

*WEST HIGHWAY 1  
AREA STRUCTURE PLAN*



WHEATLAND COUNTY

*MARCH, 2006*

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# **1. INTRODUCTION**

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## **1.1 HOW TO USE THIS DOCUMENT**

This Area Structure Plan (ASP) is divided into 4 sections:

- an overview of the Plan context,
- a detailed explanation of the intent of the Plan Concept,
- a set of policies that will guide the Approving Authorities in their decisions and
- a set of implementation guidelines to ensure County staff and developers exercise due diligence in policy application.

## **1.2 PURPOSE OF THE PLAN**

This Area Structure Plan provides a framework for the future subdivision and development of lands in Wheatland County that are referred to as the West Highway 1 Plan Area. The ASP area includes 2131 hectares (5266 ac. or 8.3 sq. miles) of land and is bounded to the north by Highway 1, to the west by The Municipal District of Rocky View, to the east by the Western Irrigation District canal. The Plan area extends south of Highway 1 by one mile.

## **1.3 BACKGROUND INFORMATION**

The document identifies existing conditions and supporting maps as well as the public consultation process as an Appendix to this ASP. Please refer to this document for more detailed information.

## **2. POLICY CONTEXT**

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The West Highway 1 Area Structure Plan meets the requirements of Section 633 of the Municipal Government Act and, as such, describes, at a broad level of planning, the proposed sequence of development, land uses, overall density, and infrastructure requirements within the Plan Area. The Area Structure Plan also complies with Wheatland County's Municipal Development Plan Bylaw 2006-01.

### **2.1 EXISTING POLICY FRAMEWORK**

This ASP is approved under the policies and regulations of the existing MDP and LUB. The ASP approval process introduced a new ~~Industrial Commercial General District (IC-G)~~ and a new Highway 1 Vicinity Landscaping Overlay District (HCO). The approval of these LUB amendments is concurrent with the ASP approval.

**The Plan As A Living Document** - The Future Land Use Concept proposed for the West Highway 1 Area Structure Plan Area is shown as Map A. The concept was derived from a number of existing land use conditions. This Plan is a living document and is intended to be amended from time to time as conditions change. Specifically, the Plan may require amendments under the following situations;

- The Province of Alberta may undertake a review of the Highway 1 Corridor Management Plan in 2006-2007 for the portion of Highway 1 adjacent to the ASP. Any re-alignment of the Highway would require a review of this Plan.
- As landowners develop road connections into the Plan area, more detailed road alignments will be refined beyond the land use concept identified in this Plan.
- Piped water and sewer may be extended into this area in the future. This may trigger amendments to the ASP in order to recognize types of development applications that may be consistent with piped water and sewer. No servicing plans have been identified at the time of the adoption of this Plan.

## **2.2 ASP OBJECTIVES**

- 1) To accommodate development opportunities in Wheatland County for light to medium industrial and compatible commercial land uses.
- 2) To provide a long-term base for future economic growth that will be of mutual benefit to the residents of Wheatland County and the Town of Strathmore.
- 3) To allow the continuation of existing land uses.
- 4) To ensure an economical, user-pay road network compatible with long range Provincial Freeway development planning objectives.
- 5) To ensure a high quality of development standards befitting proximity to the Trans Canada Highway.
- 6) To provide for an effective development process in terms of application processing, engineering, landscaping, environmental and economic considerations.

## **2.3 THE LOCAL AND REGIONAL SETTING (FIG. 1)**

The Plan area is located directly west of the Town of Strathmore along Highway 1. The north boundary is Highway 1 (Township Road 242) and the south boundary is the east/west section line located one mile south. The east boundary of the Plan area is the Western Irrigation District (WID) canal while the west boundary is the County border with the Municipal District of Rocky View (Range Road 270).

The location of the Plan area relative to the Calgary oil and gas service industry as well as its proximity to Strathmore as a rapidly growing residential community offers opportunities for long term development of industrial/commercial land uses. It is increasingly difficult for industrial land users in Calgary, especially oil and gas support services to secure the type of access required to serve their operational hinterland in a flexible and convenient manner. Therefore, oil and gas service operations are specifically considering alternative locations in the region for operating bases. The ASP

is located near roads designated by the Province for oversized loads (Highway 1, Hwy 791 and potentially the formerly designated Hwy 24). This combination of factors has led to an increase in development pressures in the area. The ASP responds to those development pressures.

## **2.4 EXISTING CONDITIONS**

Existing conditions maps are located in Appendix A. Please refer to these maps for a more detailed visual description of this section. These maps identify a Preliminary Plan area that was considered by the County as the starting point for Plan review. This area was ultimately condensed to the existing ASP policy area shown on the Future Land Use Concept Map A. Since the Preliminary ASP Study Area Boundary captures a much larger geographical area of existing conditions, this offers a wider view of planning considerations. This wider area is examined in Appendix A. However, this section of the Plan refers to the ASP policy area only.

**Topography** (see Appendix A, Map2) – The Plan area topography is reasonably flat with some gently rolling sections. The topographical relief is approximately 40 metres, ranging from a high of 1015m above sea level (ASL) in the west end of the Plan area to approximately 975 m ASL in the east.

**Drainage** - The drainage regime is generally downhill to the north. The Plan area is almost wholly within the Serviceberry Creek drainage basin which in turn empties into the Red Deer River. The east boundary of the Plan area is essentially co-terminous with the height of land between the Red Deer River basin and the Bow River Basin. A Western Irrigation District (WID) canal carrying irrigation water northward forms the east boundary of the Plan. The canal is constructed with a diversion gate in SW9-24-25- W4M to allow irrigation water to flow west into the Hartell Coulee system as supplies allow.

