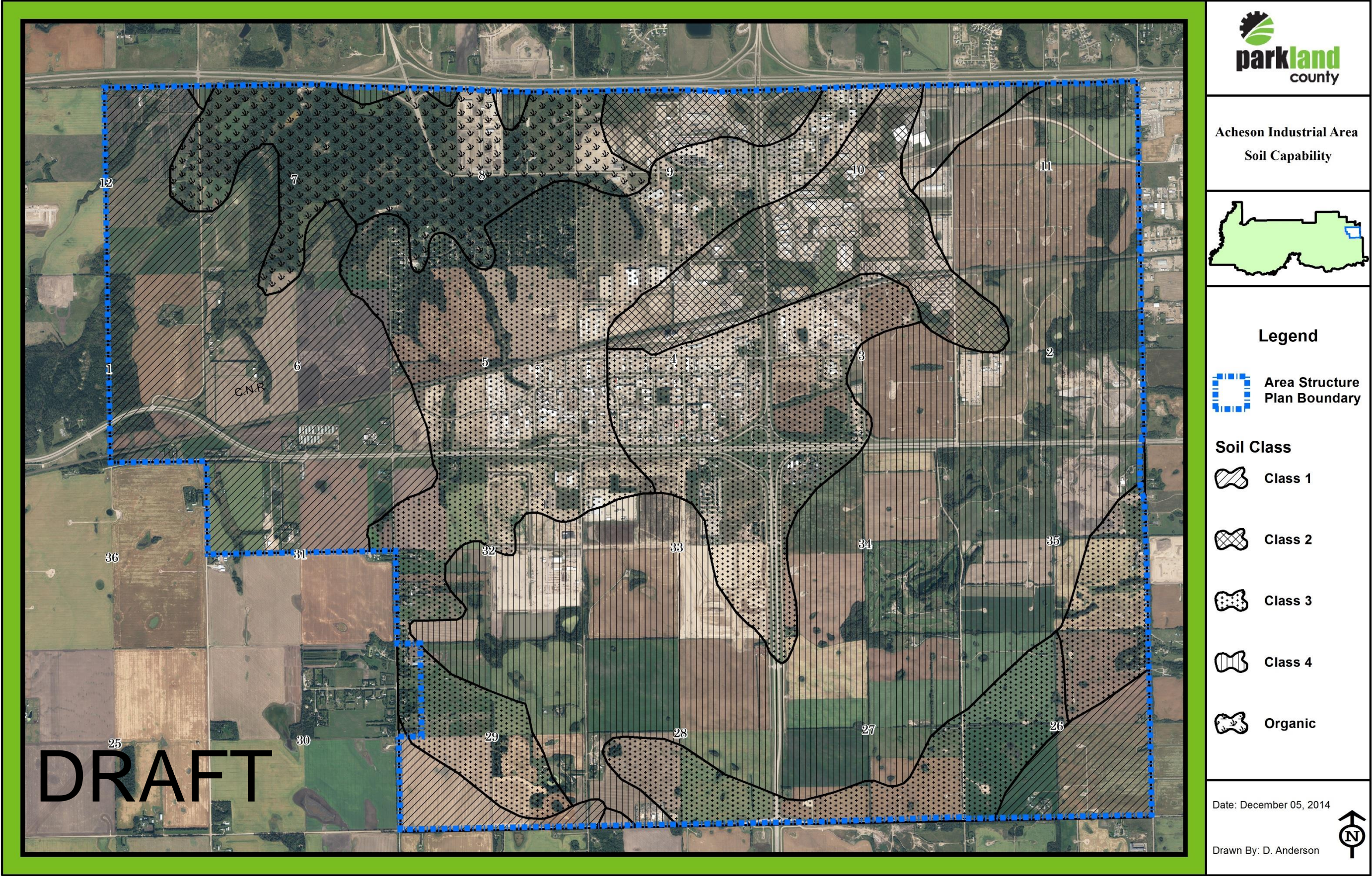


FIGURE 4 –SOIL CAPABILITY (December 2014, Version 7)



