

BLACKMUD CREEK AREA STRUCTURE PLAN

February 3, 2004



Scheffer Andrew Ltd.
Planners & Engineers

BY-LAW NO. 33-03

LEDUC COUNTY

**A BY-LAW OF LEDUC COUNTY, IN THE PROVINCE OF ALBERTA, TO ADOPT THE
BLACKMUD AREA STRUCTURE PLAN.**

WHEREAS the Council of Leduc County deems it to be in the public interest to adopt the Blackmud Area Structure Plan;

NOW THEREFORE, be it resolved that the Council of Leduc County, duly assembled, hereby enacts that the Blackmud Area Structure Plan, as attached to and forming part of this by-law, be adopted.

Read a first time this 11th day of December, A.D., 2003.

Edward Chubochka
REEVE

Kenneth J. Sli
COUNTY MANAGER

Read a second time this 3rd day of February, A.D., 2004.

Read a third time and finally passed this 3rd day of February, A.D., 2004.

Edward Chubochka
REEVE

Kenneth J. Sli
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1 BACKGROUND

1.1 History

When the "County of Leduc No. 25 Nisku Area Structure Plan" was approved in 1980, industrial development had already begun in the area. East of the Blackmud Creek valley, however, the residential development known as the "Vistas" was also partially developed. As development of the industrial area expanded eastward over the last two decades, the potential for conflict between the industrial uses and the residential development has become apparent.

Attempts to deal with this potential conflict have frequently relied on the drawings and text in the Nisku Area Structure Plan. Unfortunately, the wording of the plan itself, the interpretations by various readers, and communications among the County and other stakeholders over time have all led to differing land use expectations. In the extreme, these are:

- further heavy industrial development, even as far east as the Blackmud Creek 1:100 year floodplain boundary, and
- an agricultural or environmental buffer extending west from the Vistas, at least as far west as the quarter line.

There are existing industrial developments in the NW quarters of Sections 18 and 19-50-24-4, and there are proposals for additional industrial development in the SW 19 with the potential for more in the SW of 18. A development plan for the area between the industrial and residential areas is now required to address the aspirations of owners on both sides of Blackmud Creek.

1.2 Existing Plans

1.2.1 Leduc County Municipal Development Plan

The current Leduc County Municipal Development Plan was adopted in 1999. It designates the east halves of Sections of 18 and 19 as Agricultural Area A. Policies 2.2.5, 2.2.6, and 2.2.7 allow for the development of a variety of uses within the Nisku Business Park.

1.2.2 Nisku Area Structure Plan

"Plan 2" of the Nisku Area Structure Plan designates the east halves of Sections 18 and 19 as "Agricultural Industrial Reserve Zone". The text of the plan, however, indicates that further work must be done to define the boundary between this designation and the industrial designations of the west halves of Sections 18 and 19.

It should be noted that, regardless of the provisions of the area structure plan, County Council has the power and responsibility to amend the plan as required in order to ensure that development is properly planned.

1.2.3 Land Use Bylaw

The plan area is currently districted Direct Control / Industrial and Agricultural. The Direct Control / Industrial area is roughly above the Blackmud Creek floodplain with the Agricultural area occupying the floodplain.

1.3 Purpose of Plan

The purpose of this document is to clarify the County's plans for the development of the land in the east halves of Sections 18 and 19 -50-24-4. The plan will address future land use, future utilities servicing, access and internal circulation, and the means by which the plan is to be implemented. The objective is to establish a transitional land use area that is compatible with both the adjacent industrial and residential areas.

1.4 Plan Boundary

The plan boundary, as illustrated in Figure 1, encompasses the east halves of Sections 18 and 19-50-24-4.

2 DESCRIPTION OF PLAN AREA

2.1 Ownership

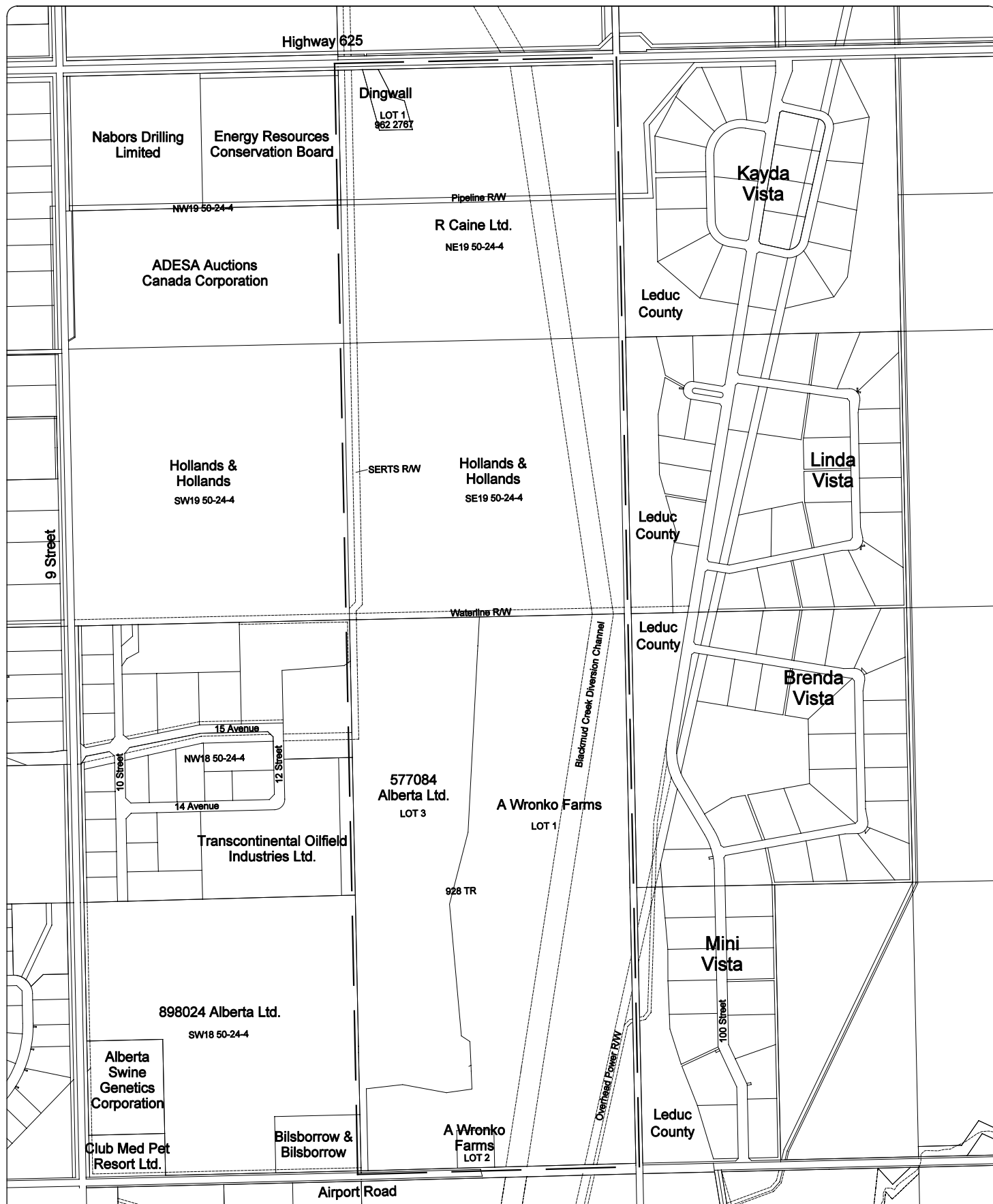
Figure 1 illustrates land ownership in and adjacent to the plan area.

