



COUNCIL MEETING OF JULY 30 , 2007

ATTACHMENT

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**REFERS TO: "APPENDIX "A" OF BYLAW
3217/G-2007 - TIMBERLANDS
NEIGHBOURHOOD AREA
STRUCTURE PLAN**

TIMBERLANDS

Neighbourhood Area Structure Plan

Reference: 112870840

Prepared by:

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June 1, 2007



Stantec

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1.0 VISION

Timberlands will be the heart of the surrounding East Hills communities. The area will be developed to reflect a unique image and character through design with focus on walkable streets, a diverse range of land uses and solid integration of commercial, residential and civic opportunities. Recreational, social and cultural activities are the foundation of the overall design and philosophy.

Commercial sites for retail, entertainment and limited office use anchor the Town Centre development and provide goods and services for the Timberlands community as well as a regional market. A vital and dynamic commercial "main street" will provide safe and convenient access to various facilities and amenities. The site includes medium and high-density residential units in the form of town houses and apartments. Based on market demand, the residential units will be a combination of stand-alone low-density housing developments, multi-family structures and dwelling units above commercial ground floors. The site may include public squares and distinctive features at carefully selected locations that will function as community focal points and gathering spaces. A multi-neighbourhood park adjacent to the future school site will be included to accommodate the programmed recreational needs of the community.

It is envisioned that the majority of residential development within the Timberlands site will occur on its periphery and will be appropriately integrated with surrounding land uses. There is a gradual transition of residential densities and land use intensity from high to low moving from the core where commercial uses dominate to the fringe where the lower density will transition well into existing neighbourhoods.

Direct pedestrian and open space linkages to neighbourhoods, commercial sites, natural areas, parks, school sites and other community gathering places, help promote active transportation and establish easily accessible destinations. Transit service links Timberlands with the surrounding neighbourhoods and the entire City of Red Deer.

Preservation and beautification of the environment are key elements of Timberlands. Green infrastructure, recycling and energy conservation are commonly practiced and the development is designed to be sensitive to the local climate by accommodating these priorities.

2.0 INTRODUCTION

2.1 Purpose

The Timberlands Neighbourhood Area Structure Plan (NASP) has been prepared by Stantec Consulting Ltd., on behalf of the City of Red Deer.

The purpose of the Neighbourhood Area Structure Plan (NASP) is to describe the land use framework and development principles for the Northwest Quarter of Section 23, Township 38, Range 27, West of the Fourth Meridian in northeast Red Deer (**Figure 2.1 - Location Plan**). The NASP includes an area of approximately 63.9 ha (159.02 ac) and was first contemplated in the East Hill Major Area Structure Plan (MASP) as one of a number of neighbourhood units accommodating future growth in east Red Deer.

The City's commitment within the Timberlands NASP, is to develop an area for the City of Red Deer that reflects a unique image and character through design with focus on walkable streets, a diverse range of land uses with solid integration of commercial, residential and civic opportunities. In order to achieve this, the NASP contains a land use concept, which will guide area development and set the expectations for future area development.

The Neighbourhood Area Structure Plan will establish a framework for the subdivision, servicing and development of the Timberlands Area. The NASP identifies:

- The size and location of various land uses;
- The alignment of collector and local roadways and lanes;
- The neighbourhood open space system of parks, pathways and public utility lots;
- The location and range of commercial forms;
- The location and range of residential forms;
- The location of community facilities;
- Servicing concepts for storm sewer, water and sanitary; and
- The development staging sequence.
- Potential Densities

2.2 Definition of Plan Area

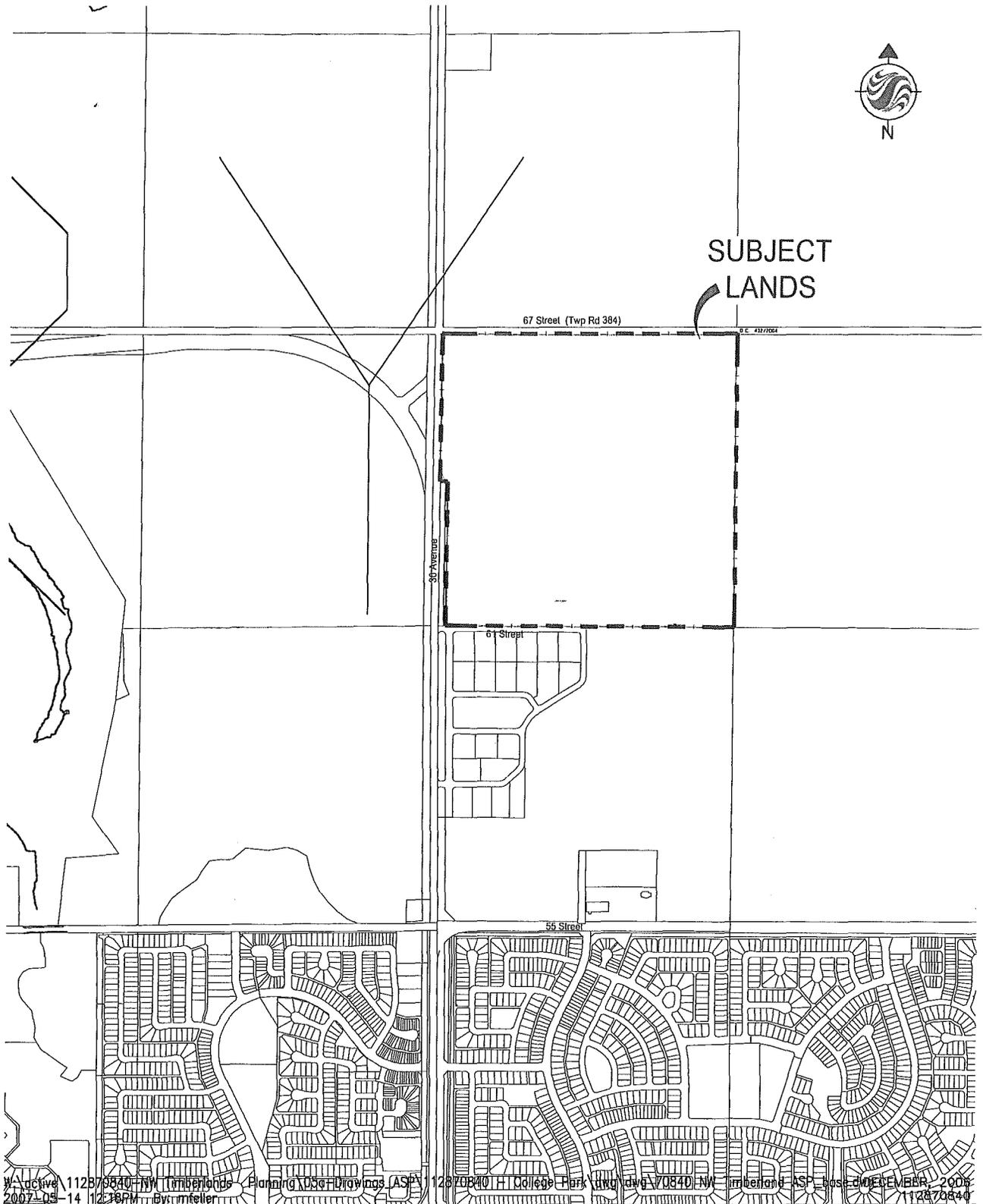
The Timberlands Neighbourhood Area Structure Plan is comprised of the Northwest Quarter of Section 23, Township 38, Range 27 West of the Fourth Meridian and includes approximately 63.9 ha (159.02 ac). As shown in **Figure 2.2 - Subject Lands**, **Figure 2.3 - Legal Area** and **Figure 2.4 - Aerial**, the NASP is defined by the following boundaries:

- Township Road 384 to the North;
- Agricultural land to the East;
- 61 Street to the South; and
- 30 Avenue to the West.

The Timberlands NASP constitutes a logical planning unit with respect to identifiable plan boundaries and servicing considerations and is consistent with the East Hills Major Area Structure Plan.



SUBJECT
LANDS



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Client/Project
 CITY OF RED DEER
 TIMBERLANDS NASP
 Figure No.
 2.2
 Title
 SUBJECT
 LANDS



67 STREET (TWP 384)

805.26m

NW $\frac{1}{4}$ SECTION 23- 38-27-W4

LEGAL AREA = 63.9 Ha

859.03m

403.52

20.42m

30 AVENUE

391.73m

859.03m

61 STREET



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 CITY OF RED DEER
 TIMBERLANDS NASP
 Figure No.
 2.3
 Title
 LEGAL BOUNDARY



67 STREET (TWP 384)

805.26m

403.52m

NW 1/4 SECTION 23-38-27-W4

LEGAL AREA = 63.9 Ha

20.42m

859.03m

391.73m

869.03m

67 STREET



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- Legend**
-  Subject Lands
 -  Seasonal Drainage Course

Client/Project
CITY OF RED DEER

TIMBERLANDS NASP

Figure No.
2.4

Title
AERIAL

3.0 PLANNING FRAMEWORK

The Timberlands Neighbourhood Area Structure Plan is consistent with the following statutory documents.

3.1 Intermunicipal Development Plan

The *Intermunicipal Development Plan* exists to facilitate land use planning cooperation between the City of Red Deer and Red Deer County. It is consistent with the provisions of the Municipal Government Act and the individual municipal development plans of the City and County. This plan exhibits a cooperative approach to land use planning matters in and around the City to provide for the future expansion of the City and to allow compatible development in the County without impeding the orderly expansion plans of the City.

As noted in Section 13.9.1 in the IDP, "The City may continue to develop the East Hill Area for mixed urban uses according to the policies of the Area Structure Plan."

3.2 Municipal Development Plan

The City of Red Deer Municipal Development Plan (MDP) was originally adopted by Council on August 24, 1998 under Bylaw 3214/98 to guide growth and development within the City limits. The scope of the plan is broad and addresses a wide variety of issues including land use, environmental protection, economic prosperity, social well being and future development planning.

Under the MDP, the Timberlands lands are slated for immediate urban growth (see **Figure 3.1 - Municipal Development Plan**). This Plan has been prepared in accordance with the policies outlined in the MDP.

3.3 East Hill Major Area Structure Plan

The East Hill Major Area Structure Plan (MASP) is one of a series of inter-related Planning documents adopted by the City of Red Deer. The MASP provides the zoning, subdivision and development framework for a large area of land in east Red Deer, which includes the Timberlands Site.

The East Hills MASP prescribes that the Timberlands site is envisioned as a commercial, civic and residential mixed use area. The Timberlands NASP has been inspired by the MASP vision and provides for the development of a lifestyle centre, regional and medium sized commercial site opportunities, a pedestrian based main street, a school site, civic amenities and both multi family and single-family neighbourhoods.

Figure 3.2 - East Hills MASP Land Use Concept, illustrates the location of Timberlands in relation to the boundary of the East Hills MASP

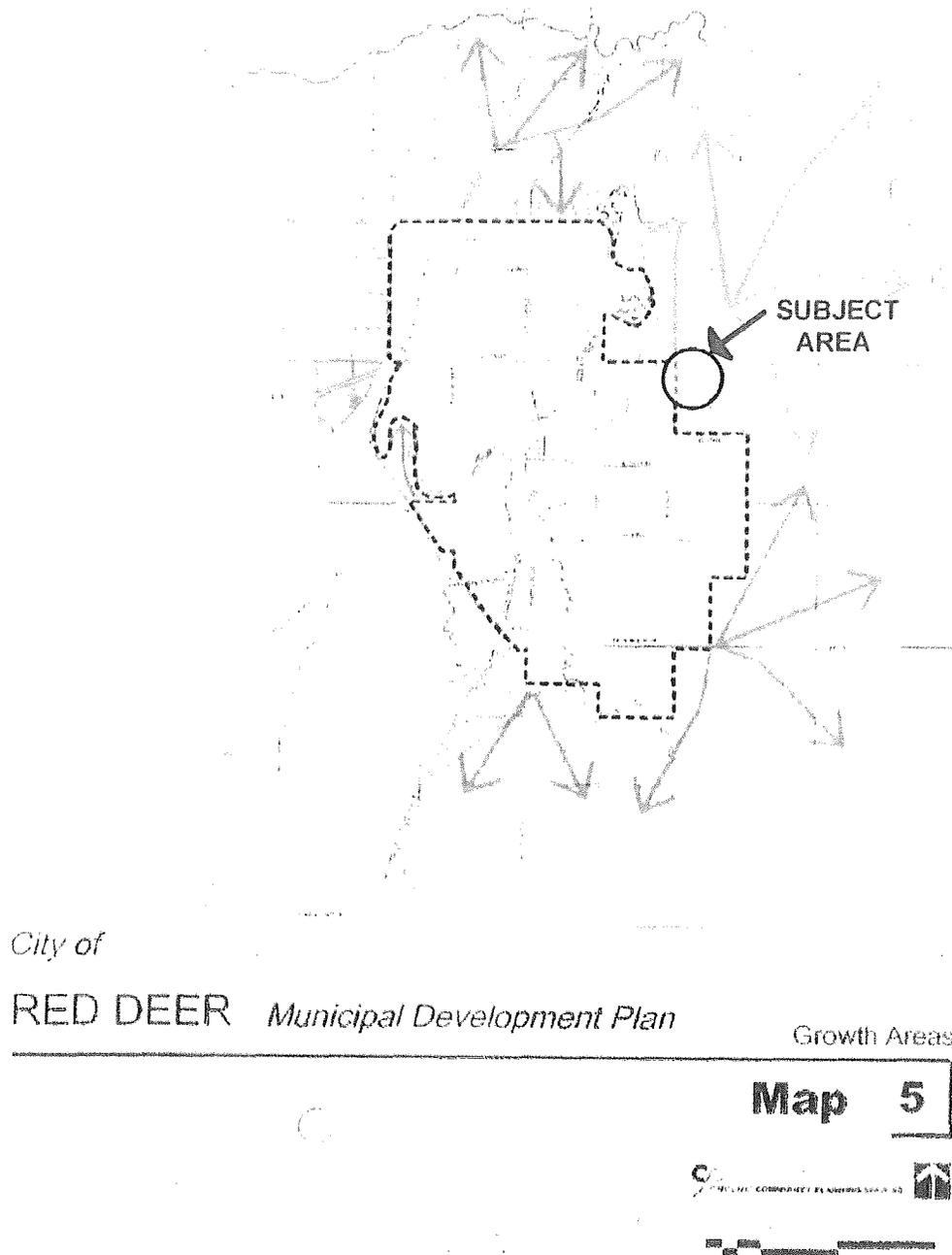
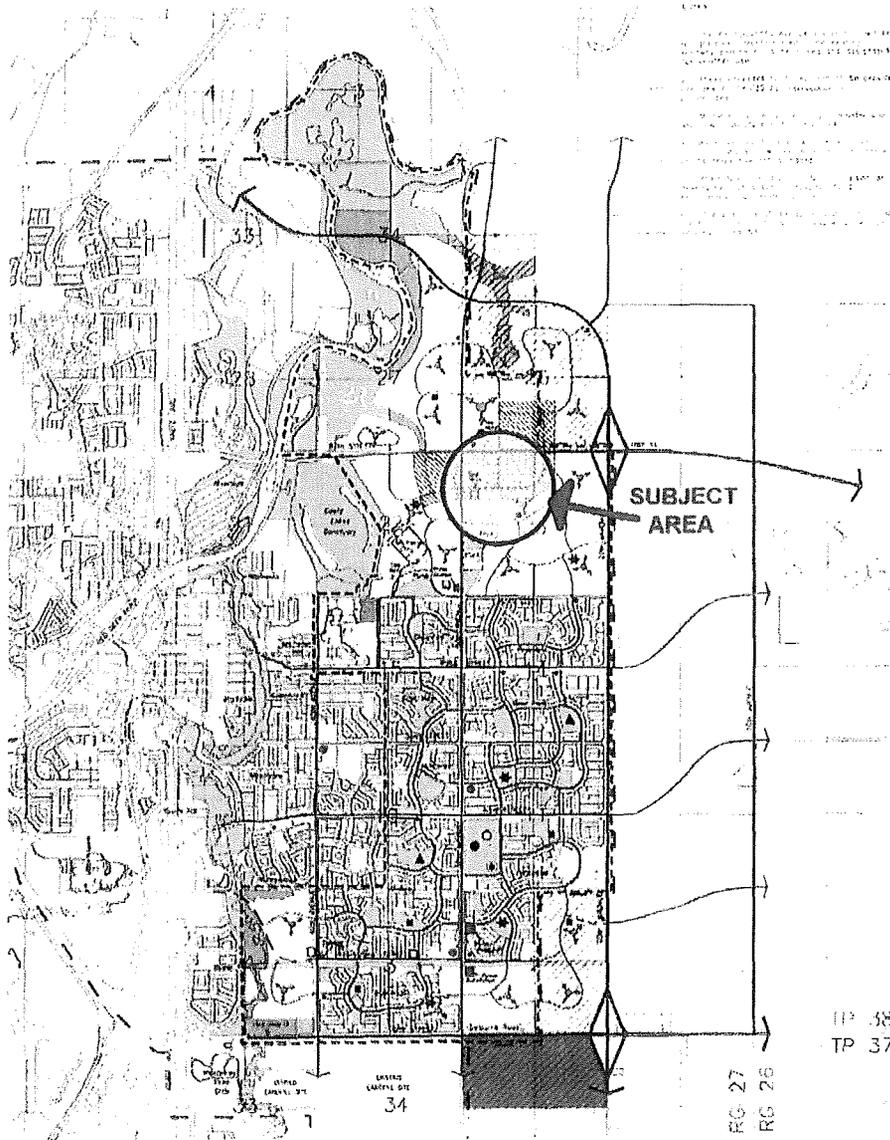


Figure 3.1 – City of Red Deer Municipal Development Plan

* Source – "City of Red Deer Municipal Development Plan" prepared by Parkland Community Planning Services and Lovatt Planning Consultants. Adopted by City Council August 1998; Amended by Council July 14, 2003.