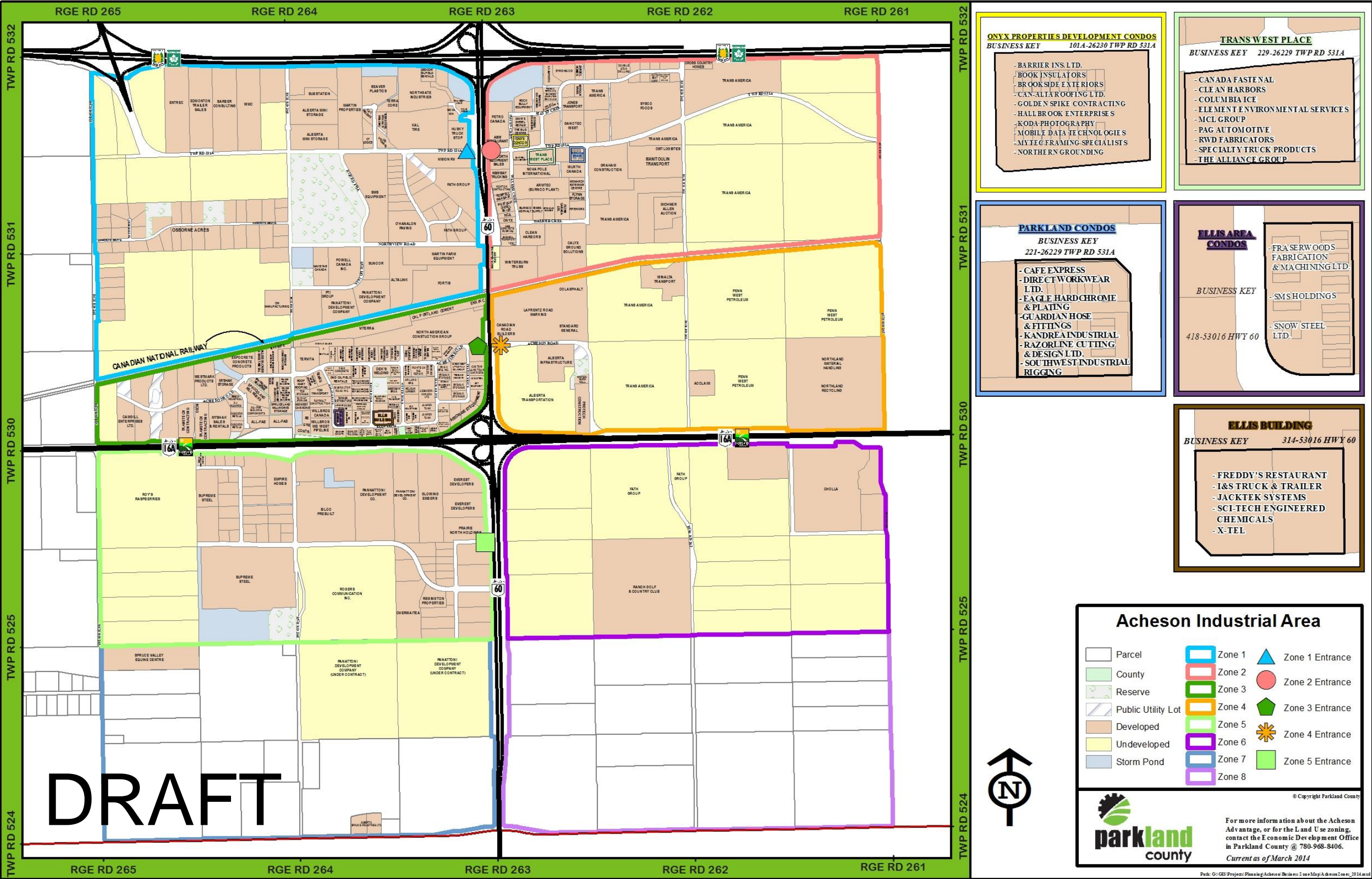


FIGURE 5 – DEVELOPMENT STATUS MAP (as of September, 2014)

(December 2014, Version 7)

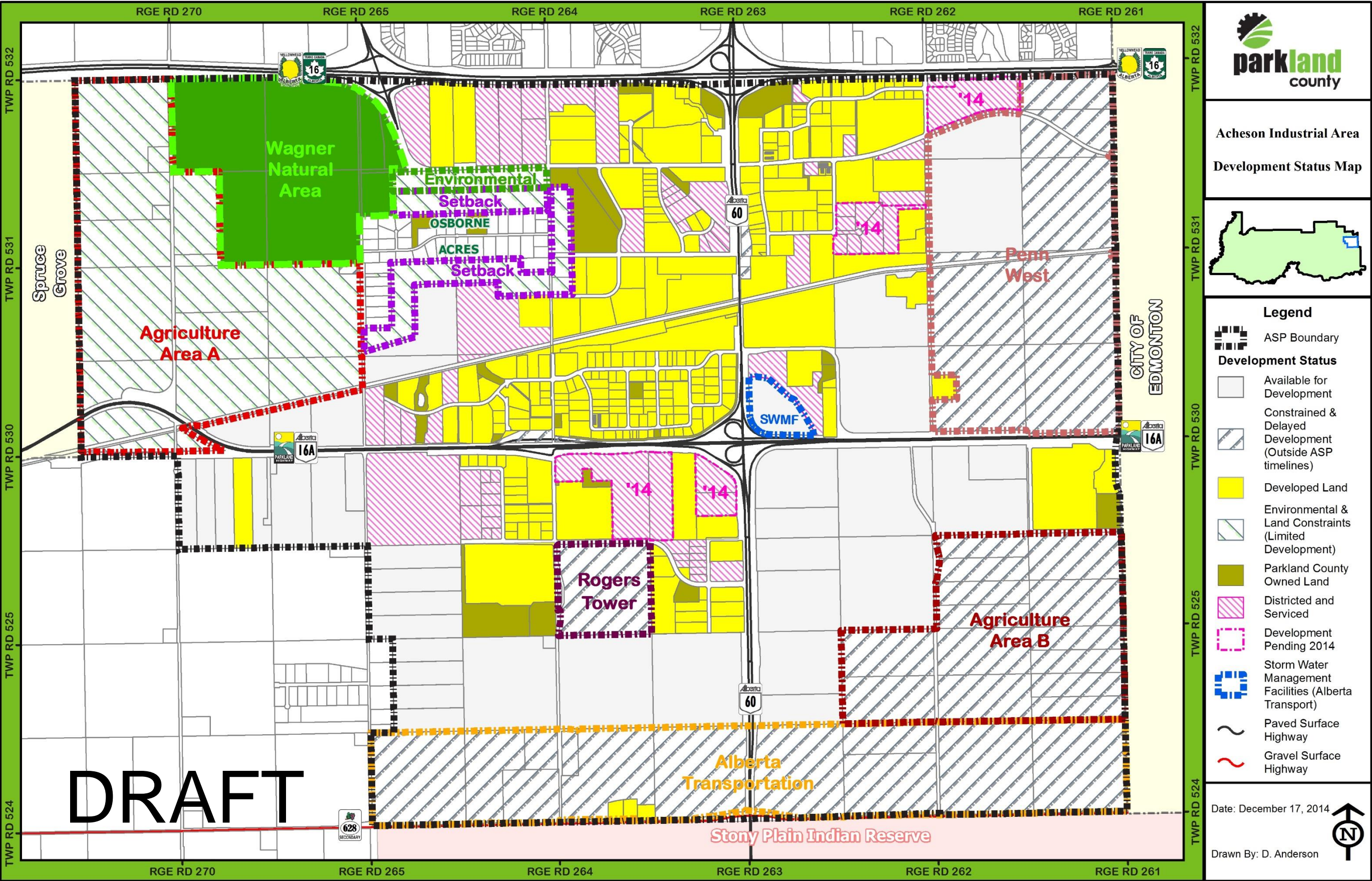


FIGURE 6 –FUTURE LAND USE CONCEPT (December 2014, Version 7)

