

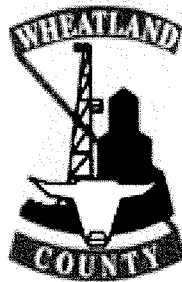
PROPOSED

**WHEATLAND WEST INDUSTRIAL PARK
AREA STRUCTURE PLAN**

PT NE9-24-26-W4M

SUBMITTED TO ;

WHEATLAND COUNTY



JANUARY 22, 2008

WHEATLAND COUNTY
PROVINCE OF ALBERTA
BYLAW 2008-08 (SMITH)
(WHEATLAND WEST INDUSTRIAL PARK AREA STRUCTURE PLAN)

Being a by-law of Wheatland County for the purpose of adopting an Area Structure Plan to provide a comprehensive framework for development of the Wheatland West Industrial Park for Industrial/ Commercial land Uses within the North half of Legal Subdivision 15 and all of Legal Subdivision 16 in the NE ¼ 9-24-26 W4M containing 20 ha. (50 acres) more or less.

BLAND MOVED First Reading of Bylaw 2008-08, on March 4, 2008, this being a by-law the purpose of adopting an Area Structure Plan to provide a comprehensive framework for development of the Wheatland West Industrial Park for Industrial/ Commercial land Uses within the North half of Legal Subdivision 15 and all of Legal Subdivision 16 in the NE ¼ 9-24-26 W4M containing 20 ha. (50 acres) more or less.

Carried.

WHEREAS notification of this Bylaw was circulated to area landowners within 1 mile and it was advertised in the Strathmore Standard two (2) weeks prior to the public hearing date.

WHEREAS a Public Hearing was held on May 6, 2008 at the Wheatland County office.

REINHARDT MOVED Second Reading of Bylaw 2008-08, on June 3, 2008, and it was

Carried.

KOESTER MOVED Third and Final Reading of Bylaw 2008-08 on June 3, 2008 and it was

Carried.

Ben Armstrong
Reeve

Jennifer Deak
County Manager

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EXECUTIVE SUMMARY

This Area Structure Plan follows the spirit and intent of the Master West Wheatland ASP approved in May, 2006. It provides for the industrial rezoning and subdivision of a 20.34 hectare (50.26 ac) parcel at the intersection of Highway 1 and Range Road 263. Approximately 17 lots will be developed in sizes ranging from 0.77 hectares (1.9 ac) to 2.1 hectares (5.2 ac) in two phases according to market demand.

A Transportation Impact Assessment (TIA) was reviewed by Alberta Transportation. The TIA provides that Phase 1 of the ASP (40% of the lots) will be allowed access to Highway 1 using Range Road 263. Development permits for Phase 2 (60% of the lots) will only be approved upon construction of a primary collector road that connects to Range Road 264 to the west.

Water and sewer will be supplied by on-site servicing, although allowance for full water and sewer servicing is contemplated at some future point. Stormwater management will be accomplished in accordance with County Policy and Alberta Environment guidelines.

Initial landscaping will be done to a rough grading stage by the developer with final hard and soft landscaping and architectural design to be determined at the development permit stage.

The matter of nesting this ASP into the County Stormwater Master Plan, the County Transportation Master Plan and off-site levy policy is yet to be determined. However, the applicant has been in contact with the County to better understand the progress of these draft documents.

1 INTRODUCTION

1.1 How To Use This Document

This Area Structure Plan is divided into three sections:

- background information;
- a detailed explanation of the intent of the Plan; and,
- a set of specific policies that will guide the Subdivision and Development Authorities in their decisions.

The ***Implementation policies*** direct the County to undertake specific actions that are required to ensure the area develops as intended by the Plan.

1.2 The General Setting (Figure 1)

The Plan area is located to the west boundary of the Town of Strathmore over level to gently undulating terrain. The L shaped parcel is approximately 20.34 hectares (50.26 ac) in size. The site is currently occupied as the applicant's residence.

Highway 1 bounds the north side of the site It became a divided highway in the 1970's. Range Road 263 is a graveled road that bounds the east side. It provides access to 6 residences along its length to where it intersects Township Road 240 to the south.

Farming operations predominate the area to the west and south although there are several rural residences on 40 ac parcels to the east and one 40 acre parcel to the west. As of the time of this ASP a number of these parcels were listed with real estate agents.

1.3 Existing Policy Framework

- *The Wheatland County Municipal Development Plan identifies the subject quarter as suitable for rural commercial/ industrial uses. Section 11.01.10 of the MDP states the following;*

"In conjunction with this Municipal Development Plan and Land Use Bylaw a West Highway 1 ASP (WHASP) for a commercial and industrial area along the south side of Highway 1 between the Town of Strathmore and the MD of Rocky View boundary has been developed. Many different land uses can be compatible. However, industrial and commercial can be difficult to integrate. Therefore the WHASP will be an area where industrial and commercial development can be generally directed, subject to site specific suitability."

- *The Wheatland West Area Structure Plan 2006 (WWASP) identifies a framework for future subdivision and development. The WWASP provides for a wide variety of commercial and industrial land uses and sets out requirements for more detailed area structure plans and conceptual schemes. The Wheatland West Industrial Park Area Structure Plan is consistent with the requirements of the WWASP.*
- *The current Wheatland County Land Use Bylaw designates the current zoning as Agricultural General (A-G). However, the WWASP provides for the rezoning of lands to the Industrial General (I-G) District of the Land Use Bylaw. The district includes a wide variety of industrial and secondary commercial uses at a variety of parcel sizes.*

2 EXISTING PHYSICAL SITE CHARACTERISTICS

2.1 Topography, Drainage and Vegetation (Figure 2)

Topography - The Plan area is comprised of a 20.34 hectare (50.26 ac) L-shaped parcel. Topography slopes gently downward from the northwest to the southeast on a relatively steady overall grade. Overall relief is approximately 5.5 metres with an average grade of 0.6%.

Drainage - Natural on-site drainage is from the north and northwest to the south and southeast. The area is composed of some low lying areas in the southeast corner and a small depression in the central part of the property. An existing drainage course channels drainage from the north side of Highway 1 by way of 4 existing culverts onto the parcel. The drainage was directed towards a former Alberta Transportation borrow pit and then re-directed to the southeast, off the property into the drainage ditch along Range Road 263.

The water volume running through the site from the north under four Highway 1 culverts has been unable to effectively flow through the parcel during high rainfall events. This is largely due to the differences in culvert capacity at the inflow and the outflow. The parcel has experienced periodic flooding in high rainfall events as the smaller, downstream culvert sizes have been unable to accept the flows resulting from the Highway 1 culverts without backing up water onto the proposed ASP parcel.

The diameter of culverts conveying water from North of Highway 1 to the Hartell Coulee outfall were measured in fall, 2007 to identify choke points for water flow between Highway 1 and the Hartell Coulee outfall.

Four separate culverts convey water onto the ASP site as a result of the highway construction as follows;

- a. Two 18 inch culverts and two 30 inch culverts convey stormwater southward from the north side of Highway 1 and onto the ASP lands.
- b. Stormwater runoff generated by the Highway and land north of the Highway is conveyed across the ASP parcel to its exit at the southeast corner of the parcel. This is then channeled southward into the west-side drainage ditch along Range Road 263 to a point where it passes to the east side of the Road through a single 18 inch culvert.
- c. The flow then continues southward through a single 12 inch culvert under an approach on land owned by Mr. Jennex.
- d. The southward flow is then re-directed under range road 263 to the west side of the road by way of a single 36 inch culvert.
- e. Approximately 400 metres further to the south, the southward drainage flow is redirected yet again to the east side of the Road by way of a single 24 inch culvert.
- f. The final route crosses an open field into the outfall at Hartell coulee.

