TES Industrial Development



SW ¼ SEC 28-39-27-4 Lacombe County

Outline Plan

112849297 February 2013





TES INDUSTRIAL DEVELOPMENT SW 1/4 SEC 28-39-27-4

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1.0 Introduction

1.1 PURPOSE

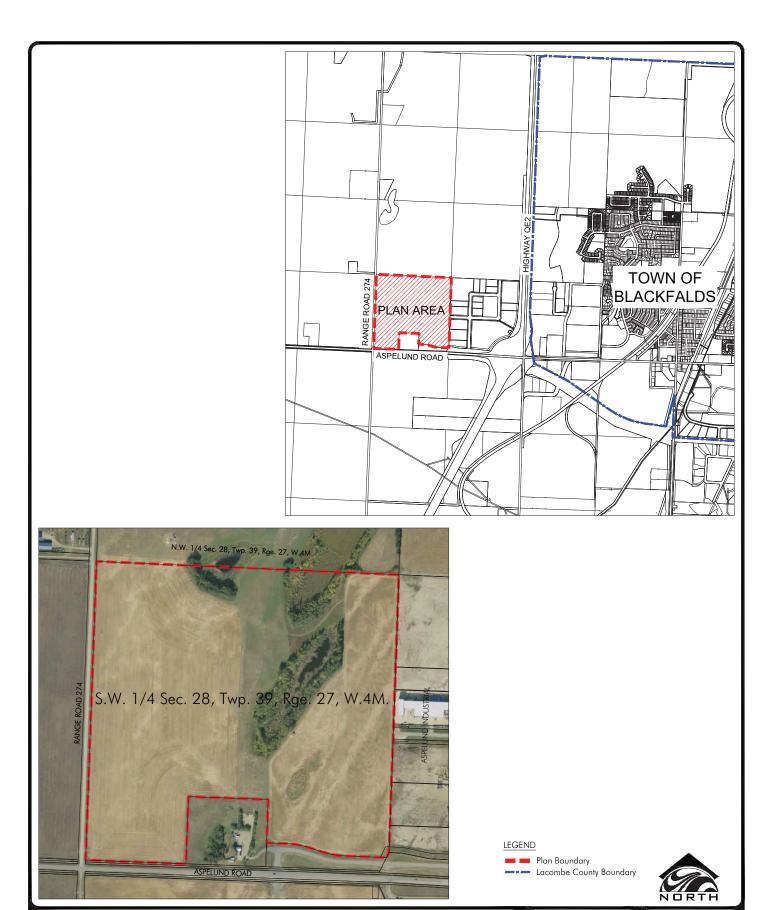
The purpose of the TES Industrial Outline Plan is to describe the land use framework and development objectives for SW $\frac{1}{4}$ Sec 28-39-27-W4 as shown **Figure 1.0 – Location Plan**.

This report has been prepared by Stantec Consulting Ltd. on behalf of TES Investments Ltd. The Developer is committed to creating a high quality, attractive, and successful business park while carefully considering the opportunities and constraints of the area. The proposed development is an extension of the existing Aspelund Industrial Park development and will incorporate similar land uses.

1.2 PLAN AREA

Located within Lacombe County, the TES Industrial Development area is comprised of 58.87 hectares (145.48 acres) as shown on **Figure 2.0 – Legal**, and is defined by the following boundaries:

- North Boundary Undeveloped agricultural land
- West Boundary Range Road 274
- East Boundary Aspelund Industrial Park
- South Boundary Agricultural land, Aspelund Road





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1.3 RELEVANT PLANNING DOCUMENTS

Located within Lacombe County, the TES Industrial Development area is comprised of 58.87 hectares (145.48 acres) as shown on **Figure 2.0 – Legal**, and is defined by the following boundaries

The following relevant documents have been reviewed and referenced in preparation of this Outline Plan report:

• Lacombe County. Lacombe County Municipal Development Plan. 2007.

Outlining the broad policies for guiding growth and changes in the County, the Municipal Development Plan (MDP) has classified the TES Industrial Development area as agricultural district. The Plan Area is adjacent to an industrial district and identified as a logical extension of industrial development within the County.

Lacombe County. Lacombe County Land Use Bylaw. 2007.

The Lacombe County Land Use Bylaw (LUB) shows the TES Industrial Development Plan Area on Schedule C: Lacombe County Land Use Bylaw No 1056/07 – NE-21-39-27-W4M. Within this figure, the Plan Area is not identified as having a particular land use designation. The concept shown within this Outline Plan has been developed to conform to the Land Use Bylaw in regards to land use and regulations.