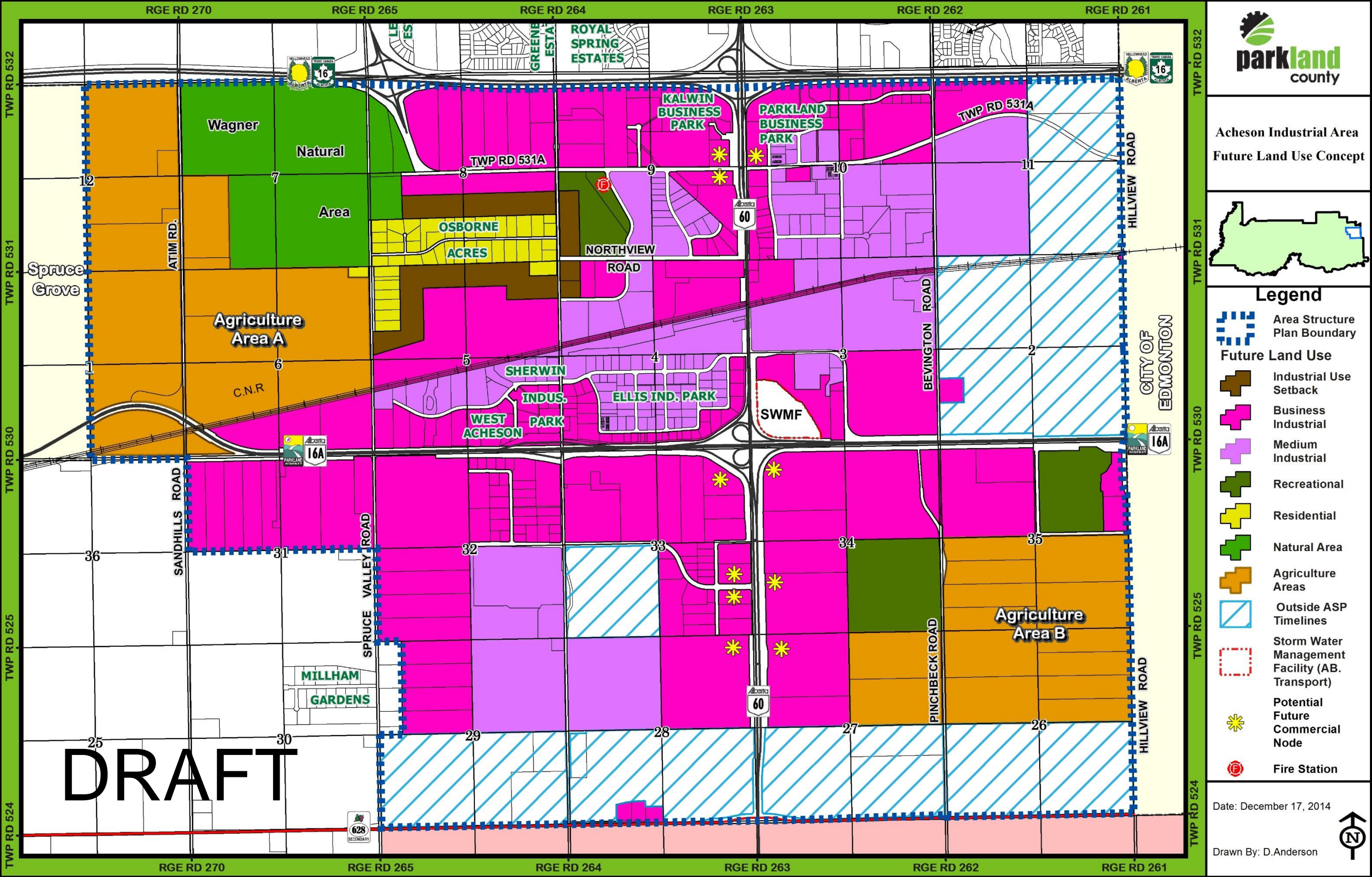


FIGURE 7 –ACHESON OVERLAY BOUNDARIES

(December 2014, Version 7)