2.2 Natural Features

Figure 2 is an air photo of the plan area taken in 1999.

2.2.1 Topography

The majority of the plan area slopes eastward toward and into the Blackmud Creek valley. The difference in elevation is approximately 14 m or 46 feet from the quarter



Area Structure Plan Blackmud Creek

**Figure 1
Land Ownership**

January 21, 2004

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Plan Boundary ——— ———



Area Structure Plan Blackmud Creek

Figure 2
Air Photo

January 21, 2004

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Date of Airphoto: 1999

section line to the Blackmud Creek channel. The slopes are relatively gentle and do not constitute a constraint to urban development.

Existing residential development in the Vistas, east of Blackmud Creek, is approximately 10 m lower than the existing industrial development in the west halves of Section 18 and 19.

2.2.2 Blackmud Creek

Blackmud Creek flows south to north within a man-made channel through the east halves of Sections 18 and 19. The 1:100 year floodplain was defined by Alberta Environment in 1985 and is shown in Figure 3.

2.2.3 Vegetation

There are substantial treed areas within the plan area west of the Creek, and along the east boundary of Sections 18 and 19, immediately west of the Vistas residential development. These areas are outlined in Figure 3.

2.3 Future Land Use Context

Figure 4 shows the land uses that either exist or are proposed adjacent the plan area.

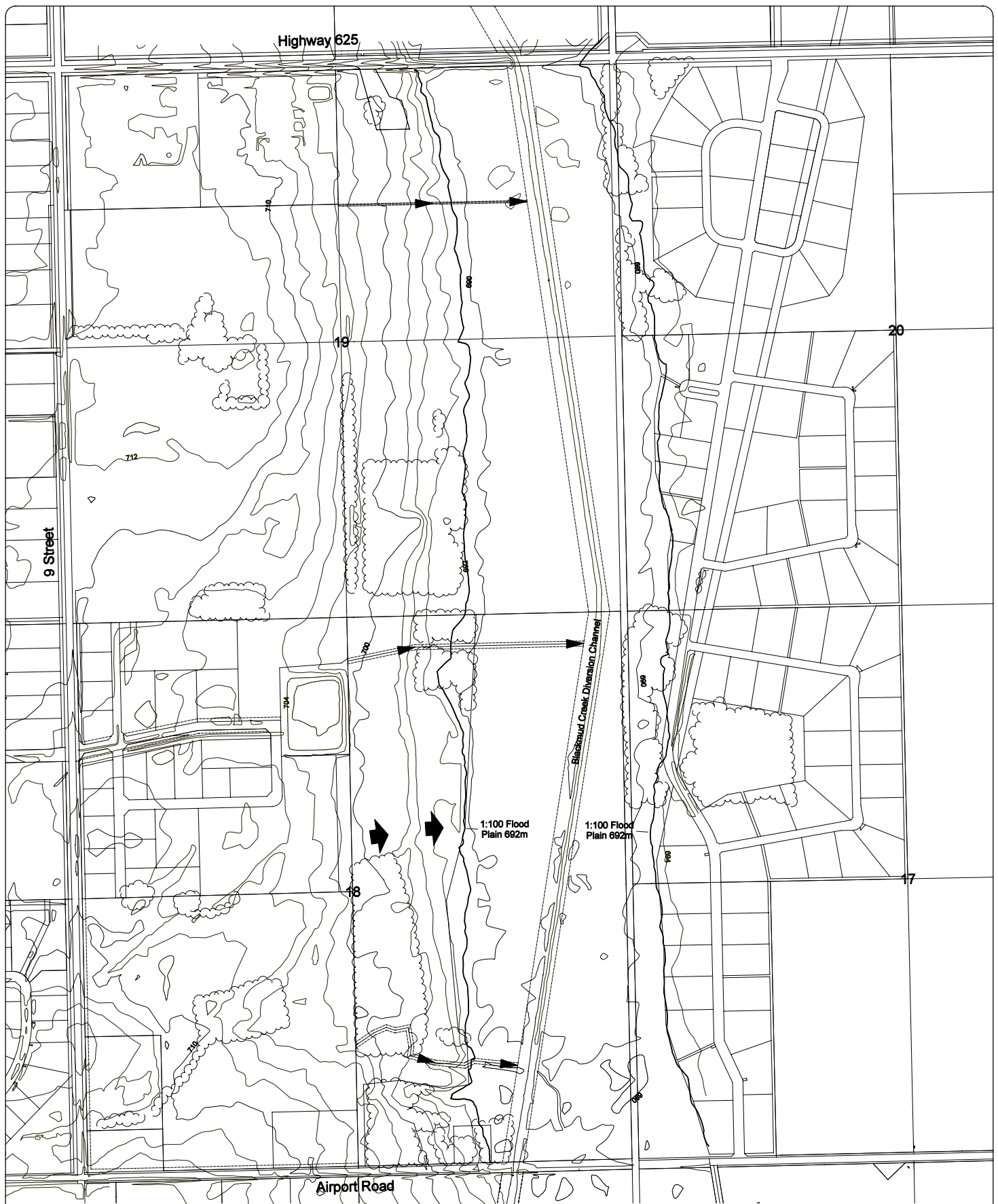
The SW ¼ 18-50-24-4 is largely undeveloped. The only existing developments occupy the three subdivided parcels; in the southeast of the quarter there is a 4.2 ha country residential parcel; a pet boarding facility is located on the corner of 9 Street and Airport Road; and the Alberta Swine Genetics Corporation development fronts onto 9 Street.