City of Red Deer
East Hill Major Area Structure Plan

Figure 5
Development Concept Plan
(READ WITH FIGURE 3)

Figure 3.2 – East Hill MASP Land Use Concept

* Source – “East Hill Major Area Structure Plan” prepared by Parkland Community Planning Services. Bylaw 3207/A-2005; Adopted by City Council December 19, 2005.

4.0 SITE CONTEXT AND DEVELOPMENT CONSIDERATIONS

4.1 Topography, Soils and Vegetation

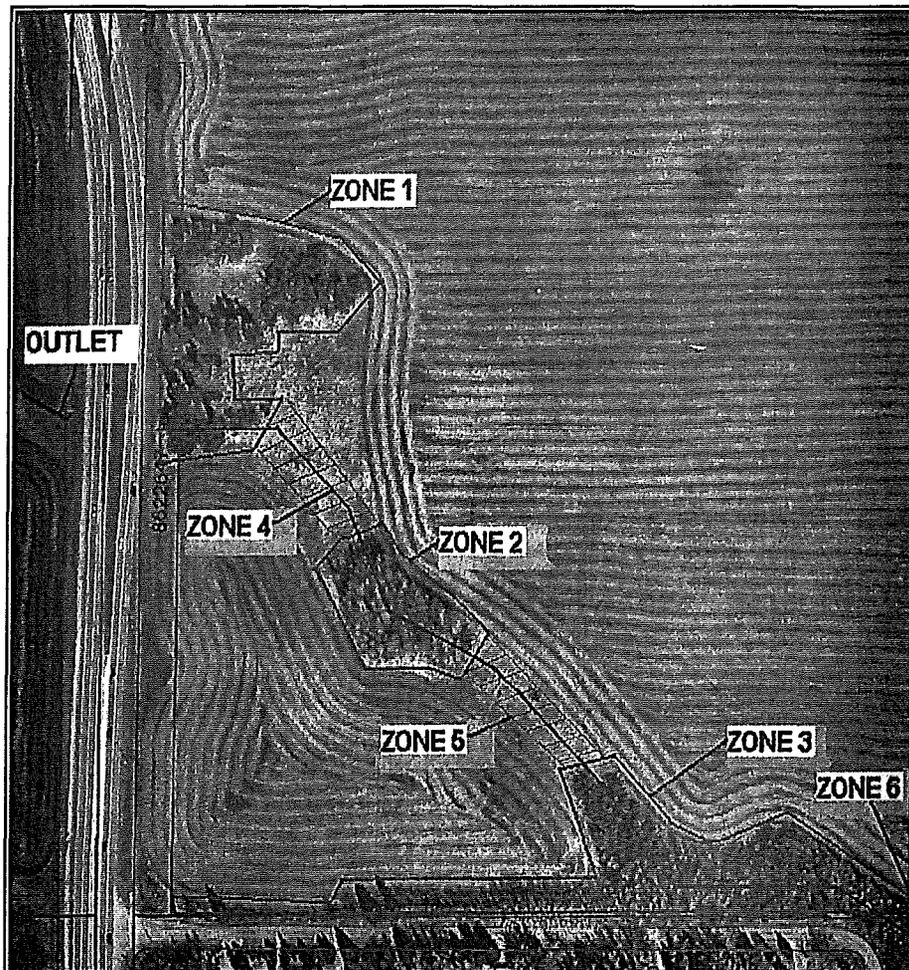
The subject lands are gently rolling with an overall downward slope to the north/northeast.

The majority of the NASP lands are undeveloped agricultural land. A City of Red Deer snow dump is located in the northwest corner. Natural habitat is sparse and is limited to the southwest and south boundary of the quarter section in the form of a shelterbelt that extends along the southern edge of the subject lands and merges with a larger stand of trees that extends to the northwest. Several other small stands of trees are located within the parcel. A seasonal drainage swale is located in the northeast corner of the quarter section.

4.2 Ecological Evaluation

Recommendations:

An Ecological Evaluation of this property was undertaken by the City of Red Deer Parks and Recreation Department in December of 2005. The recommendations in this report refer to the Figure below:



- Selective preservation of the better quality farmstead trees in Zone 1 (include as part of MR dedication). A detailed site assessment is required to establish material to be preserved.
- Preservation and incorporation of the Zone 2 and 3 treed areas southeast of the farmstead into the overall park plan. Full preservation of Zone 6 treed shelterbelt or partial preservation depending on required alignment of pre-development grades (include all zones as part of MR dedication). *Note:* there are very few natural features in the two eastern ¼'s of Section 23, therefore additional effort should be placed on preserving Zone 6 as the only centralized natural feature in the section.
- - i. Preservation or incorporation of the seasonal stream and drainage channel (Zone 4 and 5) into the storm water management plan. If the source of water into Zone 5 requires removal, direct another source of runoff into Zone 5 and/or adjacent receiving streams (Outlet west of 30 Avenue) to assure a continued source of water to downstream recipient natural areas (reference to these connections can be found in the Michener Centre Ecological Profile (1998) and College Park Ecological Profile (2003)).
 - ii. Regardless of whether Zone 4 (seasonal stream) is retained or eliminated, Zone 5 should be preserved intact as a vegetated linear park between the three linked tree zones (include as part of MR dedication). A trail should be developed through the grassy zone. As a result of the long-term association of the vegetation with a seasonal stream and no known recent use as cropland in this zone, the grassy vegetation is likely of high quality and variety – perhaps approaching a state of native grassland; further assessment would be required. Shrubs could be planted to enhance the vegetation in the linear park.
- When grading and developing the northeast corner of the ¼ section, consideration should be given to any impacts that may emerge as a result of the removal or alteration of the seasonal flow of water carried through a swale in that area to a wetland on private land north of TWP 384.

Outcome and Implementation Regarding Ecological Evaluation:

Upon consideration not all of the recommendations from the Ecological Evaluation proved to be practically feasible, for reasons related to cost or engineering considerations. Relevant details of the implementation of the Ecological Evaluation recommendations are as follows:

- Because most of the trees within the abandoned farm site are situated in the 30 Avenue roadway allowance and because of fill requirements at this location, it was not practical to preserve these trees. Also in discussion with Parks staff, of all the recommendations outlined in the report, this area was the lowest priority because most plant species in this area are not native species.
- All of the trees identified in Zone 2 will be preserved and incorporated into the Plan as well as a 10 meter wide strip of trees in zone 6 along the boundary of the College Park

neighbourhood. These two areas were considered to be the highest priority for preservation by the parks department.

- Because of urban development on this quarter section as well as the future urban development on lands upstream, the natural run off that feeds the existing seasonal drainage swale will be cut off, making it unviable to incorporate into the development concept. However, materials in this salvaged seasonal drainage course can be incorporated into a proposed constructed wetland in the northwest corner of the Plan.

Figure 4.1 - Topography illustrates the contour information for the subject lands.

4.3 Environmental Site Assessment

Parkland GEO completed a Level 1 Environmental Site Assessment (ESA) in April 2006. The ESA identified a number of potential issues, including:

- The presence of existing oil and gas facilities
- Possible contamination resulting from a temporary snow storage / disposal site;

A Phase II ESA will be undertaken to review the environmental impacts from both the snow storage site and the abandoned oil and gas facilities. This report will be submitted under separate cover by Parkland GEO before development occurs on the first phase and it will address any remedial actions that may be required.

4.4 NAL Pipelines

NAL facilities containing sour gas exist north of the plan area. The emergency planning zone boundary does not currently fall within the boundary of the plan area, however future regulation changes within the Alberta Energy and Utilities Board may change the emergency planning zone boundary.

4.5 Existing Land Use

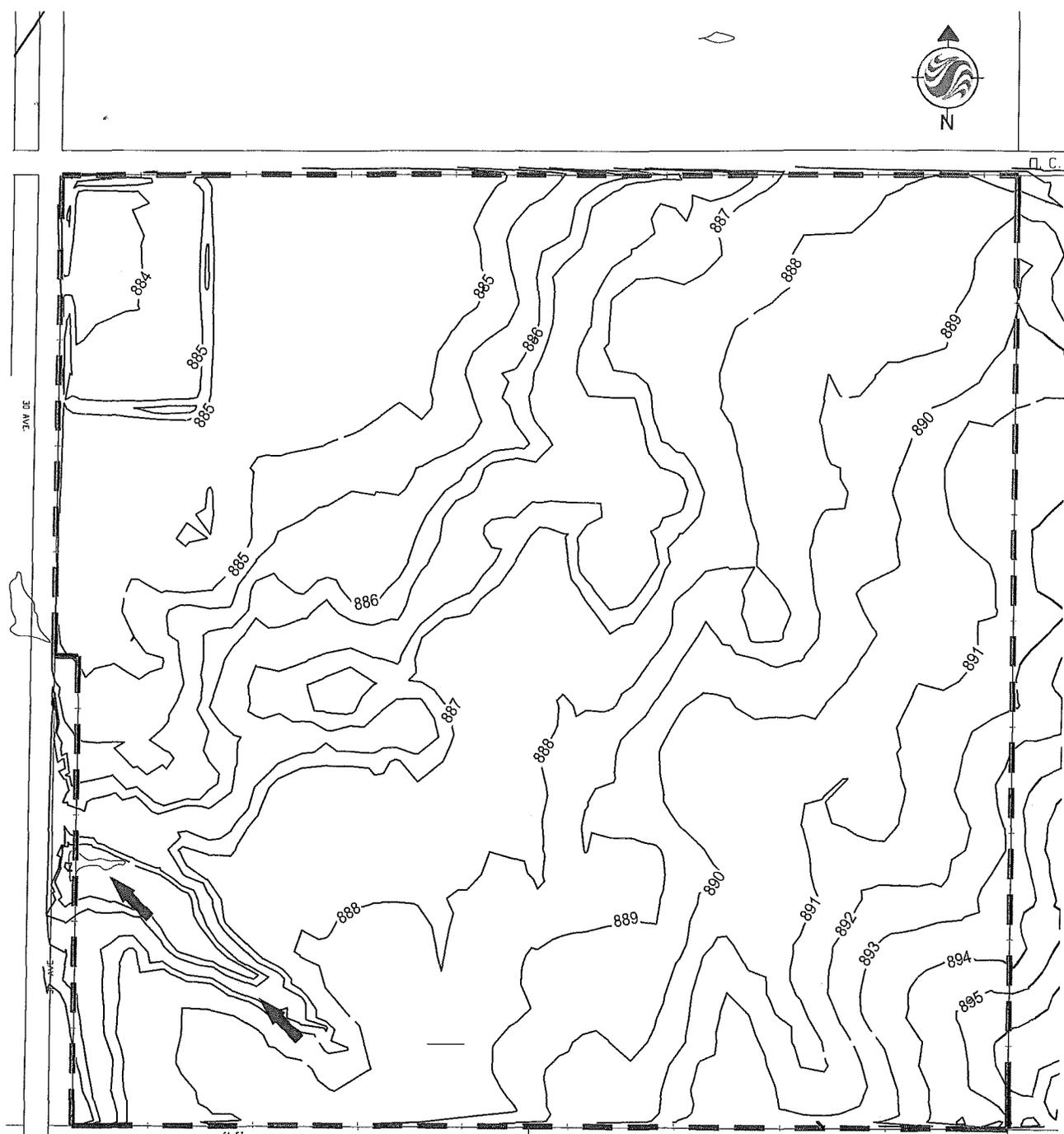
The plan area is presently designated Future Urban Development (A1) under the City of Red Deer under Bylaw 3357/06. The purpose of this land use district is to allow for agricultural uses until such time that the land is needed for urban development.

4.6 Surrounding Development

A majority of the surrounding lands are undeveloped. The anticipated land use mix will follow that outlined in the East Hills MASP. The existing residential community of College Park is located directly to the south, which the Timberlands concept will tie into.

