

**NEIGHBOURHOOD AREA STRUCTURE PLAN
FOR
DAVENPORT QUARTER SECTION
(DEER PARK EAST)**

SE ¼ SEC. 14-38-27-W4

(John & Alida Ratzke Quarter)

PREPARED FOR:

PARKSIDE HOLDINGS LTD.

PREPARED BY:

AL-TERRA ENGINEERING LTD.

SEPT, 2001

Neighbourhood Area Structure Plan amended by City Council
Bylaw 3217/B-2021
March 1, 2021

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	SITE LOCATION AND LAND OWNERSHIP.....	1
2.1	Site Location and Adjacent Development.....	1
2.2	Land Ownership.....	3
3.0	POLICY FRAMEWORK; CONFORMANCE TO GUIDELINES.....	5
4.0	SITE CHARACTERISTICS.....	5
4.1	Site Features and Access to the Quarter Section.....	5
4.2	Existing Acreage.....	6
4.3	Ecological Profile of the Quarter Section.....	7
	4.3.1. 20th Avenue Tree Band.....	7
	4.3.2. Planted Trees Along the North Boundary of the Quarter Section.....	7
5.0	DEVELOPMENT PROPOSAL.....	9
5.1	Road Widening.....	9
5.2	Development Concept.....	9
	5.2.1. Manufactured Home Park.....	7
	5.2.2. Local Convenience Commercial Site (C3).....	12
	5.2.3. Duplex Lots - RI-A.....	14
	5.2.4. Single Family Narrow - R1-N.....	17
	5.2.5. Central Park Site; Tot Lots.....	17
5.3	Land Use Distribution.....	19
6.0	TRANSPORTATION.....	21
6.1	Transportation Circulation Pattern.....	21
6.2	Collector Road Cross Sections.....	22
6.3	Pedestrian Circulation Patterns.....	25

TABLE OF CONTENTS

7.0 MUNICIPAL SERVICING CONSIDERATIONS..... 25

 7.1 Storm Sewer System..... 25

 7.1.1. Minor Drainage System..... 25

 7.1.2. Major Overland Drainage System..... 26

 7.2 Sanitary Sewer System..... 28

 7.3 Water Distribution System..... 31

 7.4 Shallow Utilities..... 31

8.0 REPORTS FROM SPECIALIZED CONSULTANTS..... 33

 8.1 Geotechnical Investigation.....33

 8.2 Phase 1 Environmental Site Assessment..... 33

9.0 PHASING OF DEVELOPMENT..... 33

10.0 CLOSURE..... 34

APPENDICES..... 36

 APPENDIX "A"

 * Certificate of Title

 * Remote Land Title Search

LIST OF FIGURES

FIGURE 1 - LOCATION PLAN.....2

FIGURE 2 - EXISTING ACREAGE, SOUTHWEST CORNER OF
QUARTER SECTION.....4

FIGURE 3 - SITE FEATURES.....8

FIGURE 4 - DEVELOPMENT CONCEPT.....10

FIGURE 4A - DEVELOPMENT CONCEPT - MANUFACTURED
HOME PARK AREA.....15

FIGURE 4B - CENTRAL PARK LAYOUT.....20

FIGURE 5 - DIVIDED AND UNDIVIDED COLLECTOR
ROADWAY DETAIL.....23

FIGURE 5A - DIVIDED AND UNDIVIDED LOCAL ROAD
DETAILS.....24

FIGURE 6 - STORM SEWERS.....27

FIGURE 7 - OVERLAND DRAINAGE.....29

FIGURE 8 - SANITARY SEWERS.....30

FIGURE 9 - WATER DISTRIBUTION.....32

FIGURE 10 - PHASING PLAN.....35

1.0 INTRODUCTION:

This outline plan has been prepared on behalf of Parkside Holdings Ltd. This plan has been prepared so it complies with the East Hill Area Structure Plan, and the City of Red Deer Design Guidelines. The one feature which differentiates the development from others is an upscale manufactured home park installed in the north east corner of the quarter section, for retirement aged residents. Mr. John Ratzke, the President of Parkside Holdings Ltd., has a world wide reputation for developing these upscale, and very innovative manufactured home parks. His intent is to make this manufactured home park his best project to date.

The overall intent is to surround the manufactured home park with neighborhoods which are typical for south east Red Deer, so as to blend in well with the existing area developments.

2.0 SITE LOCATION AND LAND OWNERSHIP:

2.1 Site Location and Adjacent Development:

The subject quarter section is located within the south east quadrant of the City of Red Deer, and is legally described as the SE ¼ SEC. 14-38-27-W4. Most commonly, it is known as the Ratzke quarter section. Figure 1 illustrates the location of this quarter section. Ross Street abutts the north boundary, 20th Avenue abutts the east boundary, 39th Street abutts the south boundary, and Melcor's Deer Park quarter section abutts the west boundary of this quarter section. Development has occurred on three sides of the subject land. Melcor Developments Ltd. has completed development in their quarter section. The Rosedale Meadows quarter section, located to the north, has development completed on approximately one half of its area. The N.E. ¼ SEC. 11-38-27-W4, located to the south, (by Laebon Developments Ltd.) has begun development.

DAVENPORT OUTLINE PLAN

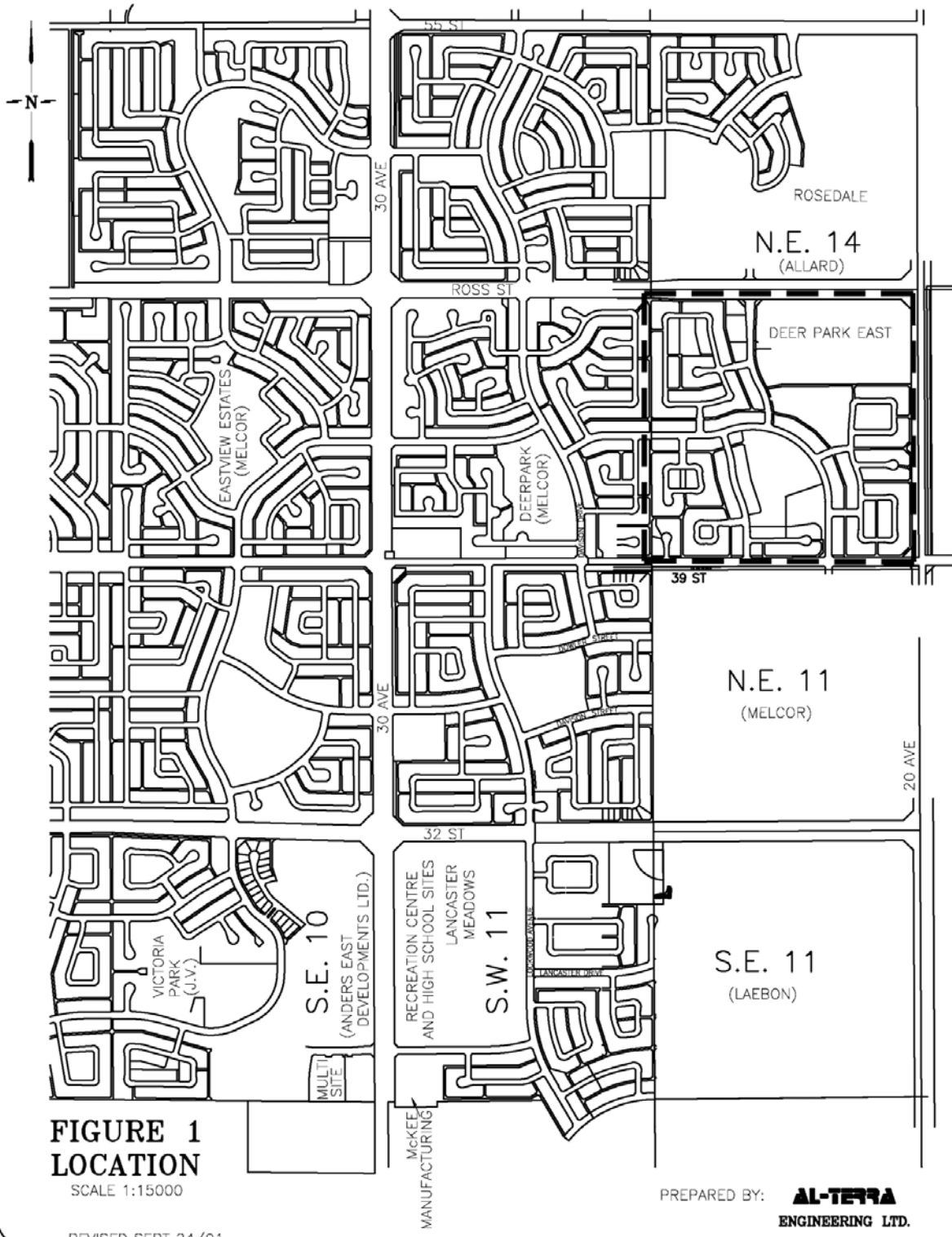


FIGURE 1
LOCATION

SCALE 1:15000

REVISED SEPT 24/01

PREPARED BY: **AL-TERRA**
ENGINEERING LTD.