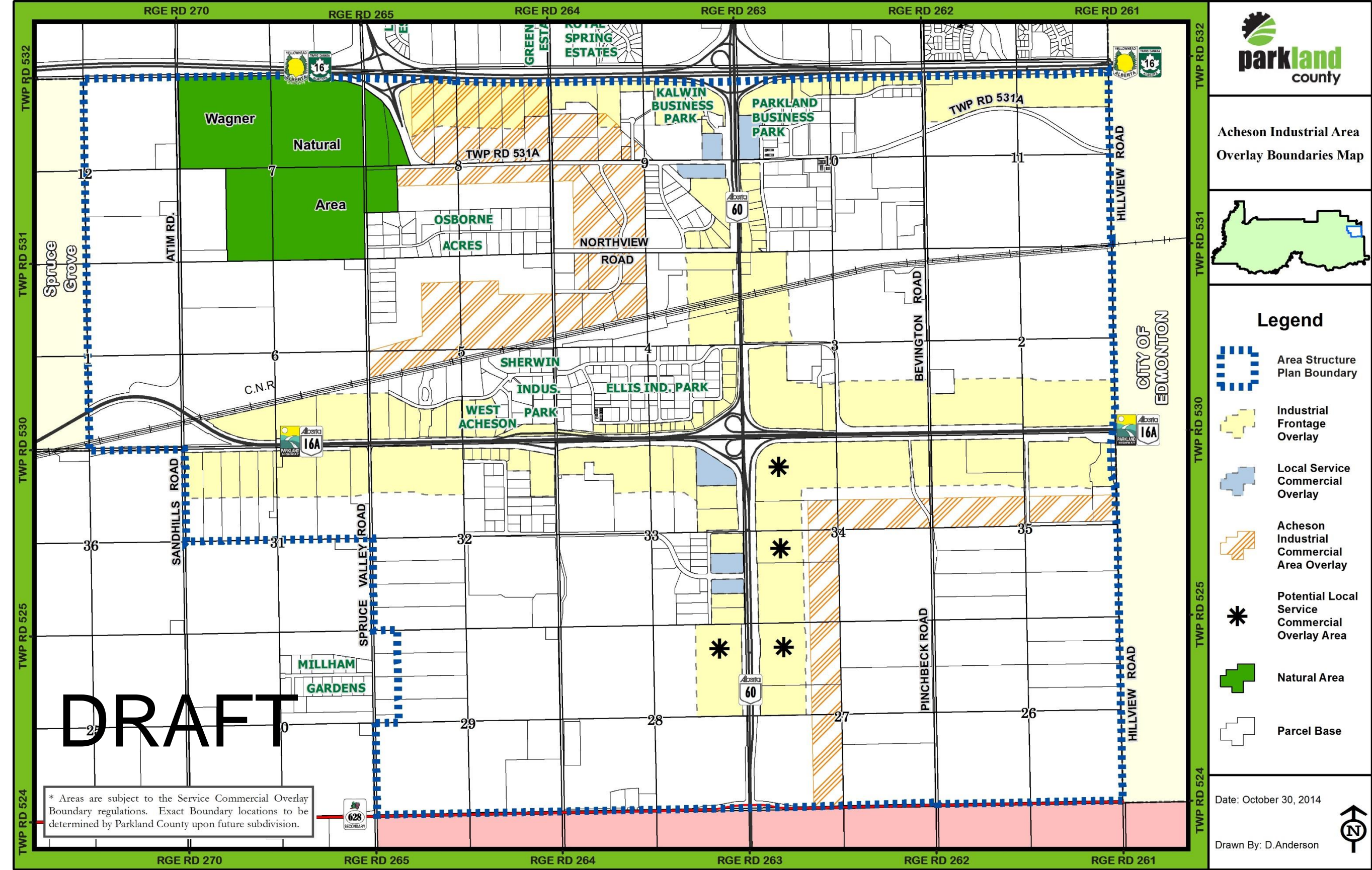


FIGURE 8 –WAGNER NATURAL AREA AND RECHARGE ZONE

(December 2014, Version 7)

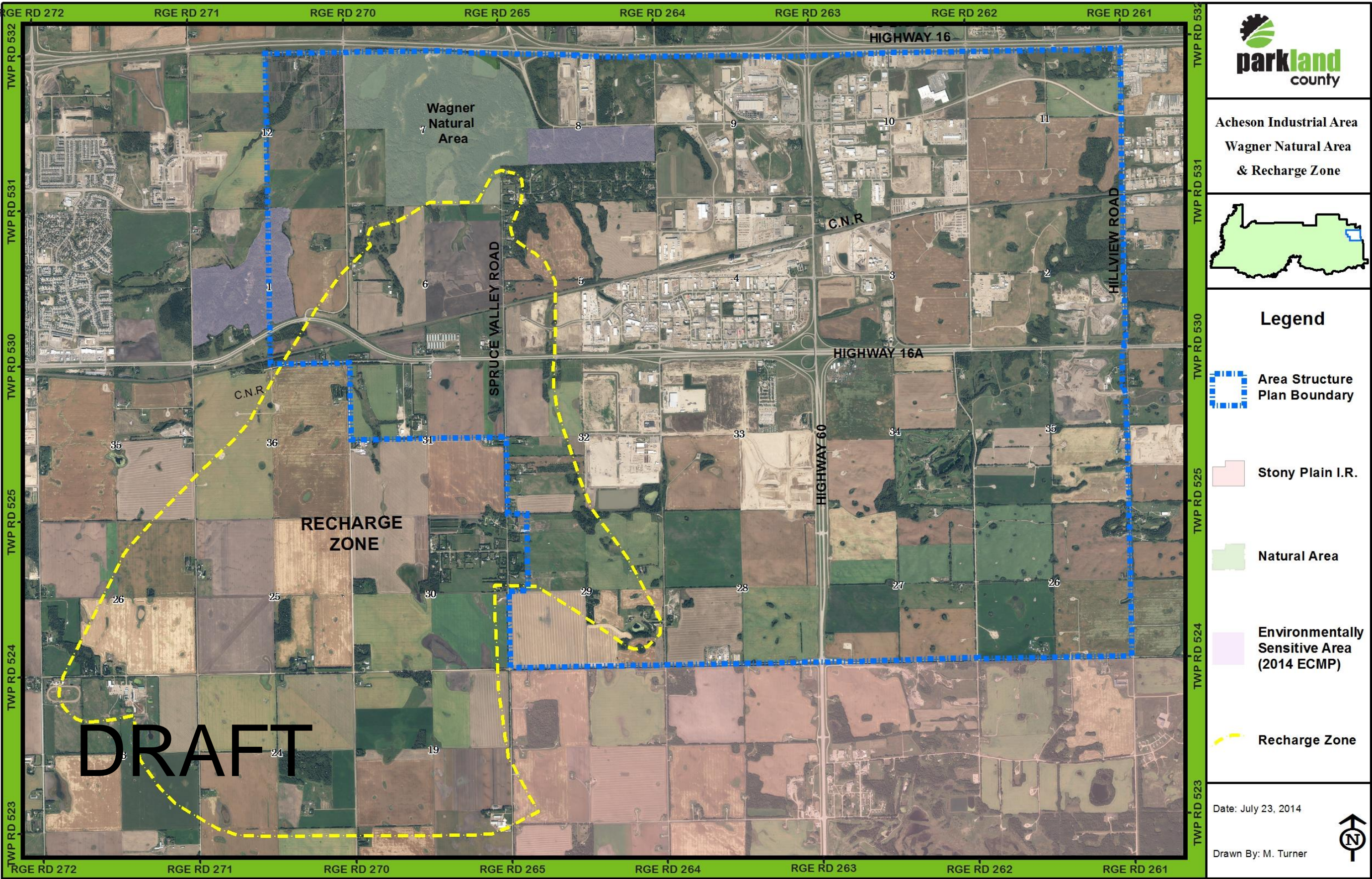


FIGURE 9 –EXISTING AND ULTIMATE WATER NETWORK (December 2014, Version 7)