4.7 Oil and Gas

As outlined in the Parkland GEO Phase 1 ESA, there are a number of oil and gas facilities identified within the subject quarter. The Atco gas pipeline (2271KS) will be retained on the property. This high pressure pipeline is protected by a 6.1 meter right-of-way. The Alberta Energy and Utilities Board (EUB) policies require that development for urban uses (such as





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-  Subject Lands
-  Geodetic Contours in meters
-  Seasonal Drainage Course

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 Figure No.
 4.1
 Title
 TOPOGRAPHY

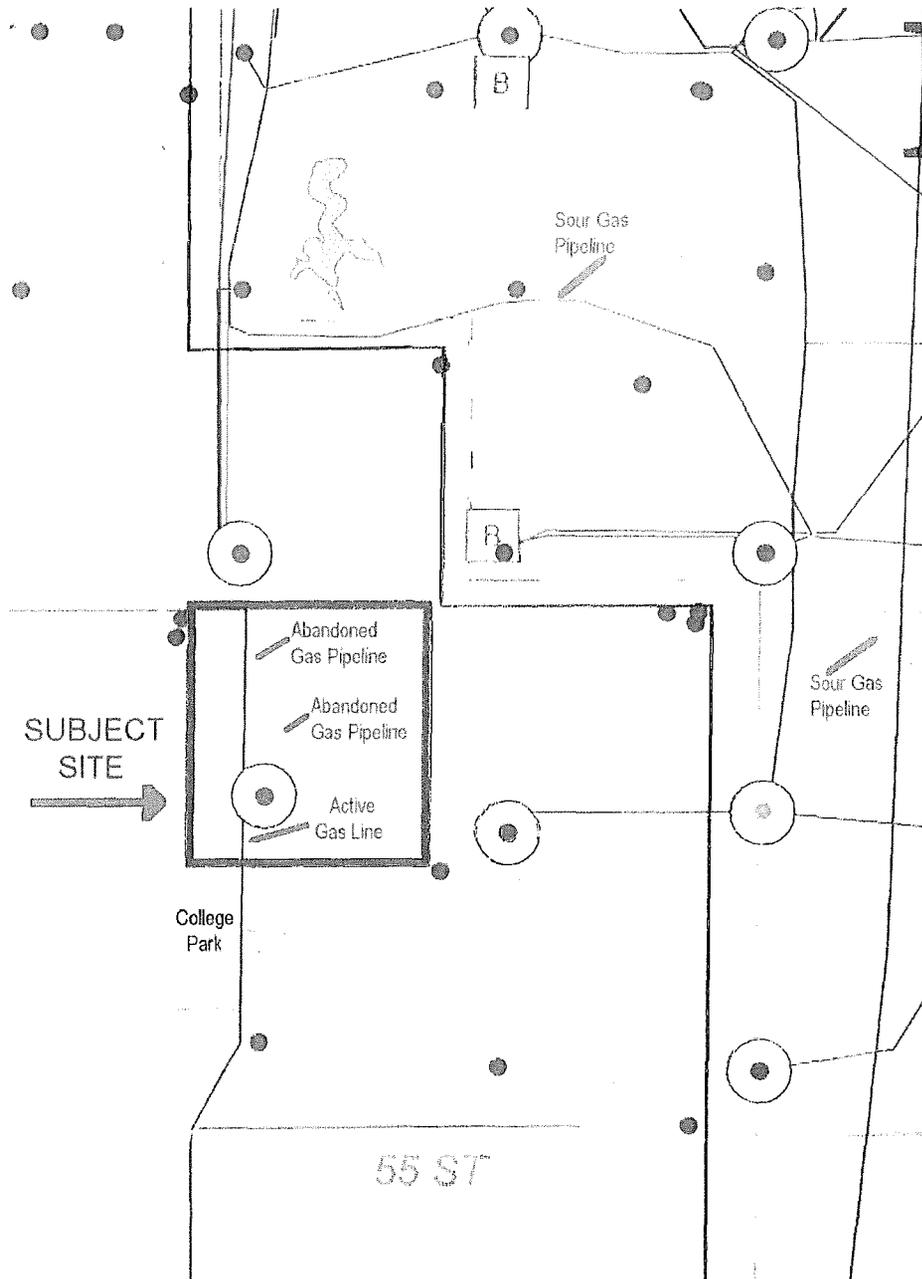
residential homes or commercial businesses) not be permitted within the right-of-way boundary. The proposed land use concept respects this regulation. They also typically require a proximity agreement from any party undertaking work within 30 metres of their right-of-way.

Two Imperial Oil pipeline rights-of-way are located to the east of the Atco pipeline. These pipelines have been abandoned and the right-of-ways were discharged in 1991.

There was a battery site and a gas well site (Calstan Red Deer 12-23N-38-27) located in the southwest portion of the property, which was drilled by Chevron Canada in 1957. In addition, there was a fresh water injection well associated with this site that was reported to be abandoned in August 1983. In May of 1976 Imperial Oil Ltd reclaimed the battery site and a reclamation certificate # 54-15749 was issued by Alberta Environment. The actual well site was reclaimed, again by Esso Resources Canada Ltd in Oct of 1988. This reclamation certificate is numbered 8429. A Phase 2 environmental assessment is to be completed before development proceeds to determine if any contamination has occurred in this vicinity.

Prior to subdivision of the plan area adjacent to this well the precise location of the well will be confirmed in the field. The Plan may have to be modified to ensure that the well is setback at least 5 meters from any permanent structures, 3 meters from any underground utilities, and there is sufficient working space in the unlikely event that a drilling rig requires access to the well.

As illustrated on **Figure 4.2 - Existing Oil and Gas Facilities**, there is an active gas well located to the east of the subject lands within the Northeast Quarter of Section 23. The EUB requires that a 100 meter setback be maintained between the well and urban uses. This setback restriction does not impact or impede development within the Timberlands.



Legend:

- **Abandoned Gas Well**
- **Abandoned Water Injection Well**
- **Active Gas Well**

Figure 4.2 – Existing Oil and Gas Facilities

* Source – "City of Red 2004 Growth Study – February 2005" prepared by Parkland Community Planning Services.

5.0 DEVELOPMENT PRINCIPLES

The Timberlands Neighborhood Area Structure Plan has been prepared as a comprehensively planned commercial and residential development, consistent with the general intent and purpose of the City of Red Deer MDP, East Hill MASP.

The Timberlands NASP shall be based on the guiding principles outlined below:

5.1 Strong Identity

A strong identity is achieved through a comprehensive vision and approach to community features and thematic elements reinforced through unique design and place-making techniques. Architectural controls placed on commercial and residential development further strengthen this identity.

5.2 Neighborhood Focus

The Town Centre achieves a sense of neighborhood through the integration of the commercial and residential areas. Distinct theme and character, a range of commercial and housing forms, and the creation of unique streetscapes, including open spaces and transportation routes strengthen the sense of neighbourhood and assist in creating the Timberlands community.

5.3 Commercial Vitality

A viable commercial development will be achieved through the provision of a vital and attractive core commercial centre to meet the shopping needs of local and regional residents and visitors to the area.

5.4 Housing Diversity

The Timberlands neighborhood will accommodate a diversity of housing types. Multi-family housing is the predominant housing type, which may include mixed use developments. A variety of lower density residential property is also offered in the periphery of the area. This diversity of housing opportunities will accommodate the needs of a variety of income groups and lifestyles, which in turn will encourage a healthy and sustainable community.

5.5 Complementary Interface

An appropriate interface between commercial and residential uses will be achieved by a gradual transition of land use intensity moving from high-density commercial and mixed use in the Town Centre core to medium and low density residential on the periphery and the use of landscape treatments. The plan will take into consideration pedestrian and vehicular connections and land use associations to adjacent and future developments.

5.6 Open Space Amenities

Open spaces are designed to accommodate active and passive recreational requirements such as formal and informal play fields, creative play opportunities and informal gathering places.

Pathway and walkway connections throughout the area provide safe pedestrian linkages for walking, jogging, in-line skating and cycling. Walkability is key to the Timberlands design.

5.7 Educational Amenities

The educational needs for the area are met through the inclusion of one joint use site and adjacent play areas.

This joint use site is to be located adjacent to one collector roadway and one local roadway at a minimum and should contain at least one sports field and be in close proximity to a trail system.

5.8 Pedestrian Circulation

The plan provides a comprehensive network of accessible pedestrian linkages and connections on and off the street that promote an active and healthy lifestyle where people can commute to work, access recreational and commercial environments and enjoy leisure time with family and friends. Pedestrian circulation routes link community destinations within the town centre environment.

5.9 Balanced Transportation

The NASP design provides for a functional, efficient and interconnected road network with a choice of routes for alternative vehicular circulation, as well as a variety of pedestrian and bicycle links.

5.10 Local Employment

Commercial land uses and limited office uses within the quarter section will foster employment opportunities in close proximity to area residents.

5.11 Transit Service

Transit use will be promoted through effective urban design and efficient transit routing.

6.0 LAND USE CONCEPT

Development within the Timberlands Area will generally conform to the Land Use Concept presented in *Figure 6.1* and *Figure 6.2*

6.1 Town Centre

The Timberlands NASP represents a portion of the area proposed in the East Hills MASP to accommodate a Town Centre development. As outlined in the MASP, the development will *"provide a range of commercial sites for retail, services, entertainment and limited office uses to serve the East Hill community, as well as a regional market"*. It will have a large multi-family component to serve residents who desire to work and live in the same neighbourhood. These sites will be situated along the fringe area of the Town Centre.

The concept for the commercial area would be a variety of retail spaces. Within these retail spaces, there would be stand-alone, single floor retail. There would be more of a regional aspect which would have larger commercial square footage buildings. There would also be a downtown element within the Town Centre. The Town Centre downtown area has the ability for retail on the first floor, potential offices or residential on second or third floor buildings.

In other areas of the Town Centre, there will be mixed uses where there is commercial, then directly adjacent to the commercial, there would be housing, particularly multi-family housing that would be adjacent to and not over the top of, but all read as one unit. There is the potential for small elements of neighbourhood commercial to be on the second and third floor of these multi-functional spots.

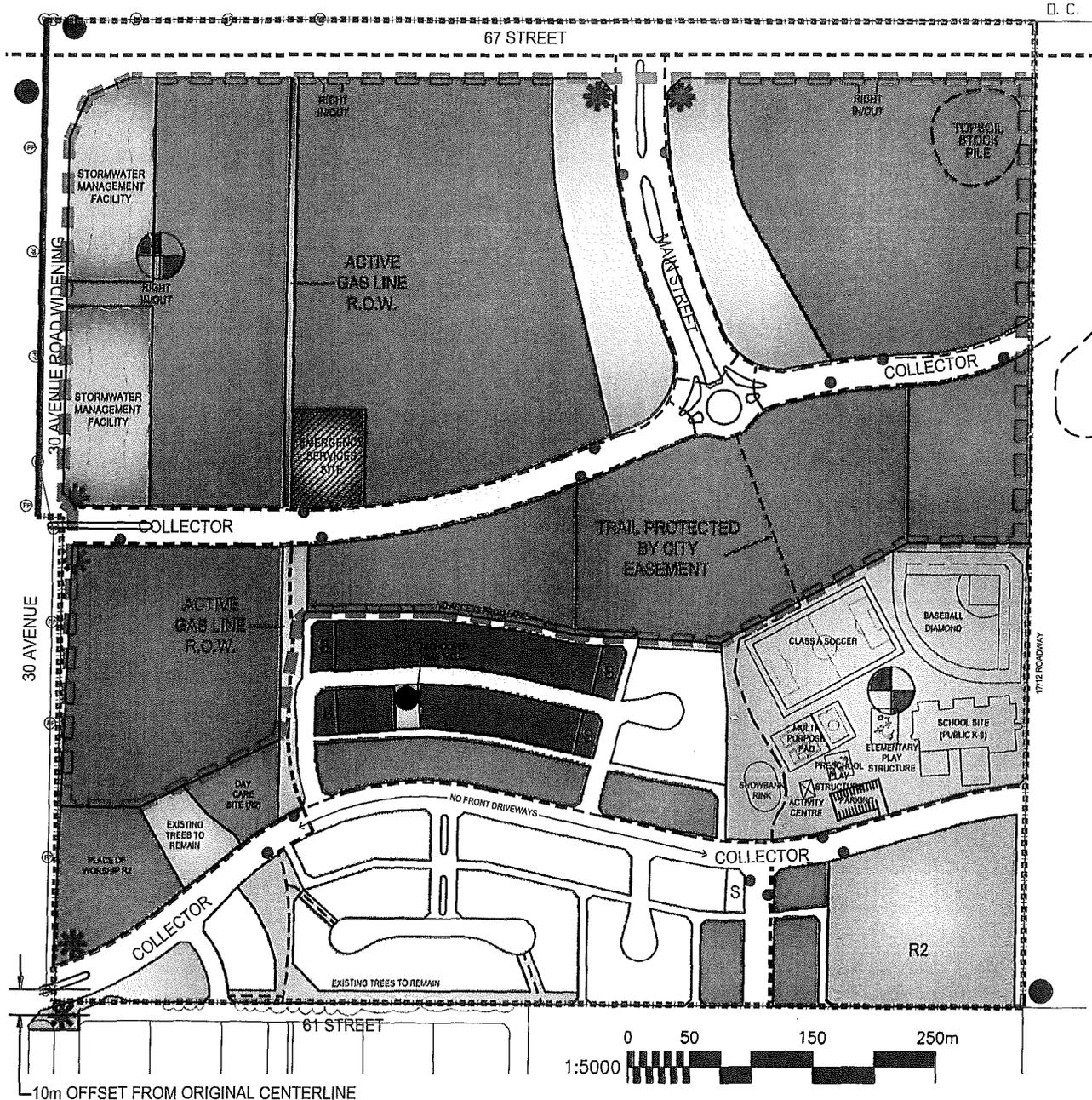
The Timberlands site, as mentioned, not only includes residential but also the commercial Town Centre. The Town Centre transitions to the commercial areas in a series of density rings, where high density is located close to commercial, which eventually would transition into single family with multi-family housing of various densities, being a transition element between the two uses.

It is not the intent of this plan that single family detached dwellings will be directly adjacent to commercial, however that does occur in some places. Overall, however, the intent of this design would be to have a series of transitional uses from the retail/commercial to multi-family and then transitioning out to lower density single family housing.

The design of the comprehensively planned Town Centre emphasizes connectivity and allows more direct travel between destinations. Connectivity and pedestrian linkages are facilitated through a continuous sidewalk, walkway and pathway system within the Town Centre, which in turn promotes alternative forms of transportation, provides foot traffic for the Core Centre and encourages an increase in ridership on the public transit system.

The commercial "Main Street" will be central to the Timberlands community. The Main Street is intended primarily as a zone for commercial mixed use development, which features combinations of service, office, retail and residential uses within integrated projects. This area encourages small-scaled commercial and mixed use streetscapes, and promotes a pedestrian-

- Legend**
- | | | | |
|----------------------------|--|-----------------------------|--------------------------------|
| Subject Lands | Town Center Boundary | Entry Feature Sign | Existing Trees to Be Preserved |
| Single Family (R1) | Municipal Reserve (P1) | Potential Bus Stop | Trails/Pathway |
| Single Family Narrow (R1N) | Public Utility Lot (P1) | Gathering Area | |
| Multi-Family (R2) | Place of Worship R2/ Day Care, Temporary Care, or Assisted Living (R2) | Abandoned Gas Well | |
| Town Centre District | Emergency Services Site Facility (DC/C2B/C2A) | Existing Fortis Power Poles | |
| Main Street District | Secondary Suite | | |
| Mixed Housing (R1/R1A) | | | |



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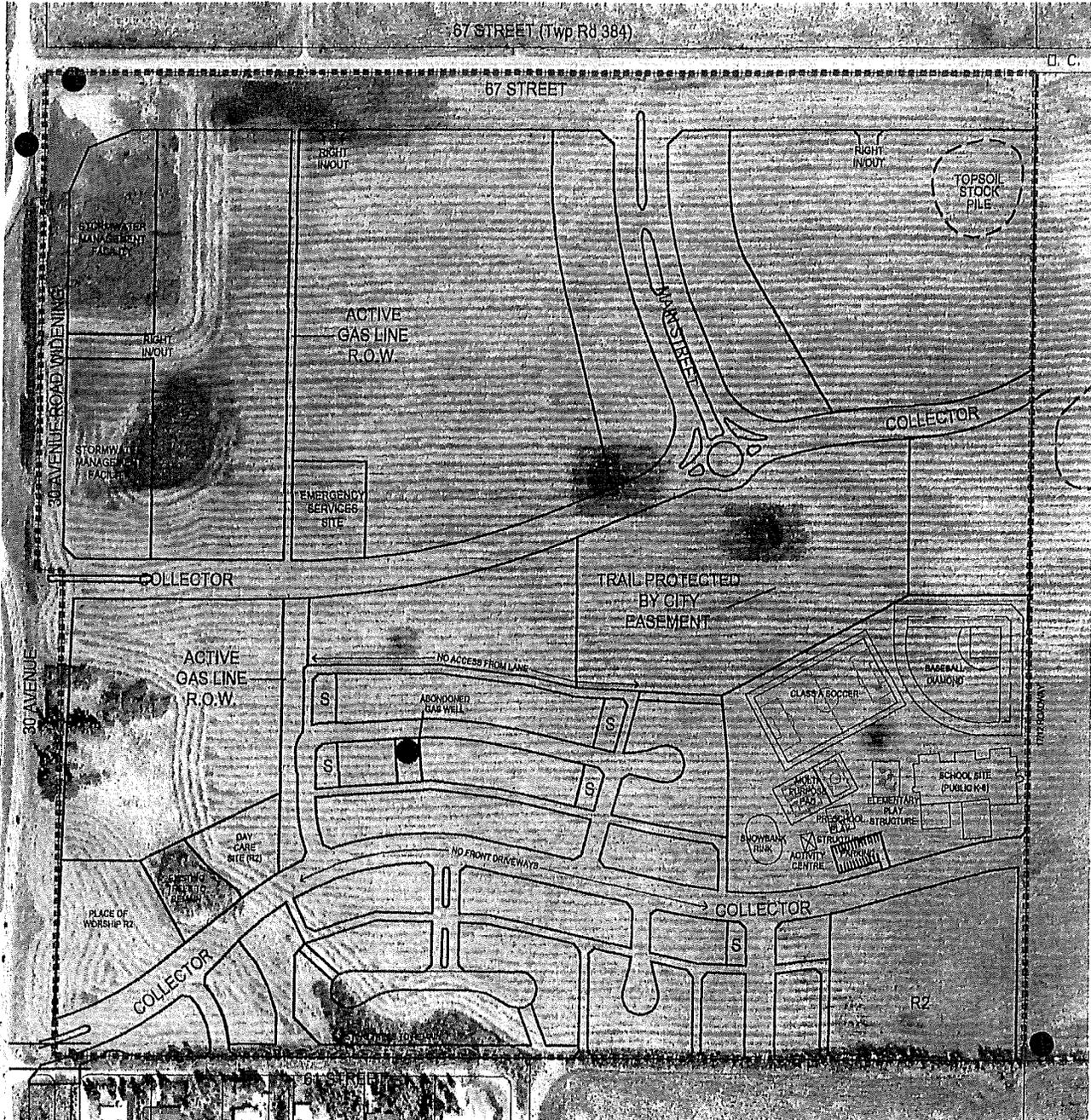


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Client/Project
 CITY OF RED DEER
 TIMBERLANDS NASP
 Figure No.
 6.1
 Title
 Land Use Concept

Legend

- Subject Lands
- ☁ Existing Trees to Be Preserved
- Abandoned Gas Well



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 CITY OF RED DEER

 TIMBERLANDS NASP
 Figure No.

