TOWN OF BROOKS

SOUTHWEST SECTOR

AREA STRUCTURE PLAN

SOUTHWEST SECTOR AREA STRUCTURE PLAN

TOWN OF BROOKS, ALBERTA

Prepared for:

ROYAL
INVESTMENT CORPORATION

Prepared by:

UMA

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TOWN OF BROOKS

BYLAW NO. 99/34

A BYLAW OF THE TOWN OF BROOKS IN THE PROVINCE OF ALBERTA TO ADOPT THE SOUTHWEST SECTOR AREA STRUCTURE PLAN

WHEREAS in accordance with Section 633(1) of the Municipal Government Act, Statutes of Alberta, 1994, Chapter M-26.1 and all amendments thereto, the Council of the Town of Brooks deems it advisable to adopt an Area Structure Plan.

AND WHEREAS the Area Structure Plan will provide a framework for subsequent subdivision and development with respect to:

a) the sequence of development for the area;

b) the general land uses for the area;

c) the general density of the population for the area; and

d) the general location of major transportation routes and public utilities.

AND WHEREAS a public hearing as required by Section 692(1) of the Municipal Government Act was held on September 7, 1999.

NOW THEREFORE the Council of the Town of Brooks in the Province of Alberta enacts as follows:

1. The Southwest Sector Area Structure Plan providing a framework for subsequent subdividing and development with respect to the land uses, population density, and location of major transportation routes and utilities, be adopted by the Council of the Town of Brooks.

2. The Southwest Sector Area Structure Plan shall contain an area as follows:

   That part of the Town of Brooks bound to the north by the CP Railway and Sunnylea and Wildrose subdivisions, to the east by Young Road, and to the south and west by the corporate limits of the Town of Brooks as shown on Drawing 1 on Schedule "A" attached hereto containing 232.8 hectares (575.24 acres) more or less.

3. That the Southwest Sector Area Structure Plan attached hereto as Schedule "A" forms part of this Bylaw.

4. This Bylaw shall be effective from the date of the final passing.

Read a first time this 3rd day of August, 1999.
Read a second time this 7th day of September, 1999.
Read a third time and finally passed this 15th day of November, 1999.

Mayor

Director of Community &
Corporate Services

SCHEDULE "A" – JULY 27, 2004

TOWN OF BROOKS – SOUTHWEST SECTOR AREA STRUCTURE PLAN

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2. STUDY AREA

2.1 Size and Location

The Southwest Sector Area Structure Plan is located in the southwest corner of the Town of Brooks, and consists of the lands within the N.W. ¼ of 31-18-14-W4M lying south of the southerly limit of the railway right-of-way on Plan RY11; lands located within the S. ½ of Section 31-18-14-W4M with the exception of the Wildrose and Sunnylea Subdivisions; and the lands making up the N. ½ of Section 30-18-14-W4M, containing 234.36 hectares (579.11 acres) more or less (Drawing 1).

The site is bounded to the north by the CP Railway right-of-way and Wildrose and Sunnylea Subdivisions; to the east by Young Road, the existing Eastern Irrigation District's reservoir sites and the Brooks Industrial Park; to the south by the newly established corporate limits of the Town of Brooks; and by the existing Government Road allowance to the west (Range Road 150).

Adjacent land uses include the EID industrial property and reservoirs east of Young Road, existing Agricultural land to the south and country residential, and agricultural land to the west. The existing Wildrose and Sunnylea Subdivisions and CP Railway lie to the north.

2.2 Ownership

There are a total of eight separate parcels contained within this ASP. Ownership of these parcels (Drawing 2) are as follows:

- A portion of the N.W. ¼ of Section 31-18-14-4 lying south of the railway containing 6.755 Ha. (16.69 Ac.).
- The north half of the S.W. ¼ of Section 31-18-14-4 containing 31.80 Ha. (78.57 Ac.).

- The south half of the S.W. ¼ of Section 31-18-4-4 containing 31.80 Ha. (78.57 Ac.).
- The north half of the N.W. ¼ of Section 30-18-14-4 containing 31.791 Ha. (78.55 Ac.).
- The south half of the N.W. ¼ of Section 30-18-14-4 containing 31.791 Ha. (78.55 Ac.).

Total gross holdings controlled by Royal Investment Corporation are 133.93 Ha. (330.94 Ac.).

- N.E. ¼ of Section 30-18-14-4 containing 64.70 Ha. (159.87 Ac.) owned by Mr. Ian Sewall.
- S.E. ¼ of Section 31-18-14-4 containing 27.39 Ha. (67.68 Ac.) owned by Ms. Donna Mae Neville, Ms. Marilyn Louise Burk, and Ms. Susan Minor with Mr. Al Sewall holding a life interest.
- S.E. ¼ of Section 31-18-14-4 containing 4.86 Ha. (12.00 Ac.) owned by Ms. Donna Mae Neville, Ms. Marilyn Louise Burk, and Ms. Susan Minor with Mr. Al Sewall holding a life interest. Total Sewall property based on titles is 96.95 Ha. (239.55 Ac.).

Total gross holdings controlled by Sewall Ranches are 96.95 Ha. (239.55 Ac.).

The Range Road 150, which was annexed to Brooks contained 3.49 Ha. (8.62 Ac.).

The total area within this ASP is 234.36 Ha. (579.11 Ac.).

All areas within this ASP will be subject to boundary condition surveys to verify boundary locations and property sizes as noted above prior to development.

3. THE PLAN

3.1 Introduction

The proposed land uses for the Southwest Sector Area Structure Plan recognize a variety and mix of housing from starter to estate, and various forms of multiple dwellings in order to meet or accommodate market conditions (see Drawing 4). Land uses are defined in general terms with low density residential representing small lot single detached, and estate housing. Medium density residential provides for a mixed range of row housing and duplex lots. The easterly half of the ASP defines residential lands as future residential areas. The future residential areas provide for a mix of residential housing from low density to medium density depending on locational factors as discussed below. The land use distribution for the plan area is shown on Table 1.

In accordance with the Town of Brooks Land Use Bylaw, specific land use districts will be applied as plans of subdivision are prepared for the area. These land use districts will incorporate regulatory controls.

3.2 Residential

Residential development planned for the southwest sector will cover a wide range of housing from a mix of single detached and duplex residential lotting to medium density townhouse and apartment blocks. Residential development that has easy pedestrian access to school sites and community parks will be provided.

The westerly two quarters of the Royal Investment Corporation lands (Westside Park) proposes a mixture of housing types in accordance with the Municipal Development Plan policies. Proposed residential land uses will range from estate residential to multi-family. Specific land use designations will be determined through the preparation of an Outline Plan in support of Redesignation and Subdivision Applications.

The multi-family sites will be integrated into the single family neighbourhoods through the use of design guidelines in accordance with the Municipal Development Plan. It is

anticipated that the mixed-use neighbourhood concept will be developed on the area shown as future residential on Drawing 4.

3.3 Commercial

There are two commercial sites planned within this ASP. Locations for the commercial sites are based on proximity to collector roads to allow for easy vehicular and pedestrian access and proximity to arterial routes.

The commercial sites will be developed as small localized shopping facilities which cater to the day to day needs of the residents of the surrounding community and may include but not be limited to uses such as a gas bar, convenience store, beauty salon, barber shop, dry cleaners, drug store and small restaurant. Commercial uses will ultimately be guided by the Town's permitted/discretionary land uses contained within the Land Use Bylaw.

The westerly commercial site is located on the collector road at the west end of the north central community park. Its optimal positioning and related facility makes this an accessible site for most residents within the west half of the ASP.

The easterly commercial site is located at the south easterly corner of the southwest sector providing exposure along Young Road and the southerly east-west collector. This location is strategically situated to provide an opportunity for service commercial uses to the traveling public along Young Road. Other locational criteria for this site is based on accessibility to residential areas as noted for the westerly site.

A regional commercial site for this ASP is considered unnecessary by the Town of Brooks as it would constitute a decentralization from the town's existing commercial core facilities.

Accordingly, the above two local commercial parcels have been selected for the southwest sector.

3.4 Parks and Open Space

Parks and open space will be provided through the dedication of Municipal Reserve when land is subdivided, as provided in the Municipal Government Act. Parks and open spaces in the ASP will be planned to provide an integrated parks, open space and school system, to address the long term parks, open space and school needs in accordance with the Municipal Development Plan.

The open space plan for the proposed Westside Park development has been carefully designed to provide residents with a variety of recreation opportunities. Facilities for structured activities such as organized sports will be located at the School site and three other large municipal reserve parcels arranged throughout the community. These open space parcels will provide opportunities for passive recreation as well. Amenities will include sports fields, play structures, pathways and tree plantings; and these parcels will be irrigated with automatic systems.

The open space parcels will be interconnected with a series of linear parks, providing off street access to and between the major recreation parcels. The linear parks will feature pathways that will also provide exercise loops for walking and jogging within the community. Tree species and grass seed mixtures for the linear parks will be carefully selected for drought resistance in consultation with the Town of Brooks' Parks Department. The predominant grass species selected for the linear parks will be fescues which are well suited for hot, dry weather.

The developer will ensure that residential lot purchasers are made aware, at the time of lot sale, that the linear parks will remain in low maintenance grasses and will not be improved in the future with irrigation. In order to reduce maintenance costs, xeriscape landscaping will be promoted in areas where irrigation is not practical, such as the linear parks, in accordance with the policies of the Municipal Development Plan.

Neighbourhood and community parks provided by developers as a result of subdivision will not require upgrades or improvements from the municipality And will be to the satisfaction of the Parks and Recreation Department. The Developer will ensure that neighbourhood and community parks are located a maximum of 400 m from a residence as per the *Master Plan for Parks, Recreation and Culture.*

In order to ensure that the planned amenities become a valuable extension of the open space system in he Town, development of open space within the area structure plan will be coordinated with the Town of Brooks' Parks and Recreation Department.

Open space development at Westside Park will be coordinated with the Town of Brooks Parks Department to ensure that the planned amenities become a valuable extension of the open space system in the Town of Brooks.

Additional open space is designated to the north adjacent to the CPR right-of-way as PUL.

This open space will provide for storm water management facilities and pedestrian access via a trail system to the east where an existing controlled pedestrian/cycle railway crossing is located (see Drawing 4). This area will be designated as a Public Utility Lot and will not be considered as part of the required dedication of reserve land.

A chain link fence will be constructed along the southerly boundary of the CPR right-of-way, to extend west from the pedestrian/cycle railway crossing to Range Road 150 at the northwesterly corner of the ASP.

This fencing will link up with the existing chain link fence to the east, and hence to the pedestrian/cycle railway crossing. The pedestrian trail will be developed as a continuation of the pedestrian/cycle railway crossing located to the east.

A joint use school site is located central to the ASP straddling both the Royal Investment Corporation and the Sewall Ranches lands. Immediately north of the joint use school site is a double power line and gas line right-of-way running in an east-west direction bisecting the entire ASP site. These utility rights-of-way will be classified as public utility lots and will not be considered part of the normal dedication of reserve land, but will function as a pedestrian connector from east to west.

A pedestrian open space link is located on the boundary line between the Royal Investment Corporation (Westside Park) and Sewall Ranches lands running north/south. This link will provide a cross open space system when combined with the Public Utility Lot(s) thereby accessing the school sites from all residential quadrants.