As a result of the disparity in culvert capacity between upstream and downstream, the volume of water attempting to move between Highway 1 and Range Road 263 has been unable to be properly channeled into the road drainage system without periodic flooding of the ASP parcel. This ASP will allow for the proper channeling of stormwater between Highway 1 and its outfall at Hartell Coulee as part of the overall drainage master plan for the larger Wheatland West ASP benefiting area.

Vegetation - The property is within the Fescue Grass Ecoregion of Alberta. Most of the plant communities on the property have been modified due to agricultural and grazing activity and reflect low to high levels of ongoing disturbance. Some areas immediately adjacent to the two existing structures appear to have had native species removed and are covered with agronomic grass species including Kentucky bluegrass and timothy. Typically, in highly disturbed areas (ie. grazing) native grasses are replaced by disturbance

resistant non-native bluegrass species with smaller amounts of timothy and brome species. The vegetation communities present in the northeastern section of the property, a grazing area for several horses, reflects this. In wetter, low-lying areas patches of forbs and grasses characteristic of wetlands or marshes are present. Apart from the man-made dugout and some low lying land to the southeast, no permanent wetlands are located on the site. There was no evidence of extremely distressed vegetation. The plant communities, especially in the northwestern portion of the property, appear to be thriving.

2.2 Surficial Geology And Soils

Surficial Geology - Alberta Transportation recently prepared a risk management Plan for Provincial lands on the north side of the highway. EBA engineering provided additional information as to the nature of the area as follows;

"The area is underlain by a ground moraine with an undulating to gently rolling topography. The sediments forming the moraine consist of till up to 30 m in thickness and are comprised of clay, silt and fine sand (I. Shetsen). In this part of Alberta, bedrock is composed of sandstone, siltstone, minor shale and coal of the Paskapoo Formation. The depth to bedrock could not be determined from the published information. Based on the hydrogeological map of the area, the regional direction of groundwater flow is expected to be to the northeast. Groundwater flow in surficial deposits is often a subdued reflection of the topography. The local surficial topography slopes to the south or southwest."

Soils classes - The soils in the general area are classes as CLI Class 2 soils. In addition the soils are composed of Soil Correlation Area (SCA) 6 (Pedocan 1993). The sediments forming the ground moraine consist of till up to 30 m in thickness and are comprised of clay, silt and fine sand (Shetsen 1987). The soils are characteristic of the Thin Black Soil Zone of south-central Alberta and are predominantly Chernozemic with a few Solonetzic areas. A search on the AENV Soil Information Viewer online indicated there is no indication of Solonetzic soils on the property. Soils on the property are predominantly Orthic Black Chernozem with some poorly drained soils in the southeastern section of

the property (AENV 2005). The surface soil horizon is black and ranges from 10 to 20 cm in depth throughout the property.

Although the property has several low-lying and drainage areas, the potential for soil erosion due to moving water is low as surface water in these areas tends to be stagnant during the spring and summer. Overall, the soils are considered generally of moderate transmissivity and appropriate for buildings, infrastructure and sewage disposal tile fields.

3 EXISTING HUMAN FEATURES (Figure 4,5)

3.1 Existing Land Use

Historical subdivision and development - The parcel was first subdivided into a 55 acre parcel in 1965 by Mr. Clifford Torgrimson. In the 1970's Alberta Transportation upgraded the highway to a 4 lane divided status and required 4 hectares for highway widening. In 1982, the County approved a development permit for Mr. Lloyd Kemble to construct a house and barn on the existing site. A real property report was issued by the County in 1989 confirming house was built in accordance with the County land use bylaw regulations. A 1997 Real Property report confirmed the existing parcel dimensions at 24.34 hectares minus 4 hectares for highway widening, netting 20.34 hectares (50.26 ac).

Current Land Use Activity on the parcel - The northwestern section of the property is used for agricultural purposes, while the northeastern section is a grazing area for several horses. The southeastern section contains the permanent structures (a residential dwelling, shed, horse corrals and horse barn) and additional grazing land. The residential dwelling is served with on-site water and sewer. Existing access to the property is from Range Rd. 263. In 2007, the landowner constructed horse corrals and a horse barn with a second access at the north end of the parcel.

Surrounding Land Use - To the north of the property, on the north side of Highway 1, a decommissioned service and bulk fuel station was used by the Province as "*The Log Cabin Satellite Maintenance Yard*". The site is currently owned by Alberta Infrastructure and Transportation (AIT). Reclamation, remediation and environmental monitoring on the site is ongoing. The well monitoring on the site conducted by Alberta Transportation through EBA Engineering has resulted in ongoing remediation of the site. Monitoring of well

data has resulted in a new well being drilled to replace a contaminated well for the parcel to the southeast (Belisle) at the expense of Alberta Transportation.

The dominant land use in the adjacent parcels is cropland. Four rural residential homes are located on 16 hectare (40 ac) properties to the east and one residence is located to the west end of the site. Encana has also completed a gas well site to the south of the ASP area but this is not seen as a development constraint.

One mile to the west, an Area Concept Plan has been re-zoned with the intention to subdivide a total of 320 acres by Isle of Mann Construction Ltd. To the southeast, a 40 acre parcel on NE10 applied for an RV storage land use. The current use of the site includes storage of derelict vehicles.

3.2 Transportation Network

Existing Access - The current access into the site is provided off Highway 1 via Range Road 263. This road forms the east boundary of the site and provides an all-turns access to the Highway. Range Road 263 has a 5 to 6 metre wide gravel surface and is used as an access to Highway 1 by six residences in a one mile stretch. Consequently, the existing traffic volumes on the range road are negligible. The existing site access services a farmstead located on the site.

Traffic Impact Assessment (TIA) - The developer retained Mr. Tomasz Kroman of *iTRANS Consulting Inc.* to prepare a (TIA) for the proposed development. Due to its proximity to Highway 1, the approval for this development must be obtained from Alberta Infrastructure and Transportation (AIT). Consequently, to ascertain that the analysis will match AIT requirements, the scope of the TIA was verified with the AIT personnel representing AIT's Calgary Office. Traffic analysis was carried out using the Synchro/SimTraffic software based on the U.S. Highway Capacity Manual (HCM). The full report is included in the

Appendices document under a separate cover. In summary, AIT has accepted the TIA and suggested options they would accept as it deals with the development of the site and access onto the highway.

Wheatland West Industrial ASP (WWASP) Policy - The WWASP outlined a basic methodology for handling turning movements onto Highway 1 from Range Roads. The policy is summarized as follows;

- Short term (0-1 year) – 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.
- Medium term (2 -10+ years) - As the internal roads are built, access will be eliminated in cooperation with Alberta Transportation.
- Long term (>10 years) – Once all intersections are linked to a complete internal road system, remaining intersections will be closed after 2 interchanges are constructed.

The WWASP policy is intended as a guide to be used by Alberta Transportation and developers in the development of the industrial area. The actual thresholds and timing of intersection closures is reviewed by Alberta Transportation on a case by case basis as a result of a TIA submitted by potential developers. An overall highway 1 access management Study is currently being prepared by Alberta Transportation and it is unknown as to the timing of the draft report timing.