• Lacombe County. Highway 2 West Area Structure Plan. 2012

The Highway 2 West ASP lays out the overall land use framework and location of major amenities and transportation routes located between Lacombe and Blackfalds west of Highway QE2.

Lacombe County. Lacombe County Operations Standards Manual. 2006.

The Standards Manual lays out the County's standards regarding subdivision design, servicing, and construction approval processes. Roadway cross-sections for use within this subdivision have been based off those within the Manual to ensure large scaled vehicles will be able to easily access the area.

 Stantec Consulting Ltd. TES Industrial Development Wetland Assessment. January 2012.

The TES Wetland Assessment was conducted to provide an accurate inventory and evaluation of wetlands and wetland communities within the proposed development area. Soils, surface hydrology, vegetation, wildlife, and habitats present were included in the assessment.

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- Newalta Corporation TES Industrial Phase 1 Environmental Site Assessment. November 2011.
 - The Phase 1 Environmental Site Assessment was completed to review the current conditions based on regulatory records, site inspection and information provided.
- Stantec Consulting Ltd. TES Industrial Development Traffic Impact Assessment. May 2012.
 - A traffic impact assessment was completed for the Plan Area in 2012.
- Parkland Geo. TES Industrial Development Geotechnical Report. February 2012.
 - A geotechnical report was completed for the Plan Area in 2011.
- Stantec Consulting Ltd. TES Industrial Wildlife Assessment. 2012.
 - A Wildlife Assessment is being completed for the Plan Area in 2012.

2.0 Site Context & Development Considerations

2.1 TOPOGRAPHY

As shown in **Figure 3.0 – Existing Conditions**, the site topography shows a moderate slope from the southwest and southeast corners into the wetlands along the central north boundary. Elevations range from 887.0m to 878.0m for a total relief of 9.0m. The Plan Area is bare agricultural land with wetlands along the central north region.

2.2 VEGETATION AND WETLANDS

In 2011, a Wetland Assessment was conducted for the TES Industrial Development Plan Area to examine the existing conditions of the property with regards to soil, hydrology, vegetation, wildlife, and habitat.

Six wetlands were identified ranging from Class II to Class VII throughout the Plan as shown on Figure 4.0 – Wetland Assessment.

2.3 SURROUNDING DEVELOPMENT

The Plan Area is largely surrounded by agricultural and industrial lands which do not present constraints to the layout of the Plan Area. The available information does not indicate any intensive livestock operation, or current or historical oil and gas facilities, in close proximity to the Plan Area.

The Aspelund Industrial Park located east of the Plan Area has proven successful in attracting intended business uses and generating positive growth in Lacombe County. The location of the TES Industrial Park is a logical extension of industrial uses and infrastructure.

The existing residential acreage located south of the Plan Area has been considered during the creation of the Concept Plan in order to minimize any possible negative impacts there may be on the residence.







FIGURE 3.0

EXISTING CONDITIONS

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2.4 EXISTING TRANSPORTATION

Access to the property will be via the existing Aspelund Industrial Park, from the east; and the existing service road for Aspelund Road, from the south. There will also be a west access point located along Range Road 274. Within the *Highway 2 West Area Structure Plan*, Range Road 247 is identified to become a paved road in the future.

The Plan Area's proximity to Highway QE2 will provide the development with good opportunities for accessibility and visibility from the Highway.

3.0 Development Objectives & Principles

The conceptual and preliminary planning of the TES Industrial Development concept has incorporated the following objectives and principles:

- Develop a Plan consistent with the general intent and purpose of the *Highway 2 West Area Structure Plan* and the *Lacombe County Land Use Bylaw*.
- Provide a framework to deliver a high quality, comprehensively planned, industrial development by defining the general concept and layout of the subdivision, linkages, servicing designs, and development staging.
- Ensure that the implementation of the development plan takes place on an orderly phased basis.
- Encourage the development of a variety of compatible businesses and uses while satisfying specific requirements and demands of the market for industrial land in the area.
- Protect existing natural features where possible by best fitting the development to the existing topography and features of the area.
- Encourage the design of visually attractive landscaping, building form, façade treatments, etc.
- Provide a logical, safe, and efficient transportation system within the Plan Area that is suitable to current needs and future demands.
- Identify issues and concerns of stakeholders and neighbouring residents to address them in a reasonable manner.
- Use the TES Industrial development to enhance the visual appeal of the Highway QE2 corridor.

4.0 Planning Concept

4.1 OVERALL

The development concept for the TES Industrial Development has been prepared in response to current and anticipated industrial/commercial market trends in the region. An analysis of these trends, and response to direct requests from potential lot purchasers, assisted in shaping the Concept Plan with respect to roadway layout, lot size, and orientation.