Storm detention ponds have been strategically located in the ASP and will be developed as amenities and as extensions of the overall park system.

The storm detention, or wet/dry pond areas, will be defined by the results of a storm water management study required prior to subdivision approvals.

3.5 Schools

With a development of this magnitude, it is imperative that the future needs of the community be planned early with regard to community services.

Recognizing the need for both public and separate school sites, a combined Joint Use Site has been planned for the community. The combined site allows for economy of scales in that facilities such as playing and sports fields can be shared as well as being constructed on less gross area. The creation of a larger “complex” capitalizes on available parking, centrality of place, identity, and maintenance.

Dedication of reserves is based on an overall 10% of the gross area and includes school site(s). This 10% dedication ensures that adequate reserves are provided to meet the Town’s immediate and long term needs.

Based on the phasing of the development and anticipated absorption, schools are not initially warranted, but will ultimately be required by both the public and separate school boards. To this end, a joint use school site(s) has been located in the N.W. and N.E. 1/4's of Section 30. This joint use site fronts onto the proposed east-west collector road, and straddles the Royal Investment Corporation (Westside Park) and Sewall Ranches lands. As development of the ASP proceeds in the future and through negotiations with the respective school boards, a comprehensive site will be provided to accommodate both schools. The school boards have been contacted and indicated the need for two schools on a combined site, but could not quantify the numbers of students at this time. It is understood that student needs would be fulfilled by a combination of on site and off-site classrooms and, therefore, the need for busing.

3.6 Tree Preservation

The mature stand of trees located on the Sewall Homestead will be preserved and integrated as part of any future development of this ASP. Disturbance of this treed area by the construction of any deep services and/or roadway construction will be prohibited.

3.7 Density

Considering the potential variety and creativity allowed under the Land Use Bylaw, defining density at this stage for the overall ASP is somewhat suspect. The fact that market demand may vary will dictate the type and style of land use and development ultimately sought, and overall densities may also vary from current projections.

The Municipal Development Plan envisions a possible increase in the average number of dwelling units per hectare (6 to 8 units per acre or 15 to 20 units per hectare).

Based on a total net area of 230 hectares (568.34 acres) and historical and envisioned densities the projected unit and population densities are anticipated to range from 1700

to 4600 units (7 to 20 units per hectare) or (3 to 8 units per acre) for a gross population of 5170 to 13785 persons.

3.8 Phasing

Drawing 5 depicts the proposed staging plan for the Royal Investment Corporation (Westside Park) property. The location of existing utilities and proposed construction of the east/west collector road across the Sewell property dictates the initial stages of development. Market conditions and servicing strategies will influence the sequencing of subsequent phases. The storm water management study, as well as a long range preliminary engineering investigation, will determine the off-site and on site servicing requirements for all developments.

All detailed designs to construction will be approved by the Town to ensure that the southwest sector provides a safe and attractive neighbourhood within the Brooks community.

3.9 Development of Adjacent Lands

Sizing of the services to accommodate future development in the ASP is a function of detailed planning at plan of subdivision stages through negotiations with the Town of Brooks. Currently, if expansion were to occur beyond the limits of this ASP, it would be to the south of the existing south annexation boundary to Silver Sage Road. This is the area that the Town initially viewed to be annexed and could progress in this direction if future growth demands warranted additional lands to be annexed.

TABLE 1. AREA STRUCTURE PLAN STATISTICS.

Statistics	**Hectares**	**Acres**	**%**
Gross Developable Area	234.36	579.10	
Less Annexed Road Allowance (Rge. Rd. 150)	3.49	8.62	
Less Road Widening (Rge. Rd. 150)	0.90	2.25	
Net Developable Area	**229.97**	**568.23**	**100.00**
Total Southwest Sector Area Structure Plan	**229.97**	**568.23**	**100.00**
Estate Residential	16.22	40.08	7.05
Low Density Residential and Future Residential	124.86	308.53	54.30
Medium Density Residential	7.98	19.72	3.47
Local Neighbourhood Commercial	1.86	4.59	0.81
Joint Use School Site	10.35	25.57	4.50
Public Park and Open Space	14.64	36.18	6.37
Public Utility Lot	11.81	29.18	5.14
Wet/Dry Storm Detention Area	6.55	16.19	2.85
Roads – Locals and Lanes	31.66	78.23	13.76
Roads – Arterials and Collectors	4.03	9.96	1.75
Royal Investment Corporation Properties	**133.02**	**328.69**	**100.00**
Estate Residential	16.22	40.08	12.19
Low Density Residential	45.21	111.71	33.99
Medium Density Residential	7.98	19.72	6.00

Local Neighbourhood Commercial	0.21	0.52	0.16
Joint Use School Site	6.48	16.01	4.87
Public Park and Open Space	14.65	36.20	11.01
Public Utility Lots	10.61	26.22	7.98
Roads & Lanes	31.66	78.23	23.80
Sewall Ranches Properties	**96.95**	**239.56**	**100.00**
Future Residential	79.65	196.82	82.16
Local Neighbourhood Commercial	1.65	4.08	1.70
Future Wet/Dry Storm Detention Area	6.55	16.18	6.76
Joint Use School Site	3.87	9.56	3.99
Public Utility Lots	1.20	2.96	1.24
Roads – Arterials and Collectors	4.03	9.96	4.15

Park reserve owning (10%) is to be provided as neighbourhood parks throughout the Sewall property.

All acreages shown are approximate only and will vary based on legal surveys and plan of subdivision submissions.

4. SERVICING

4.1 Transportation

The development area of the Southwest Area Structure Plan will benefit from being bounded by arterial roadways on the east and west side and a collector roadway on the south. Young Road defines the east boundary and will separate the development area from the EID reservoir and industrial development located east of Young Road. Range Road 150 is located on the west boundary of the development area and has been incorporated into the Town. The south boundary collector roadway connects Young Road with Range Road 150 and will be used for non-industrial traffic. Industrial traffic is to travel between the arterial roadways (Young Road and Range Road 150) to the east/ west arterial south of the development area (Silver Sage Road).

Range Road 150 has been constructed in a 20 metre (66') road right-of-way. Provision is made in the Area Structure Plan for a 5.18 metre (17') widening to accommodate upgrading of the roadway to an appropriate arterial standard. Residential lots within the development area will be buffered from the arterial roadways with judicial use of

municipal reserve strips, laneways and berms. Lots will not be fronted onto the arterial roadways.

Access to the internal road system will be provided via collector roadways from the west, south and east. Three (3) collector access roadways have been provided from the west (Range Road 150) while one (1) collector access has been provided from the south. Currently, only one (1) collector access has been provided from the east (Young Road) although additional access points may be incorporated when concepts are prepared for development in the N.E. 1/4 Sec.30-18-14-4 and S.E. 1/4 Sec.31-18-14-4. Collector roadways enable easy access to arterial roadways from all quadrants of the Area Structure Plan. The internal roadway network allows for easy access for future area residents and for access by emergency vehicles.

Arterial and collector roadways which do not provide direct access to private property (do not front lots) as well as local roadways in the low density (estate residential) areas will be constructed to an acceptable rural standard. All other collector and local roads will be designed and constructed in accordance with current municipal design standards and at the cost of the respective landowners in the plan area. Costs for arterial and collector roadways surrounding the plan area will be paid by developers of lands adjacent to the roadways.

4.2 Traffic Volumes

Traffic generated by development of Phase 1 (Zone 7) will be accommodated with the construction of a collector roadway across the east portion of the Area Structure Plan lands to Young Road. It is anticipated that this additional traffic (approximately 640 vehicles per day, 64 vehicle trips per hour in peak time) will be easily accommodated on Young Road.

At full build out it is estimated that the Area Structure Plan lands will generate about 13,240 vehicle trips per day (vpd), or about 1,324 vehicle trips per hour (vph). It is commonly accepted that a two lane collector has a capacity of about 1,500 to 1,800 vph

(15,000 to 18,000 vpd) while a four lane collector will adequately handle between 3,000 and 4,000 vph (30,000 to 40,000 vpd).

Young Road and Range Road 150 will function as collector roads for developments within the Area Structure Plan boundaries. Traffic volumes from the Area Structure Plan lands, combined with the eventual increase in traffic from other areas may eventually result in the need to upgrade both roads to a four lane standard. Consequently the capacity of the adjacent roads will not be exceeded by traffic generated by the Area Structure Plan developments. Existing right-of-way widths (20 metres) are adequate for the construction of a four lane urban collector (without boulevard) as shown on Drawing 6.

Range Road 150 will eventually require upgrading. The timing of the upgrade will be dependant on development phasing and cost sharing agreements are to be established between the area landowners developing lands adjacent to the roadway. The upgrade of roads in the plan area will be completed to the satisfaction of the CPR, the Town of Brooks and the County of Newell.

4.3 Water Supply

Potable water will be supplied to proposed development within the Area Structure Plan from existing Town of Brooks water supply facilities.

The existing distribution mains within the Wildrose Subdivision may be extended from the Ash Street/Wildrose Avenue intersection, the Venier Road/Young Road intersection and the water trunk main crossing the CPR right-of-way north of Willow Avenue. The proposed distribution mains for the Area Structure Plan developments will be looped back along Industrial Road to distribution mains located on Industrial Road between Young Road and Veiner Road.

The existing water supply facilities are suitable for supplying water to a population of 16,000 people. Once the 16,000 population threshold is exceeded, water supply facilities will need to be upgraded to provide adequate service to all developed areas, including proposed developments within the Area Structure Plan boundaries.

Within the Area Structure Plan boundaries, distribution mains will be designed and constructed to meet domestic demand and provide adequate fire flow. Mains will be looped in accordance with accepted municipal standards to ensure uninterrupted service and will be constructed in accordance with Town of Brooks standards and specifications. Detailed design of the water distribution system will be provided on a phase by phase basis as part of the approval process for each subdivision within the Area Structure Plan.

Locations of existing water supply mains and proposed major water supply mains are shown on Drawing 7.

4.4 Sanitary Sewer

Sanitary sewage lift stations will be required to pump sewage from the generally low lying plan area to the Town's existing, and relatively shallow, sewage collection system. The sewage will be pumped by force main to existing mains in the industrial subdivision east of the plan area. For initial phases of development, sewage may be pumped to existing 250 mm mains located between Young Road and Veiner Road.

The 250 mm sanitary main to which the force main will be initially routed has adequate capacity for about 15.674 hectares of industrial development and a residential population of approximately 650 (23.3 ha or 217 residential units). Subsequent phases of development will require the extension of force mains to the 375 mm mains located further to the east.

Existing sewage collection facilities are adequate for collection of sewage for a population of about 16,000. Once a population of 16,000 is exceeded the main sewage lift station will require upgrading.

Developments within the plan area will be serviced by gravity mains which will convey sewage to strategically placed lift stations. Gravity mains and required force mains will

be constructed within municipal right-of-ways (roadways etc.) in accordance with accepted municipal standards. Detailed designs for gravity mains, lift stations and force mains will be provided on a phase by phase basis as subdivision and development proceeds and for Town approval.

Existing and proposed sewage collection facilities are depicted on Drawing 8.

4.5 Storm Water Management

A storm water management plan for the plan area will be developed with a goal to maximize conveyance of storm run-off and minimize risk of flooding (thereby property damage) and impact on receiving water bodies. Drainage for the plan area will be developed using:

1) Piped underground minor systems designed to accommodate run-off from the 2 year frequency storms and,
2) Overland major drainage systems designed to accommodate run-off from storms which exceed the 2 year frequency storm and up to the 100 year frequency storm.