3.3 Existing Water Supply and Wastewater

Current groundwater supply capacity - The AENV Water Well Database has recorded a water well located on the northeast corner of section 9, township 024, range 26, west of the Fourth Meridian. The well, drilled in 1982, is located on the property and is used as water supply for the dwelling. The existing water supply on the parcel is by means of a 65 foot well.

Potential Groundwater Capacity – The developer retained Mr. John Elton (P. Geol.) of Elton Environmental Ltd. to prepare a groundwater supply evaluation on behalf of the landowner. The full report (November, 2007) is included in the Appendices document under a separate cover. Conclusions for the groundwater supply and quality are summarized as follows;

- Shallow bedrock aquifers, typically less than 30 m deep, appear to extend beneath the proposed subdivision. Individual wells completed in these aquifers within the proposed development lots are anticipated to have sustainable yields of at least 1 m³/day. On a short-term demand basis (i.e. approximately 2 hrs) the available pump test data indicate that well yields in the 46 to 655 m³/day range (7 to 100 l/gpm) could be anticipated. Deeper sandstone aquifers, at approximately 70 m deep, having similar yield potential are anticipated to underlie the proposed development.
- The natural quality of groundwater in bedrock wells in the area is a sodium bicarbonate or sodium sulphate type water. The total dissolved solids, sodium, sulphate and iron concentrations are likely to exceed aesthetic drinking water guidelines. The fluoride concentration may exceed a health criterion. Water treatment would probably be required for drinking water purposes and for the control of iron to prevent staining. With the exception of iron, if present at elevated concentrations, the water may be acceptable for non-drinking water purposes without treatment.
- The concentration of chloride in shallow groundwater in one or more of the northeastern proposed lots is likely higher than drinking water guidelines due to the effects of road salt originating at the Alberta Transportation site to the north of the ASP area. Wells completed in deeper aquifers at these locations will probably have acceptable concentrations of chloride due to the presence of intervening low permeability shale horizons.
- Individual wells will need to be licenced. A two hour pumping and two hour recovery test will be required for each well and the analyses of a water

sample will be required to determine its potability, suitability for industrial purposes and possible treatment.

- The annulus of well casings should be sealed with low permeability materials and the ground sloped away from the wells to prevent the inflow of surface water. Wells should be located so as to maximize their distance from neighbouring wells to reduce potential interference effects. Preferably, septic tank systems should be located downslope from the wells.

Existing sewage disposal – An existing tile field services the dwelling to the southeast of the existing dwelling.

3.4 Pipelines and Utilities

Pipelines and Wellsites – Encana has drilled a shallow gas well to the south of the ASP land. An access road has been constructed from Range road 263 to the well site.

Powerlines - A 138 kV transmission Trans Alta Utilities powerline runs east and west along the south side of Highway 1. The maximum vehicle height allowed at the intersection is 5.4 metres (17.7ft).

3.5 Environmental Assessment

The developer retained Corvidae Consulting Ltd. to prepare a Phase 1 and 2 Environmental Site Assessment (ESA). During Phase 1, the consultants conducted a site inspection, historical records review, historic photo review, interviews with current and previous landowners and a review of contaminated sites records. During the Phase 2 ESA, Corvidae conducted soil and water sampling and analyzed the results. The findings of the ESA were used to outline baseline biophysical information and identify potential causes of

environmental impairment to the property as a result of any past or present land use.

At the same time, a decommissioned Alberta Transportation site is currently undergoing reclamation and monitoring for hydrocarbons and monitoring for chloride north of the property. This site was identified as a potential concern with respect to contamination of the property and, as a result, Corvidae recommended a Phase II ESA be completed.

The Phase II investigation involved taking soil and surface water samples from several points on the property and adjacent to Hwy 1 north of the property to test for hydrocarbons ranging from carbon fractions 6 to 50 and benzene, xylene, toluene and ethylbenzene. A tap water sample was also collected to test on-site well water for basic water quality parameters.

The conclusions of this ESA are:

- The historic uses of the property, including agricultural use and grazing, have left no evidence of contamination.
- Currently, the surrounding land uses both historical and current pose no environmental liability to the property. However, continual monitoring and communication with AIT is recommended.
- Continual communication with AIT with respect to the monitoring and reclamation program on the decommissioned service and bulk fuel station site is recommended. Should the concentrations of hydrocarbons or chlorides increase dramatically during the next monitoring cycle steps should be taken by AIT to remediate the contaminated area.
- The existing residential dwelling may contain toxic building materials; asbestos sampling is recommended, if the building is to be demolished, to determine the environmental liability and/or need for special demolition procedures.

All of the results for surface water were below minimum detectable limits, therefore no evidence of PHC contamination. The tap water results showed that any toxic substances/materials are well below the maximum allowable concentrations in the CDWQ Guidelines. However, several aesthetic parameters related to drinking water were exceeded including iron, sodium, pH and TDS.

The full ESA report is included in the Appendices document under a separate cover.

3.6 Land Development Capability

The review of the opportunities and constraints reveals that there are opportunities to create a number of smaller parcels for industrial subdivision with on-site servicing. The following opportunities support the development of the land for further commercial/ industrial development

- The land uses proposed are in accordance with the Master Area Structure Plan,
- The land is relatively level with sufficient slope for gravity services if and when they become feasible,
- Access to Highway 1 is intended to be in conformity with the spirit and intent of the larger Master Area Structure Plan (WWASP) and in accordance with Alberta Transportation options for road access,
- There is ample water volumes for development of the number of lots anticipated,
- On-site and off-site runoff is manageable within a proper stormwater management plan,
- Soil types are suitable for structures of the type that would accommodate industrial land uses.

3.7 Landowner Communications

In early January, an information circular was mailed to 11 landowners within a quarter section of the ASP area respecting the proposed application. A copy of the circular is provided in the Appendices document under a separate cover. In addition, Mr. Dennis Torgrimson was consulted for his approval to construct a major collector road on his lands. Mr. Torgrimson has provided written consent for the applicant to construct a road on his land when required as shown in the ASP concept plan.

To the date of this application, no landowner has contacted the applicant to express opposition to the application.

4 WHEATLAND WEST INDUSTRIAL PLAN CONCEPT

4.1 Introduction

Section 4 of this Plan provides the spirit and intent in which the plan policies are written. This section should not be interpreted as policies but as context for the policies. Section 5 contains the specific policies that express the specific Plan regulations. Relaxation of these policies are within the purview of the County where the relaxations are in keeping with the spirit and intent of the overall concept. The mapping included in the Plan may require further field measurements at the subdivision and development permit stage to verify any discrepancies in measurement.

4.2 Future Land Use Concept (Map 4)

The land use concept works within the outline of the Master Wheatland West Area Structure Plan (WWASP). Expected land uses are intended for parcels serving local and regional industry and may include offices, shops, agricultural, oil and gas related business, areas for open storage of a wide range of equipment and materials. Additional secondary commercial uses such as warehousing, and wholesale sales are also appropriate as are rural business uses such as equestrian supplies.

The existing configuration of the land is designed to conform to anticipated market demand, minimize development costs, optimize highway frontage and allow the costs for highway landscaping mitigation to be shared over a wider number of lots. This more detailed ASP also proposes to construct a Primary Collector Road to connect Range Road 263 and 264. This road would necessarily cross an adjacent landowner for the purposes of long term access

to the west and link up with the land currently zoned for industrial west of Range Road 264.