The overall design for the TES Industrial Development is shown in **Figure 5.0 – Concept Plan** and **Figure 6.0 – Concept Plan with Aerial**. The concept features a simple and logical layout that has proven successful with industrial developments. By providing large lots in sequence, potential lot purchasers will be able to easily expand their operations by purchasing multiple lots.

The roadways within the Plan Area have been designed to accommodate large commercial and industrial vehicles that are anticipated to frequent the area which is further described within **Section 5.1 – Transportation**.

The land use statistics and industrial units are represented in **Table 1.0 - Land Use Allocation**.

Table 1: Land Use Allocation

Land Use	Area (ha)	% of GDA	Lots
Gross Plan Area	58.87		
Storm Water Management Facility (SWMF)	3.57		
Environmental Reserve	2.14		
Gross Developable Area	53.16	100.00%	
Business Industrial District (I-BI)	39.94	75.14%	16
Municipal Reserve (MR)	5.32	10.00%	
Public Utility Lot (PUL)	1.25	2.36%	
Roadways	6.65	12.50%	





4.2 BUSINESS INDUSTRIAL DISTRICT (I-BI)

The purpose of the Business Industrial District land use is to provide for a range of commercial and industrial uses, some of which may have outdoor storage or work activities. This District has been used within the TES Industrial Development to accommodate both commercial and industrial uses on lots sized 1.21 ha to 7.32 ha. In total,16 lots have been located within the Plan Area.

By utilizing I-BI, lots have been designed to function as single sites and also as lots that can be combined if businesses would like to expand their operation or storage facilities. As shown on **Figure 5.0 – Concept Plan**, lots have been configured and sized to suit the anticipated needs of prospective lot occupants.

4.3 OPEN SPACE

A large open space is located in the northern portion of the Plan area. This open space is envisioned to be developed as a naturalized open space that will offer passive recreation opportunities to those working within the TES Industrial Development while preserving the pond's ecological attributes. A 30m wide Environmental Reserve surrounding the existing wetlands, a 6m wide Municipal Reserve surrounding the stormwater management facility and a 5.32 ha Municipal Reserve make up the open space system as shown on **Figure 5.0 – Concept Plan**

Recreation amenities to be located within the MR area shall include: a trail system, seating benches, or picnic tables. The specific programing of the area will be completed during the detailed design portion of the development in consultation with Lacombe County. The programing will conform to the guidelines outlined in the *Lacombe County Operations Standards Manual*.

4.4 STORMWATER MANAGEMENT FACILITY (SWMF)

As mentioned in **Section 4.3 – Open Space**, a 3.60 ha stormwater management facility has been located within the north central portion of the Plan Area. The location of this facility is based on the existing conditions and the information provided within the *TES Industrial Development Wetland Assessment* (2011).

The Wetland Assessment identifies several wetlands within the Plan Area as described within **Section 2.2 – Wetland Assessment**. A setback has been provided surrounding the existing wetlands to act as a protective buffer and also provide open space for passive recreation.

This SWMF will be in the form of a wet pond and will provide a central naturalize open space within the development. This facility is further detailed in **Section 6.2 – Stormwater Management**.

5.0 Transportation

5.1 TRANSPORTATION

As shown on **Figure 7.0 – Roadways**, the proposed transportation system within the Plan Area has been designed as a simple network of local roadways that will provide connectivity within and surrounding the TES Industrial Development. The network will also accommodate large sized commercial or industrial vehicles.

A connection to the future development on the quarter section bordering north is also provided.

To facilitate connections to surrounding areas, the transportation network has been designed to provide access to nearby major roadways as well as a connection to the existing industrial park to the east and future to the north of the Plan Area.

A Traffic Impact Assessment (TIA) has been completed to take into consideration the existing and future roadways and connections and how they would affect and be affected by future development within the Plan Area.