 6.2
 Title
 Land Use Concept
 With Aerial

scaled character through the integration of active ground-floor, community-serving commercial and service uses along storefronts, with office uses and residential uses on upper floors. The residential units will be high quality, with adequate private and public open spaces through an integration of connected public and private open spaces.

Building elevations and rooflines within the Main Street will complement the adjoining residential community. Design elements within this district may include:

- Street level windows
- Appropriately designed and separated entrances for specific uses
- Street oriented signage
- Pedestrian scale design and building materials
- Screening of outdoor storage areas where required

6.2 Residential Area

The Timberlands development will accommodate a diverse housing mix. The Town Centre districts will have a variety of multi-family housing opportunities that will blend well with the surroundings. The general pattern of the housing will be more intense, multi-family units near the commercial areas and gradually transition to larger lot single family residential on the south side of the property in an effort to create an edge treatment where housing of similar size and type will transition to the College Park subdivision to the south. There is one area of multi family housing in the southeast corner of the site that will actually connect with additional multi-family located on the land to the south. This diversity of housing opportunities will accommodate the needs of a variety of income groups and lifestyles, which in turn will encourage a healthy and sustainable community.

Medium density and mixed-use residential developments are located adjacent to collector and arterial roads to provide easy access to these developments. These uses will provide an appropriate transition between commercial and adjacent single family uses. Low density residential with a landscaped buffer will provide a transition of uses between the lands identified in the NASP and the College Park subdivision to the south.

Park space and pedestrian pathways are distributed throughout the residential area providing active and passive recreational opportunities while enhancing the aesthetics of the community. The design focuses on human scale and ensures pedestrian accessibility to everyday needs, while accommodating the automobile as the primary mode of transportation. Transit stops shall be located throughout the community to encourage ridership.

Table 1: Land Use Allocation

LAND USE CATEGORY / COMPONENT	AREA (ha)	% OF PLAN AREA	NUMBER OF DWELLING UNITS
Gross Plan Area	63.90		
Arterial Road Widening on 30 Ave / 67 St	4.85		
Net Developable Area	59.05	100%	
Commercial Uses	30.06	50.9 %	445*
Town Centre District	26.68	45.2 %	405
Main Street District	2.91	4.9 %	40
Emergency Services Site	0.47	0.8 %	
Residential Uses	10.16	17.2 %	287
Residential Low Density (R1)	4.47	7.6 %	94 (95 including secondary suites)
Mixed Residential	1.72	2.9 %	45 (47 including secondary suites)
Residential Narrow Lot (R1N)	1.77	3.0 %	44
Multi-Family (R2) @ 45 units/ ha	2.20	3.7 %	101
Social Uses	1.30	2.2 %	58
Place of Worship (R2) @ 45 units/ ha if R2	0.93	1.6 %	42 (if R2)
Social Care Site (R2) @ 45 units/ ha if R2	0.37	0.6 %	16 (if R2)
Open Space	8.78	14.9 %	
Municipal Reserve	6.53	11.1%	
Public Utility Lot	2.25	3.8 %	
Transportation	8.75	14.8 %	
Collector Roadways	6.00	10.1 %	
Local Roadways	1.77	3.0 %	
Lanes	0.98	1.7 %	

* Note: The minimum number of dwelling units to be situated within the fringe area of the Town Centre is to be a minimum of 385 dwelling units as outlined in the East Hill Major Area Structure Plan (EHMASP).

Also as outlined in the EHMASP, the overall ¼ section to yield a minimum of 500 dwellings with a minimum of 205 dwelling units in the residential areas outside of the Town Centre area.

7.0 COMMERCIAL TOWN CENTRE

A Commercial Town Centre Site totalling 29.46 ha± (72.77 ac±) is located within a comprehensively planned area. The Town Centre Commercial Centre offers primarily retail, personal service and entertainment uses. Also, a mixture of multi-family housing will be integrated into this centre as well as the possibility of mixed use buildings which may include ground floor commercial with residential uses on floors above. The site design incorporates internal pedestrian routes, predominantly smaller-scale businesses, shops and street oriented buildings.

The commercial uses within the plan area will interface with the residential area through a use of transitioning techniques. It is not desirable to have a residential area backing onto the rear of large commercial buildings. As such, there should be a buffer located between the residential area and commercial area. Typically that buffer could be in the form of a lane, a landscaping buffer in the instance of certain locations within the town centre project there is a gas line easement which will be used as a buffer between residential and commercial uses. Other transitional uses would include upgraded architecture on the backside of the commercial areas as well as ensuring the commercial elements have attractive esthetic/privacy fencing, separating views of the backside of the commercial from residential areas.

While the commercial areas should be transitioned from the residential area, it is important to create connections between the areas. This could be done through pathways, open space systems, allowing residents throughout the residential areas easy access to the commercial. This is encouraged not only for ease of shopping and travel to those areas, but also individuals who may work in the commercial areas and live within the residential areas will not be required to drive to work, thus crating a more sustainable transportation model for the area.

Within the Town Centre site, in addition to commercial uses, civic spaces will also be used. Civic spaces would be areas which are considered useable by the general public, i.e. court yards cafes, amphitheatres, skating rinks, or other public uses. Where possible, these public gathering spaces or nodes should be located within the commercial area. This will benefit not only the community, but also the commercial developers will have a more esthetic appeal to their commercial uses, thus creating a destination area. The civic spaces cannot only be used as formal gathering spaces, but also be utilized as programmed elements for items such as weekend farmer markets, artisan markets, play areas and other programmed events.

It is anticipated that the Town Centre site will be able to accommodate key community amenities based on the needs of the residents and market demand of the regional area. Both regional and neighbourhood targeted businesses are expected to be evenly distributed throughout the northern portion of the Town Centre.

7.1 Commercial – Town Centre District

Large retail and service facilities are intended to anchor the Town Centre as a regional shopping district. The envisioned open-air retail and leisure centre will be anchored by larger format stores and national specialty stores. This commercial type is more compatible towards

shoppers with cars, but at the same time, promoting pedestrian friendly connections throughout the shopping area.

This component will encompass approximately 30.06 ha± (74.25 ac±) of land and will include large-scale and mid-sized retail development. Unlike the main street retail, the regional retail will require convenient vehicle access and substantial parking facilities.

Multi-family development will be inter-mixed within the commercial uses within this district.

7.2 Main Street Commercial – Main Street District

The streetscape for the Main Street Commercial District will be designed to reflect a typical prairie small town main street. This commercial type will create a pedestrian friendly environment and may include residential and office development on upper floors and commercial space on the ground floor.

This sector of retail and services will encompass approximately 2.91 ha± (7.2 ac±) of land and contain local and specialized retail uses.

8.0 RESIDENTIAL

The Timberlands NASP responds to the City of Red Deer mandate to provide a broad range of housing types and lot sizes to meet the residential needs of the City. The NASP will provide single family, medium and high density multi-family and mixed use residential opportunities.

The Residential area is comprised of low-density single-family units with medium density multi-family units and mixed-use buildings appropriately interfacing with commercial developments.

8.1 Residential Low Density District (R1)

The southern portion of the Timberlands area will accommodate conventional single-family detached dwellings. These lot types are typically in close proximity to open spaces and other amenity spaces. The low density residential will provide a transition of uses between the College Park subdivision to the south and the proposed development within the Town Centre lands.

The housing form within the low density housing areas identified in the plan will consist of single detached housing catering to a variety of lot and home sizes. These lots will typically be around 35 meters with shallower and deeper lots distributed around expanded bulbs and in the closes.

The lots backing onto the existing College Park neighbourhood are 40 meters deep and will be approximately 16.4 to 17.1 meters wide. A 10.0 meter wide municipal reserve lot, to preserve a strip of existing trees, is provided at the rear of these lots and provides a tree buffer to the existing College Park neighbourhood.

The Timberlands NASP residential area contains approximately 1275 m \pm (4183 ft \pm) of R-1 Residential Low Density District frontage and is anticipated to accommodate 95 single family lots based on a 14 m (46ft) average lot width.

8.2 Residential Narrow Lot District (R1N)

Due to the continued demand and need for more affordable lot and housing options, this plan has made provision for narrow detached lots which fall under the R1N land use district. Front yard driveways are prohibited on these lots and therefore rear lane access is a necessity to meet the parking needs for these homes. These lots will range in width from 10.5 m to 11.6 m and will typically be 35 meters in depth except around expanded bulbs.

The Timberlands NASP Residential Area contains approximately 480 m \pm (1575 ft \pm) of R-1N Residential Narrow Lot District frontage and is anticipated to accommodate 44 single family lots based on a 10.5 m (34.4ft) minimum lot width.

8.3 Multi-Family Residential (R2)

The Timberlands NASP identifies one multi-family residential site comprising approximately 1.42 ha \pm (3.51 ac \pm) of land. The site is located in the extreme southeast corner of the Plan. It is anticipated that this site will be developed with duplex or row housing.

The anticipated density of this site is 45 units per hectare and will accommodate approximately 64 residential units.

In the event that the church and social care site do not develop as their intended use, both will be developed as R2-multi family. The church site is anticipated to accommodate approximately 40 units and the social care site 16 units.

8.4 Mixed Use Housing

Lots for conventional detached dwellings, lots for detached dwellings with secondary suites and lots for semi-detached dwellings are provided in the designated mixed housing areas. The principal criteria which influenced the location of the mixed housing areas were rear lane access and, in order to improve pedestrian and cyclist safety, the prohibition of front driveway access to lots fronting along both sides of the "collector street" with its separate pathway and sidewalk.

In order to achieve the objective of a balanced blend of mixed housing types, a minimum of 50% of the lots provided in the designated mixed housing areas shall be conventional single family detached dwellings and detached dwellings with secondary suites (the latter subject to the maximum of 10% in the Land Use bylaw), while a minimum of 35% of the lots shall be designated as semi-detached dwellings (for this purpose counting a pair of semi-detached dwelling units as two separate lots). At subdivision, groups of semi-detached lots shall consist of not more than three adjacent semi-detached lots (six dwelling units), and such groups shall be separated by at least two adjacent lots for conventional detached dwellings or detached dwellings with secondary suites, or a municipal reserve lot, a PUL, a street or a lane.

Lots allocated for semi-detached dwellings will be designated into the R1A Residential (semi-Detached Dwelling) District. These lots are 35 metres deep on average and their frontage will be between 15 and 19 metres (minimum of 7.6 metres per dwelling unit). Minor variations to these averages may be made at the subdivision stage without requiring an amendment to the NASP.

The Timberlands NASP Residential Area contains approximately 470 m \pm (1542 ft \pm) of mixed-lot district frontage and is anticipated to yield approximately 45 lots.

8.5 Place of Worship and Social Care Sites

A Place of Worship is proposed in the southwest corner of the subject lands. This site is adjacent to commercial uses and is approximately 6.93 Ha. In the event that a Place of Worship does not occur on this site, the site would then revert to multi-family (R2) land use.

A small, 0.37 Ha social care site is provided in the Plan area. In the event that the Social Care site is not developed, the site would then revert to multi-family (R2) zoning.

Prior to the sites identified for Place of Worship and Social Care reverting to residential land uses, the sites must be advertised in the local paper as required by the City of Red Deer.

8.6 Residential Density and Housing Mix

The anticipated density of the Timberlands NASP is approximately 12.4 upha \pm based on the entire net developable area including all commercial areas.

(1) The whole Plan anticipated density for Residential Uses within the entire Plan area:

$$\frac{445 + 287 = 732 \text{ units}}{63.90 - 4.85 = 59.05 \text{ ha}} = 12.4 \text{ upha}\pm$$

(2) The anticipated density for Residential Uses within the entire Plan area (plus Place of Worship and Social Care Site):

$$\frac{445 + 287 + 58 = 790 \text{ units}}{63.90 - 4.85 = 59.05 \text{ ha}} = 13.38 \text{ upha}\pm$$

(3) The anticipated density in the Commercial Town Centre Only:

$$\frac{445 \text{ units}}{35.80 \text{ ha}} = 12.4 \text{ upha}\pm$$

(area within Town Centre boundary)

(4) The anticipated density within the entire Plan area excluding the Town Centre area:

$$\frac{287 \text{ units}}{63.90 - 4.85 - 35.80 \text{ ha} = 23.25 \text{ ha}} = 12.35 \text{ upha}\pm$$

(area outside of Town Centre boundary)

The Timberlands NASP provides a diverse housing mix. The percentage break down by housing type is outlined in Table 2.

Table 2: Housing Mix

LAND USE CATEGORY	NUMBER OF UNITS	PERCENTAGE OF TOTAL UNITS
Residential Low Density (R1)	95	13.0%
Mixed Housing (R1A/R1)	47	6.4%
Residential Narrow Lot (R1N)	44	6.0%
Multi-Family (R2)	101	13.8%
Towne Centre District	405	55.3%
Main Street District	40	9.9%
TOTAL	732	100%

Housing Mix Statistics	Density (du/ha)
Low density dwellings as a % of the total housing stock	25.4%
Multi-family dwelling units as a % of the total housing stock	74.5%
Ratio of semi-detached dwelling units to detached dwellings	1:10
Narrow lot land area as a % of the total net residential land area	17.4%
Lots for detached dwelling with secondary suite as a % of the total number of R1 lots	1.0%
Lots for conventional detached dwelling and detached dwellings with secondary suites as a % of the total number of lots in the mixed housing area	8.5%
Lots for semi-detached dwellings as a percentage of lots in the mixed housing area	35%

8.7 Emergency Services Site

An Emergency Services (ES) site for the purpose of a fire station is identified near the west entrance to the Town Centre. At this location the Fire Station will have close access to the arterial roadway network and to adjacent neighborhoods.

The collector roadway in this location has a median which will not extend beyond the midpoint of the ES site street frontage, in order to allow free access and egress of emergency vehicles in both directions.

The entire Plan area will fall within the four-minute minimum response time upon completion of the station.

In the event that the Emergency Services site is not needed for its intended purpose, it will be converted to Town Centre district.