This road development offers an opportunity for the County to open a significant amount of land for industrial purposes for three other landowners at such time as market conditions warrant further subdivision. The road would be constructed under an off-site levy or as an endeavour to assist, depending on the County policy yet to be decided. A cooperative arrangement among developers, the County and future benefiting landowners is in keeping with the intent of the Master ASP. That philosophy assumes an incremental strategy for the long term development of the area as entrepreneurial opportunities present themselves landowner by landowner.

The current configuration of lots on Map 4 is conceptual only. The final subdivision application would be organized to reflect market conditions at the time. However, the conceptual lotting is intended to be approximately 2 acres in size with most parcels along Highway 1 to be considered for lots 50m in width. This lotting arrangement offers the flexibility for a business to acquire more than one lot should larger parcels be required the need for re-subdivision.

The predominant intended use is for light to medium industrial purposes with an option for subsidiary commercial uses that would be complementary to the small industrial users. The range of potential uses is identified in the existing Industrial General District (I-G) district of the land use bylaw.

Except for the possibility of a security dwelling at the development permit stage, there will be no additional permanent population generated by uses proposed within the Plan area on the site.

4.3 Phasing (Map 4, 5)

The ASP intends two phases based on the requirements of the TIA. In accordance with the TIA, the proposed development could use Highway 1 access until approximately 40% of the lots have been developed, occupied and are generating traffic. Once 40% occupancy of the lots is achieved, an east-west service road connecting the proposed development with R.R. 264 shall be constructed to provide safe access to Highway 1 prior to any development permits to be approved for Phase 2.

4.4 Transportation Network

East-west road connections - The Developer plans to extend the main east-west primary collector road to connect Range Roads 263 and 264 on a Phased basis. A TIA has been reviewed and accepted by Alberta Transportation. Their letter is included as part of the Appendices under a separate cover. The TIA recognizes that Range Road 263 may be used for access off Highway 263 for 40% of the development buildout. Thereafter a service road will be required to be constructed to complete the link to connect Range Road 264. Upon service road completion, Alberta Transportation may close Range Road 263 to Highway 1 access.

Dual access onto Range Road 263 is proposed to provide emergency circulation. This dual access will result in intersection improvements for more of Range Road 263 than a single access.

Existing service road consolidation - It is intended that any existing 20 metre service road dedication along the south side of Highway 1 be consolidated into the ASP parcel at the subdivision stage. Alberta Transportation is aware of this intention and once new service road to the south is dedicated, there is no longer a need for a north service road.

Road building agreement - Implementation of the service road funding can be accomplished through County construction through an off-site levy or the developer paying the costs up front and recouping costs through an offsite levy and endeavour to assist. This could be negotiated as part of a subdivision agreement and as a result of County studies that would clarify County policy respecting this matter. Phase 1 development is expected to consist of paved roads servicing the entire ASP area. Phase 2 would be constructed at a time and standard as part of a development agreement at the time of subdivision approval.

The Phase 1 subdivision would develop the roads within Phase 1 to a paved standard and the remaining road connecting to RR264 could be constructed as part of Phase 1 and done to a gravel standard. Phase 2 subdivision would finalize paving of the primary collector as shown in the ASP.

4.5 Water and Sewer Servicing

Servicing is to be provided on-site for each parcel created. Based on the groundwater assessment report, there is potential for an adequate to substantial water supply available to supply on-site requirements for most light to medium industry. Groundwater quality will likely require treatment and the quality of water will depend on each individual well drilled. Trucked-in water may be an option at the development permit stage for some uses requiring potable water. Future intended uses are expected to require minimal water consumption, but details of expected water consumption will be determined at the development permit stage.

Sewage disposal will be on-site in accordance with Alberta Provincial requirements.

The Master ASP provides for the opportunity to retrofit piped water and sewer systems in the area. The County may request an additional right of way to accommodate this option along the south side of the proposed access road should subdivision of adjacent lands be contemplated.

4.6 Stormwater Management

The developer has retained Paul Jacobs of Stormwater Solutions Inc. to develop a stormwater management plan. A key design parameter is to provide a design for to handle offsite stormwater flows from the property north of the ASP area that discharges onto the ASP parcel. A secondary Stormwater plan will handle the runoff generated on-site by the development.

The off-site runoff enters the site through four culverts below the Trans Canada Highway. From 1:50000 map contours, it appears that these culverts service at least 50 hectares of land to the north of this site (including the TransCanada Highway runoff). The quality of overland flow entering the site has been reviewed by an environmental consultant under contract with Alberta Transportation. This flow from off-site sources is intended to be channeled directly to Range Road 263 and eventually the outfall to the Hartell coulee to the south. On-site runoff generated by the actual development of the site will be accommodated in accordance with Provincial guidelines.

The site is identified in the draft West Highway 1 Master Drainage Plan as being part of the same sub-catchment as the Torgrimson land to the south. As such, any stormwater facility built during development of this site will be constructed along the Torgrimson property boundary. Overland flow also enters the site from the Dorosh property to the west. This must also be accounted for in the development of the site.

An overland flow route is required from the highway culverts to the south east

corner of the site. A second route is required to service the lands to the west. In order for the site to drain properly, at least 330m of the west ditch of Range Road 263 must be re-graded to the south. A continuation of the proposed stormwater management facility is required along the Torgrimson property boundary at such time as the land to the south is developed.

The stormwater pond will be designed with the following features;

- The ditch from the north must be designed to take the 1:100 year flow rate from the land to the north (including the Trans Canada Highway) at 1663 litres per second (L/s) with ditch dimensions at 1m deep by 3m wide with 3:1 side slopes @ 0.18%. An overland drainage easement of 12m is intended to be registered at subdivision stage.
- Any culverts must be designed to convey the 1:5 year flow without surcharge (393 L/s), and also the 1:100 year flow with acceptable surcharge. Twin HDPE 750mm pipes are suggested at 0.18%.
- The stormwater facility will accommodate stormwater generated on the site as a result of development and will have a footprint of approximately 7% of the site and will incorporate a wetland component. The facility will have a common boundary with the Torgrimson property to the south.
- The quality of water flowing through the culverts must be within acceptable standards for agricultural runoff, or better.
- The stormwater management plan will not require the existing dugout. As such the dugout will be reclaimed and filled in as developable land in the first phase of subdivision.

4.7 Landscaping Requirements

The Master ASP requires that any development within 300m of the Trans Canada Highway be subject to landscaping provisions along the Trans Canada in accordance with the County Land Use Bylaw Highway Corridor Overlay District. The initial rough grading and contouring of the ASP lands after

subdivision will provide some landscaping in the form of earthwork to be undertaken as a starting point for development of the lots. Final design and implementation of landscaping and placement of vegetation will be at the development permit stage.

Where necessary and required, the developer will work with adjacent landowners to the east and to the west to offer additional landscaping in the form of berms and trees to provide ample screening for residential uses that intend remaining residential and where there is significant visual impairment. This design would be prepared at the subdivision stage of site development.

A conceptual design of the landscaping at the land preparation stage will identify the rough grading of the required landscaping

5) AREA STRUCTURE PLAN POLICIES

5.1 Introduction

The following policies are the specific actions and standards that a land owner/developer and the municipality shall follow unless an application is made to amend the Plan and/or the Land Use Bylaw. Relaxation of these policies are within the purview of the County where the relaxations are in keeping with the spirit and intent of the overall concept.