EDMONTON RED DEER

2.1 Site Location and Adjacent Development (continued)

The lands located to the east of the subject quarter section and east of 20th Avenue will not be developed for some time. Major sanitary and storm trunk system extensions are required before development can proceed east of 20th Avenue.

Accordingly, this quarter section is situated at an ideal location for development to proceed.

2.2 Land Ownership:

As it originally existed, the quarter section contained 65.026 hectares (160.68 acres). Parkside Holdings Ltd. owned all but 1.62 hectares of this quarter section. The remaining 1.62 hectares are owned by John and Alida Ratzke.

In 1999, development proceeded on the first four phases, three phases of principally residential development, and the manufactured home park.

The quarter section contains 65.026 hectares (160.68 acres). Parkside Holdings Ltd. owns all but 1.62 hectares (4.0 acres) of this quarter section. The remaining 1.62 hectares are owned by John and Alida Ratzke personally.

Figure 2 illustrates the 1.62 hectare parcel owned by John and Alida Ratzke. Certificate of Title 882 079 506 describes the limits of this land parcel. A house and shed occupy this property. John and Alida Ratzke maintain their residence on this acreage. The outline plan for the overall quarter section addresses how this 1.62 hectare land parcel could be incorporated into the total development scheme. Copies of remote land title searches, and the Certificates of Title are included in Appendix "A", for the original quarter section and acreage.

DEER PARK EAST OUTLINE PLAN

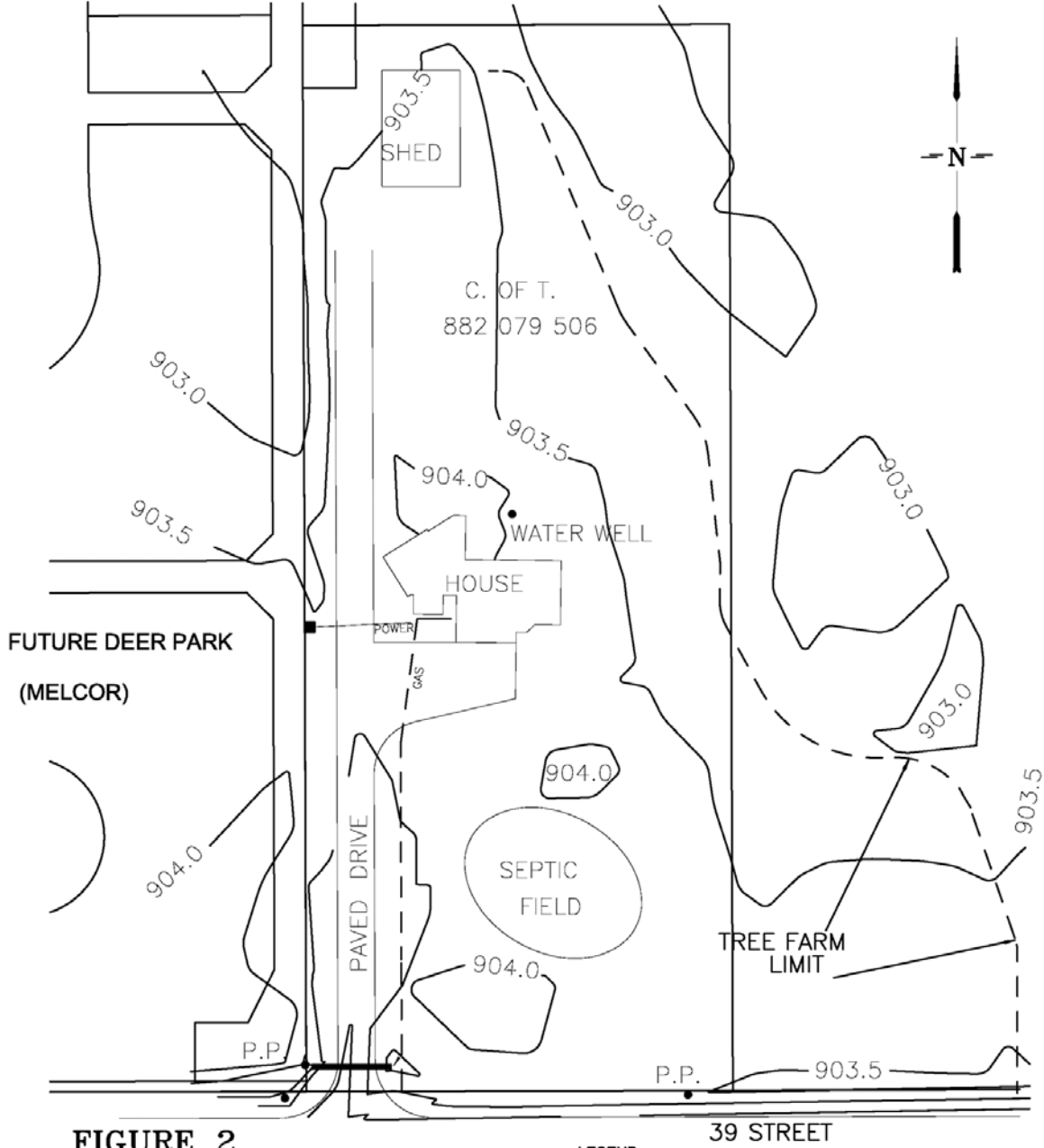


FIGURE 2
EXISTING ACREAGE
SOUTH WEST CORNER
OF QUARTER SECTION

SCALE 1:1000

REVISED MAY 21/98

LEGEND:

— 901 — ORIGINAL GROUND CONTOURS

AL-TERRA
ENGINEERING LTD.

EDMONTON RED DEER

3.0 POLICY FRAMEWORK; CONFORMANCE TO GUIDELINES:

The City of Red Deer adopted the East Hill Area Structure Plan on September 14, 1992 via Bylaw 3075/92. Subsequent revisions were made to the plan via Bylaw 3075/A-93, on April 26, 1993 and Bylaw 3075/B-93 on November 22, 1993. Further revisions to this plan are being reviewed at this time. All revisions to the ASP made during the current review will be adopted (as applicable), within the planning framework of this quarter section. As defined in the area structure plan, the principal purpose of the land is for residential purposes. A Public K-8 school site is proposed within the central park site. A 0.25 hectare local convenience commercial site is proposed along Ross Street, at the north entrance to the quarter section.

Note: Any reference to a specific school authority in this plan is only an indication of a school authority's site preference. The allocation of identified school sites will be determined by the Joint Use Committee. (Bylaw 3217/B-2021)

Some of the other City of Red Deer documents consulted for reference in the preparation of this outline plan included the City of Red Deer Design Guidelines, the Ecological Profiles of the Ratzke/Deer Park Natural Areas, the Community Services Master Plan, and the City of Red Deer Planning And Subdivision Guidelines. The outline plan, as prepared, is generally in accordance with the direction provided in these documents.

4.0 SITE CHARACTERISTICS:

4.1 Site Features And Access To The Quarter Section:

In the summer of 1999, four phases in the north part of the quarter section were developed, accounting for roughly half of the section's area. With the exception of the 1.62 hectare acreage located at the south west corner of the property, the remaining lands within the quarter section are farmed, and are currently in a cultivated state.

The site generally slopes from east to west, with an elevation difference across the quarter section of approximately 7.0 to 8.0 metres.

4.1 Site Features And Access To The Quarter Section (continued)

39th Street exists as a cold mix asphalt road along the south boundary of the quarter section. 20th Avenue exists as a 5.0 metre wide graveled road along the east boundary of the quarter section. On the north boundary of the quarter section, Ross Street exists as a divided arterial west of Donlevy Avenue (the collector road entering the quarter section); east of the entrance road, Ross Street exists in a cultivated state, with no road development on it.