Topography within the plan area demands use of at least three wet/dry storm water detention ponds. A pond, located to the north of the S.W. 1/4 Section 31-18-14-4, and between proposed development and the CPR right-of-way, will collect run-off from most of the developed area in the quarter. A pond located on the joint use school site will collect run-off from all of the N.W. 1/4 Section 30 and the westerly portions of the N.E. 1/4 Section 30, S.E. 1/4 Section 30 and S.E. Section 31. A third pond, to be located in the north east corner of N.E. 1/4 Section 30 will collect run-off from the easterly portions of the S.E. 1/4 Section 31 and N.E. 1/4 Section 30. Controlled outflow from the third pond will be directed along Young Road to the Marshall drain. Outflow from the other two ponds will be directed to existing drainage courses, at pre-development rates, located west of the plan area and north of the plan area (along the CPR right-of-way and north of the CPR right-of-way).

Additional storage of storm water run-off may be utilized in parks to be developed in the plan area. Linear parks planned in the N.W. Section 30 and S.W. Section 31 will be used to attenuate run-off flow where possible.

Storm ponds are to be drained by gravity wherever possible and the areas around proposed storm water ponds will be developed for recreational uses (passive and active). Ponds should be equipped with fresh water sources where possible to encourage function as irrigation reservoirs. Permanent storm water detention ponds will be dedicated as Public Utility Lots.

A storm water management plan will be prepared to address flow conveyance and water quality and for approval by the Town of Brooks and Alberta Environment. All system facilities will be designed to Alberta Environment and Town of Brooks standards and specifications.

Detailed design drawings will be prepared on a phase by phase basis and as subdivisions are developed for municipal approval. Major storm sewer facilities are depicted on Drawing 9.

4.6 Shallow Utilities

Shallow utility companies (power, gas, telephone and cable television) will be provided with an overall development plan for the plan area to facilitate their servicing planning.

Existing infrastructure will be extended to the plan area to ensure servicing of the area with shallow utilities. Internal servicing of the plan area will be accomplished through direct bury of the services in road allowances, easements or reserve parcels. Existing overhead power transmission lines will be maintained.

Utility rights-of-way and/or easements necessary to protect utilities and which are located on private property will be provided by developers.

4.7 Off-Site Levies

The developer will negotiate appropriate agreements with the Town of Brooks, and any other relevant Provincial Authority, for the assignment of costs associated with the provision of municipal services and utilities to the development area. Costs to be assigned may include any costs for engineering studies which may be required.

Off-site levies imposed by the Town for the recovery of costs associated with providing public utilities which will service lands subject to subdivision or development will be negotiated as terms of agreements between the Town and developers of lands contained within the plan area.

APPENDIX I

Table 1	Westside Park Preliminary Traffic Impact Assessment, June 2004, Anticipated Traffic Volumes – PM Peak Hour, Full Buildup Stage, Strip Commercial Not Included
Drawing 10	Assumed Traffic Zones
Drawing 11	Estimated Traffic Volumes PM Peak Hour in Vehicles per Hour

TABLE 1

Westside Park Preliminary Traffic Impact Assessment – June, 2004
Anticipated Traffic Volumes – PM Peak Hour
Full Buildup Stage, Strip Commercial not Included

Zone #	Land Use	Area		Generation Coefficient[1]		Total Trips
		Ha	**Ac**	**SF Trips/Acre 2.73**		
				Prod. 34%	Attr. 66%	
				0.9282	1.8018	
1	SF/MF	7.88	19.47	18	35	53
2	SF	10.13	25.03	23	45	68
3	SF/MF	7.31	18.06	17	33	50
4	SF/MF	12.52	30.94	29	56	84
5	SF	6.03	14.90	14	27	41
6	SF	7.27	17.96	17	32	49
7	SF/MF	9.45	23.35	22	42	64
8	SF	9.32	23.03	21	41	62
9	SF	5.23	12.92	12	23	35
10	SF	6.85	16.93	16	30	46
11	SF	5.92	14.63	14	26	40
12	SF/MF	9.47	23.40	22	42	64
13	SF	4.57	11.29	10	21	31
14	SF/MF	9.11	22.51	21	41	62
15	SF	30.66	75.76	70	137	207
16	SF	54.54	134.77	125	243	368
Total		**196.26**	**484.96**	**450**	**874**	**1324**

Notes:[1] As per ITE Generation 6th Edition.

1. GENERAL

1.1 Introduction

The Southwest Sector Area Structure Plan is a statutory document prepared to acknowledge future development of the lands within its boundary areas so that regardless of when development occurs, a logical framework for subsequent subdivision and development is established that can direct development in an organized and informed manner. Said framework identifies how all of the lands will be impacted on a "conceptual basis" and shows how major roads, land uses, open space, schools, transportation, and infrastructure are dealt with.

1.2 Enabling Legislation

The preparation of this Area Structure Plan (ASP) is a process guided by Section 633 of the Municipal Government Act (MGA). The MGA identifies Area Structure Plans “for the purpose of providing a framework for subsequent subdivision and development of an area of land”. As a statutory document, this ASP requires adoption by Town Council.

Other planning documents both statutory and otherwise, have had an impact on the preparation of this document as described below.

1.3 Municipal Development Plan

The Municipal Development Plan dictates the need to prepare Area Structure Plans for all areas that are considered undeveloped. The adoption of this ASP allows the Town to ensure that the goals of the Municipal Development Plan are met and implemented. In particular, the key objectives are the orderly development based on existing development boundaries and servicing; the provision of a range and balance of development types; and the tying together of all development through an integrated and comprehensive transportation network.

1.4 Land Use Bylaw

This Area Structure Plan, along with any subsequent Land Use Bylaw redistricting applications and tentative plans, are all prepared in accordance with the Land Use Bylaw respecting its purpose to prohibit or regulate and control the use and development of land and buildings within the Town of Brooks.

1.5 History

The westerly portion of the plan area has been the subject of several design concepts dating back to the early 1980s prior to annexation.

More recently, the Town of Brooks successfully bid for annexation of these lands with the consent of the affected landowners. The annexation was based on several factors as noted below:

- an expressed need for housing in Brooks due to major industrial growth;
- an expressed need by the public for varying types of housing ranging from starter housing, multiple-residential, mid-range and estate housing.

The Southwest Sector Area Structure Plan provides for a mix of housing to be developed on a staged basis which will help fulfil the Town's growth needs and provide an alternate location for people to choose from.

1.6 Annexation

This area was annexed from the County of Newell on February 4, 1998 by an Order in Council passed by the Provincial Government deemed effective December 31, 1997.

1.7 Land Use Redesignation

This ASP forms the framework for detailed phases of development related to housing needs and servicing capability. The process for development is as follows:

- development of a plan of subdivision for a specific phase or stage which will define lot widths, depths, road widths, open space locations, and related acreages;
- land use designations will be implemented in accordance with the Town's Land use Bylaw;
- servicing requirements will be addressed at this time including the development of a storm water management study (see engineering, Section 4), all in accordance with Town standards.

1.8 Goals and Objectives

It is the primary goal of this ASP to provide a mix of housing ranging from affordable residential (starter homes) to estate housing that will provide a "balanced" community which addresses the Town's needs for the immediate to long term over a 10 to 15 year planning horizon. This is based on a logical and economically viable approach to phased and staged development.

2. STUDY AREA

2.1 Size and Location

The Southwest Sector Area Structure Plan is located in the southwest corner of the Town of Brooks, and consists of the lands within the N.W.¼ of 31-18-14-W4M lying south of the southerly limit of the railway right-of-way on Plan RY11; lands located within the S.½ of Section 31-18-14-W4M; and the lands making up the N.½ of Section 30-18-14-W4M, containing ±232.80 hectares (±575.24) acres) more or less (Drawing 1).

The site is bounded to the north by the CP Railway ROW and Wildrose and Sunnylea Subdivisions; to the east by Young Road, the existing Eastern Irrigation District's reservoir sites and the Brooks Industrial Park; to the south by the newly established corporate limits of the Town of Brooks; and by the existing Government Road allowance to the west (Range 15, Road O).

Adjacent land uses include the EID industrial property and reservoirs east of Young Road, existing agricultural land to the south and country residential, and agricultural land to the west. The existing Wildrose and Sunnylea Subdivisions and CP Railway lie to the north.

2.2 Ownership

There are a total of eight separate parcels contained within the Southwest Sector Area Structure Plan. Ownership of these parcels (Drawing 2) are as follows:

- A portion of the N.W.¼ of Section 31-18-14-4 lying south of the railway containing ±6.96 ha (±17.20 ac).
- The north half of the S.W.¼ of Section 31-18-14-4 containing ±32.35 ha (±79.94 ac).
- The south half of the S.W.¼ of Section 31-18-14-4 containing ±32.35 ha (±79.94 ac).

- The north half of the N.W.¼ of Section 30-18-14-4 containing ±32.35 ha (±79.94 ac).
- The south half of the N.W.¼ of Section 30-18-14-4 containing ±32.35 ha (±79.94 ac).

Total gross holdings controlled by Royal Investment Corporation are ±136.37 ha (±336.96 ac).

- N.E.¼ of Section 30-18-14-4 containing ±64.70 ha (±159.87 ac) owned by Mr. Ian Sewall.
- S.E.¼ of Section 31-18-14-4 containing ±27.39 ha (±67.68 ac) owned by Ms. Donna Mae Neville, Ms. Marilyn Louise Burk, and Ms. Susan Minor with Mr. Al Sewall holding a life interest.
- S.E.¼ of Section 31-18-14-4 containing ±4.86 ha (±12.00 ac) owned by Ms. Donna Mae Neville, Ms. Marilyn Louise Burk, and Ms. Susan Minor with Mr. Al Sewall holding a life interest. Total Sewall property based on titles is ±96.95 ha (±239.55 ac). Note: an actual boundary survey will be required to verify the exact acreage.

Total gross holdings controlled by Sewall Ranches are ± 95.37 ha (236.66 ac).

The range 15 Road 0, which was annexed to Brooks contains ±3.49 ha (±8.62 ac).

The total area within the Southwest Sector Area Structure Plan is ±232.80 ha (±575.24 ac).

All areas within the Southwest Sector Area Structure Plan will be subject to boundary condition surveys to verify boundary locations and property sizes as noted above prior to development.

2.3 Topography and Subsurface Soils

The site is relatively flat with no significant features in regards to topography (Drawing 3). The entire area slopes south to north with an approximate 7 m change in elevation. The subsurface soils for this area include clay till, silt, and sand. The surficial soil has a 0.2 m thick layer of topsoil over the majority of the area. The predominant soil is clay till. In a study of the Royal Investment Corporation lands conducted in 1995, it was determined that there was no consistent pattern for groundwater levels which varied from 1.4 metres to 6.0 metres (see "Geotechnical Report for The Westside Park Subdivision, Brooks, Alberta", prepared March 1995).

No geotechnical information has been prepared for the Sewall property contained within the east ½ of the ASP. A geotechnical study will be required prior to development of these lands.