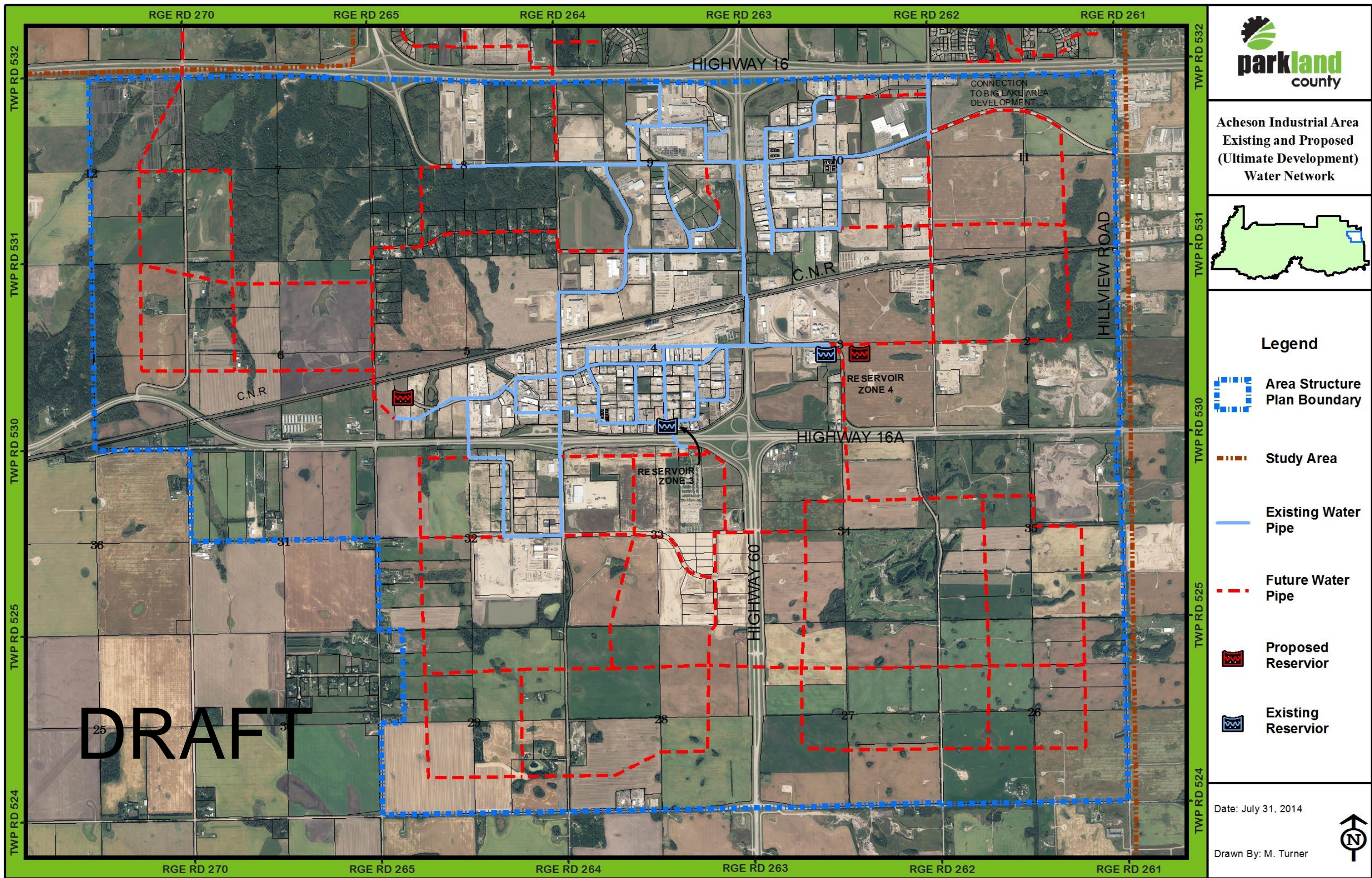


FIGURE 10 EXISTING AND ULTIMATE SANITARY NETWORK

(December 2014, Version 7)