A drainage commonly referred to as Hartell Coulee, is located west of Highway 24 (Range Road 264). It is the major creek draining the Plan area. This creek drains

Weed Lake located approximately 7 kilometres west of Highway 24 in the MD of Rocky View. Several intermittent drainages and low areas feeding the creek create a drainage network that also serve important stormwater storage functions and irrigation opportunities. Large areas of potential water retention exist in the east portion part of the Plan area. These drainage networks should be protected wherever possible from modification or contamination.

Ducks Unlimited operate several wetland enhancement projects in and near the Plan area. These projects serve to protect hydrological functions and promote biological diversity of this part of the County.

**Agricultural Capability** (see Appendix A, Map 3) – The Canada Land Inventory (CLI) classifies the relative soil quality for growing field crops and provides rankings from 1-7. These are based on topography, soil composition, presence of standing water, etc. The soils in the Plan area are generally high quality. Predominantly CLI class 2 soils are found west of Highway 24, while CLI class 3 is located to the east. In between, pockets of CLI class 1 are divided by CLI class 5 lands characterised by rolling coulees and low, wet areas draining into Hartell Coulee.

**Existing Oil, Gas, Electrical Infrastructure** (see Appendix A, Map 4) – The Plan area contains 10 known sweet gas wells, mostly owned by Encana (being the dominant gas producer in the area). Several gathering lines are located at the east periphery of the Plan area. One transmission gas line runs north-south through the Plan area in section 12-24-26-W4M. These existing wells are typically compatible with industrial uses. In future more wells per quarter may be considered for additional drilling by the Province with respect potential coal bed methane extraction. This Plan is intended to assist the County in preventing future land use conflicts

**Existing Road System** (see Appendix A, Map 5) – The existing road system in the Plan area is focused on access to Highway 1 and Highway 24. Highway 24 has been de-gazetted by the Province and is intended to revert to County control. Further east, Secondary Highway 817 is intended to be elevated to Highway status. This is due to a realignment of the highway at the Bow River crossing 14 miles south of Strathmore.

The Plan area is strategically located due to its proximity to high-load routes along Highway 1 and Highway 791. A high load route is a Provincial designation that directs traffic by oversized loads onto specified roads. The Province designates the former Highway 24 alignment as a potential future high-load route, but this may change in future. Alberta Transportation is contemplating a review of this portion of the Highway 1 corridor. This initiative is further discussed in the Plan Concept section of this Plan.

The portion of Highway 1 that skirts the north end of the Plan area currently has 9 all-turns intersections over a 9 mile stretch of the highway. Traffic counts between 1995-2004 for the east and westbound portion of the highway at the intersection of Highway 24 and Highway 1 have increased 21% to over 13,000 vehicles per day (vpd) with tractor trailer and single unit trucks increasing 10-12%. Turning movements onto Highway 24 from Highway 1 have also increased by 24% to 1880 vpd over the same time period. In addition, the road medians between east and west bound traffic do not allow for significant stacking space for multi-axle trucks. Other turning/merge movements occur at an existing weigh scale at the west end of the Plan area and two turn-outs on the north side of the Highway.

The Province has significant safety concerns about allowing added turning movements without some mechanism to reduce the overall number of movements over time. The Plan addresses these concerns by incrementally channelling the expected increase in Plan area turning movements onto fewer intersections. This strategy is consistent with Provincial plans to eventually eliminate all at-grade intersections in favour of grade-separated interchanges.

The County road system is mainly composed of gravel roads that are subject to seasonal road bans. The only service road in the study area is located in section 9-24- 25-W4M. All remaining County roads are Range roads and the former Highway 24 (being Range Road 262).

**Existing Land uses** (see Appendix A, Map 6) - The Plan area is predominantly a rural agricultural area with active farmsteads. Numerous quarter sections have first parcels subdivided from quarter sections. Typically 3-5 acres in size, many have been sold as



country residential lots. Other country residential lots have been developed on severed parcels and 40 acre subdivisions. Together, most quarters have seen some type of subdivision already. Therefore, future first-parcel subdivision of remaining unsubdivided quarters is not considered a significant constraint. In total, approximately 60 dwellings are located within the ASP Plan area. Of these, approximately 9 rental units are located on a former east-west railway right of way east of Highway 24. In addition, several rural residential parcels are located west of the Plan area in the MD of Rocky View.

Other land uses have been approved for confined poultry operations, industrial shops and several other home businesses.

**Existing Land Ownership** (see Appendix Map 7) – The ASP area includes 2131 hectares (5266 ac. or 8.3 sq. miles). Approximately 65 parcels exist in the Plan area spread over 37 landowners. Large land holdings of more than a quarter section are most likely to be located in the east or west ends of the Plan area. Smaller, more fragmented ownership is common in the central portion. This fragmentation of land holdings will have implications for the capacity of the County to develop internal roads that link the Plan area from east to west.

**Existing Land Use Districts** (see Appendix A, Map 8) – The entire Plan area is designated as Agriculture General (AG). This designation limits subdivision to one parcel from an unsubdivided quarter section. However, it does provide for the opportunity to apply for home occupations which does allow for on-site industrial type uses.

**Opportunities and Constraints and Land Development Capability** (see Appendix A, Maps 9, 10) – The Plan overlays the aforementioned maps 1-8 were overlaid to identify opportunities and constraints (map #9). From here, a land capability map #10 was created. This map represents areas that are more suited to accepting development as contemplated in the ASP. These maps form the basis of the Future Land Use Concept in the following section.