No trees exist within the actual limits of the quarter section except for the ones located within the 1.62 hectare acreage.

4.2 Existing Acreage

Figure 2 illustrates the existing acreage on which the residence of John and Alida Ratzke is located. The acreage is very nicely landscaped, with mature trees planted throughout, and with mature shrub beds. A row of mature popular trees exists along most of the west boundary of the acreage. We expect this row of trees can be saved and incorporated into lots, if this acreage parcel is subdivided. The remaining trees on this acreage may or may not be salvageable, if development occurs, depending on where they would be located in a development scheme for this acreage.

The south east corner of the acreage is planted with a number of rows of young spruce trees.

Figure 2 also illustrates the location of the paved driveway, the storage shed and work shop, the septic field, the water well, and where the power and gas services are located, to service the existing residence. Access from the existing residence is onto 39th Street.

4.3 Ecological Profile Of The Quarter Section:

4.3.1. 20th Avenue Tree Band:

The City of Red Deer Recreation Parks & Culture Department, and Community Services, have produced a report dated September, 1997, which provides ecological profiles of south east Red Deer, including the Ratzke/Deer Park natural area. This report illustrates an existing band of trees, located along the east property line, and within the Ratzke quarter section. These trees however, are not located within the boundaries of the subject property. Figure 3, site features, illustrates where these trees actually exist, within the existing 20.12 metre (66 foot) right of way for 20th Avenue. The trees exist between the east property line of the Ratzke quarter section and the west edge of the existing 5.0 metre wide graveled road. The width of this band of trees varies from 6.0 metres to 8.0 metres. The trees principally consist of old and dying poplars, mature poplars, young poplars and undergrowth, including some dogwood and willow species, and wild flowering plants.

An overhead power line is located along the east side of the existing 20th Avenue graveled road. As a result any mature trees which may have existed there were removed. At present, only some sporadic brush exists along the east side of 20th Avenue, within the existing 20.12 metre right of way.

4.3.2. Planted Trees Along The North Boundary Of The Quarter Section

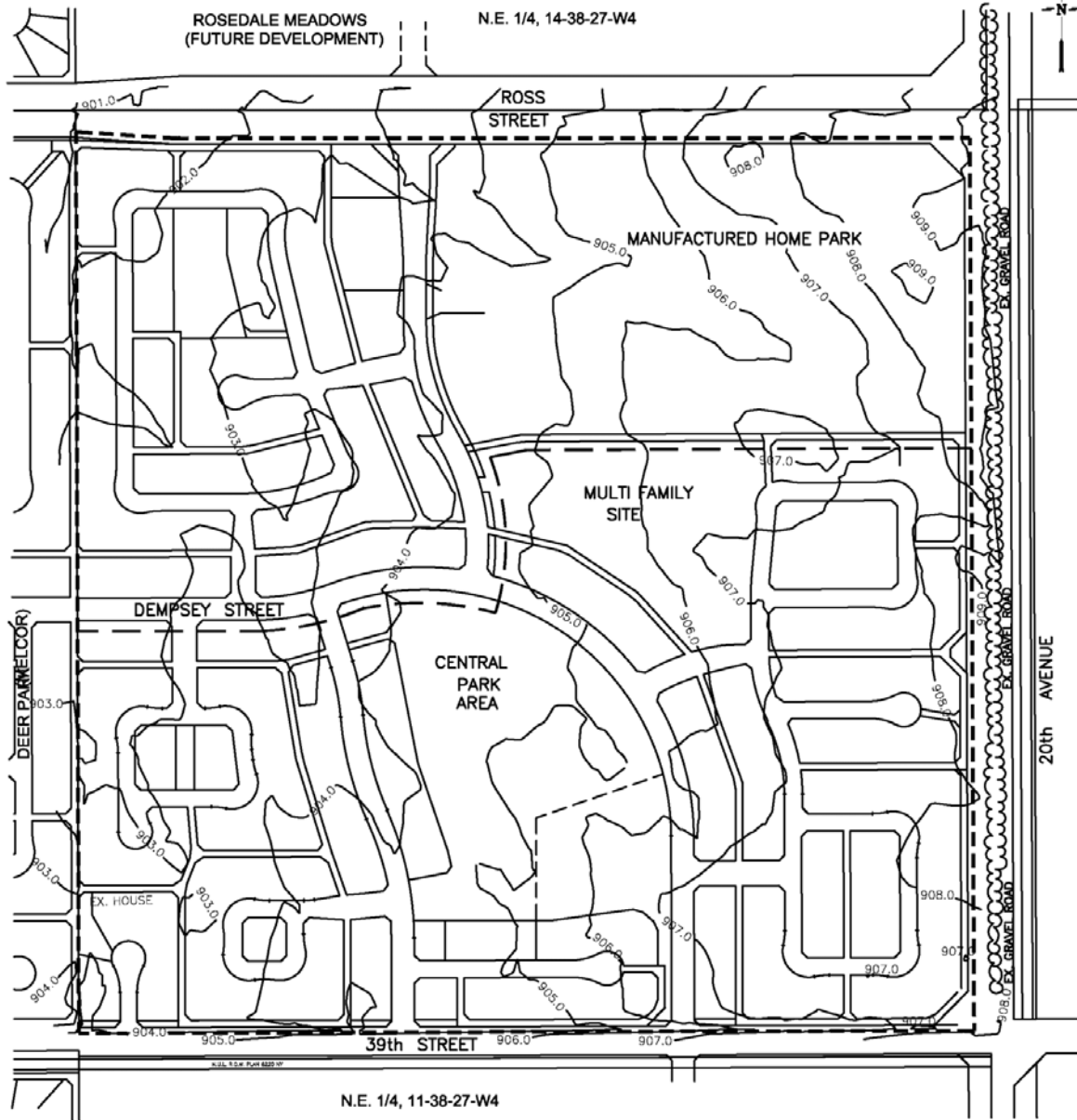
Just north of the north property line of the Ratzke quarter section, a single row of poplar trees has been planted. They are not located on the Ratzke quarter section as illustrated in the City of Red Deer Ecological Profile report. They are spaced fairly sparsely and are still relatively young. At their present location they are in the middle of the future 60 metre wide Ross Street right of way. No other ecological features of any interest exist on this quarter section.

DAVENPORT OUTLINE PLAN

EXISTING
ROSEDALE

ROSEDALE MEADOWS
(FUTURE DEVELOPMENT)

N.E. 1/4, 14-38-27-W4



**FIGURE 3
SITE FEATURES**

SCALE 1:5000

REVISED SEPT 24/01

LEGEND:

- EXISTING DEVELOPMENT BOUNDARY
- OUTLINE PLAN BOUNDARY
- 901 — ORIGINAL GROUND CONTOURS
- ~~~~ ORIGINAL TREELINE

AL-TERRA
ENGINEERING LTD.

EDMONTON RED DEER

5.0 DEVELOPMENT PROPOSAL

5.1 Road Widening:

Based on the outline plan as proposed, road widening will have to be provided on two sides of the quarter section, namely:

- * Along the east side of the quarter section for the future development of an arterial roadway, namely 20th Avenue.
- * Along the north side of the quarter section for the future extension of an arterial roadway, namely Ross Street.

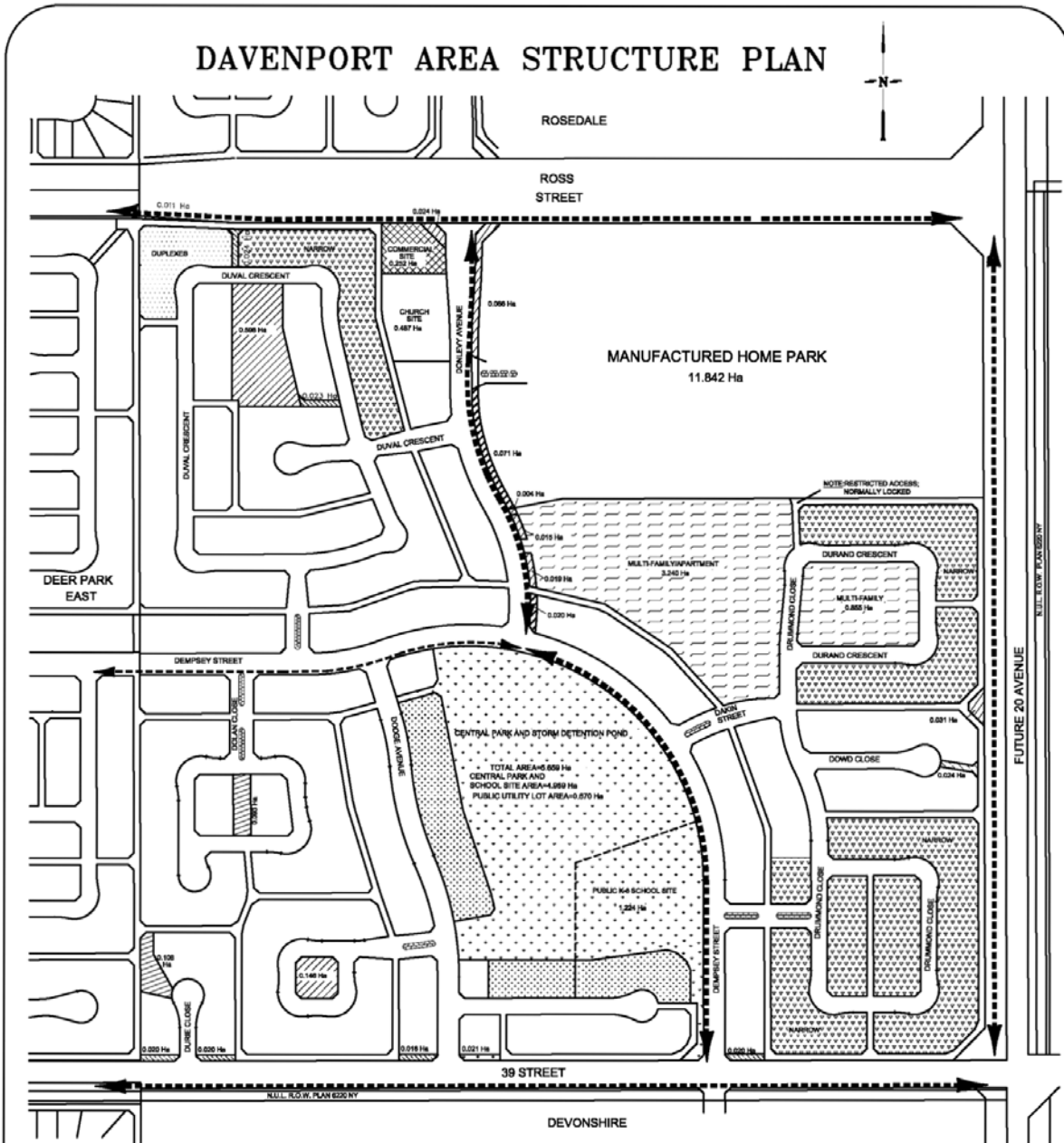
The land area required for these two road widenings, as proposed, is 3.985 hectares (9.85 acres).

As clarified in section 4.3.1. of this report, the \pm 8.0 metre wide band of trees exists within the existing 20.12 metre (66 foot) road right of way. It is assumed that these particular trees will not be preserved and that the 20th Avenue road widening will be required.

5.2 Development Concept:

Figure 4 illustrates the proposed development concept for this subdivision. The principal concept for this outline plan was to create neighborhoods within the community, with an emphasis on integrating land uses, and addressing the market trends presently existing in Red Deer. With this in mind, we created a plan which includes cul de sac's, P-Loops, and crescent road systems. The internal road system design typically discourages through traffic, thus creating the desirable quiet neighborhoods. The internal roadway system then ties into collector roads, and collector roads tie into arterial roads, thus addressing the typical hierarchy of roadway systems for the City of Red Deer.

DAVENPORT AREA STRUCTURE PLAN



**FIGURE 4
DEVELOPMENT CONCEPT**

SCALE 1:5000

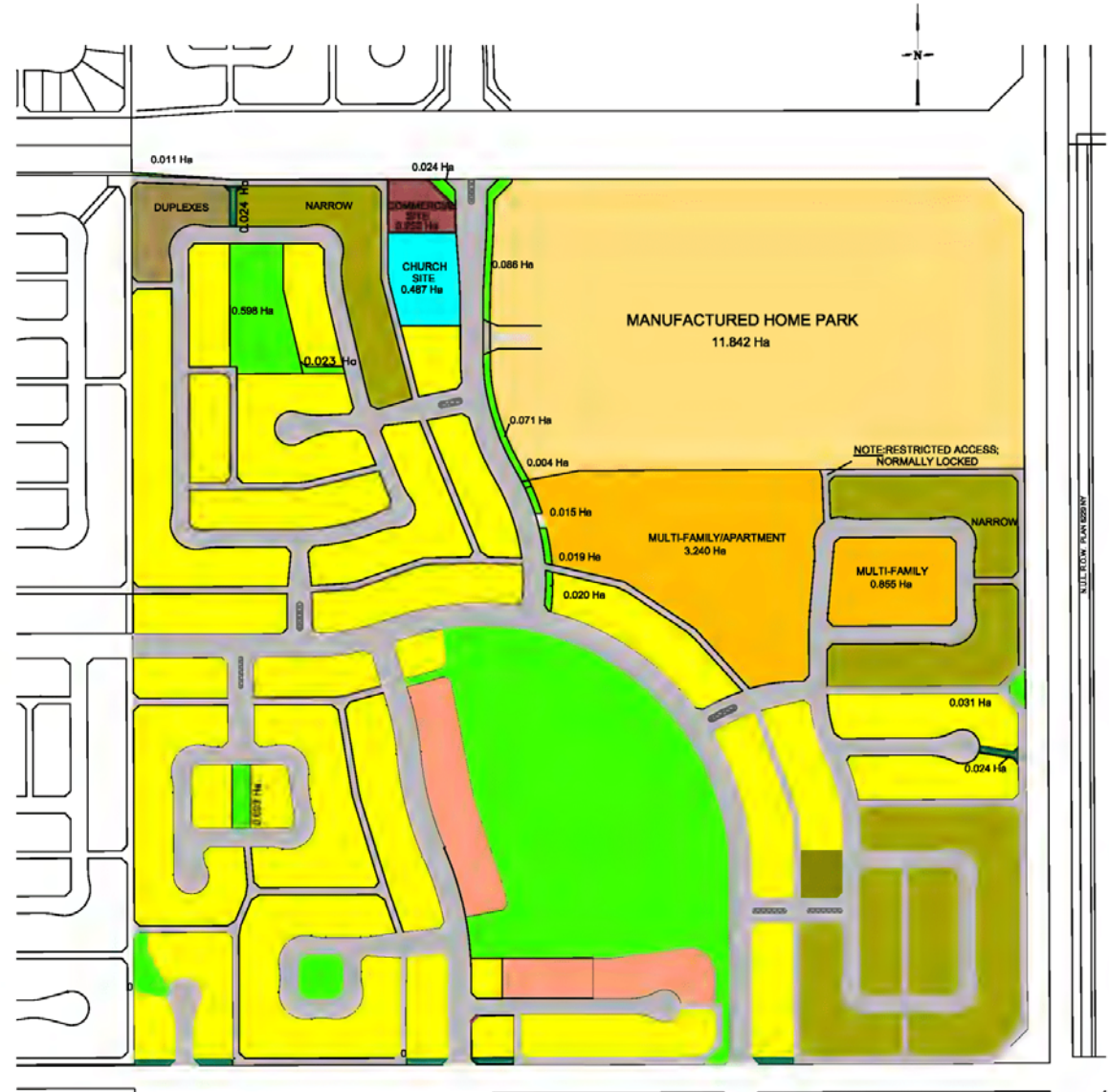
- LEGEND:
- SINGLE FAMILY - DETACHED (R1)
 - SINGLE FAMILY - NARROW (R1-N)
 - SEMI-DETACHED (DUPLICES) (R1-A)
 - MULTI-FAMILY (R2/R3)
 - TWO STOREY WALKOUT BASEMENTS (R1)
 - CENTRAL PARK
 - COMMERCIAL
 - PUBLIC UTILITY LOTS
 - WALKWAYS AND LOCAL PARKS
 - MAJOR WALKWAYS AND BIKE PATHS
 - MINOR WALKWAYS AND BIKE PATHS

**AL-TERRA
ENGINEERING LTD.**

REVISED OCT 22/01

EDMONTON RED DEER

DAVENPORT AREA STRUCTURE PLAN



**FIGURE 4
DEVELOPMENT CONCEPT**

SCALE 1:5000

- LEGEND:
- SINGLE FAMILY - DETACHED (R1)
 - SINGLE FAMILY - NARROW (R1-N)
 - SEMI-DETACHED (DUPLICES) (R1-A)
 - MULTI-FAMILY (R2/R3)
 - TWO STOREY WALKOUT BASEMENTS (R1)
 - CENTRAL PARK
 - COMMERCIAL
 - PUBLIC UTILITY LOTS
 - WALKWAYS AND LOCAL PARKS
 - MAJOR WALKWAYS AND BIKE PATHS
 - MINOR WALKWAYS AND BIKE PATHS

AL-TERRA
ENGINEERING LTD.

REVISED SEPT 25/00

EDMONTON RED DEER

Note: Any reference to a specific school authority in this plan is only an indication of a school authority's site preference. The allocation of identified school sites will be determined by the Joint Use Committee. (Bylaw 3217/B-2021)

5.2 Development Concept: (continued)

The concept, as proposed, provides for a variety of housing types and a local convenience commercial site to service the daily needs of residents in this area.

5.2.1. Manufactured Home Park (R4):

The primary element which will make this quarter section unique in Red Deer is the 11.842 hectare (29.26 acre) manufactured home park located in the north east corner of the subject property. Parkside Holdings Ltd. have won awards and numerous compliments for similar parks in other locations. The most recent of these is nearing completion in Lethbridge, Alberta. Their intent is to make this manufactured home park their best yet. It will be major asset to the community.