5.2 Land use Policies

a) ASP Conformity - The future land use concept map is identified in Map 4. Future subdivision and development shall be in accordance with this Area Structure Plan. Major deviations to the Plan design and policies shall require an amendment to this Plan. Relaxations may be considered without an amendment to this Plan where the reconfiguration of parcels and road design would, in the opinion of the approving authority, maintain the overall intent of the Plan policies.

b) Conceptual design - The ASP Concept Map is conceptual. For each phase of development, lot configuration and final road alignments will be designed prior to the subdivision approval stage for that phase. The actual numbers of lots within each phase will be determined at the detailed subdivision design stage.

5.3 Transportation Policies

- a) Primary Collector Road - A primary collector road parallel to Highway 1 as shown conceptually on Map 5 will be constructed as required to provide access and connect the Plan area with adjacent parcels and to provide indirect access to Highway 1 by way of Range Roads 263 in Phase 1 and Range Roads 264 in Phase 2. The road right of way and standards shall be within a 30 metre right of way or otherwise in accordance with Wheatland County standards.
- b) Internal Roads - The road right of way and standards for internal roads shall be within a 20 metre right of way in accordance with Wheatland County standards.
- c) Road Intersections - The developer shall construct road intersections at Range Road 263 to provide access to the ASP lands in accordance with County standards.
- d) Development Agreement - At the time of subdivision approval, the developer shall enter into an agreement to ensure that the road concept as shown in Maps 4 and 5 is constructed to County standards.

5.4 Servicing Policies

- a) Development Agreement - The Developer shall enter into a development agreement with the County at time of subdivision approval for the Plan area in respect of supplying stormwater and on site sewage disposal.
- b) Servicing Standards – Parcels will be serviced with on-site water and sewer servicing. Lot owners may connect to future piped water and/or sewage disposal systems on a local improvement basis within in the benefiting Plan area.

- c) Service Costs - The Developer shall be responsible for all costs associated with on site infrastructure development related to on-site water supply, wastewater and all utilities.
- d) Wastewater Management – Sewage treatment shall be constructed to Alberta Labour Standards.
- e) Water supply and distribution - On-site water and sewer may be provided for each parcel created at the development permit stage. Water shall be provided in accordance with Provincial requirements. A piped water supply, water license or alternative water supply arrangement, treatment and distribution system is appropriate for each development permit application and approvals shall be provided to the satisfaction of Alberta Environment.
- f) Future retro-fitting to a piped water and/ or sewage disposal system may use existing rights of way or require that a common right of way be reserved along the north ASP boundary and north property setback if required by the County.
- g) Stormwater management - Stormwater will be contained on each parcel and be in accordance with the stormwater management plan as shown conceptually on Map 6 and as described in Section 4 of this ASP. Stormwater discharge from lots are limited to 70 L/s/Ha for the 100 year storm. Lots less than 0.3 Ha will be limited to 20 L/s
- h) Fire protection - The developer shall provide fire protection to the satisfaction of the County.
- i) Shallow utilities - Underground power, communications and natural gas services shall be provided to the satisfaction of the County.

5.5 Reserve Land and Landscaping Policy

- a) Reserve land is intended to be provided as cash in lieu for the parcels at the time of subdivision. No environmental reserve is required to be provided.
- b) Landscaping shall be undertaken subsequent to subdivision approval and shall consist of rough grading of the site to provide a basis for shaping and contouring land exposed to Highway 1 where it is required to be undertaken in accordance with the Highway Corridor Overlay District of the Land use Bylaw. More defined landscaping including vegetation, additional land contouring and architectural features will be undertaken at the development permit stage.
- c) The developer will work with adjacent landowners at the time of Plan area development to provide a mutually agreeable resolution to issues of viewshed mitigation that may arise at the subdivision development stage.
- d) The 30 metre primary collector road right of way provides ample room for drainage and additional space for the potential future installation of piped infrastructure. It is intended that the urban design of buildings and other development would allow setbacks from the primary collector road to be relaxed where right of way land is proposed to be landscaped at the development permit stage and where the right of way is not required for actual road development.

5.6 Phasing Policies

- a) The phasing of the Plan area is shown in Map 4. The Phasing is conceptual and may be amended without the need to amend this Plan. However, no more than 7 lots of the total number of lots within the Plan area of Phase 1 may be granted development permits without construction of a service road connecting Range Roads 263 and 264.