2.4 Drainage

The existing drainage pattern of the area has both natural and man-made features. Being predominantly undeveloped agricultural land, natural ponding occurs at various spots, particularly in a low lying area located in the S.E.¼ of Sec. 31-18-14-W4M. A man-made EID canal traverses the site in a north-south direction across the S.E.¼ of Sec. 31-18-14-W4M and the N.E.¼ of Sec. 30-18-14-W4M, and will have to be addressed through the preparation of a Storm Water Management Plan. The Storm Water Management Plan will be prepared in concert with future phases and development plans (see Servicing, Section 4).

2.5 Canada Land Inventory

The Canada Land Inventory map shows the soil quality ranges from $2^{6}_{T,}$ $3^{4}_{T,}$ to 4S. The majority of the Southwest Sector Area Structure Plan Lands, are Class $2^{6}_{T,}$ and $3^{4}_{T,}$

These soil classifications may be described as follows:

$2^{6}_{T,}\ 3^{4}_{T}$ Soils in this class have moderate to moderately severe limitations that restrict the range of crops due to topographic limitations in proportions of 6:4.

4S Soils in this class have severe limitations that restrict the range of crops or require special conservation practices, or both. This class also has adverse soil characteristics.

5S Soils in this class have severe limitations that restrict their capability to producing perennial forage crops. This class also has adverse soil characteristics.

2.6 Vegetation

The site is predominantly open fields except for a significant mature treed area on the Sewall homestead within the Sewall Ranches Holdings. The area is used in part for the production of forage crops and cattle. Overall, there is no significant vegetation for most of the site that would impede future residential development. The heavily treed area located on the Sewall homestead is worthy of preservation and should be integrated as part of any future development of this area. In this regard, this tree stand should be preserved and not be subject to disturbance by deep services and/or roadway construction that may compromise its existence.

In a review of County of Newell No. 4 Environmentally Significant Areas, dated 1991, it was determined that the area encompassed by the Area Structure Plan contains no significant environmental areas or features. Further there are no aeloian sand, floodplains, permanent wetlands, unstable slope potential or areas of artesian flow.

2.7 Existing Features

As identified above, the only significant features to be found over the entire site include the EID canal, the Sewall homestead and mature tree stand, and the slough. Irrigation ditches exist on the property, and must be addressed prior to development. Two transmission lines are located on adjacent rights-of-way which run east/west between Sections 30 and 31, and consist of a standard wooden pole line and a steel pole structure line (138,000 kva). They are contained within two 15 metre rights-of-way and have been incorporated into the ASP design. A gas line easement runs parallel to the transmission line rights-of-way south of and adjacent to it. Other gas line rights-of-way and several well heads exist on the lands and their locations require confirmation via legal plan prior to development.

Boundary condition surveys will be required to confirm locations of all features prior to development, including fences, structures, transmission lines, and tree stands.

In May 1999, it was discovered that there were several gas line easements/ rights-of-way located on both Royal and Sewall lands which exist, but are not legally registered against the respective titles. These gas lines have, in the month of May 1999, been acquired by Startech Energy Inc. It is through Startech Energy Inc. that more detailed information has been obtained to permit plotting of the approximate location of these gas lines on the ASP's base plan. The gas company will ultimately have to locate, survey, and register each of these lines and well heads (3) at the Land Titles office, on plans, and against individual titles.

These legal surveys and registered plans must be created prior to the completion and approvals of individual phases of development, which may be impacted by the said lines.

Those lines impacting the design of the West ½ of the southwest area structure plan are as follows:

- Two transmission line rights-of-way and a gas line easement (noted above), running east west on the north side of south boundary of 31-18-14-W4M.
- A gas well head, compound and line running south of the head and off-set from the east limit of the N.W.¼ 30-18-14-W4M which access the above noted well head.
- A gas well line running east of said well head and angling south in the N.E.¼ 30-18-14-W4M ending at a well head.
- A gas line cutting the corner of the S.W.¼ of 30-18-14-W4M ending at a well head.
- A gas line located on the west limit of the S.E.¼ of 31-18-14-W4M ending at a well head.

Width, location and descriptions of these lines have been located as accurately as possible based on information provided in the existing Individual Ownership Plates and may vary once surveyed.

2.8 Land Use

As dictated at the time of annexation, the lands included in this Southwest Sector Area Structure Plan falls under the Town of Brooks Direct Control (DC) zoning. Proposed land uses have been identified based on the standard zoning descriptions contained in the Town's Land Use Bylaw. Future amendments to the Southwest Sector Area Structure Plan may occur at Council's discretion and approval. In addition, compatible zoning districts, in accordance with the Land Use Bylaw, may be created. The submission of a plan of subdivision for a specific phase of development will be accompanied by a request for land use classification. Council, at its discretion, may elect to remove the DC designation from all or a portion of these lands for a more conventional land use district.

3. THE PLAN

3.1 Introduction

The proposed land uses for the Southwest Sector Area Structure Plan recognize a variety and mix of housing from starter to estate, and various forms of multi-unit dwellings in order to meet or accommodate market conditions (see Drawing 4). Land uses are defined in general terms with low density residential representing small lot single detached, duplex and estate housing. Medium density residential provides for a mixed range of row housing and apartment buildings.

In accordance with the Town of Brooks Land Use Bylaw, specific land use districts will be applied as plans of subdivision are prepared for the site and will incorporate regulatory controls.

The location of land uses are strategically placed to offer a transition in uses and to place higher densities in close proximity to collector roads and entrance gates. This will eliminate higher density traffic from going through the heart of the residential subdivision. Land uses for the easterly half of the plan area has been described more generally as future residential to allow for the greatest degree of flexibility in design in the future.

3.2 Residential

Residential development planned for the southwest area covers a wide range of housing from medium density apartment/condominium development to a mix of single-family residential lotting. The entire site has been planned creating residential development cells that have easy pedestrian access to the central community parks of each quarter section. The westerly two quarters of the Royal Investment Corporation lands utilize these **CENTRAL COMMUNITY PARKS** as features that permit the creation of a modified grid pattern throughout. The multiple points of access/egress reduces the number of collector roads required within the subdivision.

Low profile, minimal density (maximum 2 storey), multiple-family development sites have been focused in a linear fashion along the west boundary of the Area Structure Plan taking advantage of its close proximity to major transportation thoroughfares. This will enable the development to meet the critical shortages of "affordable" housing currently facing the Town of Brooks. A single multiple family parcel is located in the S.W. corner of the N.W. ¼ 30-18-14-W4M. All residential development in this area will be buffered from the railway tracks by development of a berm and/or sound attenuation fence. Existing servicing capacities will be utilized in the first phase development area. All multiple site locations are based on ease of collector road access, thereby keeping higher density out of the single family cells of development.

NOTE: The multiple family proposed along Range Road 0 will be of a low density nature, i.e. 20 to 30 U.P.A. Due to the soils conditions high rise development will not occur in these locations. Development will be backing to the west and will acknowledge the need to preserve the E.I.D's existing water pipeline adjacent to the west boundary. Landscaping and uniform fencing should also be considered along this boundary.

3.3 Commercial

There are three commercial sites planned within the Southwest Sector Area Structure Plan. Meeting with neo-traditional planning ideals, positioning of these sites next to collector roads allows for easy vehicular and pedestrian access. In addition, its proximity to the higher population development cells (multiple family) and arterial routes further define them as optimum commercial locations.

Small localized shopping facilities which cater to the day to day needs of the residents of the surrounding community may include gas bar, convenience store, beauty salon, barber shop, dry cleaners, drug store, small restaurant, etc., will ultimately be guided by the Town's permissible/discretionary land uses.

The westerly site is located on the internal ring collector road at the west end of the north central community park. Its optimal positioning and related facility makes this an accessible site for all residents within the west half of the Area Structure Plan study area.

A second commercial site has been provided to the east with egress onto Young Road. Locational criteria for this site and uses are similar to those noted for the westerly site.

A third commercial site is identified in the N.W.¼ 30-18-14-W4M on the south side of the collector road immediately south of the school sites. Its central location to the entire Area Structure Plan will provide an excellent location for convenience commercial.

A regional commercial centre for this Area Structure Plan is considered unnecessary by the Town of Brooks and would constitute decentralization from the existing commercial core facilities. Accordingly, the above three local commercial parcels have been selected.

3.4 Open Space

The open space network planned for the Southwest Sector Area Structure Plans West ½ community is based on the neo-traditional subdivision design, and **THE CENTRAL COMMUNITY PARK(S)** and facilities. Two such parks containing ±6.60 acres (2.67 hectares) each have been located central to each of the westerly quarter sections. These neighbourhood park areas are large enough to consider multiple recreation uses and may include:

- a community hall
- soccer pitch(es)
- tennis courts
- wading pool
- outdoor skating
- gardens (formal)

- interconnected pathways

The **NORTH AND SOUTH CENTRAL COMMUNITY PARKS** are located at the hub of the two westerly quarter sections allowing for ease of pedestrian access to these areas from any part of the subdivision. All roads lead to the central park loop roads which completely encircles the open space.

Additional park spaces are designated to the north adjacent to the CPR right-of-way. This linear strip (±30 m - ±100') provides access via a trail system to the east where an existing controlled pedestrian railway crossing is located (see Drawing 4). A chain link fence has been located along the south boundary line of the CP right-of-way, and extends west from the crossing to the northeast corner of the Southwest Sector Area Structure Plan.

The linear buffer strip to the north of the ASP is provided to allow for a physical separation between the rail and residential. It also provides an area for development of a berm and/or sound attenuation fence if required. The proposed fence to the north of the Area Structure Plan will link up with the existing chain link fence to the east, and hence to the pedestrian railway crossing. The type of sound attenuation will be developed to the satisfaction of the Town of Brooks and the developer.

In addition, a pedestrian trail will be developed as a continuation of the railway pedestrian crossing located to the east.

A joint use school site is located central to the Area Structure Plan straddling both the Royal Investment Corporation and the Sewall Ranches lands containing a combined ±21.03 acres (±8.51 ha). Immediately north of the joint use school site is a double power line and gas line right-of-way running in an east-west direction bisecting the entire Area Structure Plan site.

These utility ROW(s) will be classed as public utility lots, but will function as a pedestrian connector from east to west.

A pedestrian open space link varying from 8 m/26.25' width to the north, to ±45 m/147.64 m to the south is located on the boundary line between the Royal Investment Corporation and Sewall Ranches lands running north/south. This provides a cross open space system when combined with the Public Utility Lot(s) thereby accessing the school sites from all residential quadrants.

The Sewall Ranches property to the east of the Southwest Sector Area Structure Plan is shown as **FUTURE RESIDENTIAL IN ORDER TO ALLOW THE GREATEST FLEXIBILITY IN FUTURE DESIGN AND MIXES OF LAND USES**. Deficiencies of reserve to meet the 10% municipal reserve requirement will be provided when development occurs on the Royal Investment Corporation and Sewall Ranches lands as neighbourhood parks or tot lots to the satisfaction of the approving authority and the landowner/developer.

Future storm detention ponds have been strategically located in Southwest Sector Area Structure Plan and will be developed as amenities and as extensions of the overall park system. The storm detention, or dry pond areas, will be defined by the results of a storm water management study required prior to subdivision approvals.

3.5 Schools

With a development of this magnitude, it is imperative that the future needs of the community be planned early with regard to community services. Recognizing the need for both public and separate school sites, a combined Joint Use Site has been planned for the community. The combined site allows for economy of scales in that facilities such as playing and sports fields can be shared as well as being constructed on less gross area. The creation of a larger "complex" capitalizes on available parking, centrality of place, identity, and maintenance.