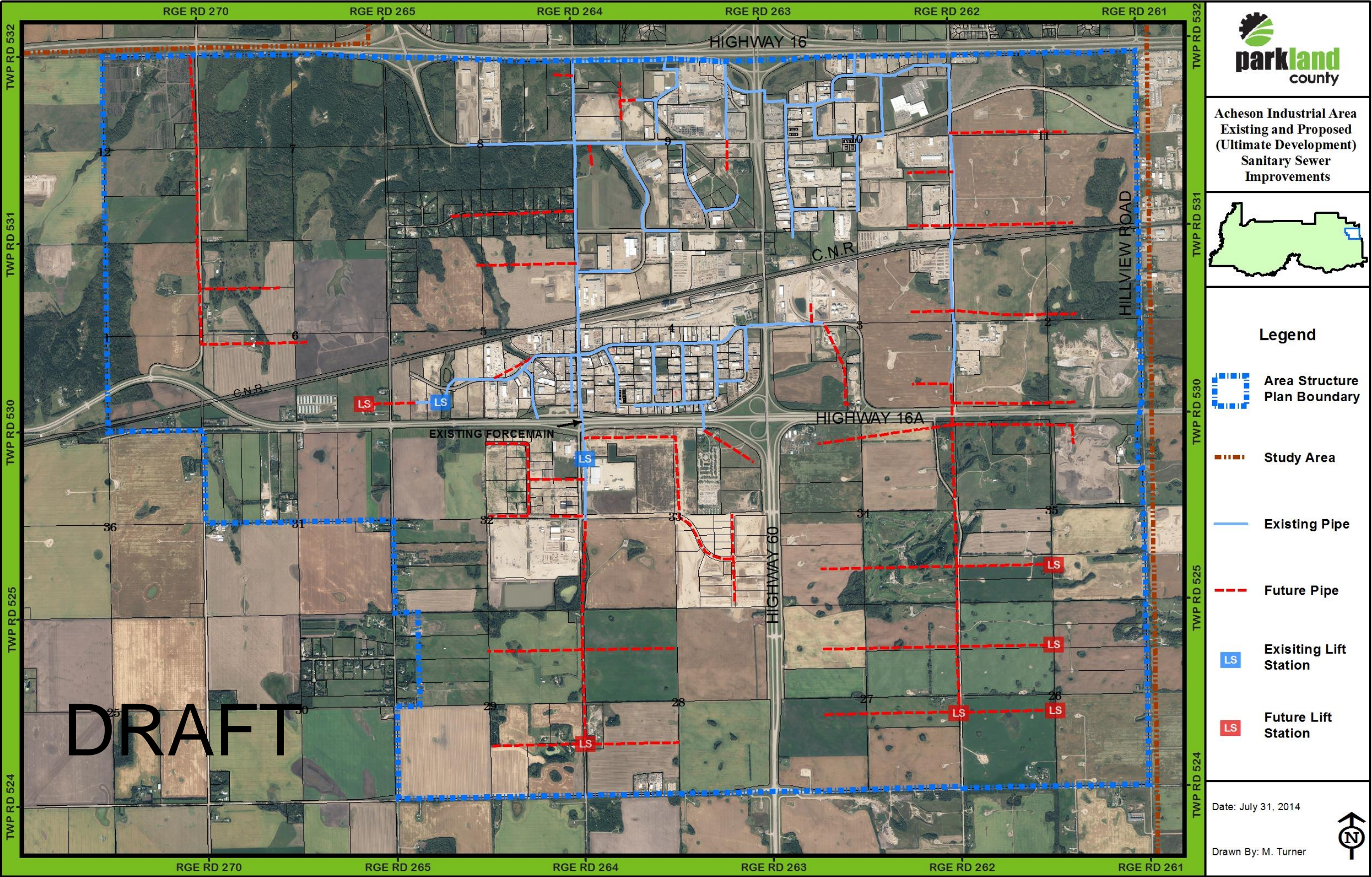
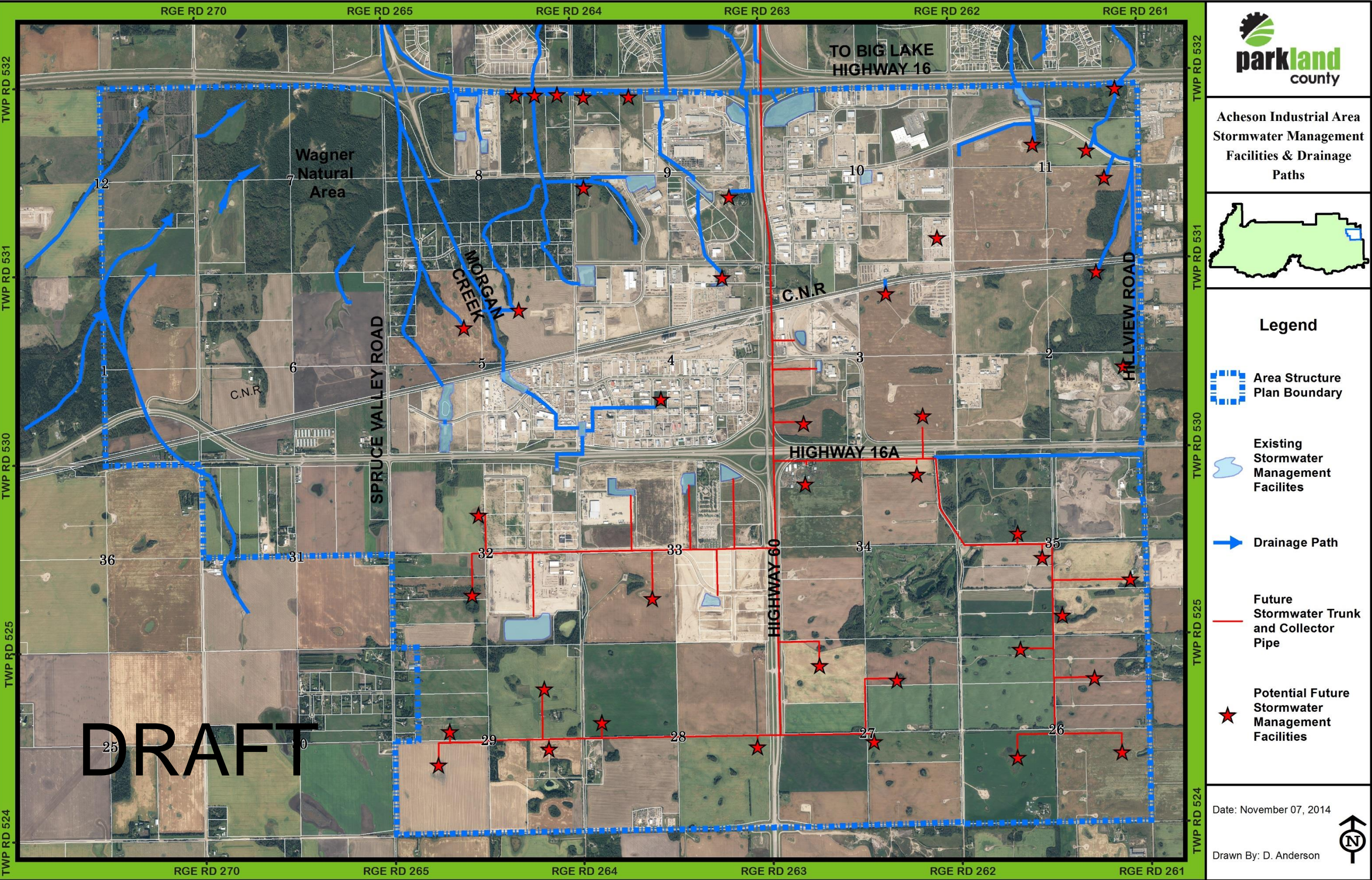


FIGURE 11 EXISTING AND ULTIMATE STORMWATER MANAGEMENT SYSTEM (December 2014, Version 7)



(December 2014, Version 7)