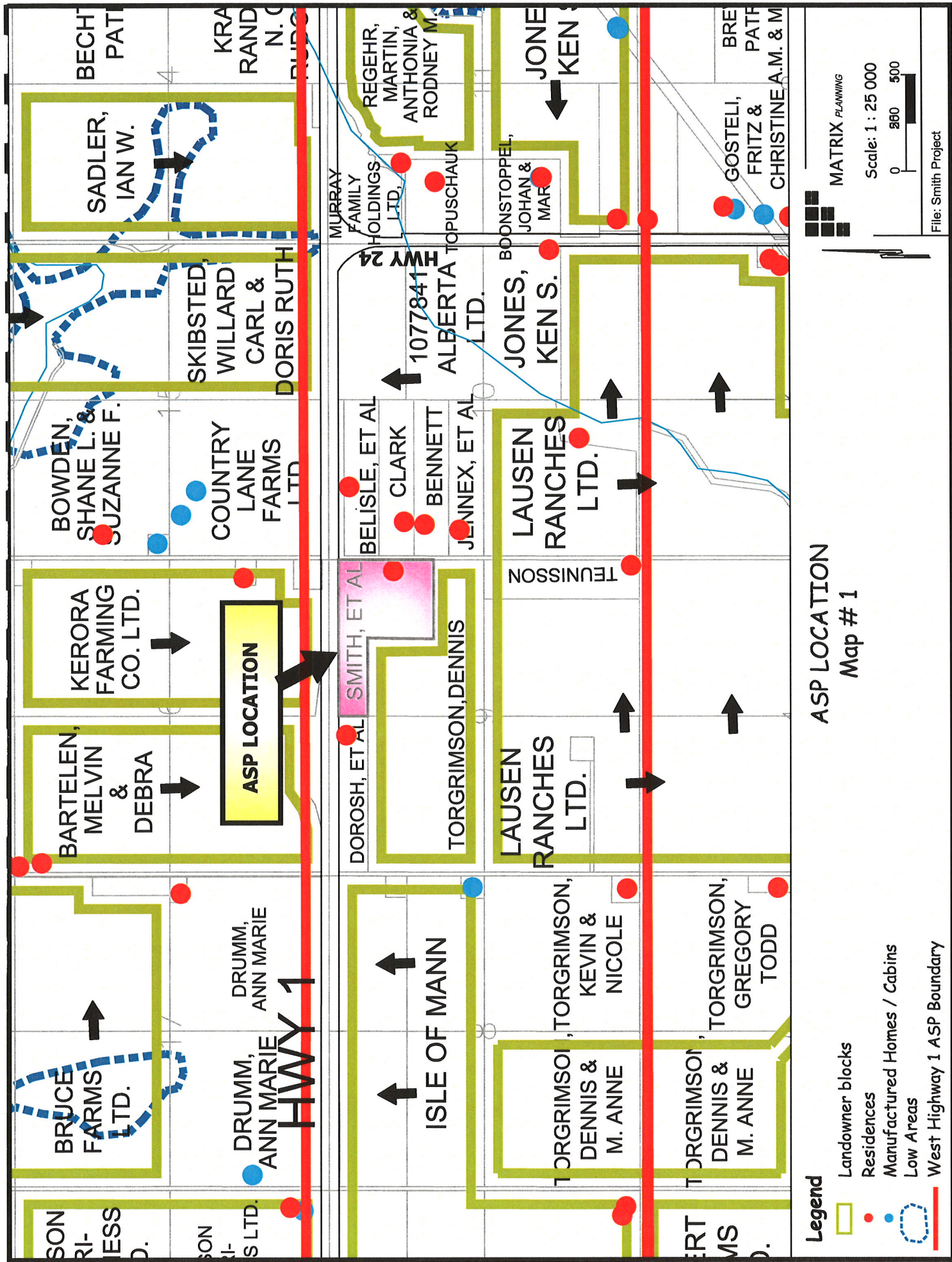
5.7 Implementation Policies

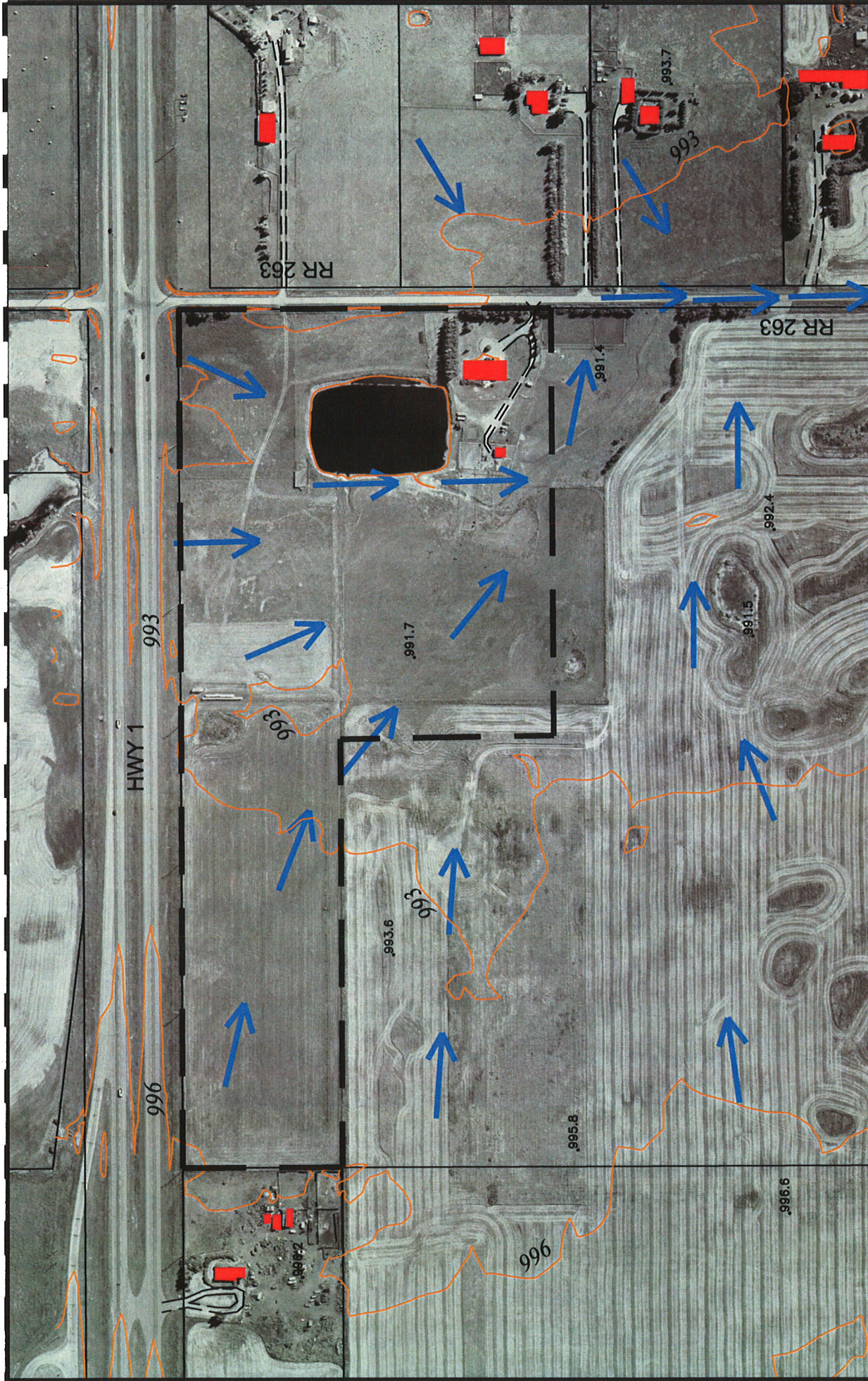
- a) Development Agreement - The developer shall enter into an agreement with the municipality at the subdivision approval stage to ensure standards of road construction, stormwater management, site preparation, development charges, endeavours to assist and any other matter required by the County under the provisions of the Municipal Government Act.

- b) Re-zoning - Subdivision applications shall require a rezoning to the appropriate Rural Industrial zoning district, being the Industrial General District (IG) as amended from time to time. Map 7 of this ASP identifies the lands to be amended to implement the ASP within a separate bylaw amendment process.

6) ASP MAPS

- 1. ASP Location**
- 2. Existing Topography and Drainage**
- 3. Existing Land Use and Ownership**
- 4. Future Land Use Concept**
- 5. Regional Road Concept**
- 6. Stormwater Concept**
- 7. Land Use Bylaw District Map Amendment**





Legend

- Existing Structures
- Property Boundary
- Contour (Index - 15m)
- Contour (Inter - 3m)