The NW 18 is subdivided and developed for general industrial uses. One of the larger parcels in this quarter is owned by Transcontinental Oilfields Industries Ltd. and utilised as a pipe yard.

The SW 19 is presently unsubdivided and undeveloped. It is anticipated that this area will be subdivided and developed for general industrial uses.

The NW 19 contains three large developments: Nabors Drilling Ltd. operates its drilling equipment business in the northwest; the Energy Resources Conservation Board operates an oilfield training facility in the northeast; and ADESA Auctions Canada operates an automotive auction yard on the south half of the quarter.

To the immediate east of the plan area, in the east halves of Sections 17 and 20, is a country residential development known as the "Vistas". There are 94 country residential lots within this area.



Area Structure Plan Blackmud Creek




Figure 3 Natural Features

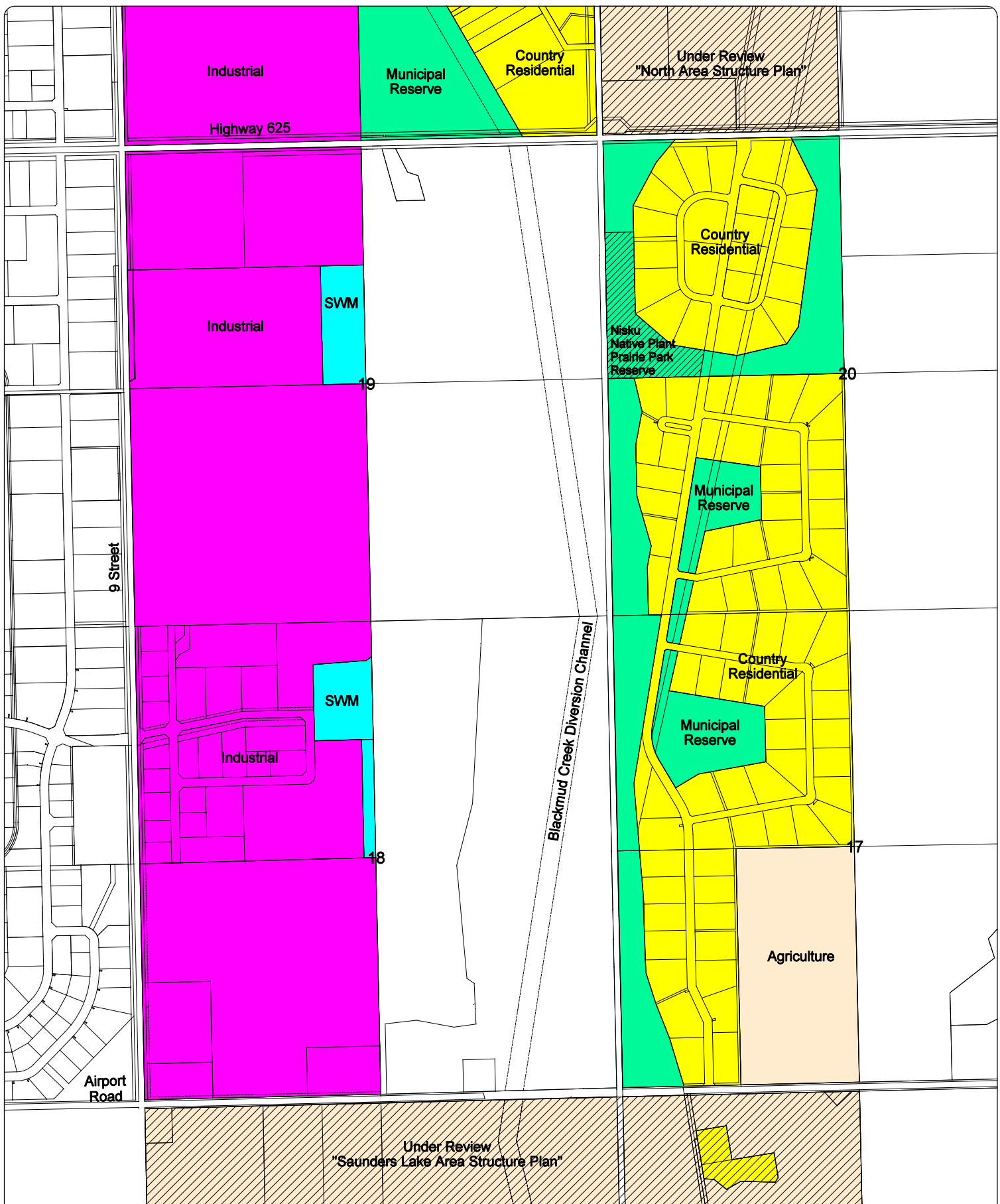
January 21, 2004

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Existing Trees 
Seasonal / Intermittent Drainage 
Drainage Easement 



Industrial		Storm Water Management	
Country Residential		Public Utility Lot	
Agriculture		Berm	
Under Review (Other Area Structure Plan)		Municipal Reserve	
		Recreation / Open Space	

Area Structure Plan Blackmud Creek

Figure 4
Future Land Use Context

January 21, 2004

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2.4 Existing Land Use

The majority of the lands within the east halves of Sections 18 and 19 are in agricultural production or treed, with a substantial portion of this area within the 1:100 year floodplain of Blackmud Creek. There are three farmstead/country residential developments within this portion of the plan area – two in the SE 18 and one in the NE 19. Two of these residences are on existing small lots (one south of Highway 625 and one directly north of Airport Road), while the remaining residence is located on a larger agricultural parcel.