The general intent of this portion of the development is to provide a safe and attractive community for retirement aged residents and empty nesters, reasonably 'protected' from the rest of the surrounding neighborhoods. The park will be enclosed by a 1.83 metre (6 foot) high, sculptured stucco fence, accented with large decorative pillars. Security gates with access cards will provide access to owners and guests. Emergency service vehicles will also be provided with access codes and keys. A total of 172 manufactured home units are proposed for the park, providing a site density of only 14.57 units per hectare (5.90 units per acre). Given the traditionally low 'per unit' occupancy population of these parks (average of 1.7 persons per unit), the population density of the park is approximately 25 persons per hectare - substantially less than even traditional single family detached residential land uses. The proposed layout of the park is noted in Figure 4A.

The manufactured home park will be detailed with a variety of landscaping features, including: rock gardens, flower beds, shrub beds, shale walkways, accent berms and flowering trees.

5.2.1. **Manufactured Home Park (R4):** (continued)

Traditional grassed areas will be utilized throughout the unit locations, which will be arranged in planning 'clusters'. Typical clusters consist of four (4) units, but the east side corners will have seven (7) and six (6) units in the north and south portions respectively. Each cluster will have a minimum of 42% 'green' space with that percentage potentially increasing up to 62% depending on the size of the particular units involved. Planning calls for the homes to vary in size from 16' x 76' (4.88 m x 23.16m) to 29' x 76' (8.84m x 23.16m), with 12 variations in between. Each cluster will also provide parking for up to 3 cars per unit (1 in each garage and 2 in driveways). Additional parking of some 70 spaces is provided along the street adjacent to the buffer zones, 34 spaces on the roads in front of grassed areas and a further 21 off street spaces at the site amenities complex. As proposed, as many as 641 spaces are available within the manufactured home park site.

In its entirety, the manufactured home park (as noted in Figure 4A) has a total landscaped and amenity area of just under 60,500 m² or 51.1% of the useable space. If smaller units are used, this proportion will increase. When taking into account the 'usefulness ratios' of 4:1 for the Club House, 3:1 for the tennis courts and shuffleboard areas and 2:1 for the playground and horseshoe pits, the numbers suggest an equivalent 52.7% . Again, this represents a general minimum given the residential unit sizes indicated on Figure 4A.

Other site amenities will include a storage compound and shed for the residents, occupying some 2435 m² which will provide an average of 14.15m² per unit - far above minimum requirements, and linkage walkways set amongst the detailed landscaping. Maintenance of the 'public' areas (which total a further 9.0% of the Manufactured Home Park site - over and above the previous municipal reserve allowance for the quarter section) will be closely monitored and controlled. Undoubtedly, the site will be a quality development which will set a new standard.

A detailed area breakdown for the site is as follows:

5.2.1. **Manufactured Home Park (R4):** (continued)

Total Manufactured Home Park	118,420 m ²	100%
‘Public’ Areas: Roads	14,557 m ²	12.0%
Amenities (1)	4,297 m ²	3.6%
Landscaped (2)	6,819 m ²	5.7%
‘Private’ Areas: Driveways:	11,902 m ²	10.0%
Landscaped	49,297 m ²	41.9%
Units	31,548 m ²	26.8%

(1) Indicates Club House, tennis courts, storage compound, playgrounds etc.

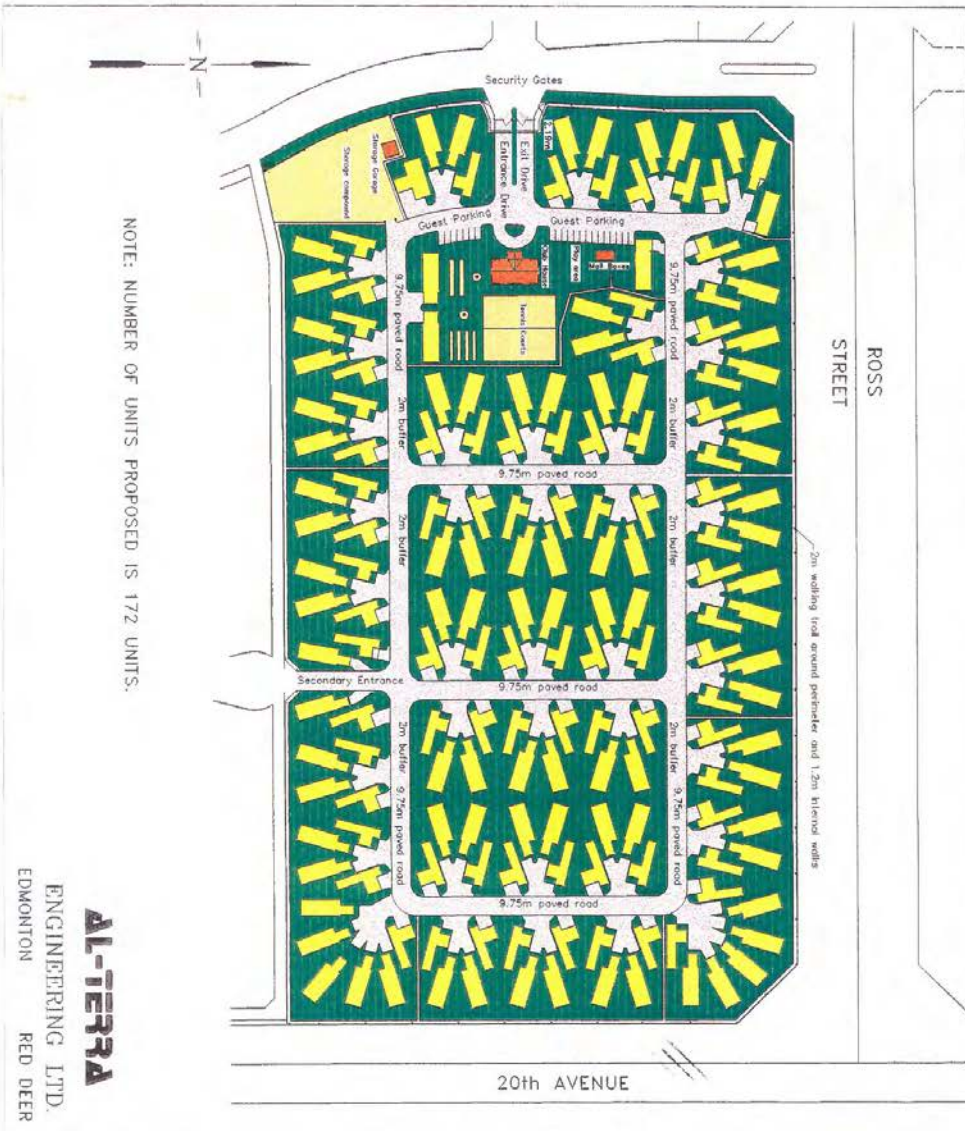
(2) Includes walkways, grasses buffer zones, flower beds etc.

Servicing elements for the manufactured home park are noted in section 7.0 following.

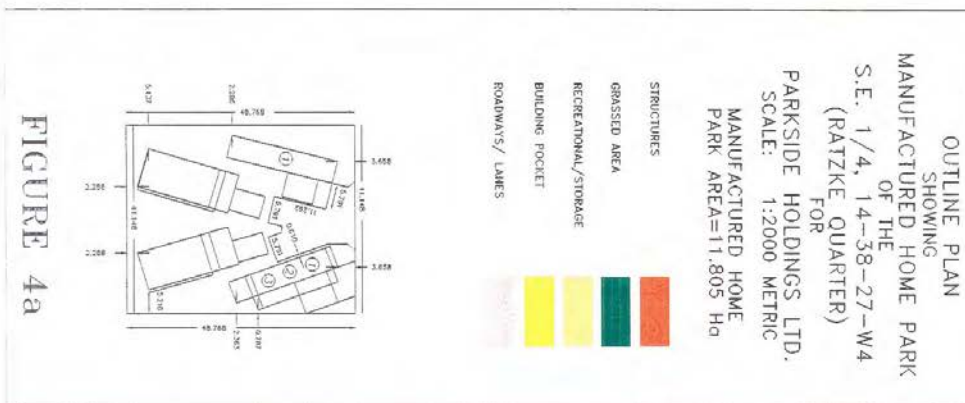
5.2.2. **Local Convenience Commercial Site (C3):**