As noted, dedication of reserves is based on an overall 10% of the gross area and includes school site(s). This 10% dedication ensures that adequate reserves are provided to meet the Town of Brooks immediate and long term needs.

Based on the phasing of the development and anticipated absorption, schools are not initially warranted, but will ultimately be required by both the public and separate school boards. To this end, a ±8.51 ha (±21.03 acre) school site(s) has been located in the N.W. and N.E.¼'s of Section 31. The joint use site backs onto the existing PUL right-of-way, fronts onto the proposed collector ring road, and straddles the Royal investment Corporation and Sewall Ranches lands. When development of the Sewall Ranches lands occurs in the future and through negotiations with the respective school boards, a comprehensive site will be provided to accommodate both schools. The school boards have been contacted and indicated the need for two schools on a combined site, but could not quantify the numbers of students at this time. It is understood that student needs will be fulfilled by a combination of on site and off-site classrooms and, therefore, the need for bussing.

3.6 Trails

As alluded to earlier in this report, an internal trail system is planned within the central open space "cross" corridor providing safe, traffic free pedestrian access from all quadrants, and by utilizing existing utility R.O.W.'s. The trail system will be ideal for joggers, roller-bladers, pedestrians, and cyclists. The size and materials to be used in the construction of the trail system will be determined in cooperation with Town staff at the time of subdivision development. Additional park connections may be provided throughout the Southwest Sector Area Structure Plan as 3 m (9.84') wide, non-creditable pedestrian walkways.

3.7 Density

Considering the potential for variety and creativity allowed under the Direct Control zoning, defining density at this stage for the overall Southwest Sector Area Structure Plan is somewhat suspect. The fact that market demand may vary will dictate the type and style of land use and development ultimately sought, overall densities may also vary from current projections. Based on a total net area of 228.44 ha (564.47 ac), the projected unit and population densities are anticipated

to range from ±2,500 to ±3,380 units (10.7 to 14.53 uph) or (4.35 to 5.88 upa) for a gross population of 7,500 to 10,140 persons.

Population projections for the west ½ of the Southwest Sector Area Structure Plan are more definitive due to the developer's preparation of detailed designs for the westerly 133.07 hectares (328.80 acres). These lands contain ±2,147 units (or 6.53 upa) for a population of ±6,440 persons. This is based on a significant amount of multiple family housing, and a mix of single family housing lots with the higher percentage being in the 9 to 12 metre wide range.

3.8 Southwest Sector Area Structure Plan)

Statistics	Hectares	Acres	%
Gross Developable Area	232.80	575.24	
Less Annexed Road Allowance (Rge 15 Rd 0)	3.49	8.62	
Less Road widening (Rge 15 Rd 0)	0.87	2.15	
Net Developable Area	**228.44**	**564.47**	**100.00**
Total Southwest Sector Area Structure Plan	**228.44**	**564.47**	**100.00**
(SFR) Single Family Residential District and Future Residential	154.41	381.54	67.59
(MFR) Multi-Family Residential District	24.44	60.39	10.70
(C-3) Local Commercial District	2.69	6.65	1.18
(P-1) Public Service (School Site) District	8.51	21.03	3.73
(P-2) Public Park and Open Space District	15.34	37.91	6.71
(PUL) Public Utility Lots	3.33	8.23	1.46
Future Storm Detention Ponds	2.45	6.05	1.07
Roads - Arterials and Collectors	17.27	42.67	7.56
Royal Investment Corporation Properties (Westside Park)	**133.07**	**328.80**	**58.25**
(SFR) Single Family Residential District	76.07	187.97	57.17
(MFR) Multi-Family Residential District	24.44	60.39	18.37
(C-3) Local Commercial District	1.69	4.18	1.27
(P-1) Public Service (School Site) District	3.59	8.87	2.70
(P-2) Public Park and Open Space District	13.06	32.27	9.81
(PUL) Public Utility Lots	2.16	5.34	1.62
Future Storm Detention Pond	1.43	3.53	1.07
Roads - *Arterials, Collectors (includes south east-west arterial)	10.63	26.27	7.99
Sewall Ranches Properties	**95.37**	**235.66**	**41.75**
Future Residential	78.34	193.58	82.14
(C-3) Future Residential District	1.00	2.47	1.05
(P-1) Public Service (School Site) District	4.92	12.16	5.16
(P-2) Public Park and Open Space District (Balance of park reserve owing (10%) is to be provided as neighbourhood parks throughout the Sewall property)	2.28	5.63	2.39
(PUL) Public Utility Lots	1.17	2.89	1.23
Future Storm Detention Pond	1.02	2.52	1.07
Roads - Arterials and Collectors	6.64	16.41	6.96

3.9 Phasing

The first phase of development is based on the ability to use existing servicing capabilities from Wildrose, as well as from north of the tracks. Some ±150 lots for single family starter home purposes are currently being considered by the developer and will occur east of the entry road on the west side of the Royal Investment Corporation property holdings north of the main entry road. The exact configuration of the phase is shown on Drawing 5. Stages within this phase will be determined when the plan of subdivision is developed. Phase One is proposed to commence in the spring of 2000, assuming all approvals have been obtained. Population projections for this phase are in the order of 400 to 450 persons. Actual existing servicing capacity will vary depending on when Phase One commences, and the additional build out which may have occurred to that time from other areas in Brooks.

As development progresses, subsequent stages within Phase One will occur to completely fill in the area prior to proceeding to the east and Phase Two. Growth will be directly tied to servicing capabilities as defined in Section 4. The storm water management study, as well as a long range preliminary engineering investigation, will determine the off-site and on site servicing requirements for all developments beyond Phase One/Stage One.

NOTE: All detailed designs to construction will be reviewed by the Town and Developer(s) to ensure that the Southwest Sector Area provides a safe and attractive neighbourhood within the Brooks community.

3.10 Development of Adjacent Lands

Sizing of the services to accommodate future development in the Southwest Sector Area Structure Plan is a function of detailed planning at plan of subdivision stages through negotiations with the Town of Brooks. Currently, if expansion were to occur beyond the limits of the Southwest Sector Area Structure Plan, it would be to the south of the existing south annexation boundary to Young Road, also referred to as Antelope Road. This is the area that the Town initially viewed

to be annexed and could progress in this direction if future growth demands warranted additional lands to be annexed.

4. SERVICING

4.1 Transportation

The ultimate community of the Southwest Sector Area Structure Plan will have the benefit of being defined by arterials on the east and west side of the development, with a collector road on the south end. Young Road defines the east boundary and separates the residential development from the EID reservoirs and industrial development further east. Range 15, Road 0, forms the west boundary of the A.S.P., and has been incorporated into the Town boundaries. The south boundary collector road connects the above noted arterial roads. Industrial traffic will travel south on Young Road to the east-west road (Antelope Road). The westerly arterial route, (Range 15, Road 0) is an existing 20 m (66') R.O.W. Provision is made within this A.S.P. to widen it on the east side by 17' (5.18 m). As defined on Drawing No. 6, the full anticipated traffic volumes can be accommodated within this R.O.W. All arterials will be buffered from the adjacent residential development through the use of backing lots, berming and possible fencing and landscaping. A typical cross section showing how a 66', 20 m ROW can be developed is shown on Drawing 6.

The internal ring road provides a unique loop system which instantly accesses all quadrants of the subdivision and allows easy movement from the local roads within the individual cells of development onto the ring road, and hence, accessing the major collectors from five entrance gate roads to the east, south and west.

The north boundary is also well defined by the railway tracks and present development. Internally, the planned development is characterized by a ring road linking all development pods via this collector. The collector is further defined in the west quarter sections by two ring roads around the proposed central community parks. The incorporation of a circuitous collector maintains a continuous and efficient flow of traffic while discouraging shortcutting and high speed traffic, particularly through residential areas. This type of configuration also allows for easy access and egress from specific sites such as the combined school site

without the need to leave the community, or utilize an arterial. From a long range planning perspective, this type of internal network is optimal for both public transit and school bus routing. It also allows for relatively unimpeded emergency vehicle access. The neo-traditional design of the west half of the Southwest Sector Area Structure Plan also adds to the ease of traffic flows within the various quadrants through the modified grid design and multiple access points onto the central community park ring road(s).

All arterial, collector and local roads will be designed and constructed to the current Town of Brooks engineering and design standards.

4.2 Traffic Volumes

For purposes of Phase One development, the ±420 persons anticipated will not present a problem for the existing perimeter road (Rge 15 Rd 0). Traffic trip generations for the built-out development will be subject to a traffic study that will take into account Southwest Sector Area Structure Plan and the two developments to the south located in the County of Newell.

A preliminary review indicates that at the time of full build-out, the entire development will create a traffic generation of 15,000 to 16,000 vpd which translates into 1,500 to 1,600 vph in peak time. It is assumed that a capacity of the two lane collector is 1,500 to 1,800 vph (15,000 to 18,000 vpd) while four lane collector/arterial 3,000 to 4,000 (30,000 to 40,000 vpd) (see Appendix I for supporting information on traffic zones and estimated traffic volumes).

Young Road and Rge 15 Rd 0 will function as collector/arterial roads within the local transportation system. The anticipated increase in the traffic volumes will eventually result in the need to upgrade both to a four lane standard, therefore, traffic that will be generated by Southwest Sector Area Structure Plan in conjunction with the anticipated background traffic **AT ULTIMATE BUILD-OUT STAGE, WILL NOT EXCEED CAPACITY OF THE ADJACENT ROAD SYSTEM. THE EXISTING 20 M WIDE RIGHT-OF-WAY COULD ACCOMMODATE**

A FOUR LANE URBAN FACILITY WITHOUT A BOULEVARD AS SHOWN ON DRAWING 6.

The Range Road 0 - CPR Crossing will in time require upgrading based on densities and will be undertaken to the satisfaction of the Town, CPR and the Developer.

4.3 Water Supply

Potable water will be supplied to the proposed development in the Southwest Sector Area Structure Plan from existing Town of Brooks water supply facilities. The existing distribution system in the Wildrose Subdivision, and the water trunk main crossing the CPR tracks north of Willow Avenue, will be extended for the proposed developments. Once development occurs in the N.W.¼ Section 30-18-14-4, the proposed water distribution system for the Area Structure Plan needs to be looped back along Industrial Road to existing water mains near the water supply facilities.

A treated water storage reservoir and distribution pump station are required to supply adequate peak domestic demands and fire flows to all proposed developments in the west ½ of the Southwest Sector Area Structure Plan, and possible future developments in the S.E.¼ Section 31-18-14-4 and the N.E.¼ Section 30-18-14-4.

The existing water supply facilities are capable of supplying water for an equivalent population of approximately 16,000 people. Once the Town's population exceeds 16,000 people, the water supply facilities will need to be upgraded to provide adequate services to all existing, and proposed, developments in Town including proposed developments in the Southwest Sector Area Structure Plan.

Within the proposed development areas, distribution mains will be designed to provide the required flows including the necessary looping, treated water storage and pumping facilities, and coverage. Mains will likely be installed within

roadways and will be designed according to Town of Brooks standards. Detailed drawings for servicing the site will be provided to the Town as part of the approval process for servicing each subdivision. Locations of the existing water supply mains and proposed major water supply facilities are shown on Drawing 7.