9.0 OPEN SPACE SYSTEM

The Timberlands NASP area incorporates a multi-functional open space system, which will accommodate the active and passive recreational needs of future residents. Community access points are well defined with features, signage, crossings, and landscape development to provide a sense of continuity throughout the Town Centre. The total creditable reserve dedication of the Town Centre community is 6.53 ha± (16.13 ac±) representing 10.2% of the gross developable area for the entire community. Based on the net developable plan area, excluding arterial roadway dedications, the reserve dedication is 11.1% of the Plan area. The Timberlands NASP provides for distribution of reserve dedication throughout the plan area to optimally meet the open space requirements of the community. The Reserve Dedication Analysis is as follows;

Table 3: Reserve Dedication Analysis

	AREA (ha)	PERCENTAGE
Gross Plan Area	63.90	100%
Required Dedication	6.39	10%
Amount Dedicated	6.53	10.2%
Over Dedication	0.14	0.2%

A variety of open space areas are provided including joint use site, community gathering spaces, regional pathway corridors and stormwater management facilities. The arrangement of open space provides a high degree of connectivity within the Timberlands community and allows the public to conveniently access and enjoy the open space system.

Figure 9.1 illustrates the land use concept for open space along with pedestrian connectivity, and circulation through the proposed trail network within and adjacent to the community of NW Timberlands.

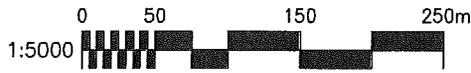
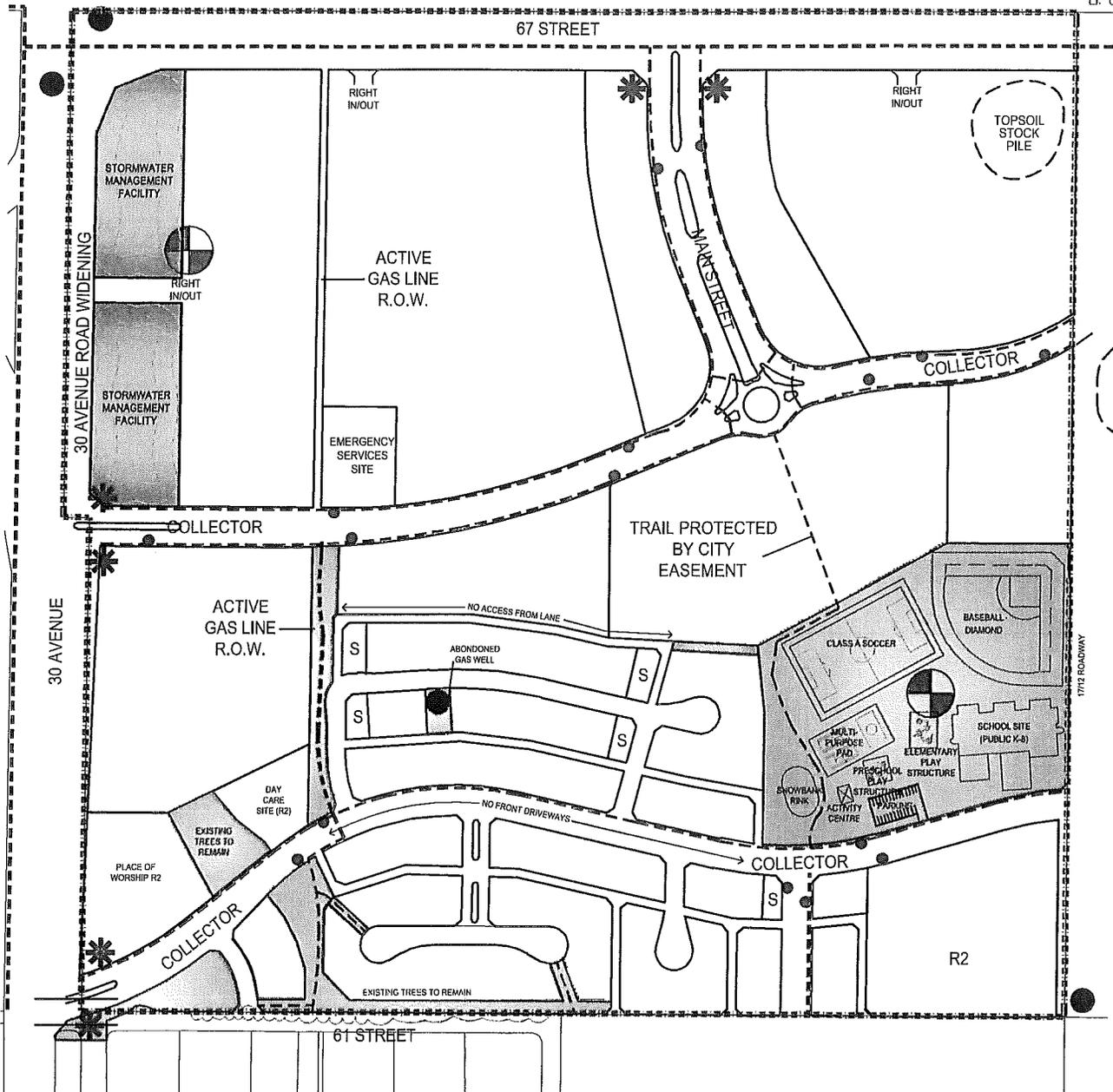
9.1 Joint Use Site (PS)

Some 4.83 ha± (11.93 ac±) of land throughout the Timberlands community has been dedicated to accommodate one (1) Joint Use Site. (The school site itself is 1.40 Ha in size). The site accommodates a Public K-8 school and will address catchment areas within the community. The Joint Use Site contains an active recreational park, which includes a soccer field, multi-purpose pad, ball diamond, snowbank rink, activity center, and a pre-school and elementary play structure. The parcel is designed to accommodate active and passive recreational activities for future area residents.

The site is located and designed to facilitate car and bus drop-off zones to give residents and students the choice of walking, cycling or using public transit. Before construction proceeds on

Legend

-  Subject Lands
-  Entry Feature Sign
-  Municipal Reserve (P1)
-  Potential Bus Stop
-  Public Utility Lot (P1)
-  Gathering Area
-  Sidewalk/Pathways



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TIMBERLANDS NASP
Figure No.
9.1
Title
Open Space System

the adjacent roadways that are adjacent to this site, the school board should be contacted to identify the location of lay-bys so they can be constructed ahead of time.

9.2 Linear Parks and Open Spaces (P1)

A system of open space linkages has been provided within the NASP area. The pathway system forms an integral part of the residential development and offers pathway connections to the Joint Use Site, Town Centre, and the transit stops.

This multi-functional system promotes active and passive recreational opportunities and maximizes the opportunity for use by the adjoining land uses.

9.3 Public Utility Lot (P1)

Two stormwater management facilities (SWMF) have been identified on the Plan and joined by a large culvert. They will be located in the northwest corner of the Plan which is the lowest point on this quarter section. It is anticipated that these facilities will be constructed wetlands and will strongly enhance the character of the Town Centre area. They will not only provide an attractive entrance into this site but will also act as passive recreational amenities integrated into the commercial area.

Plant material will be salvaged from the existing seasonal drainage course and re-planted in the constructed wetland. This material will help the constructed wetland function as a facility that will not only control the quantity of stormwater run-off but also enhance the quality of this run-off.

Approximately 2.21 ha± (5.9 ac ±) of Public Utility Lot (PUL) has been incorporated into the NASP design to accommodate one (1) stormwater management facility (constructed wetland).

The location of the SWMF on Figure 6.1 is shown conceptually and the actual location can be altered and shape modified, as required, to complement or integrated into the commercial area adjacent to this facility. This modification will require approval first by the City of Red Deer Engineering Services Department.

9.4 Southwest Parkette

There is a 0.36 hectare Parkette proposed at the southwest entrance to the Timberlands neighborhood. This park will function not only as a transitional buffer between the new neighborhood and College park but also as a passive recreational amenity for the adjacent residential areas. It is anticipated that this park will be developed with extensive tree and shrub plantings as well as park benches.

9.5 Gathering Places

Gathering Places are public or semi-public spaced located at a node, with or without a structure, and which create opportunities for social contact. This plan has identified two sites:

- 1) The first is adjacent to the proposed constructed wetland on the northwest corner of the Plan. This passive recreational feature, along with adjacent commercial will be an ideal location for people to gather in this neighbourhood. They can enjoy both the retail amenities at this location at the same time as enjoying the natural beauty of the wetlands

area. Since this site has two elements, namely a commercial site and a recreational element, it will be considered a local gathering area.

2) The second gathering place has been identified in the joint use park site. This site is ideal for a district gathering place since it includes several of the elements required for this type of site including:

- An educational element which is facilitated by the K-8 school site
- A trail element because it is linked by a multi-purpose pad that extends through this site.
- Since the site is adjacent to the collector roadway network, and a transit stop has been identified, it has a transit element.
- This site has a significant recreational element including two playgrounds, a soccer field, a ball diamond, snow-bank rink, and a multi-purpose pad.

10.0 ARCHITECTURAL CONTROLS

Design standards and information shall be developed and form the Architectural Control Guidelines for the Town Centre. The guidelines will be a stand-alone / separate document that will be used for the entire East Hill Town Centre Area.

10.1 Vision

The Town Centre Architectural Control Site Guidelines have been developed to ensure a high standard of design, quality, and appearance for the commercial development. These guidelines are intended to be used in conjunction with the City of Red Deer land use bylaw for Town Centre and Main Street districts. They are to be used to help guide the direction of design and development of the Town Centre and Main Street early in the planning process. Design specifications are provided for the East Hill Town Centre and Main Street districts.

Landowners, builders, and tenants shall follow these guidelines in order to achieve a coordinated whole. Alternative solutions may be considered where it can be clearly demonstrated that the intent of the guidelines can be met or exceeded.

These guidelines shall become a part of the established approval process as part of an issuance of development permits. The guidelines are not intended to create an additional layer of review and approval to the established City of Red Deer process, but to help ensure a more predictable and timely review process. These guidelines shall provide guidance in addition to the requirements set by the City of Red Deer Land Use Bylaw.

10.2 Architectural Control Design Guidelines

The guidelines will be initiated and implemented by the City of Red Deer and will include development standards such as:

- Interface issues;
- Minimum/maximum building footprints;
- Fencing design and materials;
- Roofing materials;
- Diversity of building design;
- Exterior finish; and
- Landscaping requirements.

11.0 TRANSPORTATION NETWORK

The NASP has an extensive walkway and pathway system that offers residents choices in mobility, while accommodating the automobile as the primary mode of transportation.

The objective of the Timberlands NASP is to provide convenient access to the destinations within and outside the community.

The transportation network conforms to the East Hill MASP and provides direct linkages to the main collector system, commercial uses, joint use site and other community facilities.

11.1 Arterial Roadways

The East Hill MASP designates both 30 Avenue and the eventual extension of 67 Street as divided arterial roadways and these will be the two primary roadways used to access the Timberlands development. Two all directional access points are provided to 30 Avenue. One will access the commercial node at the mid-point of the quarter and the second one at the extreme south end of the quarter to access residential areas. One right-in / right-out access to the commercial area has been identified on the Plan from 30 Avenue.

Access to 67 Street and to the commercial area will be accommodated via one all directional access in the middle of the quarter and two potential right-in / right-out access points.

All right-in / right-out access locations are to be spaced at approximately 200 meter spacing from adjacent intersections and will need to have acceleration and deceleration lanes.

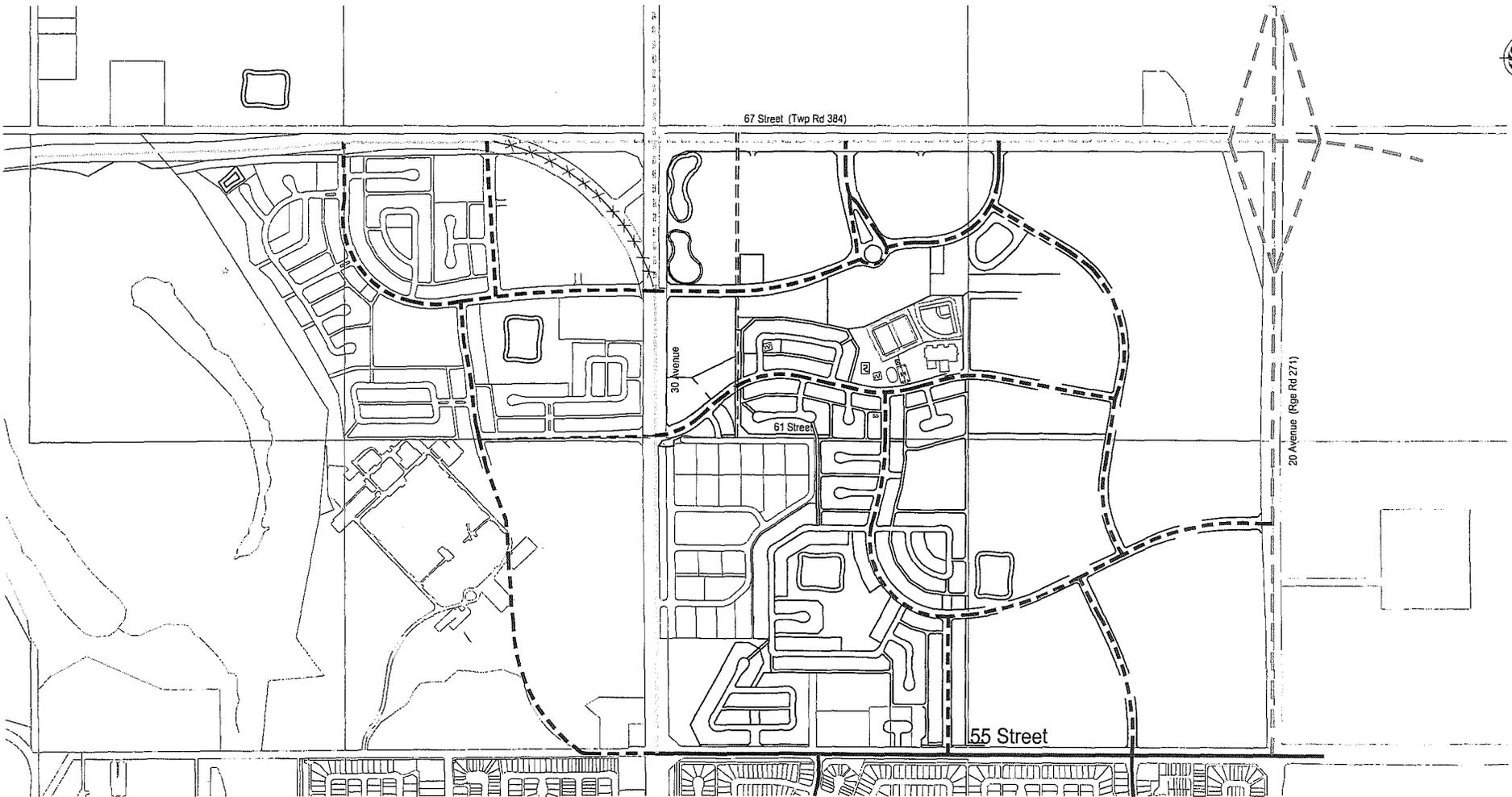
In order to facilitate the future extension of 67 Street and improvements to 30 Avenue, there is land dedication required from NW Timberlands.

Figure 11.1, Regional Road Network, illustrates the proposed transportation plan for the Timberlands development.

11.2 Collector Roadways

The neighbourhood Area Structure Plan provides four collector roadways linking the Timberlands neighbourhood to the arterial roadways and the proposed Timberstone Park neighbourhood to the south.