The 0.25 hectare local convenience commercial site will be a major asset to this community, particularly since some of the retired residents of the manufactured home park will no longer be driving. Accordingly, items they require on a daily basis, such as a carton of milk, or renting a video, will be easy to access.

Similarly the commuter coming home from a day's work can stop by the local convenience outlet and pick up what is needed, without going out of their way to complete this shopping.



AL-TERRA
 ENGINEERING LTD.
 EDMONTON RED DEER



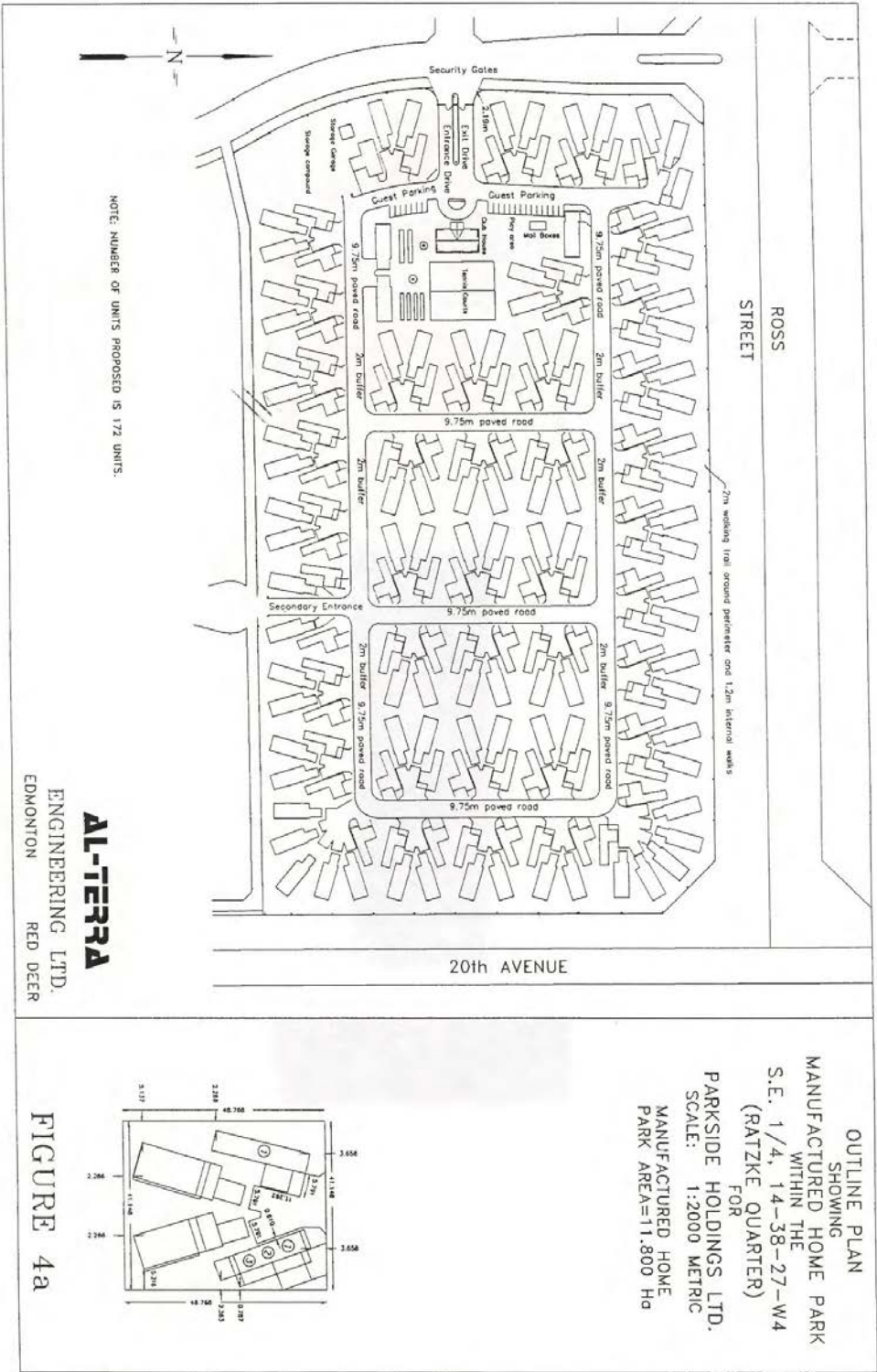


FIGURE 4a

The local convenience commercial site will be a significant asset to this community, since it will provide what the name implies, "convenience" for the adjacent residents.

5.2.3. **Duplex Lots - RI-A:**

The duplex lots for this subdivision have been located in the northwest corner of the quarter section, adjacent to the Deer Park (Melcor) duplex lots, thus creating compatible land uses.

5.2.4. **Single Family Narrow Lots - RI-N:**

Single-family narrow lots will be located along the east boundary of the quarter section, south of the manufactured home park and adjacent to the 20TH Street right-of-way. A block of lots originally proposed as duplex lots, located within Phase 1, are also planned as single family narrow lots. All developments on these lots will fully comply with the requirements of the City of Red Deer's land use bylaw, and no relaxations will be required or requested of any R1-N standards.

5.2.5. **Central Park Site; Tot Lots; Detention Pond:**

A 5.059 hectare (12.5 acre) central park site is provided within this outline plan. The site is designated to include a Public K-8 school and the required neighborhood recreation facilities. There is good road exposure for this park site along Dempsey Street. The central location of the park site makes it so all residents within the quarter section require only a short walk to use the central park facilities. Figure 4b indicates the proposed park layout.

Note: Any reference to a specific school authority in this plan is only an indication of a school authority's site preference. The allocation of identified school sites will be determined by the Joint Use Committee. (Bylaw 3217/B-2021)

Four tot lots, strategically located within the quarter section, will provide park facilities, and a neighborhood gathering focal point for particular neighborhoods.

5.2.5. **Central Park Site; Tot Lots; Detention Pond:** (continued)

The primary storm detention pond will be located in the north west corner of the Central Park. As is now typical in Red Deer, this storm detention pond will be public utility lot, and part municipal reserve. Section 7.1.1 and 7.1.2 of this report clarify the engineering circumstances with respect to this storm detention pond. A second smaller detention pond, needed as a result of the site topography, is to be located in an area park located in the north west portion of the quarter section. The actual sizes of both ponds required will be resolved with the City of Red Deer Engineering Department.

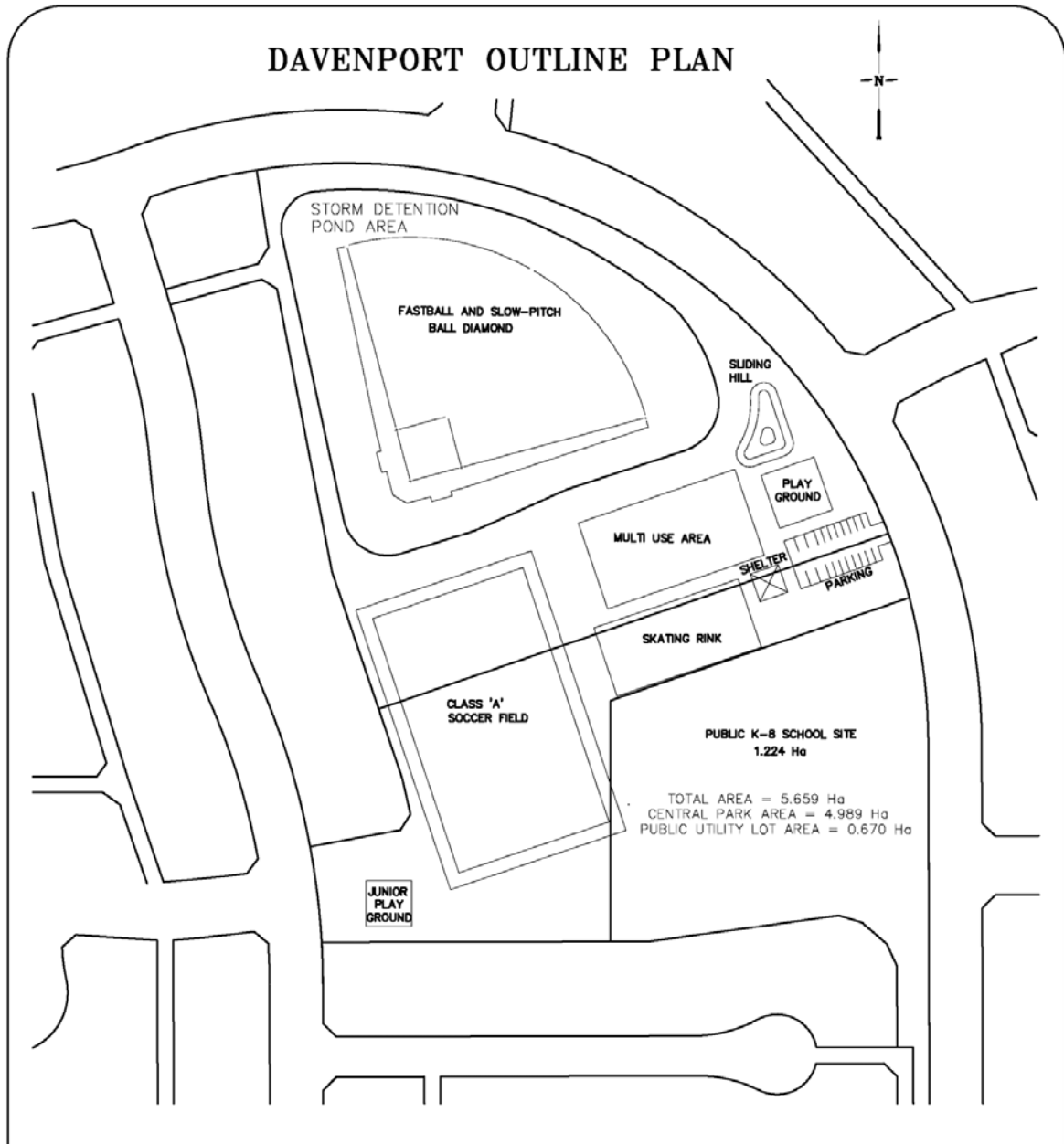
5.3 Land Use Distribution:

Table 1 illustrates the land use distribution for the outline plan area.

TABLE 1. OUTLINE PLAN STATISTICS:

TOTAL AREA OF ORIGINAL ¼ SECTION	65.026 Ha	160.68 Ac	
Ross Street and 20th Avenue Widening	4.031 Ha	9.96 Ac	
DEVELOPABLE AREA	60.995 Ha	150.72 Ac	100%
Single Family (R1)	19.044 Ha	47.06 Ac	31.2%
Manufactured Home Park (R4)	11.842 Ha	29.26 Ac	19.4%
Multiple Family (R2/R3)	3.939 Ha	9.73 Ac	6.5%
Duplex Lots (R1-A)	0.488 Ha	1.21 Ac	0.8%
Neighborhood Commercial (C3)	0.252 Ha	0.62 Ac	0.4%
Single Family - Narrow (R1-N)	5.744 Ha	14.27 Ac	9.5%
Social Care Sites (R1-A)	0.124 Ha	0.31 Ac	0.2%
Church Site (R1)	0.487 Ha	1.20 Ac	0.8%
Central Park and School Site (P1)	4.989 Ha	12.33 Ac	8.2%
Detention Pond	0.670 Ha	1.65 Ac	1.1%