## 2.5 **DEVELOPMENT CONCEPT OVERVIEW**

Future Land Use Concept Map is shown as Map A. It identifies the extent of the Plan area, where land uses will be allowed to apply for future industrial/commercial land uses and where physical and human features on the land should be considered when the County makes its decisions. The map is intended to denote general areas. More detailed road alignments and land uses will result from site-specific applications to amend the land use bylaw, as well as applications for subdivision and development. [Map B further identifies the location of Origin Business Park on the West boundary of the Plan area, to which some specific policies within the ASP applies.](#)

### a) **Land uses**

The Plan area is intended to accommodate a range of future industrial/commercial activities that are initially served by on-site water and sewer. Future ASP land uses will likely reflect the current oil and gas-related land uses will allow a variety of industrial uses and compatible commercial uses characterized by specific criteria in the Plan policy section. The Plan anticipates light to medium industrial uses with a commercial component compatible with on-site servicing, [until piped water and wastewater are later available. Should individual onsite wastewater disposal not be acceptable, and the piped wastewater connection not be available in the foreseeable future, a piped wastewater collection system from each lot to a communal treatment and disposal system could be provided.](#) ~~and low retail traffic. Commercial activities that generate retail traffic are not contemplated except where it may directly support industrial activity.~~

Industrial uses would be characterized by significant open storage, large structures ( $\pm 2000\text{m}^2$  or more), gravelled or paved vehicle circulation areas, on-site servicing and presence of some nuisance impacts of noise, dust and glare. The land use bylaw uses suitable for the Plan area may include a combination of use classes depending upon the demand for a low level of services and large areas of land.

Appendix B identifies a more detailed description of light, medium and heavy industrial uses as well as different classes of commercial uses.

Coal bed methane (CBM) wells are expected to be drilled in the Plan area in future. The EUB also defines the minimum development setbacks from oil and gas wells as 100 metres in Alberta. However, there is a potential for well setbacks to be reduced in some cases. For more information on setbacks from pipelines and oil and gas wells, please refer to [www.eub.gov.ab.ca/BBS/OilandGas/EnerFAQs5.htm](http://www.eub.gov.ab.ca/BBS/OilandGas/EnerFAQs5.htm).

**b) Proximity to Dwellings**

There are approximately 60 existing dwellings within 400 metres of the Plan area boundary. Applicants for rezoning and subdivision and development will need to identify what nuisances are likely to affect residences within 400m of the source of the nuisance and what measures they will apply to mitigate those impacts. This includes nuisances of noise, glare, dust, odour and vibration. However, the visibility of commercial/industrial uses will often be unavoidable and is considered a nuisance only where in the opinion of the County, open storage is not maintained in a neat and orderly manner. The County may introduce a community standards bylaw should such incidents become a municipal issue.

Applicants are also encouraged to work with nearby residents to address perceived visual impacts on either the developers land and/or the residential parcel through berming, vegetation, fencing and any other techniques that would mitigate impacts to a reasonable degree.

**c) Non-Conforming uses**

New residential land uses shall not be allowed beyond that already allowed for in the Municipal Development Plan and the AG District of the Land Use Bylaw as amended from time to time. A landowner will be allowed to subdivide a farmstead or create a single parcel from a previously unsubdivided quarter section.

Existing and expanded farming operations are protected as are other existing land uses with valid development permits. These are allowed to operate within the scope of existing development permits as existed before the adoption of the Plan.

The ASP does not permit multi-parcel country residential development. Future approvals for a secondary use business site will be limited in scope to home-based businesses that are subordinate and incidental to the principal residential use or agricultural use.

## **2.6 FUTURE ROAD NETWORK**

**Working with Provincial legislation** - The Province of Alberta has passed legislation to eventually eliminate all at-grade accesses to major Alberta Highways, including all of Highway 1. Therefore, the Area Structure Plan future road network will need to interconnect new development by means of an internal road network as development proceeds.

Over time, the future land use concept map identifies the staged closure of existing direct access to Highway 1 in cooperation with Alberta Transportation. Staged intersection closures provide a mechanism to better manage the expected increase in turning movements. Closures will be assessed as applications for land use, subdivision and development are considered by the County. This will eventually require that each developer ensures continuous road rights of way to adjacent parcels and range roads across the entire Plan area. Landowners will need to work cooperatively to ensure this happens.

**Provincial Highway Corridor Plan** - The Province may undertake a review of the Highway 1 Corridor Management Plan in 2006-2007 for that part of Highway 1 between Range road 270 (West Boundary Road) and Secondary Highway 842 at Cluny. The purpose is to determine where future interchanges will be located and which existing at-grade intersections will be closed. In addition, there is no assumption respecting any bypass of the Town of Strathmore at this time. If the interchanges are re-located or a Town bypass is instituted by the Province, this will require the ASP to be amended to reflect the Provincial Plans.

**ASP Assumptions** - In order for the West Highway 1 ASP to become operational, it is necessary to make some assumptions in advance of the Corridor Management Plan. These assumptions are flexible but will require consultation with the Province to ensure the ASP and the freeway study are coordinated.

It is assumed that Highway 1 alignment through the Plan area will remain unchanged. It is also assumed that two interchanges will be constructed within the ASP area; one at Hwy 24 and one near RR 254. Interim access to Highway 1 is assumed to be reduced to every 2 miles in the medium term. Access will be via internal road network ("back service roads") as development proceeds. "Back" service roads will allow development to be built on both sides of the road rather than just one side and create a full internal road network. Existing accesses will be closed as development proceeds and as an internal road network replaces the direct highway access every 2 miles. Eventually, it is assumed 2 interchanges will allow access to Highway 1 from the Plan area.