3 PUBLIC INPUT

3.1 Ongoing Public Involvement

From the time of the first advertisement (March, 2003) explaining that development of an Area Structure Plan was underway, the public has been involved in the planning process. Numerous phone calls, emails, and faxes have been received, reviewed, and considered over the course of plan development. These included communications from residents of the Vistas, landowners within the plan area, and landowners and businesses within the Nisku Business Park.

Updates on the development of the plan have been posted on both the County and the Scheffer Andrew Ltd. websites and notices have been published in the Leduc Representative.

3.2 First Public Meeting

A public meeting was held on April 15, 2003 to obtain input from landowners and other affected parties regarding development issues within and around the plan area. It was attended by approximately 100 people, many of whom took the opportunity to express their concerns regarding the extension of industrial development east toward Blackmud Creek and the Vistas residential development to the east.

At the meeting, and in communications received by the County and the consultants before and after the meeting, the following three general concerns were most strongly expressed:

- The expansion eastward of the Nisku industrial development would exacerbate their current problems with noise and dust in particular, and the potential for other similar direct impacts such as odours, toxic emissions, and light pollution.
- Additional industrial development would add to the negative visual impact on their view of the west side of the valley.

- Many wished to maximize the retention of trees west of the creek as an aesthetic amenity, and as a visual screen between the residential and industrial development.

3.3 Second Public Meeting

A second public meeting was held on June 23, 2003. Approximately 20 people attended. These people heard a description of a proposed general approach to development in the area that involved the use of buffers and transitional land uses to minimize the impact of development on the residential area east of Blackmud Creek. The consultant described, in general terms, a possible transitional land use (referred to as "Residential/Business") that would consist of residential lots upon which small-scale businesses could also be located.

Attendees were divided into three discussion groups that were asked to identify specific land uses they would regard as acceptable along the west side of Blackmud Creek. Generally, their suggestions included a broad range of potential uses, with the notable exception being the general type of industrial development that currently exists in the Nisku area. Suggestions included:

- several types of residential development (if buffered from industrial development to the west),
- business offices,
- low impact recreational uses (e.g. golf course, equestrian centre),
- low-impact public uses (e.g. cemeteries),
- intensive horticulture (market garden, tree farm), and
- indoor storage.

The proposed "Residential/Business" transitional use was well received subject to the County imposing appropriate development regulations and controls.

It is notable that some participants even suggested light industrial uses, provided that any outdoor activity was either prohibited or properly landscaped and buffered.

3.4 Third Public Meeting

The third public meeting was held on September 9, 2003 to review and discuss the draft Blackmud Creek Area Structure Plan. Approximately 30 people attended the meeting. The draft plan was made available to the public September 1, at both the Leduc County and Scheffer Andrew Ltd. websites, and hard copies were available from the Leduc

County Office. The four owners with large holdings within the plan boundary were sent copies of the plan directly for their review.

A summary of the proposed plan and details regarding future land uses were presented to the public. The Residential/Business use that was proposed was explained in detail, as was the future use of municipal reserve to retain trees and acquire land for berms.

Two of the four large landowners within the plan area had strong objections to the proposed Residential/Business use. Their concerns included:

- Future conflicts between residential and industrial uses;
- Costs associated with berm construction;
- The types of businesses that would be attracted to such an area would not be visually pleasing to the Vistas; and
- Unproven market for such development.

A number of speakers showed support for the Residential / Business use that had been presented.

3.5 Landowner Meetings

During the first two weeks of August, individual meetings were held with the owners of developable land within the plan area. The purpose of these meetings was to discuss options for land use and access. The plan area owners indicated their willingness to cooperate with their immediate neighbours and with the County to ensure appropriate access to and within the plan area, and to facilitate the transfer of municipal reserve to locations where it would be most effective.

With respect to land use, all the owners of the larger land holdings within the plan area indicated some degree of support for low impact industrial or business use, rather than for residential. While one of these owners has also indicated that residential development would be acceptable, the remainder are opposed to residential development. The reasons cited for this opposition included the potential for conflict with industrial uses to the west and questions regarding the economic viability of residential development in this location.

All indicated some level of concern for the potential impact of the development of their land on the residents east of Blackmud Creek.

4 PLANNING TOOLS

4.1 Municipal Reserve Dedication

Alberta's planning legislation provides for the dedication, without compensation, of up to 10% of the area of a parcel of land being subdivided as "municipal reserve" for parks. The legislation also provides that land dedicated as municipal reserve may be used to separate different land uses from one another. When land within the development area is subdivided, some or all of the municipal reserve generated can be used to accommodate buffers separating potentially incompatible land uses. Municipal reserve can also be used to place existing tree stands in municipal ownership.

It is possible to transfer reserve obligations from one parcel of land to another if appropriate agreements are made between the affected landowners and the municipality. Such agreements and transfers will only be possible if landowners subdivide their land. Assuming, however, that all development above the 1:100 year floodplain is subject to subdivision and is therefore subject to the dedication of municipal reserve, the total area of municipal reserve potentially available from the plan area is approximately 10.5 ha (25.9 acres).

4.2 Environmental Reserve Dedication

Alberta's planning legislation also provides for the dedication of land for environmental reserve. The types of land that can be dedicated as environmental reserve are identified in the legislation, and the fact that an area is occupied by a substantial tree stand is not sufficient justification for its being dedicated as environmental reserve. Within the plan area, the only areas that could be dedicated as environmental reserve are those subject to flooding (normally understood to refer to areas below the 1:100 year floodplain) or occupied by a natural drainage course.

4.3 Direct Control Districts

The use of a direct control district, as provided for in Alberta's planning legislation, gives the municipality considerable power to control land use and to impose specific conditions on development on a particular site. The County's Land Use Bylaw includes such a district, and it can be used to impose specific landscaping and buffering requirements, building height limitations, and even architectural controls. The County's established direct control district does not allow appeals by the applicant or other affected parties regarding such requirements.

4.4 Development Agreements

Provided for under Alberta's planning legislation, development agreements are negotiated between development proponents and the municipality, and deal with questions of financial responsibility for the provision of infrastructure required to support the proposed development. A development agreement is frequently a condition placed on a subdivision approval, or on the issuance of a development permit.