Local Parks and Walkways (P1)	1.251 Ha	3.09 Ac	2.1%
Public Utility Lots (PS)	0.304 Ha	0.75 Ac	0.5%
Roads	11.832 Ha	29.24 Ac	19.4%
Collector	3.273 Ha	8.09 Ac	
Residential	5.843 Ha	14.44 Ac	
Lanes	2.722 Ha	6.73 Ac	

The total municipal reserve area, including the central park site, and excluding the main detention pond area is approximately 6.240 hectares (15.42 acres). This represents some 10.3% of the developable land area. As addressed in Section 5.2.1, there will also be a significant amount of landscaped area within the manufactured home park.



**FIGURE 4b
CENTRAL PARK**

Note: Any reference to a specific school authority in this plan is only an indication of a school authority's site preference. The allocation of identified school sites will be determined by the Joint Use Committee. (Bylaw 3217/B-2021)

SCALE 1:2000

PREPARED MAR 26/98
REVISED SEPT 22/98
REVISED MAY 23/00
REVISED SEPT 25/01

PREPARED BY:

AL-TERRA
ENGINEERING LTD.

EDMONTON RED DEER

5.3 Land Use Distribution: (continued)

We believe the land use distribution, as proposed, illustrates a well balanced development, with sufficient narrow, duplex and multifamily area (16.72 percent of the developable land area) to create some density, for the quarter section. Meanwhile the single family component is 31.4 percent of the developable land area. Actual lot sizes and land uses will determine final densities. An approximate dwelling unit and population density for the quarter section is as follows:

Residential Uses:

ITEM	No. of Units	Persons/Unit	Population	Population Density
Single Family	345 - 365	3.4	1173 - 1241	61 - 65/Ha
Duplex	10	3.3	33	68/Ha
Multi Family	139 - 177	2.8	389 - 496	101 - 128/Ha
Manufactured Home	172	1.7	292	25/Ha
Narrow	114	3.3	376	65/Ha
Total Site	780 - 838	-----	2263 - 2438	37 - 40/Ha

The outline plan also provides for the following required facilities and alternative usage sites:

- * Social Care Site: 0.124 Hectares (single family)
- * Church Site: 0.487 Hectares (single family)

6.0 TRANSPORTATION:

6.1 Transportation Circulation Pattern

The traffic circulation pattern proposed in the outline plan conforms to the East Hill Area Structure Plan. At some point in the future, there will be two arterial roadways adjacent to the quarter section:

- * Ross Street along the northern boundary of the quarter section. The east half of this arterial roadway is constructed.

6.1 Transportation Circulation Pattern (continued)

- * 20th Avenue along the eastern boundary of the quarter section.

The internal transportation system will ultimately tie into Ross Street and 39th Street. There is no collector road connection proposed to 20th Avenue.

An internal collector loop street will tie into the existing Dempsey Street along the west boundary of the quarter section, and into 39th Street at the south limit of the quarter section.

The extension of Ross Street to the midpoint of the Ratzke quarter section was completed in 1998. This provides the principal access to the quarter section.

6.2 Collector Road Cross Sections:

Figures 5 and 5a illustrate the cross sections proposed for the divided and undivided residential roads. Figure 5 illustrates the typical collector road cross sections for a 28.0 m wide divided right-of-way (applicable at site access from Ross Street only) and the 20.0m typical undivided collector. These cross sections conform to the City of Red Deer Design Guidelines drawing B5 and B6. The intent is that the 2.5 metre wide separate sidewalk, or paved walkway, would be located on the same side of the collector road as the 6.0 metre wide municipal reserve strip. This would apply to Donlevy Avenue, from Ross Street to Dempsey Street, and, along Dempsey Street, from 39th Street. Figure 5a illustrates the typical divided 22.0m wide local road and standard 15.0m undivided local road within the interior sections of the development.