**a) Future Access Sequence**

- Short term (0-1 year) – Development will be allowed to access the highway at 5 points in the plan area - every 2 miles as shown on the Future Land Use Concept map. Restrictions to Highway 1 access will be influenced by construction of an internal arterial road to parallel Highway 1 and eventually link all the study area. Access to range roads from the internal road network should be limited to one per quarter section wherever possible.
- Medium term (2 -10+ years) - As the internal roads are built, access to the other 4 southbound range roads will be eliminated in cooperation with Alberta Transportation.
- Long term (>10 years) – Once all 5 remaining intersections are linked to a complete internal road system, all remaining intersections will be closed after the 2 interchanges are constructed.

**b) Access Principles**

- Access onto County roads should be limited to the minimum needed for safe and efficient circulation.
- Where new accesses are proposed onto County roads, existing accesses should be consolidated wherever feasible.
- The internal road network should concentrate development in contiguous nodes wherever possible.
- Temporary use of existing highway access may be considered for subdivision and development approvals, subject to Alberta Transportation approvals and until such time as developers or the County provide alternative access.
- Long term highway access will be restricted to interchanges to be specified by Alberta Transportation and this ASP may be amended from time to time.

**2.7 SERVICING STANDARDS**

The nature of expected development dictates that on-site water and sewage disposal is appropriate to the Plan area in the short term (5 years). In the medium term (3-10 years) piped water may be constructed into the Plan area through a regional servicing system. A long term (5-15 years) possibility exists for long term piped sewer through a regional servicing system. Provision of piped sewage may effectively alter the land use mix to smaller lot sizes, larger buildings and higher traffic volumes. In turn, this may result in future applications to amend the Plan.

**2.8 LANDSCAPING AND DEVELOPMENT STANDARDS**

Development and landscaping standards within 300metres of the Trans Canada Highway will be of high quality befitting its location in view of a national highway. Infrastructure costs (ie. roads, water, sewer, storm management) shall be constructed and paid for by developers, although provisions for Provincial grants to assist in the upgrade of County roads may be considered for this area.

Developers will be expected to upgrade Range Roads that will be subject to added industrial/commercial traffic. Building standards for the public road construction shall be consistent with expected industrial traffic loads with heavy vehicles. Industrial use of Range Roads will be limited to that necessary to access Highway 1. Fire supply shall be sufficient to meet the requirements of the Alberta Building Code and consider storage of dangerous or hazardous materials. This may require the provision of on-site dugouts, reservoirs, berms, distance separations, etc. on a case by case basis. On-site servicing plan are required to demonstrate adequate water supply and sewage disposal handling. A stormwater management plan shall be provided demonstrating that the proposal will not to alter off-site drainage patterns or runoff rates. Effluent shall not be discharged off the site and the County may require oil/grit separators and settling ponds to ensure effluent does not drain off the site.

## **2.9 ENVIRONMENTAL PROTECTION**

Applicants for subdivision and development will be required to identify how the potential impacts of their applications will be handled in a manner that will not unduly impact local aquifer quantity or quality, have effluent discharge that negatively affects adjacent properties or water courses, cause erosion or unduly affect existing wetlands and ephemeral drainages. Approximately 236 hectares (583ac) of land are identified as having constraints due to permanent and intermittent drainage courses, areas of seasonal water accumulation and slopes in excess of 10%. Developers will need to identify what measures will be undertaken to ensure protection of the existing watershed drainage patterns and volumes.

## **2.10 DEVELOPMENT PHASING AND FUTURE POPULATION DENSITY**

As the Plan area is owned by multiple landowners, it is expected that staging of development will be dependent upon the capacity of potential developers to achieve agreement with adjoining landowners to secure contiguous road networks. These networks would cross adjoining parcels and Range Roads to specified Highway

intersections or achieve consensus with Alberta Transportation on alternative ones. In terms of future population density, the Plan does not expect additional residential population beyond that allowed for in existing policies for one parcel out of an un-subdivided quarter section; approximately 5 more parcels.

## **2.11 IMPLEMENTATION**

Plan implementation refers to specific actions and processes that ensure the land development process occurs as intended in the spirit and intent of the ASP. It also provides a mechanism to ensure that all matters of importance are reviewed with reason and in a systematic manner.

**Land Use Bylaw** - The main implementation mechanism is through the [Industrial General \(IG\) District of the Land Use Bylaw. The Commercial Highway \(CH\) District will also be implemented within Origin Business Park.](#)~~General Industrial/ Commercial (IC) District of the Land Use Bylaw. This District is adopted as a companion document to this Plan.~~

## **2.12 APPLICANT INFORMATION REQUIREMENTS**

The County will determine whether rezoning, subdivision and development applications will be required to provide the sufficient documentation to assess the traffic, environmental and nuisance impacts of development.

**Environmental Impact Statement** - An environmental impact statement may be required where the County determines that significant seasonal and permanent drainages and wetlands are present. The review shall address quality of stormwater runoff, mitigations to protect wetlands and seasonal drainages, soil erosion, air pollution, risk assessment for handling of hazardous goods and other matters as may be determined to be impacts by the County.



**Stormwater management plan** - A stormwater management plan will be required as part of a subdivision or development agreement prior to subdivision and development approval.