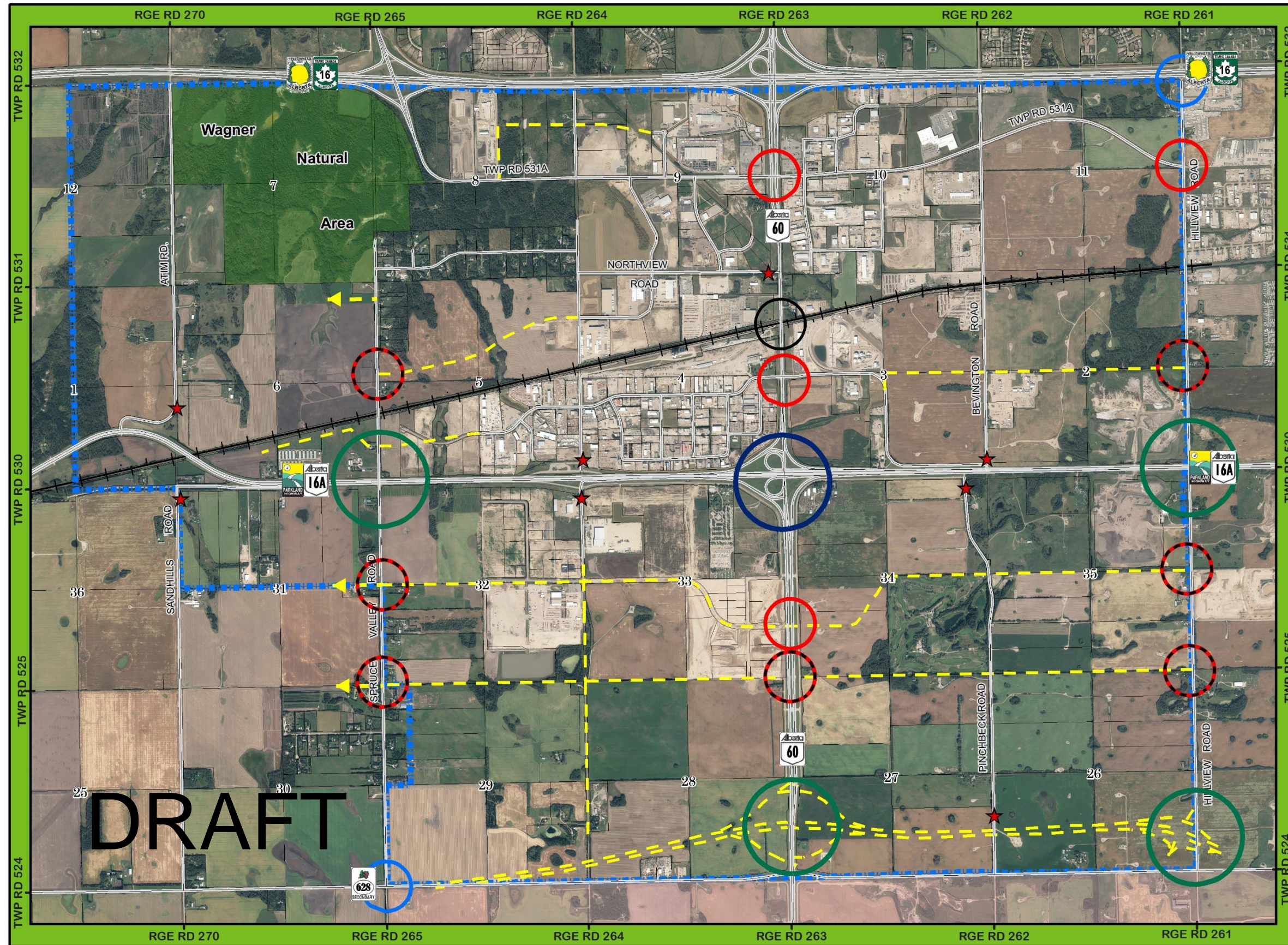


FIGURE 13 SERVICE ROAD IMPROVEMENTS - ZONE 1

(December 2014, Version 7)



FIGURE 14 EXISTING OIL AND GAS FIELDS (December 2014, Version 7)