5 LAND USE

5.1 General Approach

The general approach to land use designations adopted in the preparation of this plan reflect consideration of the following:

- The Nisku Area Structure Plan acknowledges that some portions of the east half of Sections 18 and 19 are suitable for development.
- The participants in the second public meeting indicated that a broad range of low or controlled impact uses might be acceptable west of Blackmud Creek.
- The third public meeting revealed strong support on the part of several of those who spoke for low or controlled impact business and light industrial uses.
- Direct interviews with landowners within the plan area indicated consistent support for low impact business and light industrial development.
- Several written submissions from landowners west of the plan area (one from the Nisku Business Association) indicated opposition to any form of residential development within the plan area.

The general approach to future land use designation adopted in the preparation of this plan is based on the following general principles:

- The extension of heavy industrial development east of the quarter section line toward the 1:100 year floodplain of Blackmud Creek is unacceptable because of its potential to have negative impacts on the residential development east of the Creek.

- A restriction of development in that area to exclusively open space or agricultural uses is also unacceptable. The approved Nisku Area Structure Plan recognizes the potential of some lands within the east halves of the Sections for some type of industrial use. Heavy industrial uses are not the only alternative.
- The majority of the area below the 1:100 year floodplain will remain in agricultural use. However, alternative uses compatible with the floodplain (e.g. passive recreation, golf course) may be considered.
- West of Blackmud Creek as many of the trees as possible should be preserved as an amenity feature and to help mitigate the impacts (visual) of existing heavy industrial development in the Nisku Industrial Park west of the quarter line.
- Appropriate buffers can be used to separate potentially incompatible uses.
- Transitional uses (i.e. uses that are generally compatible with medium to heavy industrial and residential development) may be found that are appropriate west of Blackmud Creek.

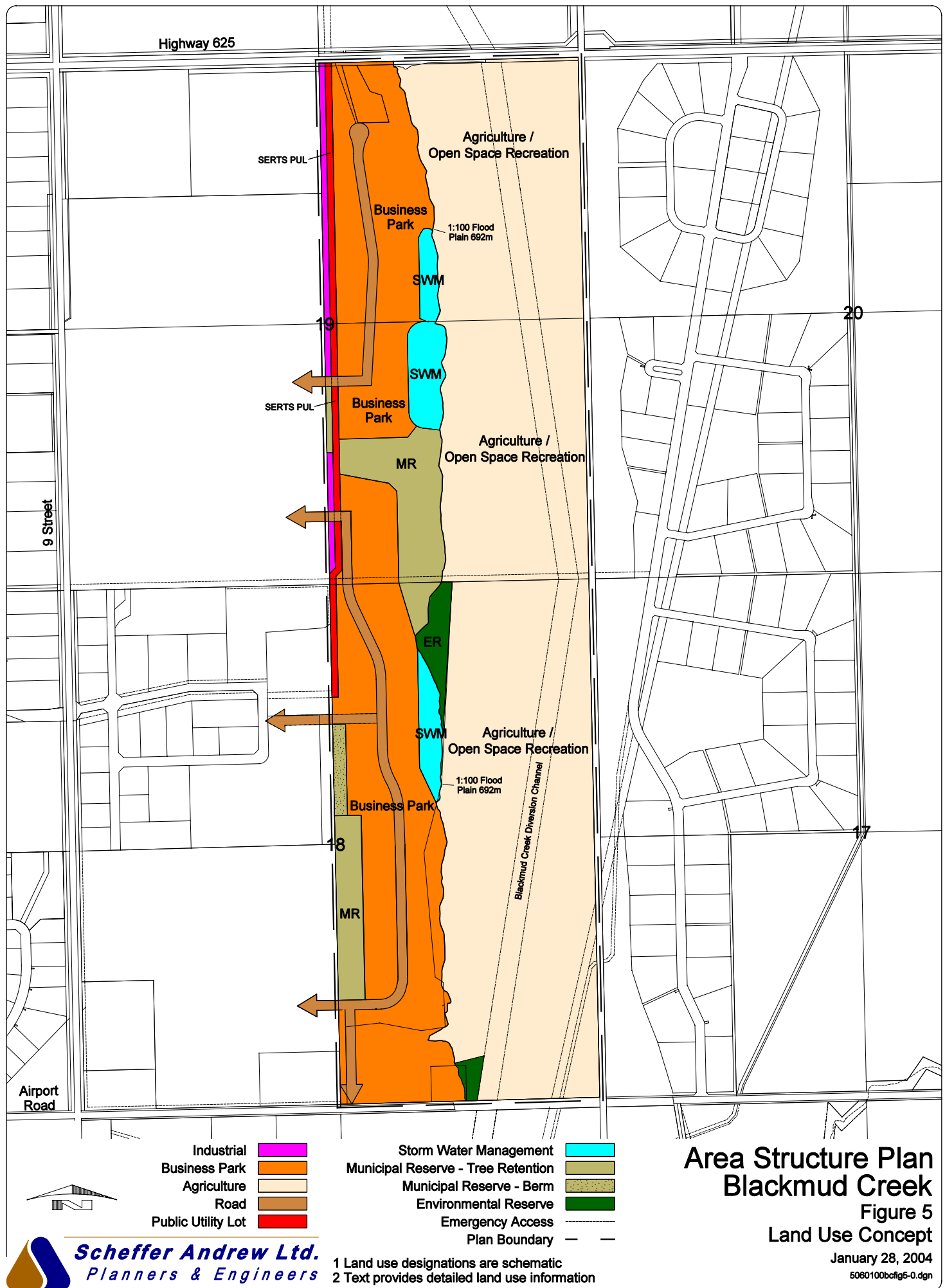
5.1.1 Future land uses within the plan area shall be as shown in Figure 5 and described in the following subsections.

The general land use designations described in this plan are different from Land Use Bylaw districts. This plan provides guidance regarding the types of Land Use Bylaw districts that are appropriate within the plan area.

5.2 Business Park

Business Park development is proposed for the majority of the plan area. The Business Park designation is intended to encompass those uses suggested at the public meetings that ranged from "office buildings" to "indoor manufacturing". The basic principle behind the designation is to provide the plan area landowners with a range of economically viable development options that are compatible with the industrial development to the west as well as the residential development in the Vistas east of Blackmud Creek.

The Business Park area is envisioned as consisting of low rise office buildings, warehousing, and small-scale indoor manufacturing enterprises on individual lots. The area will feature extensive landscaping to create a park-like setting. Development in the



Business Park area will be required to be quiet and clean, with minimal impacts beyond individual site boundaries.