**Transportation Impact Assessment (TIA)** - A TIA may be required in cases where the County, in consultation with Alberta Transportation, believes the traffic volumes and scale of the application or access to Highway 1 warrants a more detailed assessment.

**ASP or Conceptual Scheme** - The County may require the applicant to prepare more detailed Area Structure Plans or conceptual schemes where the development of more than 6 lots are proposed, and/or access issues or environmental matters may be of sufficient complexity to warrant a comprehensive approach to land development.

**Landscaping Plan** - The developer will submit a landscaping plan prepared by an accredited professional landscape architect at the subdivision stage and/or at the development permit stage.

## 2.13 **DEVELOPMENT APPROVAL PROCESS**

- A development agreement will be signed prior to 3<sup>rd</sup> reading of a rezoning bylaw. This provides a legal agreement to ensure subdivision standards are maintained.
- Re-zoning changes will happen as development proceeds; “pre-zoning” land far ahead of subdivision or development plans is discouraged. A rezoning application will be limited to the amount of land contained in a subdivision or development permit application.
- Developers are encouraged to submit re-zoning and subdivision applications or development permits for concurrent approval.

### **3. AREA STRUCTURE PLAN POLICIES**

#### **3.1 LAND USE AND SUBDIVISION POLICIES**

- Future land use map a) The West Highway 1 Area Structure Plan policies allow for the implementation of the Future Land Use Concept shown on Map A and will be applied at the time of re-zoning, subdivision and development. Relevant Municipal Development Plan policies and the regulations of the Land Use Bylaw also will be applied.
- Intent b) The intent of this Plan is to provide an area for manufacturing, assembling, fabrication, processing, distribution, storage, service and repair land uses that may result in some outside nuisance factors such as noise, dust, heat, smoke, glare or odours. It is also intended to provide an area for compatible commercial uses that supports the industrial intent of the Plan area creation of a diverse and attractive location for developing future business. The clustering of industrial and commercial operations in the West Highway 1 Area Structure Plan is intended to encourage this type of economic development in areas where possible offsite impacts are lessened.
- appropriate commercial uses c) The Plan may provide for appropriate secondary commercial uses throughout the plan area that are identified in the Industrial General (IG) District ~~Industrial/Commercial General (IC-G) District~~ of the Land Use Bylaw. Within Origin Business Park the Plan may also provide for appropriate primary commercial uses identified in the Industrial General (IG) District and the Commercial Highway (CH) District. The County shall review applications for commercial uses that generally have one or more of the following characteristics. Appropriate commercial uses;

- should primarily, but not exclusively, provide goods and services that are wholesale, storage or trans-shipment functions,
- offer retail sales to service industries within the Plan area,
- may contain secondary commercial uses which offers a retail sales component of goods and services produced on-site but the sales component is subordinate and ancillary to the principle use, requires a low level of servicing requirements and generate low traffic levels.
- notwithstanding the above characteristics, may include primary commercial uses within Origin Business Park which offers retail of every day goods and services, and may generate some increased traffic, providing the development is compatible with the location, and provides valuable services to residents, business park employees and visitors, and those travelling through the County. -

more detailed  
Planning

- d) Applications for rezoning or subdivision that would result in more than 6 parcels being created may be required to prepare a more detailed Area Structure Plan or conceptual scheme prior to consideration of subdivision approval.

IC districts  
to apply

- e) With the exception of those uses in compliance with the existing zoning district at the time of approval of this Plan, all submissions respecting more detailed Area Structure Plans, conceptual schemes, subdivision and development identified as Potential Development Areas in the Future Land Use Concept shall require rezoning to the [Industrial General \(IGG\) District](#) [or Commercial Highway \(CH\) District \(within Origin Business Park only\)](#) of the Land Use Bylaw, as amended from time to time.

Nuisance  
mitigation

- f) Industrial/commercial development may result in some unavoidable nuisance factors. However, the presence of residential uses within 400m of an existing dwelling is a development consideration by the County. Applications for subdivision and development permits shall identify the expected nature, duration and intensity of potential nuisances such as noise, dust, heat, smoke, odours and glare and describe methods of mitigating those nuisances if the County deems these excessive. As a general rule, such nuisances should not extend beyond the boundaries of the areas zoned [Industrial Commercial \(IC\)](#), [Industrial General \(IG\) District](#) or [Commercial Highway \(CH\) District](#).

dwelling within  
400m

- g) Developers are expected to work with nearby residential landowners to identify what visual mitigations can be offered for the residences. This may include landscaping and/or berming improvement for residences that may be affected within approximately 400m of developments. It may also address mitigations for nuisances such as dust control, lighting, odours, etc.

- Grandfathering existing uses** h) Existing land uses with valid development permits that exist as of the date of approval of this Plan may continue to operate in accordance with the provisions of the Land Use Bylaw and Municipal Development Plan.
- no multi-parcel rural residential subdivision** i) Multi-parcel residential subdivisions shall not be permitted in the Plan area. Subdivision of an unsubdivided quarter section intended for a single residential parcel shall be permitted in accordance with the policies in the Municipal Development Plan and the existing Land Use Bylaw District.
- j) Residential subdivision density in the Plan area shall not exceed one parcel out of a quarter section of a minimum parcel size of 4.04 hectares (10 acres). Previously subdivided quarter sections shall not be permitted to subdivide additional parcels for residential purposes.
- Municipal reserve** k) Municipal Reserve shall be taken as cash in lieu except where the County is of the opinion that land would provide recreation purposes for the benefit of the area or provide a separation between less compatible land uses.