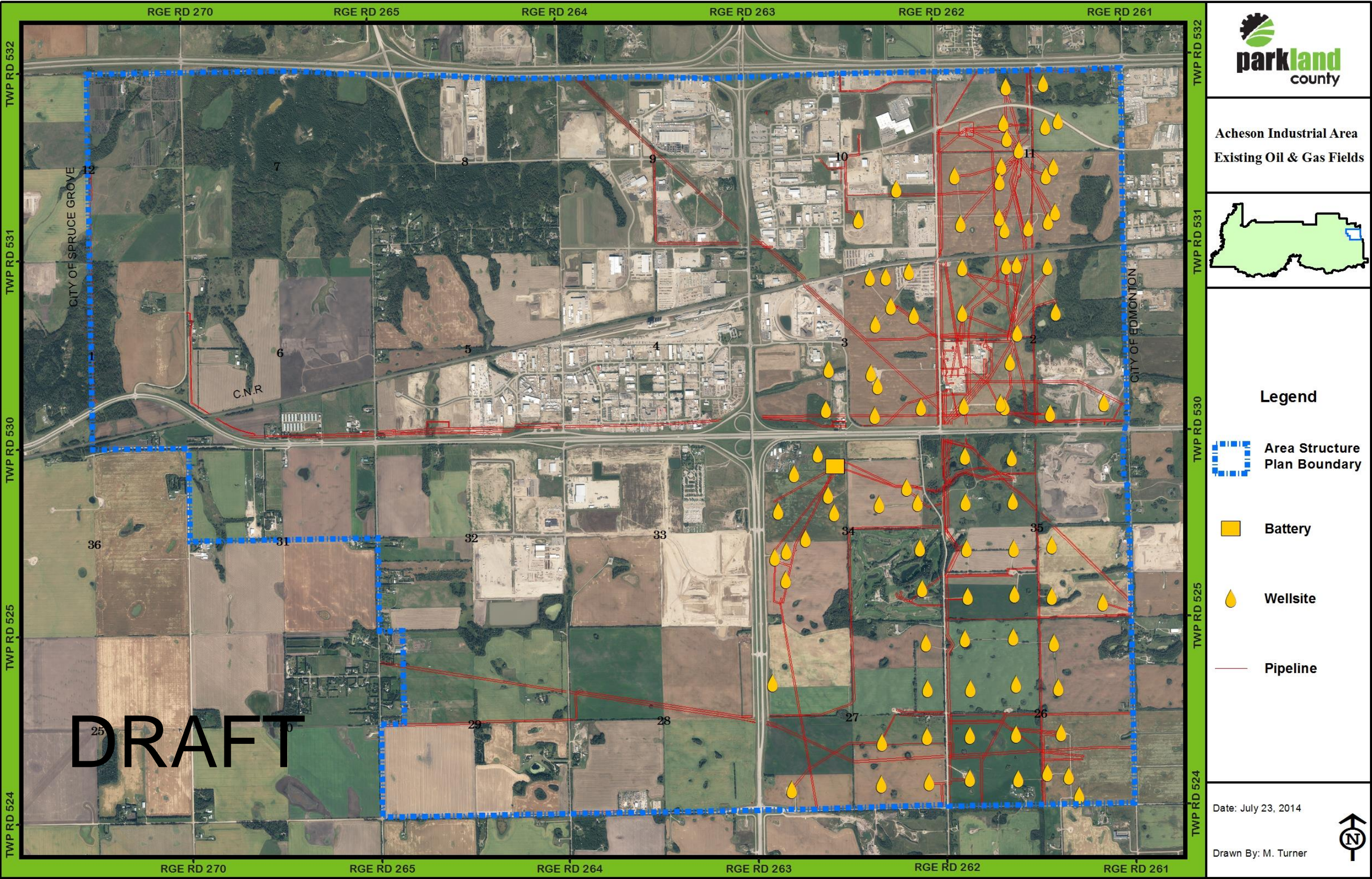
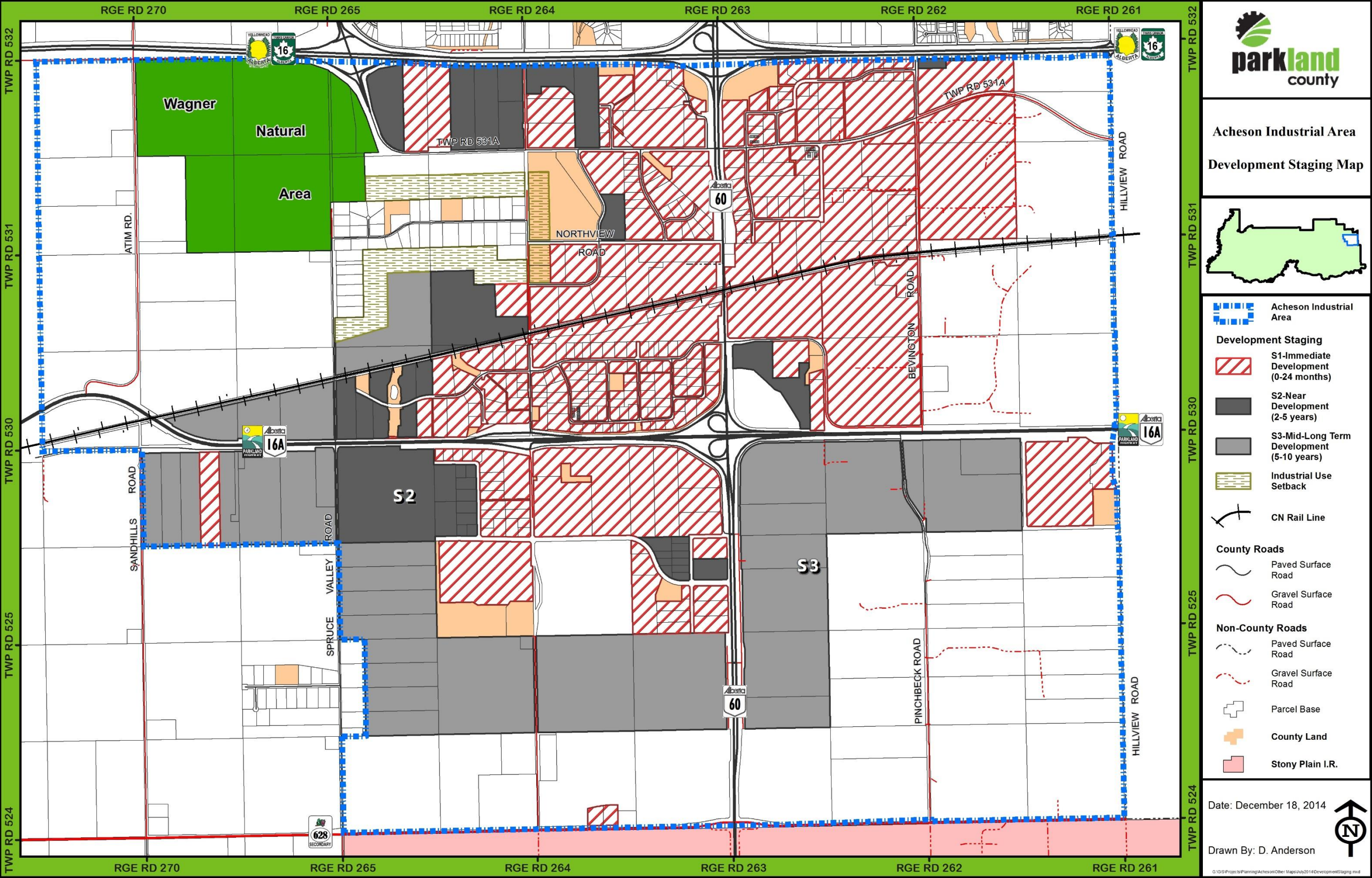


FIGURE 15 DEVELOPMENT STAGING

(December 2014, Version 7)



DRAFT