Traffic volume is intended to be low, with a lower proportion of heavy vehicles than in typical industrial areas. Using trip generation factors published by the Institute of Traffic Engineers, an average of 60 daily trips could be expected for every developable hectare of Business Park. With 64 ha of Business Park use within the plan area, approximately 3,800 daily trips could be expected to and from the area when fully developed.

5.2.1 Development in the Business Park area shall be subject to development controls designed to minimize the impact of the development on the residential area east of the Creek. The following controls shall be implemented in the Business Park area:

- a) No development shall be approved that would produce airborne contaminants, dust, vibration, light and noise emissions, likely to have a detrimental impact on nearby residential development.*
- b) Development applications for individual sites shall be reviewed with consideration of the potential noise impact on residential development to the east. Noise attenuation measures should be considered in the site design (building location, parking and storage areas, landscaping) of every proposal. Conditions regarding landscaping and/or special architectural requirements shall be imposed to ensure that each development will have a minimal noise impact on the residential development to the east.*
- c) Businesses generating high volumes of traffic shall not be permitted.*
- d) Development applications for individual sites shall be reviewed with consideration of the potential visual impact on residential development to the east. Conditions regarding landscaping and/or special architectural requirements shall be imposed to ensure that each development is aesthetically pleasing when viewed from the residential development to the east.*
- e) Outdoor parking and loading areas shall be appropriately screened from nearby residential development by opaque fences, planting, and/or similar landscape features.*

- f) No parking, storage, or loading shall be permitted within the east yards of the easternmost lots facing the Blackmud Creek Floodplain and Vistas residential area.*
- g) Plantings of mature trees, preferably coniferous, shall be required, particularly along the east sides of parcels being developed along the Blackmud Creek 1:100 year floodplain.*
- h) The height of buildings shall be limited to a maximum of 10 m.*
- i) Site coverage shall be limited to 40%.*

Examples of land uses that may be allowed in the Business Park area include:

- a) Commercial Offices*
- b) Small Scale Indoor Manufacturing*
- c) Government Services*
- d) Warehousing*
- e) Business Support Services (e.g. banks, photocopy shops, computer services, janitorial services)*
- f) Animal Hospitals and Shelters*
- g) Small Scale Indoor Recreation*
- h) Personal and Health Care Service*
- i) Funeral, Cremation, and Interment Services*
- j) Broadcasting and Motion Picture Studios*

The uses listed above are intended as an illustration of the type of development contemplated for the Business Park land use designation. The Land Use Bylaw districts applied to the land prior to development may include the possibility of other, similar, uses. It is not intended that the area be restricted to a single land use district under the Land Use Bylaw.

5.2.2 More than one Land Use Bylaw district may be used to accommodate uses that are consistent with the Business Park designation under this plan.

5.3 Commercial

Although it is not shown In Figure 5, an opportunity for a local convenience commercial facility exists at the Airport Road entrance to the development area.

5.3.1 Council may approve a re-districting to accommodate a local convenience commercial site at the south (Airport Road) entrance to the plan area without a formal amendment to this plan.

5.4 Agriculture

Extensive agricultural uses (such as the cultivation of forage or cereal crops, or cattle grazing) will continue to be permitted within the floodplain.

5.4.1 The area below the 1:100 floodplain boundary is designated agricultural. Development in this area is subject to some restrictions due to the potential for flooding.

5.4.2 Passive outdoor recreation uses not adversely affected by flooding, including golf courses and parks, may be considered on a discretionary basis.

5.4.3 Any permanent building associated with this use shall be located above the 1:100 floodplain (e.g. golf course club house).

5.5 Other Uses

It is important to note that it is not Council's intent (nor is it necessary) to prevent other acceptable transitional uses from being developed in the plan area.

5.5.1 Other low impact transitional uses, such as public parks, cemeteries, and similar uses, may be considered at the outline plan level. Any such proposed development, however, must be compatible not only with the residential development east of the Creek but with other uses planned or existing west of the Creek.

5.6 Municipal Reserve – Tree Retention

The municipality cannot require the retention of trees through the dedication of environmental reserve; however, it can use municipal reserve to require the dedication of treed areas as public parks. The use of municipal reserve is subject to legislative

limits regarding the maximum area that can be required to be dedicated when subdivision occurs.

It should be noted that the retention of trees requires the cooperation of the landowner. There are no existing regulations that would prevent owners from removing trees prior to seeking subdivision approval if they so desire.

Where possible, transfers of reserve obligations from adjacent lands into the plan area should be encouraged. The additional reserve land could be used to retain more of the treed areas within the plan boundary.

5.6.1 Trees shall be retained, through the use of municipal reserve, in the three areas shown in Figure 5.

The first area is the treed area above the 1:100 year floodplain in the west central portion of the SE 19. It is proposed that a substantial proportion of the trees nearest the Blackmud Creek 1:100 year floodplain be preserved. Trees in this location will serve as a transitional use and a visual buffer between residential development east of Blackmud Creek and the non-residential development to the west.

The second is also within the SE 19. This small stand of trees (oriented in a north/south alignment) north of the previously mentioned tree area should be retained to serve as a visual buffer along the eastern expanse of the industrial development in the SW 19.

The third is along the west boundary of the SE 18. The retention of all the existing trees would create a narrow, almost undevelopable, strip of land between the tree stands and the floodplain boundary. It is therefore proposed that a broad strip of trees be preserved, through the dedication of municipal reserve, along the west boundary of the quarter. This is where the land is highest and the effect of the trees as a visual buffer will be the greatest.

5.6.2 Refinements to the configuration of municipal reserve lots intended to provide for the retention of trees may be considered by the County at the Outline Plan or subdivision stage.

5.6.3 The County encourages the retention of trees wherever practical within the plan area.

5.7 Municipal Reserve – Berm

The municipal reserve land identified south of the Southeast Regional Trunk Sewer (SERTS) line and north of the existing trees in the E½ 18 has been identified for a future

berm to separate industrial development from the Vistas to the east (Figure 5). Given its alignment on relatively higher ground, the berm and trees along the crest will provide a visual and noise buffer intended to benefit the residents of the Vistas.