### 3.2 **TRANSPORTATION POLICIES**

- Future road network Map A** a) The internal arterial road pattern shown on the Future Land Use Concept map is conceptual and is subject to detailed alignment at the time of subdivision.

TIA requirement b) Applications for rezoning and subdivision shall be circulated to Alberta Transportation for their comment. Major applications or applications that involve

- a significant increase in turning movements,
- extensive use of large vehicles and
- land uses that may generate substantial traffic for retail goods and services ~~as an accessory use~~,

may be required by Alberta Transportation to prepare a Traffic Impact Assessment (TIA). The TIA shall be prepared by a qualified professional. A TIA checklist is included in Appendix C.

Hwy 1  
intersection  
closures

c) In accordance with the Highway Development and Protection Act, this Plan contains policies to reduce the number of at-grade intersections on the south side of Highway 1 as development in the Plan area is developed. The preferred sequence of closure of intersections is identified on the Future Land Use map.

d) Alberta Transportation may require the closure of road intersections on the south side of Highway 1 as a result of applications for rezoning or subdivision. The location and timing of intersection closures will be done in consultation with the developer, the County and Alberta Transportation and in accordance with this Plan. The Plan requires landowners to work together to develop an internal road network that eventually provides direct access for all parcels in the Plan area to Range Roads 254 and 262 (formerly Highway 24). Therefore, applications for rezoning and subdivision shall identify logical road extensions through adjacent parcels and must obtain adjacent landowners comments respecting agreements to extend arterial road rights of way through adjacent parcels.

- First phase intersection closures**
- e) Intersections on the south side of Highway 1 and Range Roads 265, 263, 261 and 255 are preferred as first phase intersection closures. Subdivision and road development within the Plan area will dictate the exact sequence of these intersection closures as development applications are approved. In addition, private accesses onto Highway 1 that are the subject of a rezoning shall be required to be closed where the private access is part of a rcel that is subject of a rezoning proposal.
- Second phase intersection closures**
- f) Intersections on the south side of Highway 1 and Range Roads 260, 264, 270 are preferred as the second phase intersection closures. Subdivision and road development within the Plan area will dictate the exact sequence of these intersection closures as development applications are approved.
- Potential interchange locations**
- g) Intersections on the south side of Highway 1 and Range Road 254 and Range Road 262 (formerly Highway 24) will remain open as potential future grade-separated interchanges. This interchange location and detailed alignment is subject to confirmation by a corridor management study to be undertaken by Alberta Transportation. Changes to this interchange designation by the Province will require an amendment to this Plan.
- arterial roads connecting adjacent parcels**
- h) Applications for rezoning that provide direct access to Range Roads 254 and 262 (formerly Highway 24), shall ensure that an arterial road right of way is dedicated to provide road access connecting adjacent parcels.
- i) A minimum of one arterial road right of way shall be dedicated at the subdivision stage for all parcels to ensure direct access to all adjoining properties.

- j) The Plan requires that an arterial road network be constructed incrementally as rezoning and subdivision proceeds. All arterial roads shall be roads considered by the County as those which are intended to connect to adjacent parcels. Arterial roads identified at the time of subdivision shall be constructed and/or upgraded within a 40 metre wide right-of-way. All other roads shall dedicate a 30 metre right of way. All roads shall be constructed in accordance with County standards.
- k) Applications for rezoning will be considered for approval where the developer is able to demonstrate to the satisfaction of the County that east-west arterial roads will be dedicated to connect Range Roads 253, 260, 264 and 270.

- Road standards**
- l) All internal roads and County roads to be used for the proposed subdivision and/or development shall be upgraded or constructed by the applicant in order to accept anticipated heavy industrial traffic and shall be constructed to a gravel, all-season County standard.
  - m) All areas to which vehicle may have access shall be gravelled and maintained in a dust-free manner.
  - n) Road intersections between internal subdivision roads and County Range Roads require sufficient separation distances to ensure safe and efficient turning movements. Subdivision applications shall provide a separation of 300 metres (656ft) between intersections. Alternatively, two access points per quarter section may be allowed at the discretion of the County.
  - o) Where Range Roads are closed at Highway 1, additional direct access onto the Range Roads may be considered by the County in accordance with appropriate intersection spacing and sight lines.



- p) Areas zoned Industrial ~~Commercial-General (ICG) District and Commercial Highway (CH) District~~ shall only use County Range Roads where no other access option is available or where County Roads are upgraded to accept regular use by industrial users.

### 3.3 **SERVICING POLICIES**

On-site  
servicing

- a) Subdivision and development shall be serviced by on-site water and sewer systems until such time as the County amends this Plan to accommodate a piped water and/or sewer system.
- b) All private sewage systems must comply with the Alberta Labour's Private Sewage Systems Standards of Practice.

Future  
water/sewer

- c) A piped water and sewer system may be constructed for this Plan area in future. The costs of connection to this system shall be borne by benefiting landowners. Amendments to this Plan will be required to implement the servicing for a piped water and sewer system to ensure that resulting sewage volumes are appropriately managed.

### 3.4 **LANDSCAPING AND DEVELOPMENT STANDARDS POLICIES**

Highway 1  
vicinity  
landscaping

- a) Landscaping within 300m is according to Highway 1 Corridor Overlay District

- b) Visual impacts of development shall be addressed within 300m of Highway 1 in accordance with the provisions of the Highway Corridor Overlay District of the Land Use Bylaw.

Signage

- c) Signs shall identify on site developments or facilities only. Signs advertising off-premises developments or facilities (billboards) are not permitted.