The first collector is located at the south portion of the Plan and extends east/west to service the residential areas of NW Timberlands. There is no direct connection from this roadway to the commercial areas to the north in order to prevent shortcutting of residential traffic from areas to the south to the commercial area. Intersection improvements will be required where this roadway intersects 30 Avenue because the roadway will be offset 10 meters north of the existing 61 Street intersection at this location. Also as shown on **Figure 6.1**, 61 Street will be reconfigured, local access will be directed north from College Park to the new collector roadway, and the existing 61 Street connection eliminated.



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Legend

EXISTING		PROPOSED	
	Collector Roadways		Collector Roadways
	Arterial Roadways		Arterial Roadways
	Expressways		Expressways

Client/Project
 CITY OF RED DEER
 TIMBERLANDS TOWN CENTRE NASP

Figure No.
 11.1

Title
 Regional Transportation

A second collector roadway is proposed to connect the main east/west residential collector roadway to the proposed Timberstone Park neighbourhood to the south.

Figure 11.2 illustrates the proposed cross-sections for these two 24.0 meter wide residential collector roads. The east/west residential collector will be expanded to a 32.0 meter cross section at the intersection of 30 Avenue to accommodate a proposed island at this location.

The third and fourth collector roadways accommodate access to and from the mixed use commercial area at the north end of the Plan. The first of these two roadways stretches east/west across the Plan area and connects to 30 Avenue and the second north/west collector connects this collector roadway to 67 Street.

The east/west commercial collector will have a 24.0 meter roadway cross section as identified on **Figure 11.2** and will be expanded to a 32.0 meter cross section at the connection to 30 Avenue to accommodate a proposed island at this location. The north/south commercial collector will have a 32.0 meter roadway cross section complete with a landscape center median as shown on **Figure 11.2**. It may be possible to expand this main street entrance to accommodate parallel parking or even possibly angle parking but this detail will need to be approved at the detailed engineering stage in consultation with the Engineering Services Department. This is to ensure that parallel or angle parking does not negatively impact how this roadway functions from a traffic flow and safety perspective.

All four collector roadways will have separate sidewalks with boulevard tree plantings.

11.3 Local Roadways

The system of local roads has been planned to provide access to the individual development cells in the residential area in the south at the same time discouraging outside traffic from short cutting through local roads. Local roads will have a 10.0 meter wide carriage way and a 15.0 meter wide right-of-way. All local roadways will have monolithic curb and gutter sidewalks on each side of the roadway.

A typical cross section of the local roadway is shown on **Figure 11.3**.

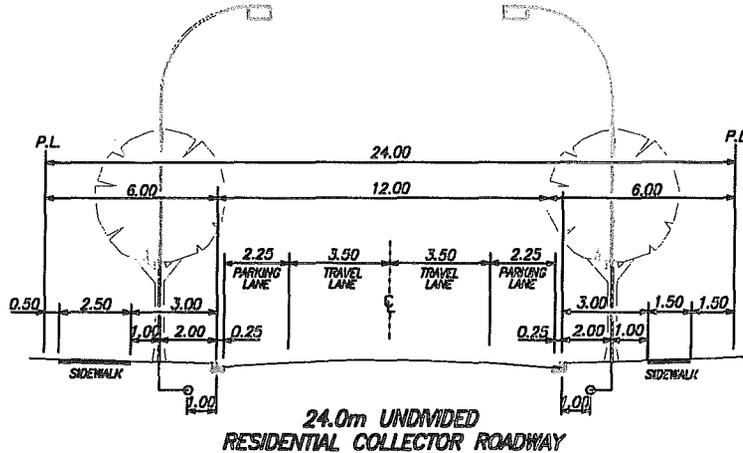
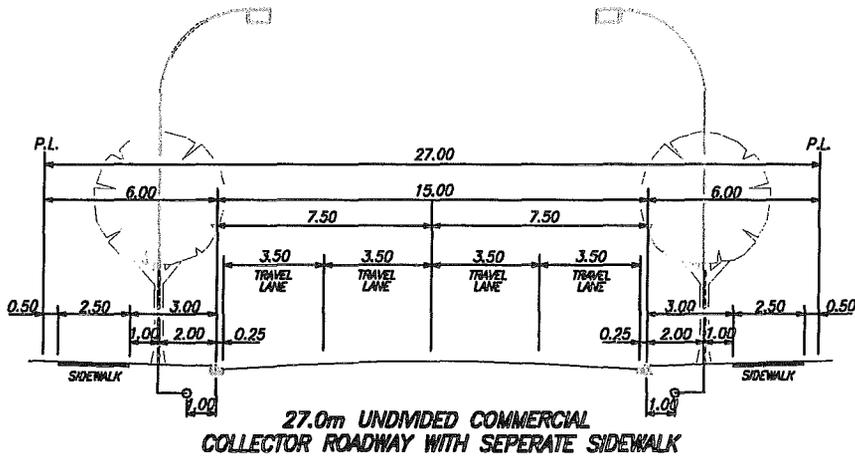
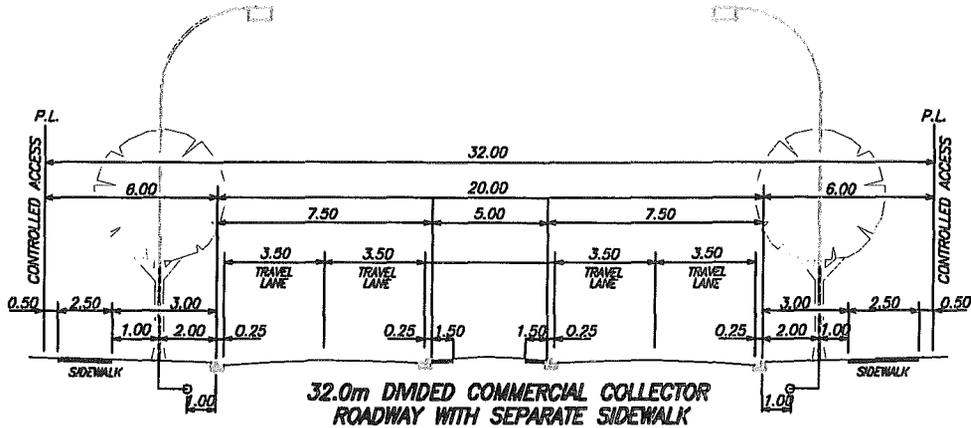
11.4 Laneways

The NW Timberlands NASP has been designed with the majority of lots backing onto laneways, however lanes have not been provided for lots backing onto open space areas. Rear laneways will be designed to City of Red Deer standards and will be 7.0 meters wide.

There will be no connection from the proposed laneways shown on the plan to the proposed commercial development to the north in order to prevent short cutting.

11.5 Roundabout

A roundabout is proposed at the intersection of the two commercial collector roadways in the Town Center area. This intersection feature has become more and more common in new



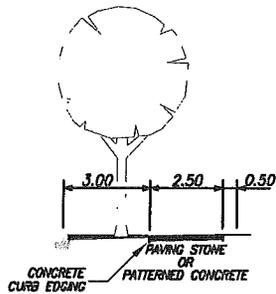
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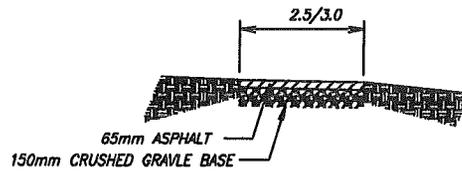


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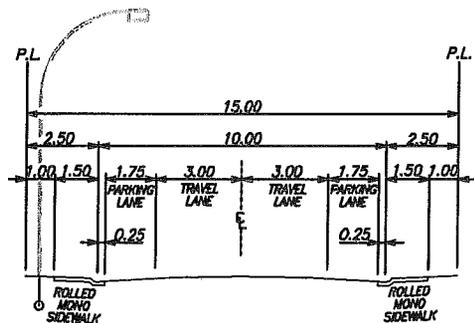
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CITY OF RED DEER
TIMBERLANDS NASP
Figure No.
11.2
Title
Roadway Cross Sections



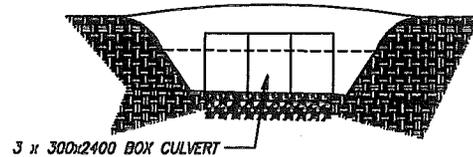
PAVING STONE DETAIL



2.5m OR 3.0m PAVED PATH



15/10 UNDIVDED RESIDENTIAL LOCAL ROADWAY



**BOX CULVERT
(RIGHT-IN/OUT ENTRANCE OFF
30 AVENUE)**

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Figure No.

11.3

Title

Roadway Cross Sections

development areas in both Edmonton and Calgary to help both calm and control traffic flows. So far it has been very successful were it has been implemented.

The basic elements of a typical signal lane roundabout or shown on **Figure 11.4**.

Once this project proceeds to the detailed design stage, the details of the roundabout will be investigated further in close consultation with the City of Red Deer Engineering Services Department, Transit Department, and Public Works Department to ensure that this feature will function adequately when considering traffic flows, bus turning movements, and snow removal. In the event that it cannot be designed to the satisfaction of all three of these departments, this intersection would be constructed as a T-intersection as opposed to the traffic circle concept on **Figure 6.1**. (This change would not require a NASP amendment)

11.6 Pedestrian Circulation

A pedestrian network that is direct and convenient is accomplished through the provision of regional and local pathways throughout the community of Timberlands.

Local pathways create an interconnected system within the community and provide connections to the entire Northeast region of Red Deer.

The sidewalks and pathway system are designed to accommodate short, convenient walking and cycling routes within the cellular design of the Land Use Concept.

11.7 Public Transit Network

The Timberlands area will be well serviced by City transit with 100% of the community's population within 400 m of transit stops. Transit routing will conform to City of Red Deer standards and local transit routes will service the community of Timberlands via the collector road system.

The provision and utilization of public transit is a goal of the MASP and is supported by the Timberlands design.

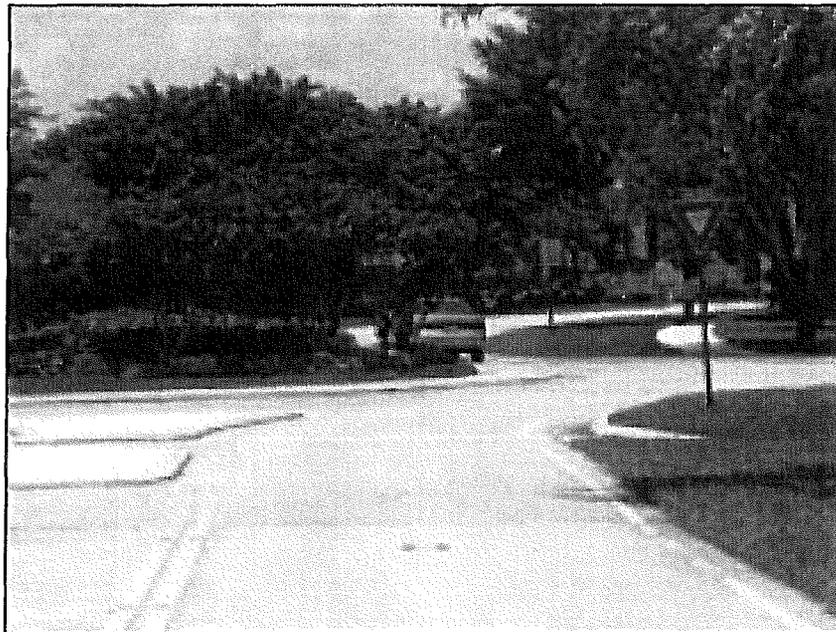
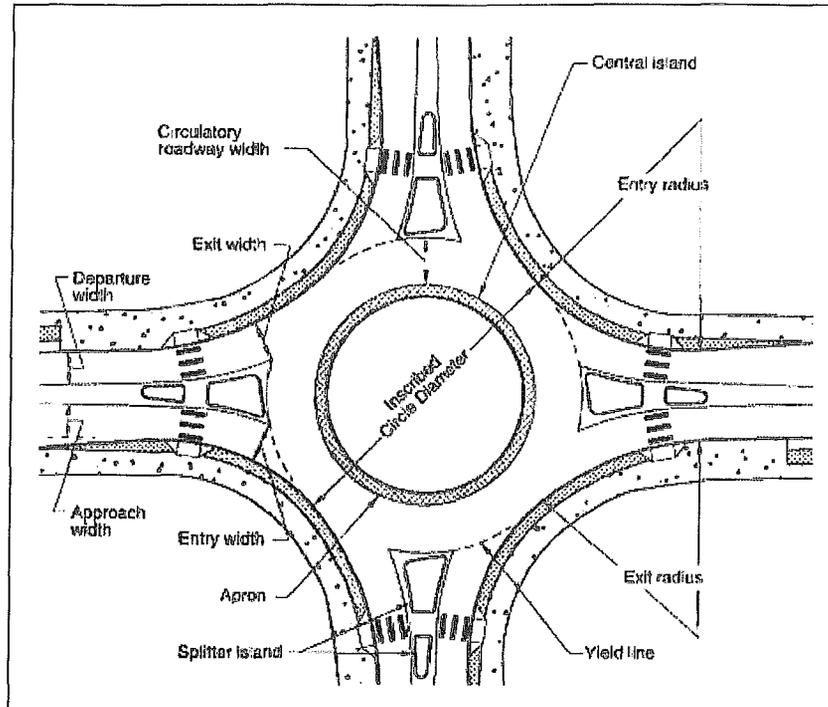


Figure 11.4 – Basic Geometric Elements of a Single Lane Roundabout

* Source - "Roundabouts: An Information Guide" prepared by the US Department of Transportation – Federal Highway Administration

12.0 ENGINEERING SERVICES

12.1 Stormwater Management

Two combined stormwater management facilities (SWMF) are proposed for NW Timberland lands (NW 23) and will be located near the northwest boundary of the development. They will control stormwater from both the major and minor storm system for the entire development as well as major/minor stormwater from ± 10 ha of NE $\frac{1}{4}$ Sec. 23 and a small part (± 1 ha) of the Laebon Lands in the northwest corner of SW $\frac{1}{4}$ Sec. 23. The SWMFs will likely be constructed wetland facilities that will be sized to accommodate stormwater detention for a 1:100 year storm event. The location of these facilities is identified in Figure 6.1, is flexible and will be integrated into the commercial area in the southwest corner of the Plan when this area is developed. It is anticipated that materials can be salvaged from the existing drainage course and re-introduced in the proposed wetland facilities in consultation with the City Park Staff.

All storm sewers within the development will be sized to accommodate a 1 in 5 year stormwater event with stormwater being conveyed on the streets to the stormwater management facilities during large stormwater events.

All stormwater in the development area will discharge into a proposed trunk main located at the intersection of 30 Avenue and the proposed commercial collector located 400 m south of 67 Street, as illustrated in **Figure 12.1**. From there it will be routed into a new trunk to be extended through the Clearview North lands (Melcor Developments) to the west and down the south side of 67 Street to an existing outfall to the Red Deer River which also needs to be twinned.

All stormwater facilities and storm sewers will be designed in accordance with the City of Red Deer Design Guidelines and will become the responsibility of the City of Red Deer to maintain after a two year period.

The major drainage and overall storm system are shown on **Figure 12.2**.