996.6 Spot Elevation (m)

General Drainage Direction

EXISTING TOPOGRAPHY AND DRAINAGE MAP 2

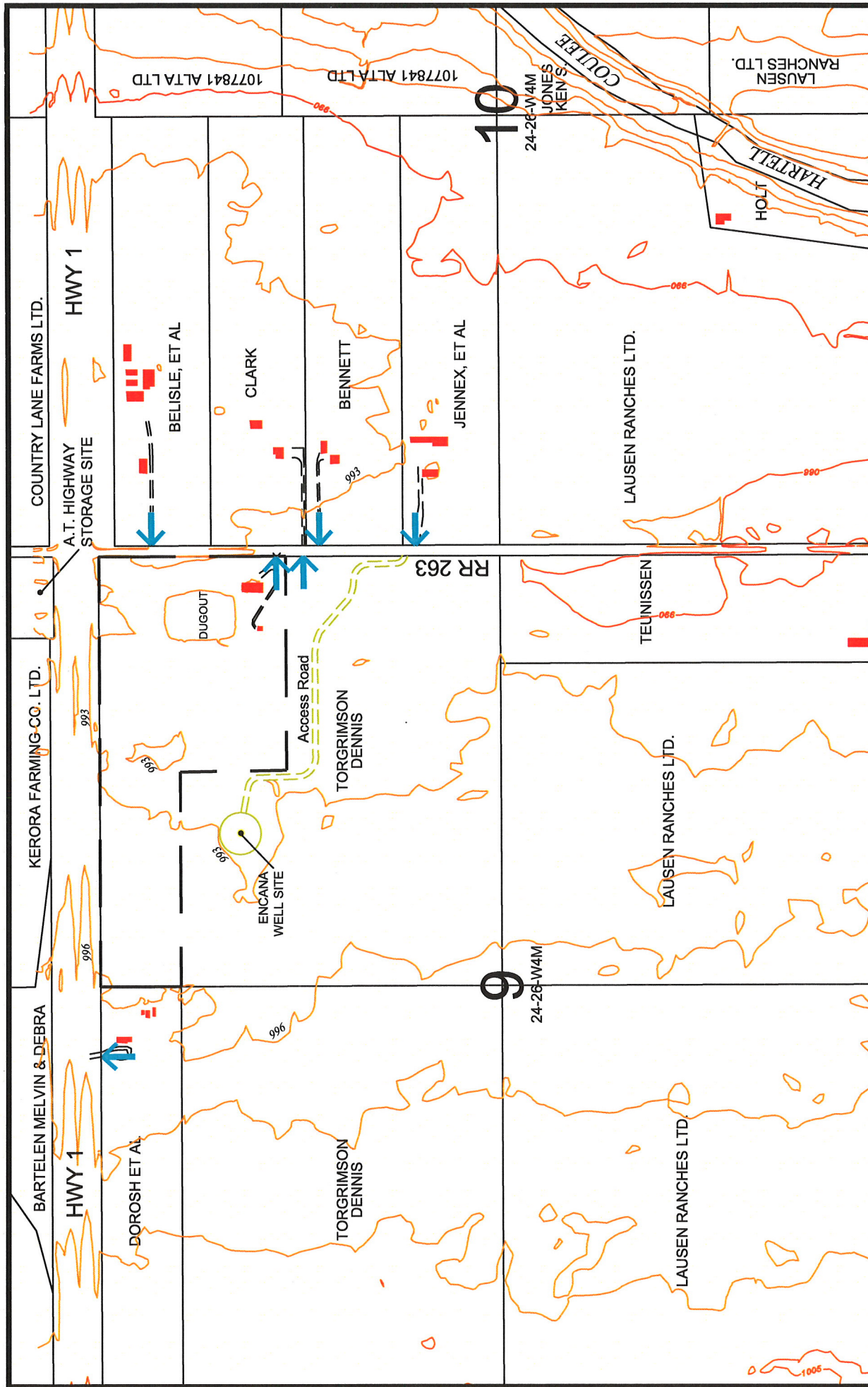


MATRIX PLANNING

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EXISTING LAND USE AND OWNERSHIP MAP 3

MATRIX PLANNING

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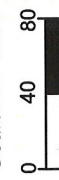
Legend

- Existing Structures
- ASP Boundary
- Future Lot Lines (Conceptual)
- Phase Boundary

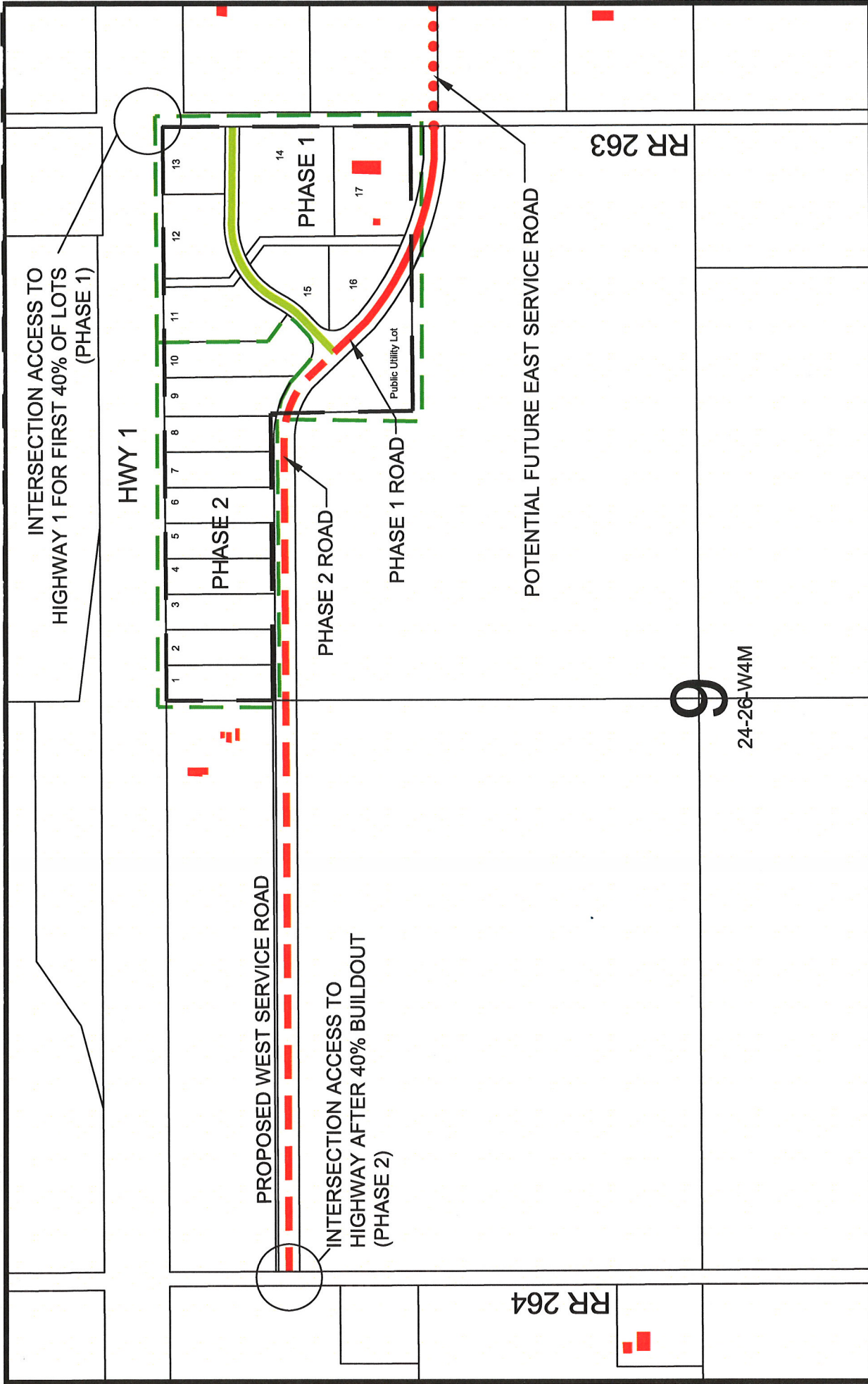
Future Land Use Concept PT. NE 9-24-26-W4M Map 4