### 3.5 **ENVIRONMENTAL PROTECTION POLICIES**

Pollution protection

- a) All applications for subdivision and development shall adhere to the County Municipal Development Plan provisions respecting protection from pollution.

Stormwater management

- b) Applicants for subdivision and development shall provide a professionally prepared stormwater management plan. All proposals for subdivision and development shall adhere to the Stormwater Management Guidelines for the Province of Alberta 1999, prepared by Alberta Environment.
- c) All applications for subdivision and development shall ensure that post-development flow rates and volumes off the site are equal to pre-development flows.

Top of bank designated

- d) At the time of subdivision, the top of bank of existing seasonal or permanent water courses, intermittent sloughs and other drainage collection areas be identified by a qualified professional and in accordance with the Surveys Act.

**15m setback** e) In order to protect existing natural drainage functions, existing seasonal or permanent watercourses and their natural drainages shall be protected by a 15m setback from the top of bank.

**Wetland enhancement** f) Developers are encouraged to improve wetland habitat in the Plan area. Wetland enhancement projects are encouraged as a stormwater management mechanism. Applicants are encouraged to work with non-governmental organizations such as Ducks Unlimited in this regard.

**Environmental Reserve** g) Areas may be identified by the County as Environmental Reserve in accordance with the provisions of the Municipal Government Act, for protection of areas susceptible to erosion, subsidence or as areas that may serve as a natural stormwater management function. These areas are identified conceptually on the Future Land use Map.

## **4.0 IMPLEMENTATION**

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### **4.1 HOW TO USE THIS SECTION**

This section of the Plan directs the County and applicants for rezoning, subdivision and development to undertake more specific actions that are required to ensure the area develops as intended by the Plan. While this section should be interpreted as policies, the County may exercise some flexibility at the land use, subdivision or development permit stage respecting specified, site-specific considerations, with the provision that the Plan goals and objectives are achieved.

### **4.2 IMPLEMENTATION POLICIES**

- |                                 |   |
|---------------------------------|---|
| IC District                     | a) The County shall pass a bylaw adopting a General Industrial District (IC) of the Land use Bylaw.   |
| Landscaping<br>Overlay District | b) The County shall pass a bylaw adopting a Highway Corridor Overlay District of the Land use Bylaw for the purposes of designating landscaping standards within 300m of Highway 1.                       |
| Off-site levy bylaw             | c) The County shall consider the preparation of an off-site levy bylaw to pay for future potential arterial roads and the potential provision of piped water and sewer.                                   |
| Endeavour-to-<br>assist' policy | d) The County shall consider the preparation of an 'endeavour-to-assist' policy that would assist developers to recover off-site costs associated with development ahead of other benefitting developers. |
| Community<br>standards bylaw    | e) The County shall consider the preparation of a "community standards bylaw" to ensure that hard and soft landscaping provided by a developer is maintained after the 2 year warranty period.            |

- Development Phasing** f) To the extent possible, the County shall promote contiguous development within the Plan Area as a means of encouraging logical staging of road extensions, and to prevent premature development on agricultural lands that are being actively farmed.
- Application Processing policies** g) Applications for rezoning, Area Structure Plans, subdivision or development permits may be processed and approved by the County concurrently.
- Development agreement before 3<sup>rd</sup> reading** h) Applications for rezoning approval shall be considered for third reading of the rezoning bylaw upon completion of a development agreement with the County to address matters of landscaping, road construction, stormwater management, subdivision standards, deferred servicing agreements and endeavours to assist.
- AT approval of ASP** i) The County shall request Alberta Transportation to adopt this Plan as a local operations referral document for future roadside approval permits.

## **APPENDIX B**

### **CHARACTERISTICS OF INDUSTRIAL CLASSES**

#### **What does light, medium and heavy Industry mean? What does secondary commercial mean?**

The following guide differentiates different types of industrial/commercial uses. These uses do not necessarily apply exclusively to any one class as there is a wide overlap in the range of human industrial activity. The intent of this industrial classification is to assess characteristics within a future land use bylaw district. Typically, traffic, safety and nuisance impacts determine what would be compatible uses.

Light Industrial characteristics – lot sizes vary from 1 to ±10 acres; little or no open storage; what open storage exists is screened from view off the site; relatively large structures; paved parking and vehicle access areas; typically serviced with piped water and sewer; intense, soft landscaping (trees and plants); may have a retail or wholesale component that is subordinate to the principle use. Uses are typically carried on indoors where no significant nuisance factors are created or apparent beyond the boundaries of the site. This designation includes uses such as warehouses, manufacturing operations, trans-shipment and distribution centres.

Medium Industrial characteristics – lot sizes vary from 3 to ±20 acres; moderate to extensive open storage of vehicles and machinery that may be partly or wholly visible off the site; minor to large structures; gravel vehicle access areas; typically on-site water and sewer servicing; landscaping is primarily grass with a minor vegetation component; may have a wholesale component that is subordinate to the principle use. Uses are typically carried on indoors and outdoors where some nuisance factors may be created or apparent beyond the boundaries of the site, depending upon nature of the business. This designation includes uses such as trucking firms, equipment storage firms, oil and gas maintenance and storage operations, certain manufacturing operations,

Heavy Industrial characteristics - lot sizes vary from 3 to ±80 acres or more; moderate to extensive open storage and stockpiling of raw materials, vehicles and machinery that may be partly or wholly visible off the site; minor to large structures can contain a substantial office support component; gravel vehicle access areas; water and sewer servicing may be on-site or piped depending on the nature of the processes; landscaping is on the perimeter of the site and is primarily grass with a minor vegetation component; typically no wholesale or retail component. Uses are typically carried on indoors and outdoors where substantial nuisance factors are created such as smoke, noise, odours and light. Hazardous uses and manufacturing processes may require risk assessment. This designation includes uses such as abattoirs, processing sand and gravel extraction, asphalt and cement manufacture, fertilizer manufacture and waste management operations.