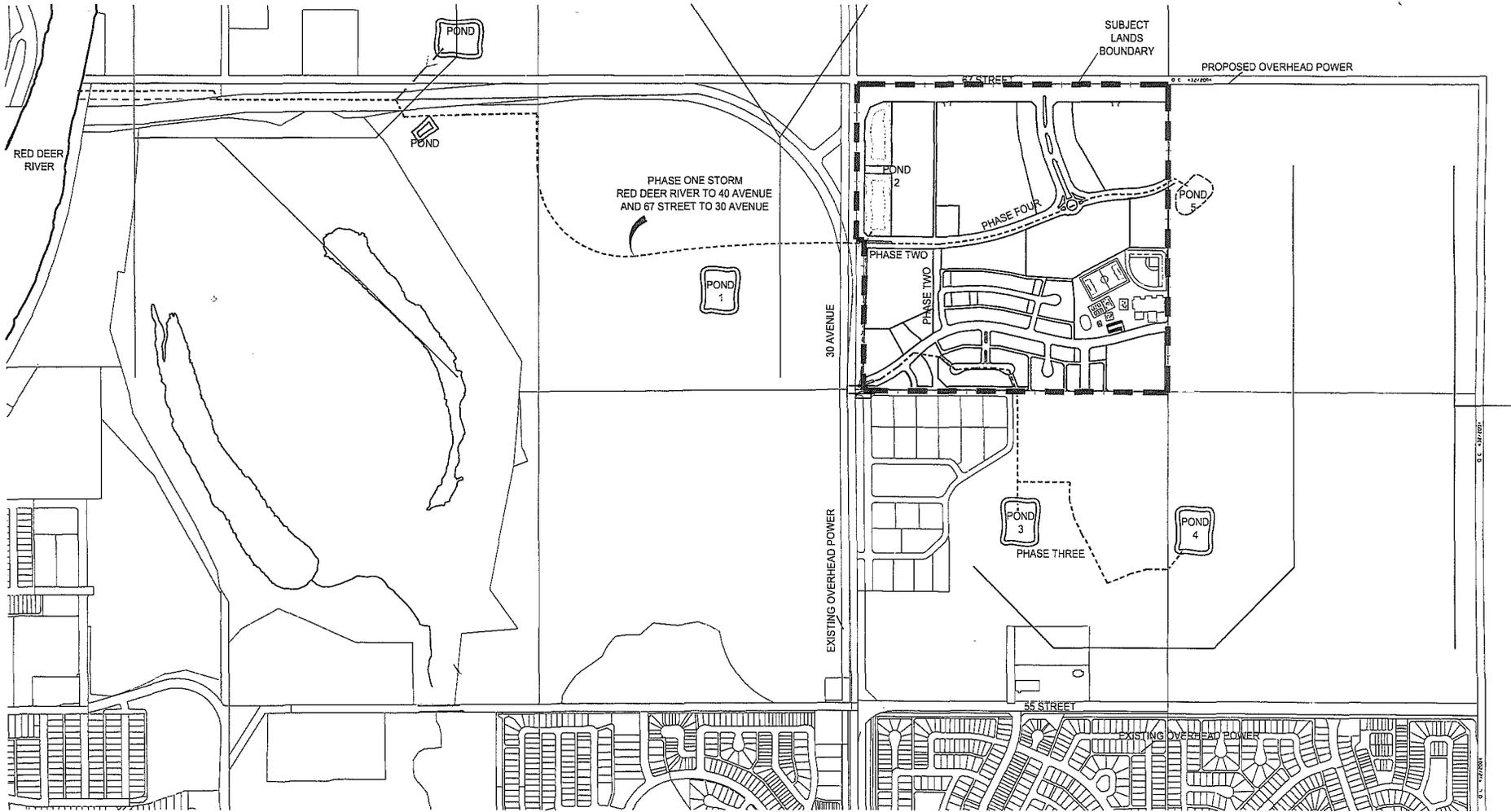
Stormwater Flow From Lands East of 20 Avenue and South of 67 Street (Through Section 23)

Overland stormwater drainage from lands east of 20 Avenue currently flows through Section 23 and the northeast corner of the NE quarter of Section 22 into an existing ravine. The City has expressed a desire to maintain a flow of stormwater into this ravine. Development of Section 23 and construction of 20 Avenue (construction of berms on both sides of the roadway) will block the natural flow of stormwater through Section 23.

Stantec Consulting Ltd. has been retained by the City to complete the "*Greater East Hill Sanitary and Stormwater Functional Study*." This study will review various options for diverting stormwater around the boundary of Section 23 along 20 Avenue and 67 Street to the ravine west of 30 Avenue. Based on this study, the City will determine which option will be implemented.

12.2 Sanitary Sewer Servicing

The proposed development will be serviced from the existing Waskasoo Regional Sanitary Sewer Main, located within the 30 Avenue and 67 Street rights-of-way. The section of main from



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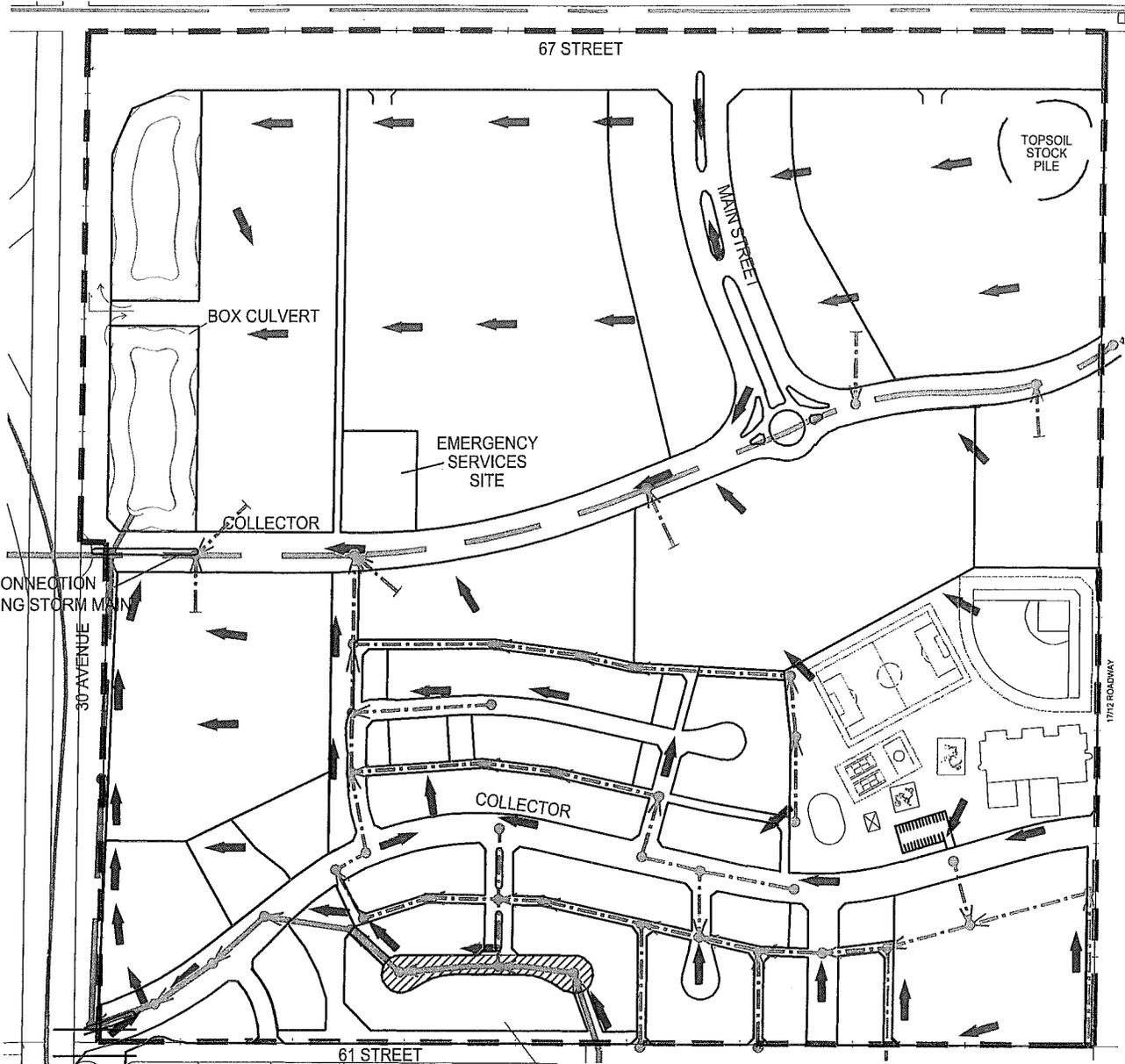


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Legend
 - - - - - TRUNK STORM MAIN
 ———— EXISTING TRUNK STORM MAIN

NOTE: THE PROPOSED ROADWAYS
 SHOWN ON ADJACENT LANDS
 ARE TENTATIVE,
 AND SUBJECT TO CHANGE.

Client/Project
 CITY OF RED DEER
 TIMBERLANDS NASP
 Figure No.
 12.1
 Title
 Proposed Storm
 Trunk Mains



- LEGEND**
- NASP BOUNDARY
 - EXISTING STORM MAIN
 - PROPOSED STORM TRUNK
 - PROPOSED STORM MAIN
 - MAJOR OVERLAND DRAINAGE
 - MANHOLE AND FLOW DIRECTION
 - PROPOSED POND AREAS
 - STREET SERVICED LOTS



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Client/Project
 CITY OF RED DEER
 TIMBERLANDS NASP
 Figure No.
 12.2
 Title
 STORM

58 Street to the connection to the City trunk sanitary main in 40 Avenue north of the Red Deer River was oversized to accommodate flows from the adjacent lands.

The sanitary trunk mains for Section 23, as shown on **Figure 12.3** will connect to this main at the intersection of 30 Avenue and 67 Street. Provisions will be made to allow a portion of the flow to be diverted north into the new Northland Drive sanitary trunk main when the east half of Section 23 develops. The overall conceptual sanitary sewer system is shown on **Figure 12.4**.

The majority of the sanitary pipes will be 200mm in diameter, except for the sanitary trunk mains, which will be between 250 to 300 mm in diameter. In most instances the sanitary lines will be located in the lanes except in cases where there is no lane to service from.

All sanitary sewer facilities will be designed in accordance with the City of Red Deer Design Guidelines and will become the responsibility of the City to maintain after a two year period.

It is anticipated that Phase 1 and Phase 2 of the trunk extension will be constructed to the south boundary of the Timberlands Plan.

12.3 Water Distribution

The overall water distribution system needed to service NW Timberlands is shown on **Figure 12.5**. The City of Red Deer will be extending a new water trunk north from the Clearview Booster Station, along the west side of 30 Avenue, which will serve as the main feeder to this development (the site of this trunk is currently under review by the City). In the future a 400 mm trunk water main will be located within the commercial collector road right of way from 30 Avenue to 67 Street, then parallel to the south boundary of 67 Street to the new Reservoir located east of 20 Avenue.

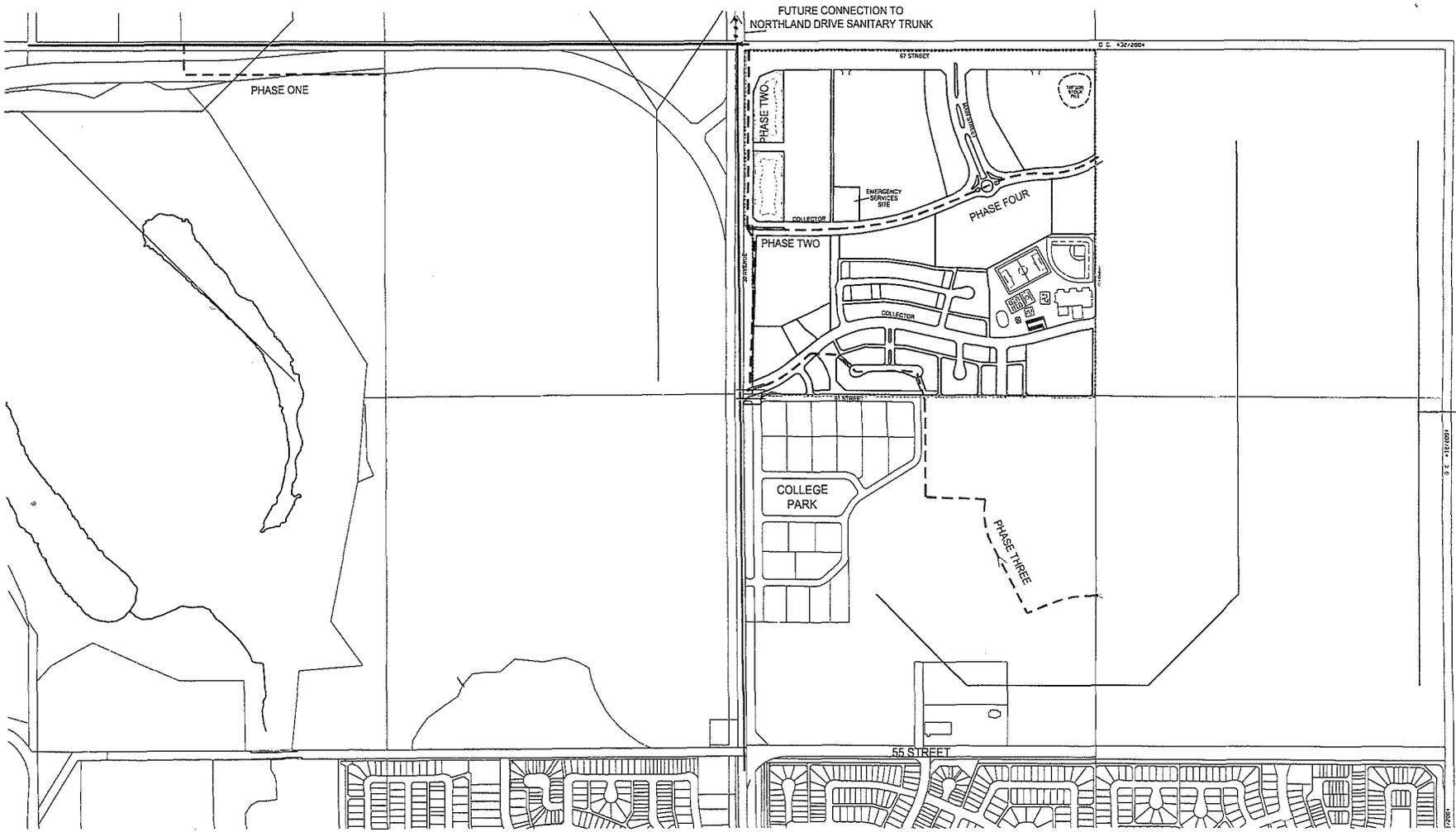
Water mains will be sized at the detailed design and servicing study stage.

All water main facilities will be designed in accordance with the City of Red Deer Design Guidelines and will become the responsibility of the City of Red Deer to maintain after a two year period.

12.4 Power Distribution and Streetlighting

The City of Red Deer EL&P Department has advised that they will service this development from their existing overhead power line located parallel to the west boundary of 30 Avenue and from a new overhead power line to be located near the south boundary of the proposed 67 Street right of way.