4.4 Sanitary Sewer

Due to the lowness of the entire site in relation to existing developments both north and east of the proposed Southwest Sector Area Structure Plan development, a sanitary sewage lift station will be required to pump sewage to the Town's existing sewage collection system. Indications are that the existing gravity main in Young Road, has an excess capacity for sewage flows from a proposed Phase 1 development in northwest ¼ of the Area Structure Plan and a population of approximately 395 people. Once the sewage flows from the proposed developments in the Westside Park exceed this capacity, the sewage will be pumped to an existing sanitary trunk main located in the abandoned railway spur R/W in the Industrial Park (see attached UMA Interoffice Memo dated February 10, 1998).

Similar to the Town's water supply facilities, the existing sewage collection facilities, as indicated by the Town, are capable of collecting sewage from an equivalent population of approximately 16,000 people. Once the Town's population exceeds 16,000 people, the main sewage lift station and collection system needs to be upgraded to collect and pump sewage from all existing and proposed developments serviced by the Town to the existing sewage treatment facilities. This would include sewage from the proposed developments in the Southwest Sector Area Structure Plan.

Internal servicing of the site will be by gravity sanitary collection mains generally along roadways within the development area. Trunk mains, lift stations, force mains, and collection mains will be designed to Town of Brooks standards. Design drawings for servicing of each subdivision will be provided to the Town as part of the approval process.

Locations of existing and proposed sewage collection facilities are shown on Drawing 8.

NOTE: The Town of Brooks is prepared to discuss raw water irrigation and package sewage treatment facilities with prospective developers.

4.5 Storm Water Management

A storm water management plan will be developed for the site to minimize property damage, risk of flooding, conveyance of storm runoff, and reduce impact on the receiving water bodies. The drainage systems from the proposed developments will have two components. One is the piped underground minor system designed to carry runoff from up to the 2 year frequency storms, and a second component consisting of an overland major system designed to carry runoff which exceeds the capacity of the minor system up to the 100 year frequency storms.

Due to the lowness of the entire site in relation to the existing storm sewer facilities around the Southwest Sector Area Structure Plan, three storm water detention ponds will be required to collect the minor and major storm sewer runoff. One pond, located northwest of the S.W.¼ Section 31-18-14-4 just south of the CPR railway tracks, will collect runoff from most developments in this quarter section. A second pond, located in the N.E. corner of the S.W.¼ Section 31, and will collect runoff from all of the N.W. ¼ Section 30 and the westerly portions of the N.E.¼ Section 30 and S.E.¼ Section 31. The third pond, located at the centre of the N.E.¼ Section 30, just west of Young Road, will collect runoff from proposed developments in the easterly portions of the S.E.¼ Section 31 and N.E.¼ Section 30. This future pond can be drained by gravity along Young Road to the Marshall drain. The other two ponds are land locked and need to be drained via storm water pump stations to existing drainage courses and/or wet lands located west along the railway tracks and north of the tracks.

As part of the development of the Southwest Sector Area Structure Plan, a storm water management report will be prepared addressing the major and minor systems, water quality, and conveyance of flows to the point of discharge. The document will be submitted to the Town of Brooks and Alberta Environmental Protection for approval. Major and minor storm sewer systems, detention ponds, storm sewer lift stations, and storm outfalls will be designed to Town of Brooks standards. Detailed drawings for servicing each subdivision will be provided to the Town as part of the approval process.

Locations of the proposed major storm sewer facilities are shown on Drawing 9.

4.6 Shallow Utilities

Shallow utilities consisting of power, gas, phone, and cable TV are supplied directly by the utility companies. The companies will be provided with an overall development plan for Southwest Sector Area Structure Plan from which they can develop their servicing schemes.

The servicing of the study area with shallow utilities will come from existing infrastructure located within the Town of Brooks. Internal servicing of the developments within the site will be direct bury located in road allowances or reserve areas, and the two existing overhead power lines traversing the property from east to west will be maintained.

APPENDIX I

Figure 1 Southwest Sector Area Structure Plan Traffic Impact Assessment
Figure 2 - Assumed Traffic Zones
Figure 3 - Estimated Traffic Volumes PM Peak hour in Vehicles per Hour

APPENDIX II

Interim and Future Servicing Costs
Certificates of Title

3.4 Parks and Open Space

Parks and open space will be provided through the dedication of municipal reserve when land is subdivided, as provided for in the Municipal Government Act. Parks and open spaces in the ASP will be planned to provide an integrated parks, open space and school system, to address long term needs in accordance with the Municipal Development Plan.

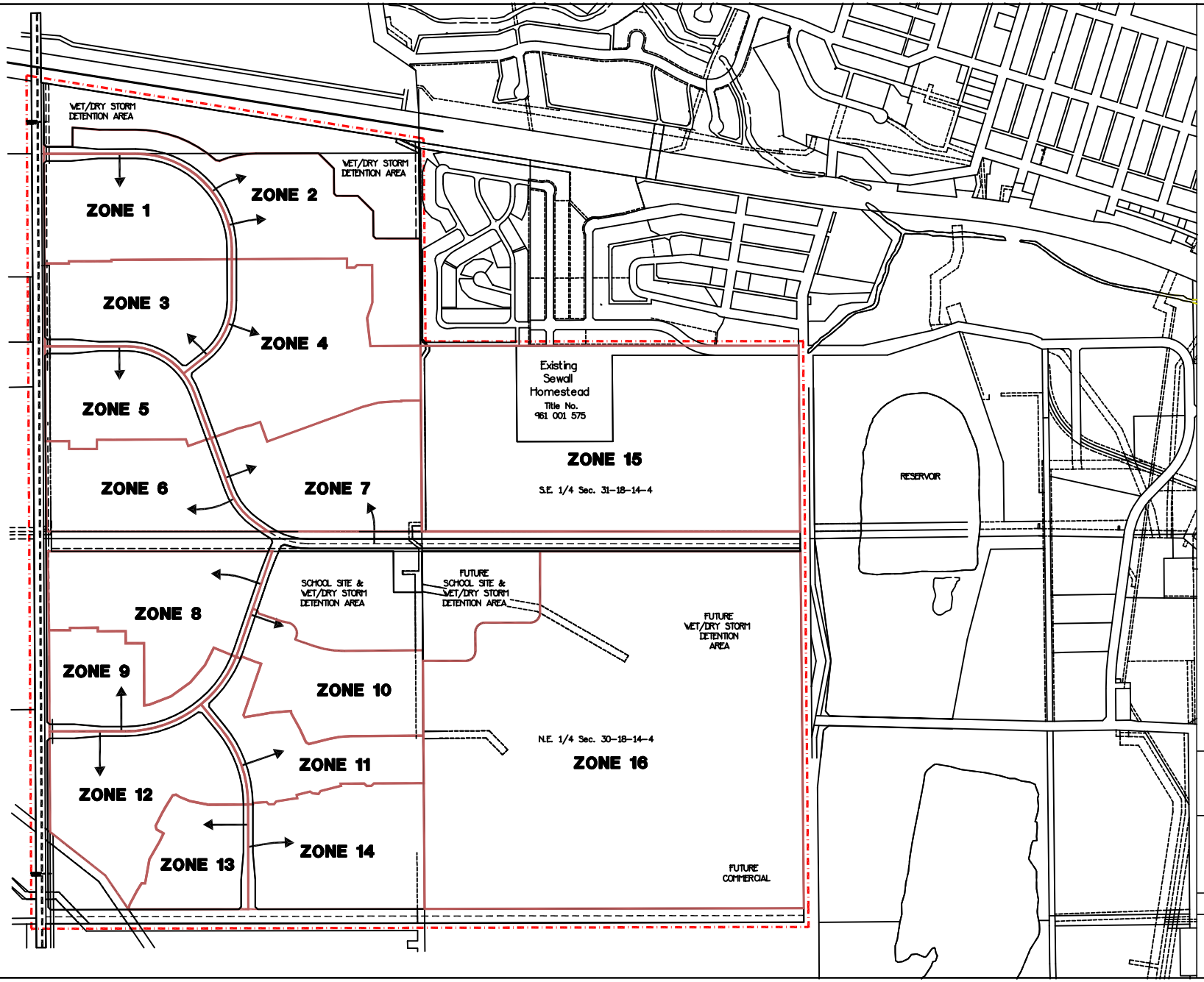
The open space plan for the proposed Westside Park development has been carefully designed to provide residents with a variety of recreation opportunities. Facilities for structured activities such as organized sports will be located at the school site and other municipal reserve parcels arranged throughout the community. These large parcels will provide opportunities for passive recreation as well. Amenities will include sports fields, play structures, pathways and tree plantings; and these large parcels will be irrigated with automatic systems.

The open space parcels will be interconnected with a series of linear parks, providing off street access to and between the major recreation parcels. The linear parks will feature pathways that will also provide exercise loops for walking and jogging within the community. Tree species and grass seed mixtures for the linear parks will be carefully selected for drought resistance in consultation with the Town of Brooks' Parks Department. The linear parks shall be non-irrigated. The predominant grass species selected for the linear parks will be fescues which are well suited for hot, dry weather.

The developer will ensure that residential lot purchasers are made aware at the time of lot sale that the linear parks will remain in low maintenance grasses and will not be improved in the future with irrigation. In order to reduce maintenance costs, low maintenance landscaping will be promoted in areas where irrigation is not practical, such as the linear parks, in accordance with the policies of the Municipal Development Plan.

Neighborhood and community parks provided by developers as a result of subdivision will not require upgrades or improvements from the municipality and will be to the satisfaction of the Parks and Recreation Department. The developer will ensure that neighborhood and community parks are located a maximum of 400 m from a residence as per the *Master Plan for Parks, Recreation and Culture*.

In order to ensure that the planned amenities become a valuable extension of the open space system in the Town, development of open space within Westside Park will be coordinated with the Town of Brooks' Parks and Recreation Department.