5.7.1 The berm shall be approximately 4-5 m high, landscaped with planted trees or a screen fence at the crest. The exact configuration of the berm will be determined to the satisfaction of the County prior to redistricting.

Coniferous trees are preferable as a visual buffer as they are more or less opaque throughout the year. However, deciduous trees are also useful in that they do provide a visual buffer during the parts of the year when people are generally more likely to spend time outdoors.

The construction of berms requires that a practical source of appropriate material is available. It is assumed that topsoil stripping to accommodate various developments east of 9 Street can be used for this purpose. This will require specific arrangements between landowners with respect to any compensation required and the relative timing of development projects.

5.8 Municipal Reserve - Other

Where municipal reserve dedication is not specifically addressed in this plan, municipal reserves will be required as provided for in the relevant legislation and in accordance with County policy applicable at the time.

5.9 Environmental Reserve

Only two relatively small areas of land are proposed to be dedicated as environmental reserve. One is the area below the 1:100 year floodplain immediately south of the north boundary of the NE 18. This land is subject to flooding and therefore satisfies the requirements in the Municipal Government Act for environmental reserve. It also has some significant tree cover. The second is an area just north of Airport Road that contains a stand of trees. These trees are to be preserved to help stabilize the slope within the 1:100 year floodplain.

5.10 Storm Water Management

Storm water management facilities can act as transitional uses separating developments that have the potential to conflict with one another.

As illustrated in Figure 4, the existing storm water management facility along the east boundary of the NW 18 provides some separation between existing industrial development and the residential development east of Blackmud Creek. Development on

the ADESA Auctions Canada site in the SW 19 will include a storm water management facility along the east boundary of the quarter that will serve the same function. Neither facility will, however, be of value in separating future development in the east halves of Sections 18 and 19 from residential development in the Vistas.

A future storm water management facility is proposed for the area north of the tree stand in the SE 19 (Figure 5). This facility is proposed to be located adjacent to the floodplain boundary and will therefore provide additional separation space between non-residential development in the west halves of Sections 18 and 19 and the Vistas.

It is anticipated that some type of storm water management will be required for future development in the east half of Section 18 and the NE 19. Based on runoff coefficients for the intended land uses, the required storage for storm water in the east half of Section 18 is approximately 28,300m³ and 18,800m³ for the NE 19. Conceptual locations of these facilities have been shown on Figure 5.

Storm water management must be addressed in more detail at the outline plan and/or subdivision stage.

5.11 Land Use Distribution

The following table shows the distribution of the various land use designations through the plan area.

	Hectares	Acres	Per Cent
Total Area	258.1	637.7	
Agricultural (below 1:100 floodplain)	155.7	386.7	
Environmental Reserve	3.1	7.7	
Net Developable	99.3	245.4	100.0%
Business Park	65.1	161.0	65.5%
Circulation	10.4	25.7	10.5%
Stormwater Management	7.7	19.0	7.8%
Municipal Reserve*	16.1	39.8	16.2%

* 6.4 ha of MR has been deferred from the SW ¼ 19-50-24-4 to the SE ¼ 19-50-24-4

Assuming an average lot size of 1.5 ha, the business park may provide for approximately 43 business lots.

6 ACCESS

Road access to the plan area is a significant development challenge. Direct connections from the regional road network are only possible at the north and south ends of a two mile long strip of potentially developable land.

Alberta Transportation has indicated that existing access to Highway 625 will be eliminated in the future as traffic levels increase and that new accesses will not be permitted. An emergency access connection to Highway 625, shown in Figure 5, is necessary due to the long cul-de-sac that services the NE 19. As development has occurred in the NW 19, alternative access opportunities are limited. Options for the future include the creation of a road connection west to 9th Street, or, if no other alternative is available, restrictions on the development of the land in the NE 19 may be required.

In the southern half of the plan area, it is possible that arrangements could be made to provide an east/west road connection along the south boundary of the existing storm water management facility in the NW 18. However, there are no explicit plans for further subdivision in this area, and right-of-way for such a road cannot be required to be dedicated, except when subdivision occurs. Access (local road connection) onto Airport Road in this area is not ideal due to the road grade sloping east to the creek. However, a non-signalized, fully channelized intersection may be acceptable provided the connection road is built at a 2% or lesser grade. Efforts should be made to attain an alternative access through the SW 18.

Figure 5 shows a conceptual internal road pattern.

- 6.1.1 *The road pattern illustrated in Figure 5 is intended as an indication of one possible arrangement of access points and road alignments. At the outline plan stage, development proponents may, with the approval of the County, vary the road alignments and/or connection points shown to facilitate their own development requirements or to coordinate with their neighbours.*
- 6.1.2 *The County will review all outline plan and subdivision applications to ensure that adequate access is provided for future development within the plan area.*
- 6.1.3 *Any upgrades to Airport Road, required that as a result of development within the plan area, will be the responsibility of the developer.*