Single-phase power lines, owned by FortisAlberta Inc., are located along the south boundary of the existing 67 Street right-of-way and along the east boundary of the 30 Avenue right-of-way. When the City of Red Deer annexes land in Fortis's service area, EL&P applies to the EUB to transfer the annexed land into the City's service area. All land currently within the City of Red Deer boundary is also within the City's service area. EL&P and Fortis then work together to determine which assets and customers should be purchased by the City of Red Deer and the



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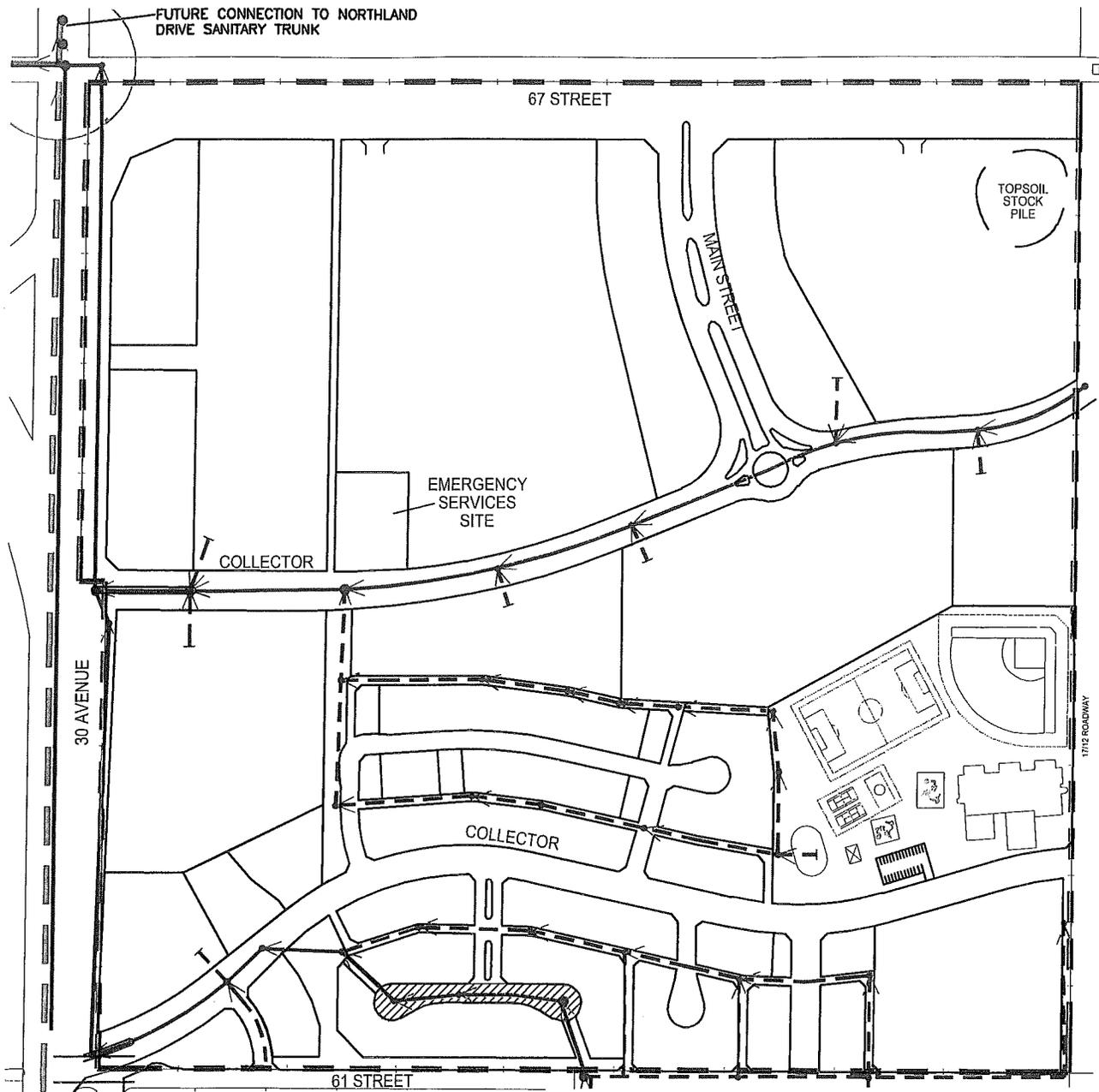
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Legend

--- TRUNK SANITARY MAIN
 ——— EXISTING SANITARY TRUNK MAIN
 MANHOLE

NOTE: THE PROPOSED ROADWAYS
 SHOWN ON ADJACENT LANDS
 ARE TENTATIVE,
 AND SUBJECT TO CHANGE.

Client/Project
 CITY OF RED DEER
 TIMBERLANDS NASP
 Figure No.
 12.3
 Title
 Proposed Sanitary
 Trunk Mains



-  NASP BOUNDARY
-  TRUNK MAINS
-  COLLECTOR MAINS
-  WASKASOO REGIONAL SEWER MAIN
-  MANHOLE AND FLOW DIRECTION
-  STREET SERVICED LOTS



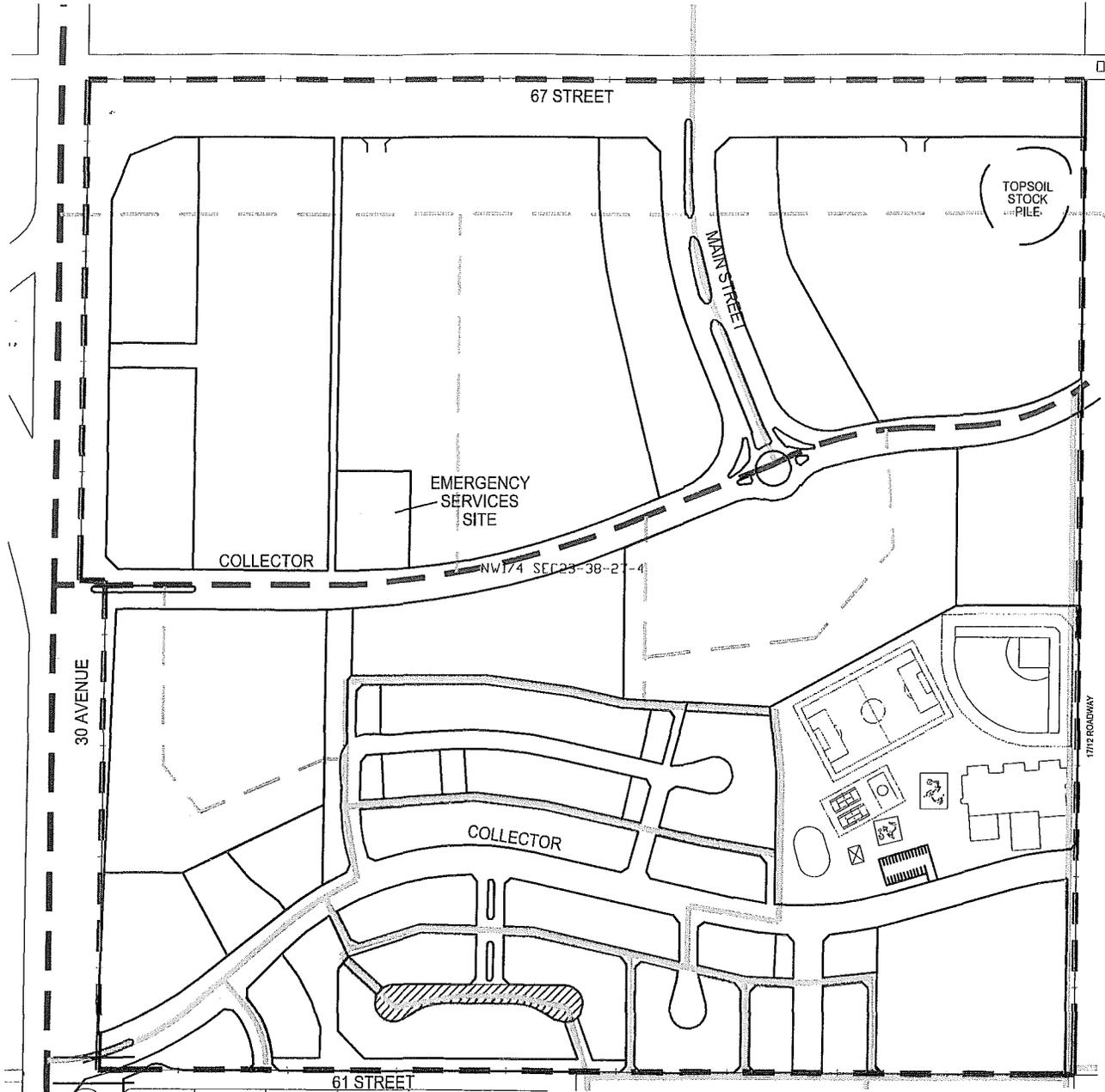
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CITY OF RED DEER
TIMBERLANDS NASP
Figure No.
12.4
Title
SANITARY



-  NASP BOUNDARY
-  PROPOSED WATER TRUNK
-  PROPOSED WATER MAIN
-  LOCATIONS SHOWN
-  ARE CONCEPTUAL ONLY
-  STREET SERVICED

NOTE: PROPOSED HYDRANTS NOT SHOWN. LOCATIONS TO BE DETERMINED IN DETAILED SERVICING STUDY. PIPESIZING TO BE DETERMINED AT DETAILED DESIGN STAGE.



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 CITY OF RED DEER
 TIMBERLANDS NASP
 Figure No.
 12.5
 Title
 WATER

timing of such transfers. The transfer of these customers and assets to the City of Red Deer will generally occur as the newly annexed lands are developed. Currently, the Fortis lines on 55 Street and 30 Avenue service many Fortis customers outside of the City of Red Deer. Fortis has expressed interest in keeping these lines until all of the land occupied by Fortis customers has been annexed by the City of Red Deer.

12.5 Shallow Utilities

Gas, telephone and cable television services will be provided by the following companies:

- ATCO Gas (Natural Gas)
- Telus Communications (Telephone)
- Shaw Cable (Cable Television)

ATCO Gas will service this development by constructing a large diameter medium pressure gas main along the existing high-pressure gas main right-of-way from Rollis Street to 55 Street. A new alignment will be required to extend this main north to service the NW Timberlands (NW 23) development area.

Shaw Cable does not have any facilities in the immediate vicinity to service the NW Timberlands (NW 23) development area. A fibre optics cable will need to be constructed east along 67 Street from the Gaetz Avenue/67 Street intersection or north along 30 Avenue from the Ross Street/30 Avenue intersection.

In addition to the Telus and Shaw communications networks, the City of Red Deer has partnered with the Alberta Government (Bell West) to provide Supernet fibre optics service to all schools and City owned facilities within the City. Provisions should also be made for the extension of the "Supernet/City of Red Deer Rednet" fibre optics network to the new school site and if possible to the Town Centre site.

The shallow utility alignments will be established during preparation of the detailed servicing study for the NW Timberlands (NW 23) Lands.

12.6 ATCO Pipelines High Pressure Gas Line (ROW 2271KS)

The existing high pressure gas line that extends north / south through the proposed development is proposed to be maintained in the development concept. In the south half of the Plan it has been located within a proposed linear park.

This high pressure gas line also stretches through the proposed commercial development at the north end. The developer of this commercial area will need to work closely with ATCO Pipelines to ensure that all of their requirements are met for development around this gas line. This includes, but is not limited to, not placing any buildings over this gasline. It may become necessary to relocate this section of pipeline if it cannot be accommodated in the commercial layout concept. Crossing agreements will be required from ATCO Pipelines for the two collector roadway crossings and if there is insufficient cover a concrete bridge may have to be constructed.

13.0 IMPLEMENTATION

13.1 Development Staging

Infrastructure to service the first phase of the Timberlands residential development will be serviced from a new sanitary and storm trunk, which will be extended into these lands from the north. Each successive stage will be developed with the logical and economical extension of these municipal services with the intent of meeting the needs of the regional and local housing market.

As shown on **Figure 13.1 – Proposed Phasing**, the first phase is expected to start in the southwest corner. Then development will proceed to the easterly direction. The phasing boundaries are shown conceptually and may vary from those shown when redistricting and subdivision applications are made. As well, portions of separate phases may be developed concurrently if there is sufficient demand and / or if the municipal servicing is made more efficient as a result.

Phasing has tentatively been provided for the Town Centre Lands however it is difficult to predict how this area may be developed and the phasing is therefore subject to change. It is anticipated that it will develop starting at the western boundary and extend in a eastward direction.

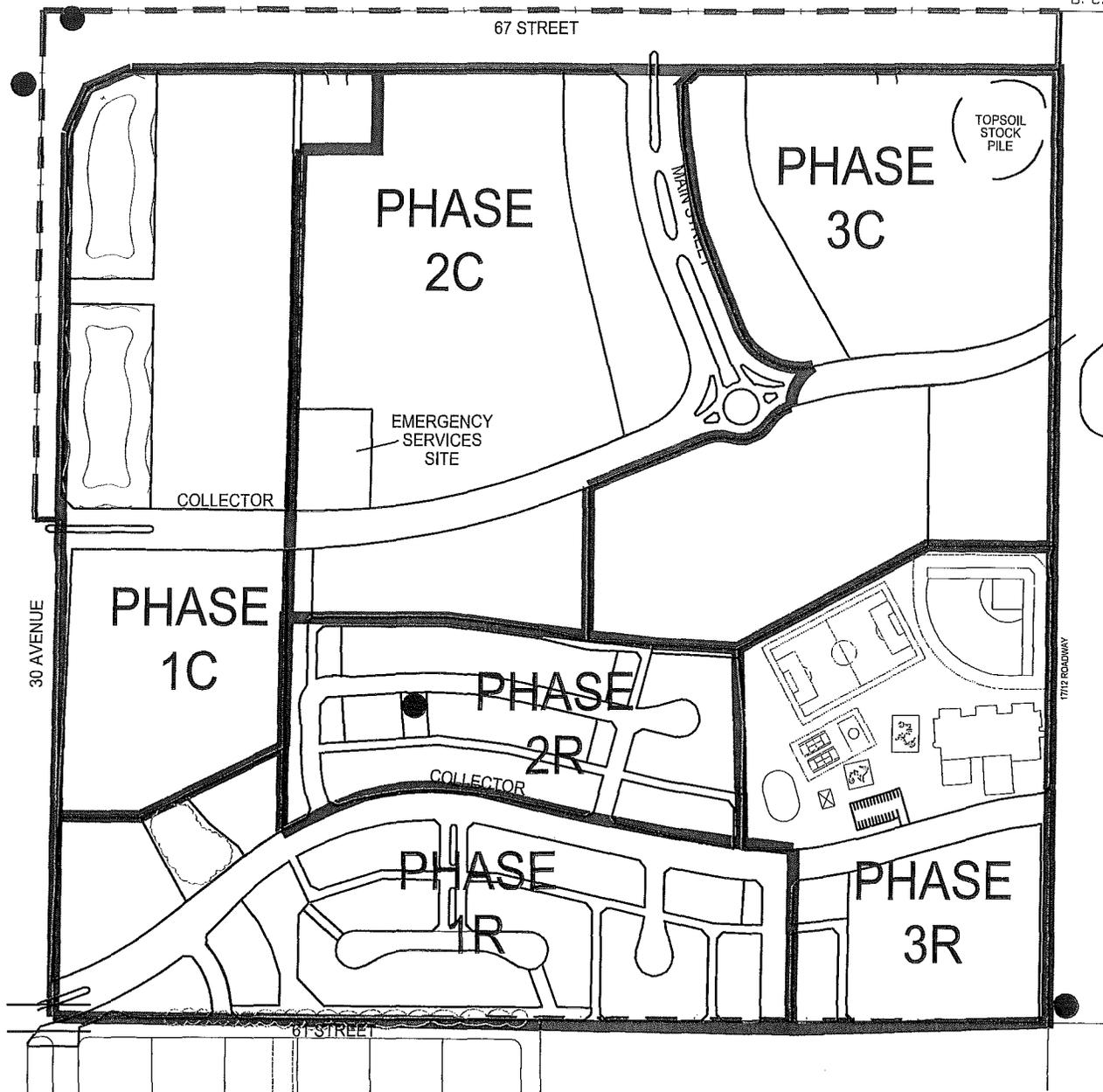
13.2 Redistricting and Subdivision

Redistricting and subdivision applications, to conform to the land use designations described in the NASP, will be undertaken as necessary. Guided by the City of Red Deer MDP, the East Hill MASP and the Timberland NASP, redistricting and subdivisions will be required to adhere to the City of Red Deer Land Use Bylaw and informational requirements necessary for each application.

13.3 Plan Amendments

An amendment to the adopted NASP is required for any significant changes to the plan, such as:

- Major shift in the location of community facilities
- Major shift between general land use categories (e.g. residential to industrial)
- Major shift in infrastructure design or layout, excepting the addition or deletion of lanes (e.g. roads, sanitary services)
- Change in other documents affecting planning and land use in the area (such as a major amendment to the MASP)
- Any other circumstance at the discretion of the City of Red Deer where public interests necessitate formal amendments.



Legend

-  Subject Lands
-  Municipal Reserve (P1)
-  Public Utility Lot (P1)
-  Phase Boundary
- 1R Residential Phasing
- 1C Commercial Phasing



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Figure No.

13.1

Title

PHASING