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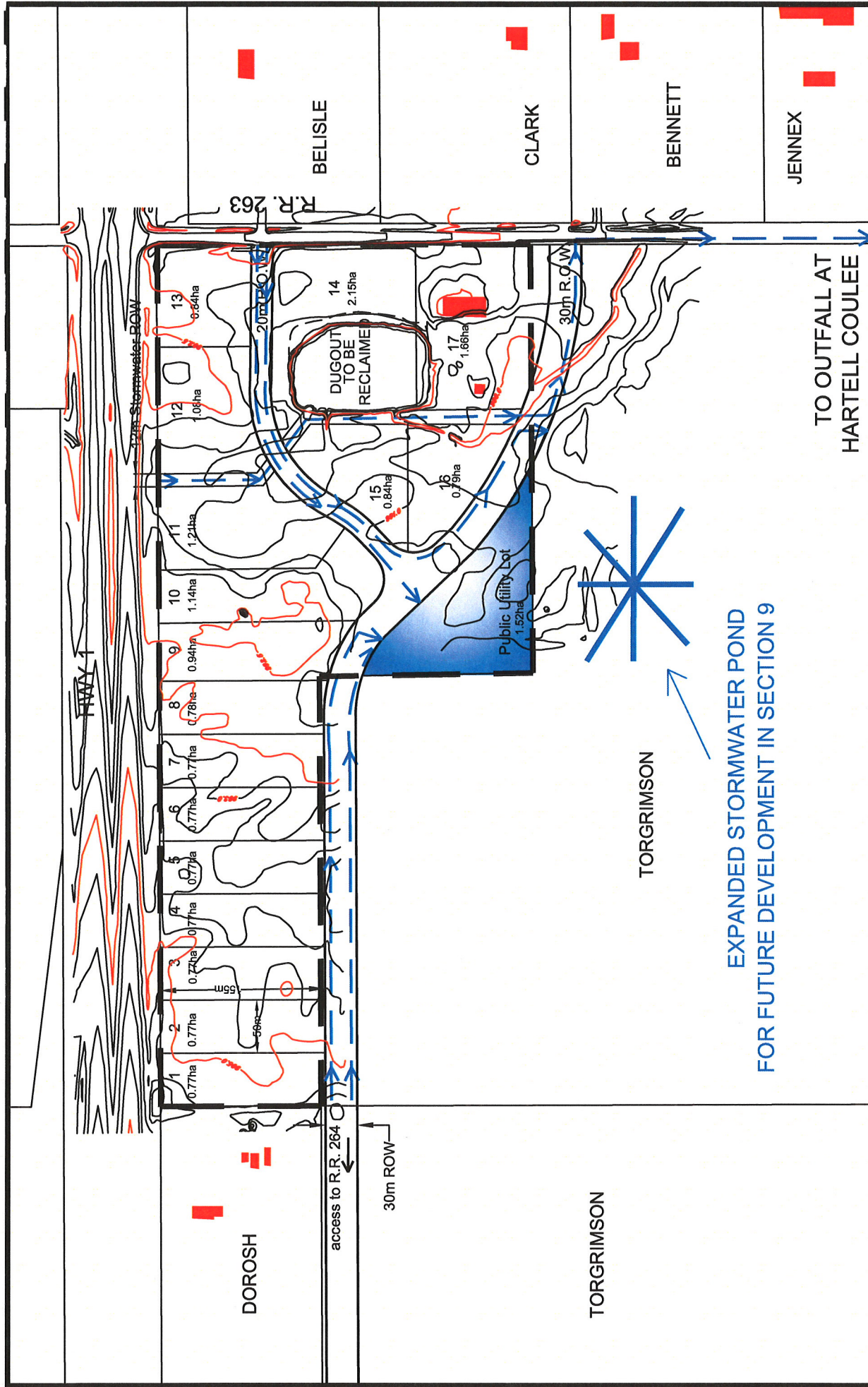
- ROAD (LOCAL)
- PRIMARY COLLECTOR (PROPOSED PHASE 1)
- PRIMARY COLLECTOR (PROPOSED PHASE 2)
- PHASING

Regional Road Concept Map 5



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Legend

- Existing Structures
- ASP Boundary
- Future Lot Lines (Conceptual)
- Contour (Index - 0.5m)
- Stormwater Flow

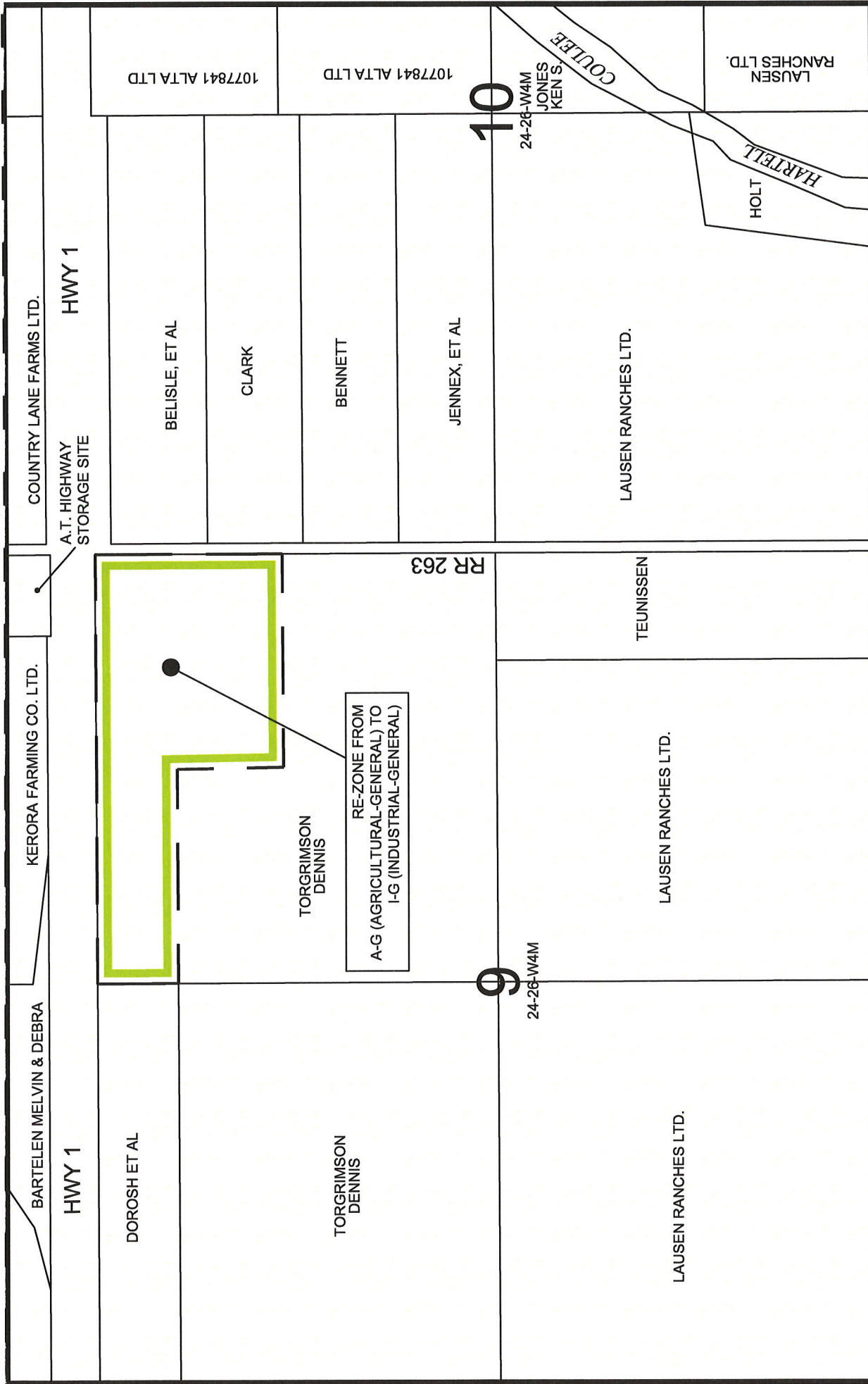
Storm Water Concept NE 9-24-26-W4M Map 6

MATRIX PLANNING

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Legend

- Area Proposed for Land Use Bylaw Amendment
- Property Boundary

PROPOSED RE-ZONING FOR PT. NE 24-26-W4M



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