Primary Commercial ~~–Not considered in ASP;~~ characteristics ~~zed~~ – (considered in Origin Business Park only) may generate increased ~~by high~~ traffic volumes, sale of retail goods and services, typically smaller parcel sizes, may include some larger parcels where development is considered compatible with area, serviced by piped water and sewer where possible; detailed architectural design; high landscaping and paving requirements; requires multiple road access points. This designation includes uses such as service stations, supermarkets, big box stores, stand alone commercial retail units (CRU's).

Secondary Commercial characteristics - lot sizes vary from 0.25ac to  $\pm 10$  acres; open storage is typically of specific goods for retail or wholesale purchase to target users and not everyday goods and services; structures may be small or major component of the site; typically paved parking and vehicle access areas; typically serviced with piped water; intense, soft landscaping (trees and plants); may have a manufacturing component that is subordinate to the principle use. Uses are typically carried on indoors where no significant nuisance factors are created or apparent beyond the boundaries of the site. This designation includes uses such as warehouses, wholesale distributors, farm implement dealerships

**APPENDIX C**

**Checklist for a Traffic Impact Assessment**

<i>General Information</i>	<ul style="list-style-type: none"> <li>• Location of project in relation to the highway network.</li> <li>• Site plan of the project (subdivision or development)</li> </ul>
<b>Highway Classification</b>	<ul style="list-style-type: none"> <li>• Highway classification.</li> </ul>
<b>Existing Infrastructure</b>	<ul style="list-style-type: none"> <li>• Pavement width, lane and shoulder widths, edge of pavement limits (shown on plan).</li> <li>• Existing intersection/access configuration (lane configuration, existing radius and tapers, pavement markings, existing signs) (shown on plan).</li> <li>• Width of the existing intersecting road at the edge of the right-of-way boundary.</li> </ul>
<b>Existing/ proposed accesses located in the vicinity</b>	<ul style="list-style-type: none"> <li>• Location of the access centreline from a referenced location.</li> <li>• Intersection sight distance, stop sight distance and decision sight distances.</li> <li>• Grade of the highway &amp; local road.</li> <li>• Design speed of the highway.</li> </ul>
<b>Other Existing Infrastructure (not typically required)</b>	<ul style="list-style-type: none"> <li>• The existing highway cross-section, right-of-way boundary to right-of-way boundary.</li> <li>• Existing utilities (pipelines, cable, telecommunication, illumination, etc.).</li> <li>• Existing drainage structures (length, diameter, culvert material).</li> <li>• Known pavement design (i.e. depth of acp, subgrade, etc.)</li> </ul>
<b>Traffic</b>	<ul style="list-style-type: none"> <li>• Existing/background highway traffic (volumes and % type of vehicles)</li> <li>• Highway traffics average annual growth rate (5-10 year summary) at the proposed location.</li> <li>• Existing traffic utilizing the access/intersection</li> </ul>



	<p>(volumes and % type of vehicles).</p> <ul style="list-style-type: none"> <li>• Projected background traffic (apply average annual growth rate over 5-20 year period).</li> <li>• Projected development traffic (volumes and % type of vehicles) over a 5-20 year period.</li> </ul>
<b>Traffic Distribution</b>	<ul style="list-style-type: none"> <li>• Directional traffic split (What direction is the traffic coming / going?)</li> </ul>
<b>Vehicle Types</b>	<ul style="list-style-type: none"> <li>• Type of vehicle utilizing the access/intersection (For example, can a WB 21 or 27 successfully make desired turning movement without interfering with other lanes?)</li> <li>• Passenger vehicle equivalency (PVE). (Has the traffic been converted into PVE?).</li> </ul>
<b>Peak Hour Analysis</b>	<ul style="list-style-type: none"> <li>• Critical turning movements for AM and PM peak periods. (Typically used in vicinity of Urban Areas)</li> </ul>
<b>Highway Capacity Analysis</b>	<ul style="list-style-type: none"> <li>• Level of service of access/intersection.</li> <li>• Level of service for each critical movement.</li> <li>• Vehicle delay for each critical movement (seconds/vehicle).</li> <li>• Need for left/right turn bays (based on warrants in the HGDG).</li> </ul>
<b>Pedestrian Movements</b>	<ul style="list-style-type: none"> <li>• Pedestrian movements crossing the highway.</li> <li>• Recommendation for mitigation of pedestrian movements.</li> </ul>
<b>Illumination</b>	<ul style="list-style-type: none"> <li>• Existing illumination in vicinity of access/intersection.</li> <li>• Need for modification as a result of development.</li> </ul>
<b>Signalization</b>	<ul style="list-style-type: none"> <li>• Existing Signalization at access/intersection.</li> <li>• Need for modification as a result of development.</li> </ul> <p><b>Note:</b> Alberta Transportation does not support signals in rural areas.</p>
<b>Conclusions / Recommendations</b>	<ul style="list-style-type: none"> <li>• Required intersection improvements.</li> <li>• Required pedestrian mitigation.</li> <li>• Required illumination.</li> <li>• Required Signalization.</li> </ul> <p><b>Note:</b> If intersection improvements are required, it must include sub-grade for two highway overlays.</p>