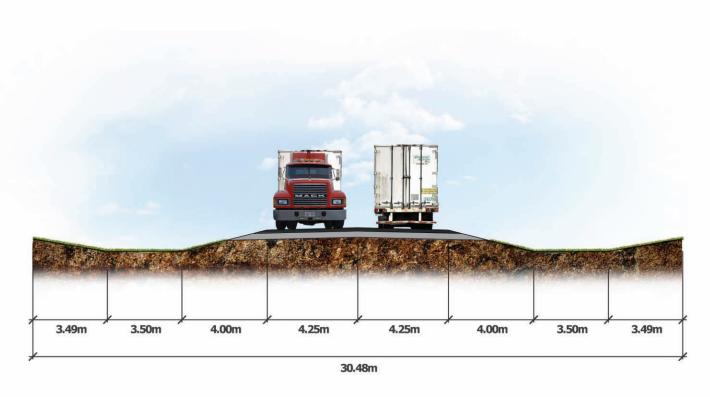
Based on the TIA, the initial development would not warrant any upgrades to the Service Road or Range Road 274 intersection with Aspelund Road. However, at the time of phase 2 development, Range Road 274 will be paved from Aspelund Road to the west Site Access. The Aspelund Road/Range Road 274 intersection will also be upgraded to a Type IV intersection at this time. At the 2022 horizon, the intersection at Aspelund Road/Range Road 274 will require to be upgraded to a Type IV intersection and traffic signals/intersection illumination at the Aspelund Road/Site Access intersection. At the 2032 horizon, number of additional considerations will be required in regards to the storage bay lengths at both intersections along Aspelund Road as noted in the TIA.

5.1.1 Industrial Subdivision Roads

All roadways within the Plan Area have been planned to provide access throughout the development and to individual lots. As shown on **Figure 7.1 – Transportation Detail**, the roads will be constructed in accordance with the Industrial Subdivision Road standards set out within the *Lacombe County Operations Standards Manual*. All Industrial Subdivision roadways will have a 30.48m right-of-way and an 8.50m finished road top with grassed ditches on both sides.

Industrial turning radii's have also been considered within the design of the transportation network to ensure large vehicles will be able to easily maneuver throughout and access areas of the Plan Area.





30.48m Industrial Subdivision Roadway



FIGURE 7.1

TRANSPORTATION DETAIL
TES INVESTMENTS LTD.

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Stantec

600-4808 Ross Street Red Deer, AB T4N1)

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May 2012

6.0 Engineering Plan

6.1 SITE GRADING

A grading plan for the site will be designed to suit a drainage plan and provide suitable lot grades for the proposed land uses. The general grading concept will drain the majority of the site to the collector roadways. The drainage from the site will be conveyed by ditches and culverts along the roadways to the southern tip of the storm pond where a sedimentation forebay will collect silt before it enters the wetland.

The developable area of the site will be stripped of topsoil in preparation for site grading. A stockpile will be created likely at the southwest side of the existing wetland and will be used as a source of material to complete landscaping of the lots as they develop. The remaining excess topsoil will be hauled and disposed of at an offsite location.

The existing drainage pattern on the subject property is generally from the outer limits of the property to the existing wetland that is located in the north central portion of the site. Where possible, the existing contour of the land will be matched in order to maintain some existing vegetation. This will be balanced with the need to re-grade the development in order to direct all stormwater to the storm ponds sedimentation forebay before flowing to the existing wetland and ultimately to the north. Each of the lots will be graded generally level to meet the needs of the future business that will occupy them.

The site grades established for this development will be set in order to achieve an overall earth balance in order to avoid hauling away excess material and eliminate the need to import material. There are a few low areas that will be filled in to prevent water from ponding in locations other than the designated storm pond.

During site grading operations, silt fencing will be installed along the boundary of the existing wetland to prevent silt erosion due to grading activities from entering the wetland.

6.2 STORMWATER MANAGEMENT

A centralized Storm Water Management Facility (SWMF) will be used to control the stormwater runoff from this site. The location of the SWMF is shown in **Figure 8.0 – Storm Servicing**. The SWMF will be constructed within the existing wetland; this will ensure that wetland is maintained as none of the exiting drainage will be directed away from it ensuring that it will not dry up. Stormwater runoff will be filtered through one of four separate sedimentation forebays to control any sedimentation and contaminates from entering the wetland itself. The SWMF will be sized to accommodate a 1:100 year storm event. In order to have adequate storage for this size of event two of the existing wetlands will be interconnected and increased in size.

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Through Best Management Practices, as directed by Alberta Environment Initiatives, this SWMF will not only control runoff but will also provide stormwater treatment before naturally discharging to the north. All stormwater from the proposed development will be routed first to this facility where the stormwater will be detained to pre-development rates before naturally discharging to the north.

A separate stormwater management report has been prepared for this project which is available under separate cover.



6.3 WASTEWATER DISPOSAL

Lacombe County is in the process of extending a wastewater collection system from the Town of Blackfalds. This is being accomplished by auguring under Highway 2 and installing a gravity sanitary sewer line that we collect wastewater from the entire Highway 2 West Area Structure Plan Area.

In order to service the TES development area a sanitary trunk will be extended through the existing Aspelund Industrial Park to the southeast corner of the TES development area. This trunk will then be extended to the west and south boundary of quarter section to service both this development but also future development areas to the west and south. The remainder of the development will be serviced with a gravity sanitary collection system that will connect to this sanitary trunk system. This sanitary pipe system will be sized and using the Lacombe County Operations Standards Manual.