LEGEND

- AREA STRUCTURE PLAN BOUNDARY (234.26 ha./579.11 ac.)
- PROPOSED PHASE BOUNDARIES
- COLLECTOR ROADS (20 m)
- ARTERIAL ROADS (30 m)
- CONNECTION TO EXISTING PEDESTRIAN PATHWAY

N

Bemoco Land Surveying Ltd.
21,7895-49th Avenue
Red Deer, Alberta
Phone No: 342-2611

WM ENGINEERING Ltd.
RED DEER, ALBERTA

Title

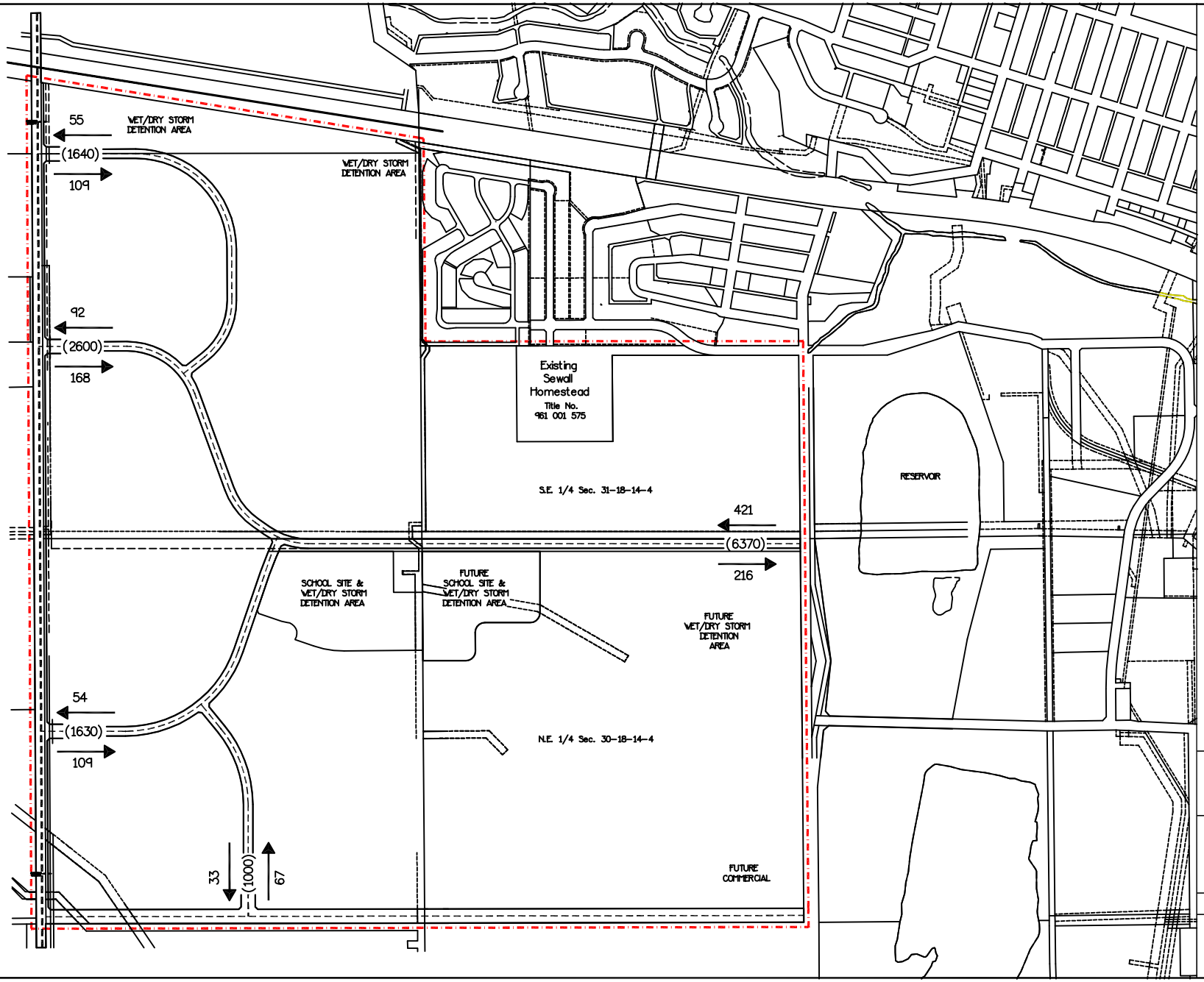
ASSUMED TRAFFIC ZONES

TOWN OF BROOKS
SOUTHWEST SECTOR
AREA STRUCTURE PLAN
AMENDMENT

SCALE: 1:8000

Date
June 04

Dwg. No.
10



LEGEND

AREA STRUCTURE PLAN BOUNDARY (234.26 ha./579.11 ac.)

421 ESTIMATED PM PEAK HOURLY VOLUME

(6370) ESTIMATED DAILY TRAFFIC

Bemoco Land Surveying Ltd.
21,7895-49th Avenue
Red Deer, Alberta
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WM ENGINEERING Ltd.
RED DEER, ALBERTA

Title

ESTIMATED TRAFFIC VOLUMES

TOWN OF BROOKS
SOUTHWEST SECTOR
AREA STRUCTURE PLAN
AMENDMENT

SCALE: 1:8000

Date
June 04

Dwg. No.
11



LEGEND

- AREA STRUCTURE PLAN BOUNDARY (234.26 ha./579.11 ac.)
- FUTURE RESIDENTIAL
- ESTATE RESIDENTIAL
- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- NEIGHBOURHOOD COMMERCIAL
- JOINT USE SCHOOL SITE
- PUBLIC PARK AND OPEN SPACE (MR)
- PUBLIC UTILITY LOT
- EXISTING PUBLIC PARK
- COLLECTOR ROADS (20 m)
- ARTERIAL ROADS (30 m)
- CONNECTION TO EXISTING PEDESTRIAN PATHWAY

N

Bemoco Land Surveying Ltd.
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Red Deer, Alberta
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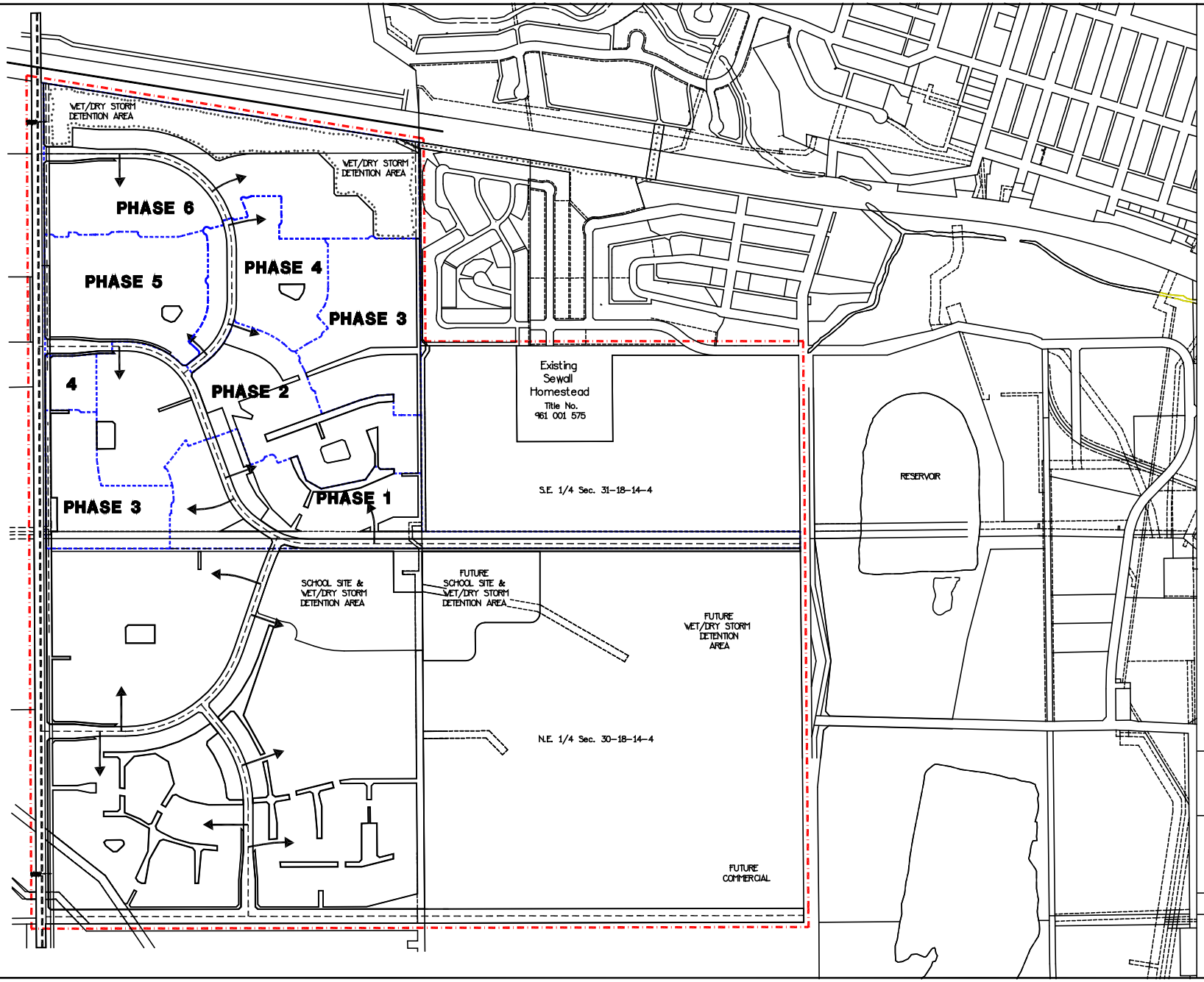
WM ENGINEERING Ltd.
RED DEER, ALBERTA

TOWN OF BROOKS SOUTHWEST SECTOR AREA STRUCTURE PLAN AMENDMENT

SCALE: 1:8000

Date
June 04

Dwg. No.
4



LEGEND

- AREA STRUCTURE PLAN BOUNDARY (234.26 ha./579.11 ac.)
- PROPOSED PHASE BOUNDARIES
- COLLECTOR ROADS (20 m)
- ARTERIAL ROADS (30 m)
- CONNECTION TO EXISTING PEDESTRIAN PATHWAY

N

Bemoco Land Surveying Ltd.
21,7895-49th Avenue
Red Deer, Alberta
Phone No: 342-2611