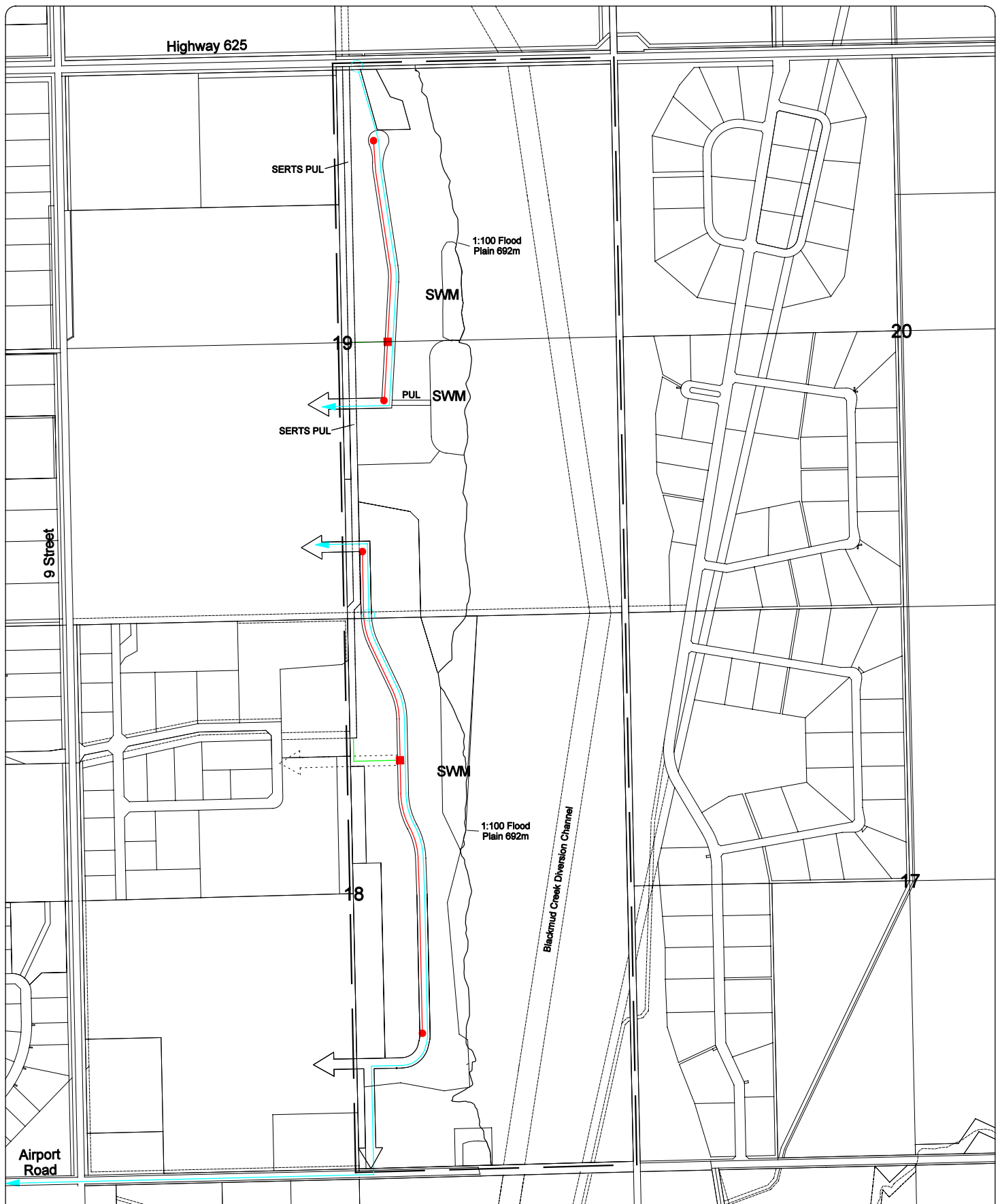
- 6.1.4 *No new access and no direct Business Park access onto Airport Road will be permitted. Existing residential accesses onto Airport Road will be allowed to remain to be used only for existing uses.*
- 6.1.5 *Access roads to the SW 18 and the SW 19 as illustrated in Figure 5 shall be coordinated with subdivision in those adjacent quarters.*
- 6.1.6 *The County will encourage the creation of an east/west road connection to 9th Street to provide access to the NE 19, allowing for the elimination of the emergency connection to Highway 625, and to improve the circulation pattern in the general area. All non-residential and non-agricultural uses will be required to have access from new road connections linking with the NE 19 and not connecting onto HWY 625.*
- 6.1.7 *Development and subdivision applications may require a minimum of two access roads, dependent on a traffic impact assessment (provided by proponent) as part of an Outline Plan.*
- 6.1.8 *A restricted access from NE 19 onto Highway 625, for emergency vehicles only, may be permitted after further study by Alberta Transportation upon receipt of an Outline Plan and/or subdivision application.*
- 6.1.9 *Roads within the development area shall be constructed to County standards for the land uses proposed. The minimum surface required will be "cold mix" asphalt.*

7 SERVICING CONCEPT

Municipal water and sanitary sewer drainage services can be extended from the existing regional trunks within the plan area as shown conceptually in Figure 6.

- 7.1.1 *All development within the plan area shall be connected to municipal water and sanitary sewer.*

Sanitary sewer drainage will require the construction of at least two lift stations within the plan area to convey sanitary sewage by force main to the SERTS line. The specific



- Connection to Existing Water Distribution Line ○
- Water Line —
- Lift Station ■
- Sanitary Force Main —
- Sanitary Gravity Line —
- Plan Boundary —

Area Structure Plan Blackmud Creek

Figure 6
Servicing Concept

January 21, 2004

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locations of these facilities and the alignments of the sanitary sewers will be determined at the outline plan stage.

7.1.2 The SERTS line through the plan area shall be registered as a separate public utility lot owned by the County.

This plan proposes no change to the storm water management scheme described in the Nisku Area Structure Plan and in the various other studies and plans prepared by the County since the Nisku plan was adopted. Approximate locations for stormwater management facilities are shown on Figure 5. Specific requirements for storm water management will be addressed at the outline plan or subdivision stage of development.

7.1.3 Future development within this plan shall be designed so that it accommodates the existing drainage network for storm water.

7.1.4 Future storm water management facilities shall be located to provide additional separation between the business park and the existing residential development to the east.

8 IMPLEMENTATION

8.1 Application

8.1.1 This plan is intended to replace the Nisku Area Structure Plan in the area to which this plan applies.

8.2 Development Sequence

As the development area is on the eastern perimeter of the Nisku industrial area, there is no requirement to provide for additional future development to the east.

The specific sequence of development is not an issue as the regional waterline and the SERTS line pass through the plan area and potential access points from the south, west, and north, allow for a number of development sequence scenarios.

The availability of appropriate access from the west, particularly from the SW 19, may constrain the timing of development within some parts of the plan area.

8.3 Districting

The implementation of this plan may require amendments to the Land Use Bylaw to create land use districts compatible with this plan.

The County is presently updating its Land Use Bylaw. Appropriate districts may be included in this revised bylaw. In some cases, implementation of this plan may be accommodated by the use of a direct control district.

8.4 Outline Plan

8.4.1 Prior to the approval of districting or subdivision that would allow development to proceed, a detailed outline plan shall be prepared by the applicant and accepted by the County.

8.4.2 This outline plan shall show how the proposed development will relate to its neighbours in terms of sound/visual/dust impacts, access requirements, traffic impacts, provision of municipal reserve, identification of landscaping and buffering requirements/standards, storm water drainage and natural drainage courses, and municipal services.

8.4.3 Outline plans shall be subject to public review and comment prior to their consideration for approval.