The wastewater management plan for the Plan Area is shown on **Figure 9.0 – Sanitary Servicing**.

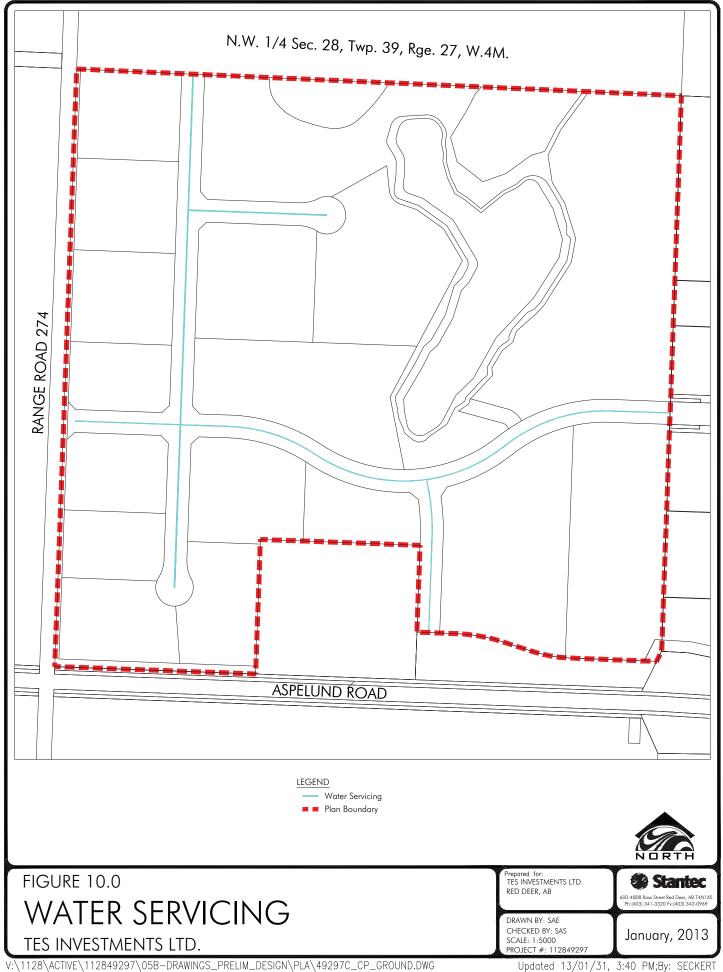
6.4 WATER SUPPLY

Lacombe County is also connecting to the Town of Blackfalds water distribution system. Similar to the sanitary sewer system, they are auguring under Highway 2 and installing a large water trunk to supply water to the entire Highway 2 West Area Structure Plan Area.

In order to service the TES development area water mains will be extended through the existing Aspelund Industrial Park to the southeast corner of the TES development area. This trunk water main will then be extended to the west and south boundary of quarter section to service both this development but also future development areas to the west and south. The remainder of the development will be serviced with water distribution pipes and hydrants to meet both the water supply and firefighting needs of the proposed businesses. This water pipe system will be sized and using the Lacombe County Operations Standards Manual.

The water distribution plan for the Plan Area is shown on Figure 10.0 – Water Servicing.





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6.5 LOT SERVICES

Each lot will be serviced with sanitary, water, gas, and power services. Sanitary services to each lot will be located within a 200mm sanitary service with an inspection manhole at each service location. The gas and power serviced will be provided based on each individual lot owner's requirements.

6.6 FIRE SAFETY

The development will include fire safety measures including full fire flow as outlined in the Lacombe County's Operations Standards Manual.

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7.0 Implementation and Phasing

7.1 DEVELOPMENT PHASING

Development phasing will consist of two phases as shown in **Figure 11.0 – Phasing**. Phase 1 is located in the eastern portion of the Plan Area as services will be extended into the Plan Area from the existing industrial development to the east. Phase 1 will also incorporate the development of the stormwater management facility, any community amenities and the dedication of the required Municipal Reserve for the entire parcel.

Future Phasing has been shown within the western portion of the Plan Area and will be developed along a timeline dictated by market demand.

7.2 SITE DEVELOPMENT GUIDELINES

Site Development Guidelines will be prepared for the TES Industrial Development to facilitate the creation of a comprehensive and consistent subdivision. This document will include topics such as screening, landscape, signs, access, buildings and up keep. The Developer will ensure that all lot owners will comply with the requirements of the Site Development Guidelines.