WM ENGINEERING Ltd.
RED DEER, ALBERTA

Title

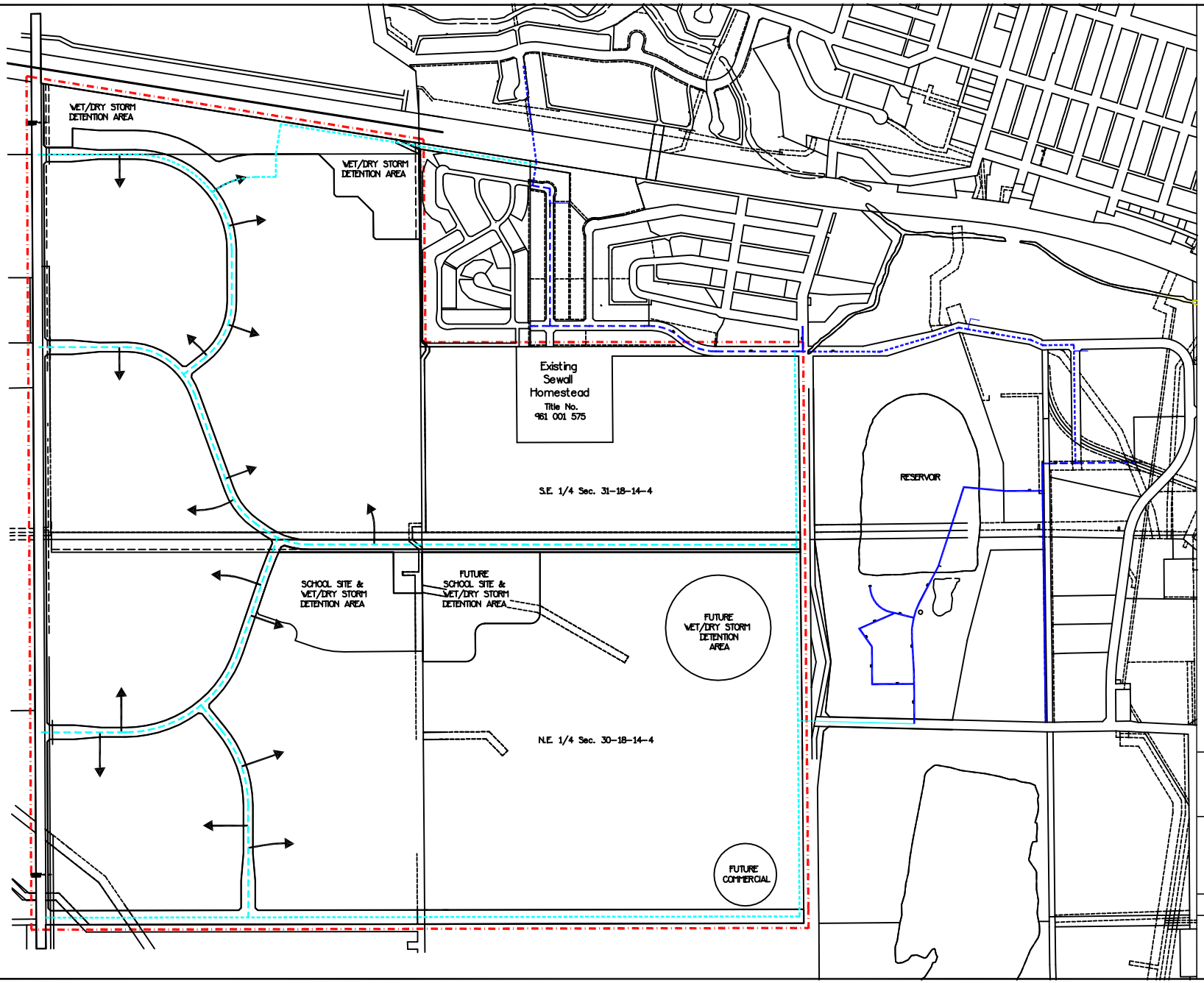
DEVELOPMENT PHASING

TOWN OF BROOKS SOUTHWEST SECTOR AREA STRUCTURE PLAN AMENDMENT

SCALE: 1:8000

Date
June 04

Dwg. No.
5



LEGEND

- AREA STRUCTURE PLAN BOUNDARY (234.26 ha./579.11 ac.)
- EXISTING MAINS (300 mm)
- EXISTING MAINS (250 mm)
- EXISTING MAINS (200 mm OR LESS)
- PROPOSED MAINS (300 mm)
- PROPOSED MAINS (250 mm)
- PROPOSED MAINS (200 mm)

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RED DEER, ALBERTA

Title

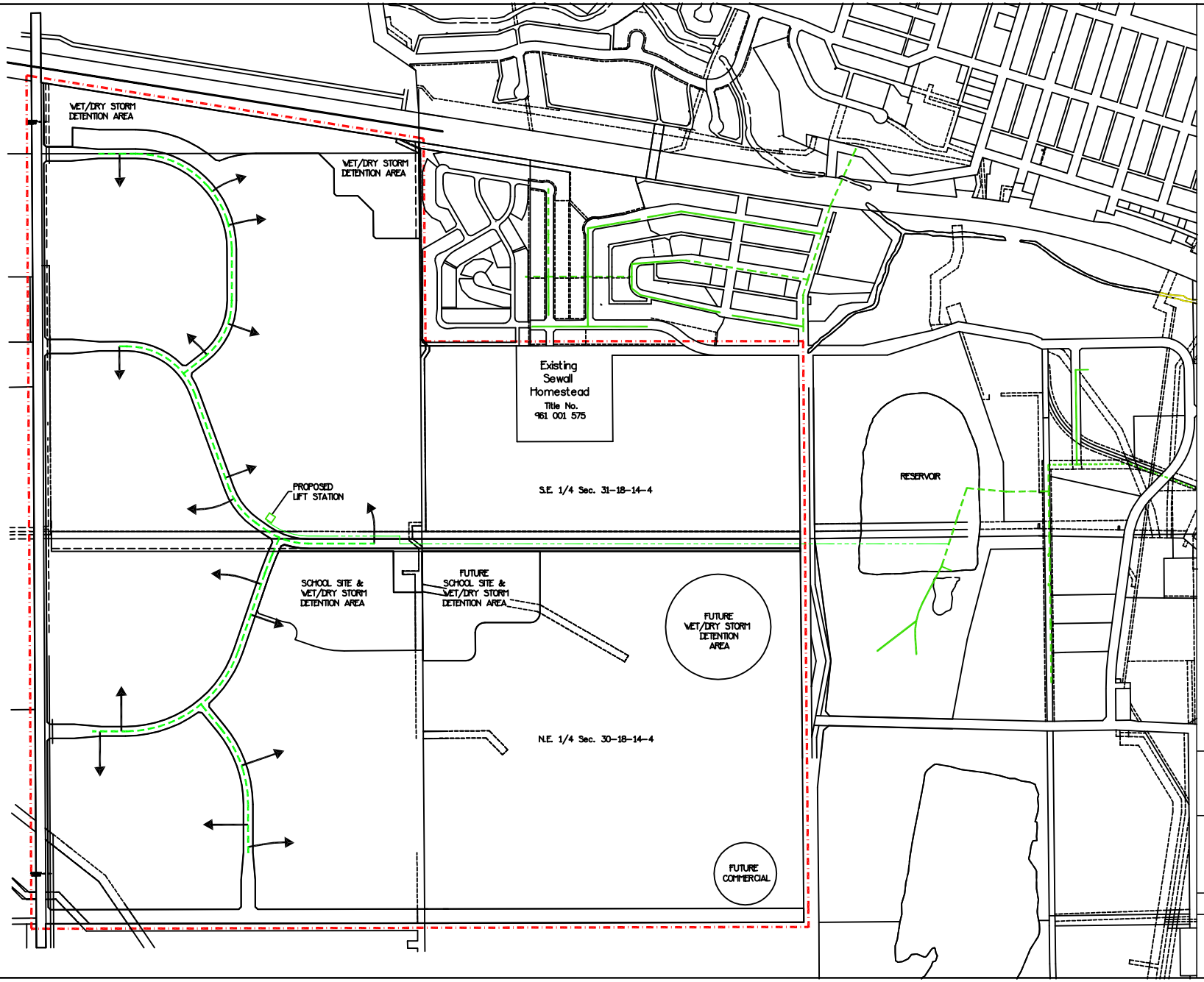
WATER SUPPLY

TOWN OF BROOKS
SOUTHWEST SECTOR
AREA STRUCTURE PLAN
AMENDMENT

SCALE: 1:8000

Date
June 04

Dwg. No.
7



LEGEND

- AREA STRUCTURE PLAN BOUNDARY (234.26 ha./579.11 ac.)
- EXISTING MAINS (>300 mm)
- EXISTING MAINS (250 mm)
- EXISTING MAINS (200 mm OR LESS)
- PROPOSED MAINS
- PROPOSED FORCEMAINS

N

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Red Deer, Alberta
Phone No: 342-2611

WM ENGINEERING Ltd.
RED DEER, ALBERTA

Title

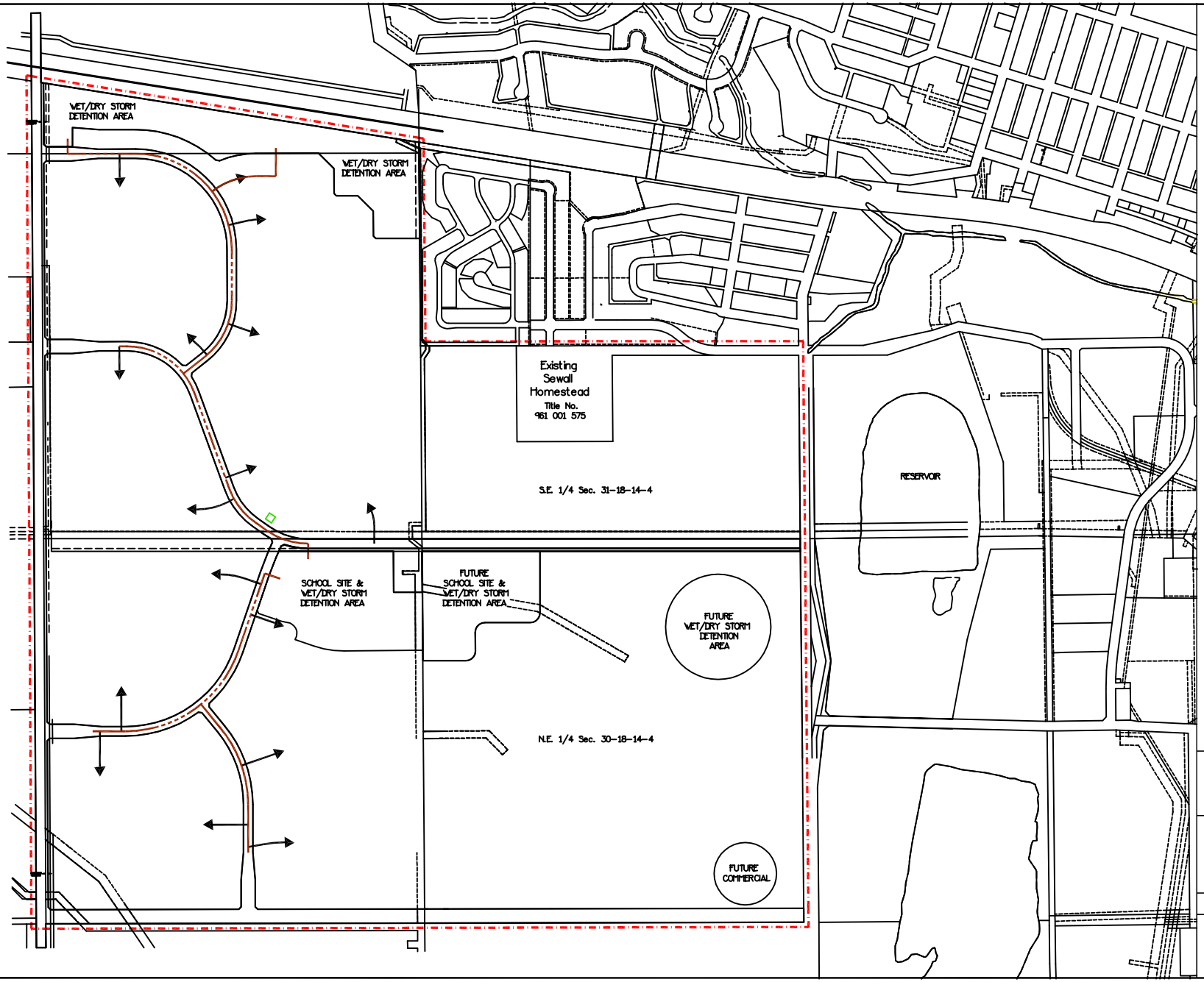
SANITARY SEWER

TOWN OF BROOKS
SOUTHWEST SECTOR
AREA STRUCTURE PLAN
AMENDMENT

SCALE: 1:8000

Date
June 04

Dwg. No.
8



LEGEND

AREA STRUCTURE PLAN BOUNDARY (234.26 ha./579.11 ac.)

PROPOSED STORM MAINS

N

Bemoco Land Surveying Ltd.
21,7895-49th Avenue
Red Deer, Alberta
Phone No: 342-2611

WM ENGINEERING Ltd.
RED DEER, ALBERTA

Title

STORM WATER MANAGEMENT

TOWN OF BROOKS
SOUTHWEST SECTOR
AREA STRUCTURE PLAN
AMENDMENT

SCALE: 1:8000

Date
June 04

Dwg. No.
9