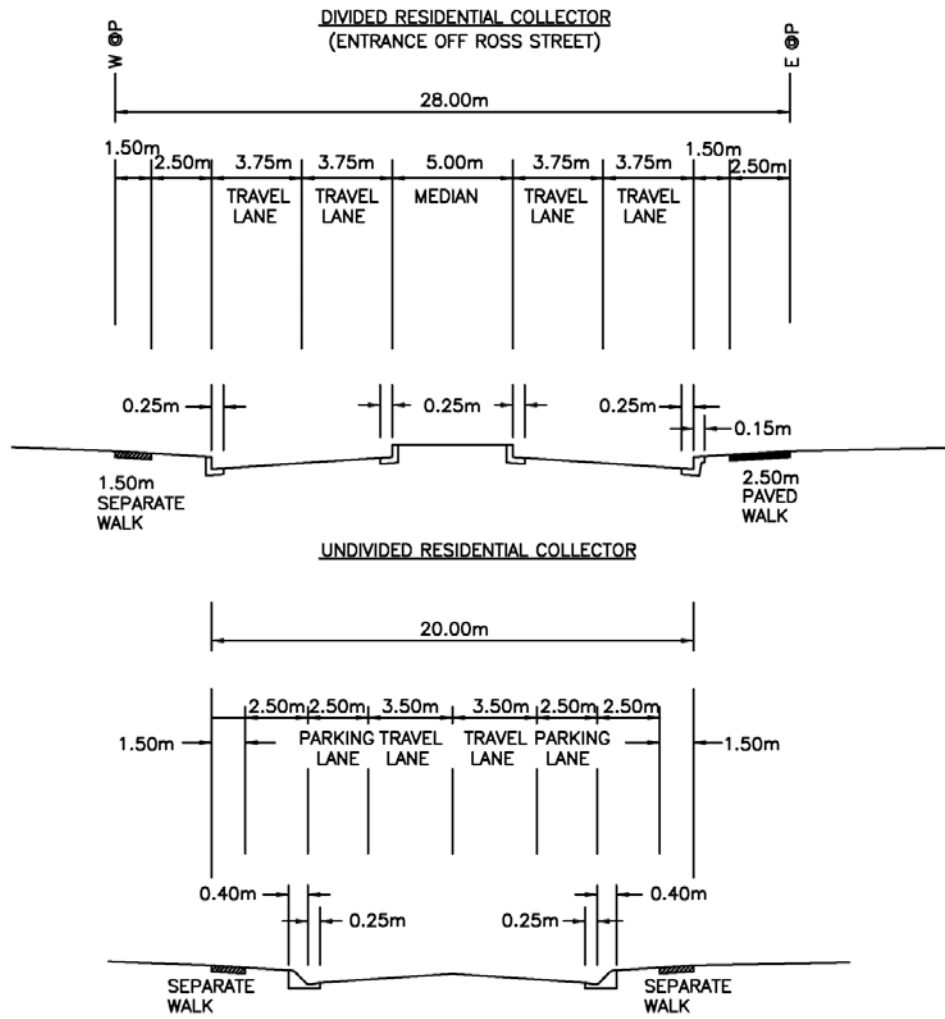


FIGURE 5
DIVIDED AND UNDIVIDED RESIDENTIAL
COLLECTOR ROADWAY DETAIL

PREPARED BY:

AL-TERRA
ENGINEERING LTD.

EDMONTON RED DEER

REVISED SEPT 22/98

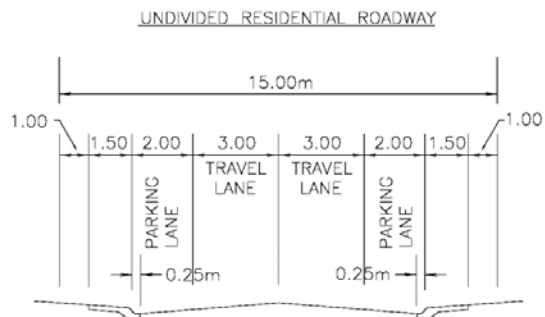
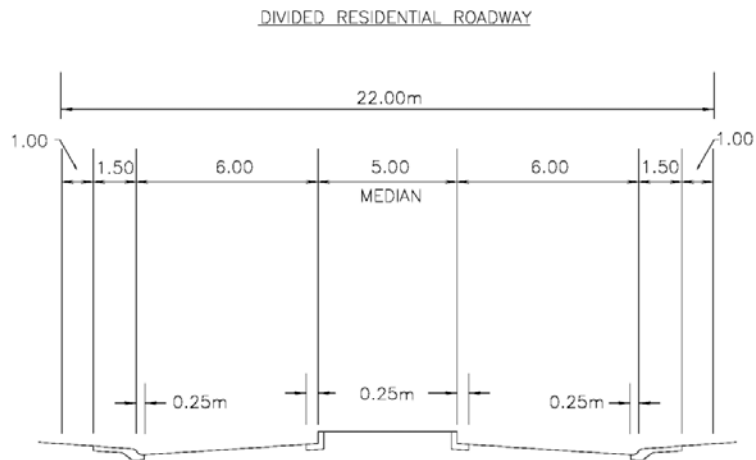


FIGURE 5a
DIVIDED AND UNDIVIDED RESIDENTIAL
LOCAL ROADWAY DETAIL

PREPARED BY:
AL-TERRA
 ENGINEERING LTD.

REVISED SEPT 22/98

EDMONTON RED DEER

6.3 Pedestrian Circulation Patterns:

Figure 4 illustrates a continuous integrated pedestrian system throughout the quarter section. As assumed for this report, and as illustrated on Figure 4 and, for cross sectional details, on Figure 5:

- * We assume the City of Red Deer will provide a pedestrian walkway system along 39th Street, along Ross Street, and along 20th Avenue as these roads are upgraded.
- * The pedestrian linkage will be continued, along Dempsey street, from Melcor's Deer Park Subdivision.
- * A 2.5 metre wide pedestrian linkage is provided from Ross Street to Dempsey Street, and will be provided along Dempsey Street, to 39th Street.
- * We propose to provide a pedestrian linkage from Dempsey Street to 20th Avenue, toward the mid point of the quarter section.

The pedestrian linkage system on the outline plan connects the key neighborhood elements and will enable residents to walk, run, or ride bicycles through the community on a system of walkways, or sidewalks. The pedestrian movement patterns are designed for both internal and external pedestrian flows.

7.0 MUNICIPAL SERVICING CONSIDERATIONS:

The municipal services required to service this subdivision are existing, and are located directly along the west boundary of the subject quarter section, within the lane that runs all along the east boundary of the Deer Park Melcor quarter section. Accordingly, to service the Ratzke quarter section requires only a direct extension of these services.

7.1 Storm Sewer System:

7.1.1. Minor Drainage System:

The existing storm sewer trunk line downstream from this quarter section is undersized to

7.1.1. **Minor Drainage System:** (continued)

handle any significant storm events. Our preliminary findings suggest a maximum capacity based on a 1 in 2 to 3 year storm for the area is available. Actual capacities, based on the City of Red Deer's computer model analysis, provided a 1 in 3 year event, and will be used to complete detailed design work. Connection locations to the existing trunk system are provided within the east-most lane of the Deer Park (Melcor) quarter section, as follows:

- * At the north west corner of the Ratzke quarter section.
- * In the lane located just north of Dempsey Street, at approximately the mid point of the quarter section, and
- * Toward the south end of the quarter section.

Figure 6 illustrates the conceptual layout for the minor, piped storm sewer system. A weeping tile drainage system will be provided for all lots. Mr. John Ratzke of Parkside Holdings Ltd. advises that weeping tile drainage systems are also installed under his manufactured home units. The storm sewer design will be completed in accordance with the City of Red Deer design guidelines.

7.1.2. **Major Overland Drainage System**

Major overland drainage exists in all areas where an inadequate (or no) underground storm sewer system is in place to handle the particular storm intensity. As was noted earlier, the existing trunk line does not have ample capacity to handle a storm event of one in five years. The actual capacity of the system is one in three years as determined by the City of Red Deer's modeling study.

To accommodate the inevitable runoff over and above the system's capacity, roads and lanes will be designed to route the excess storm runoff to a storm detention pond located within the central

DAVENPORT AREA STRUCTURE PLAN

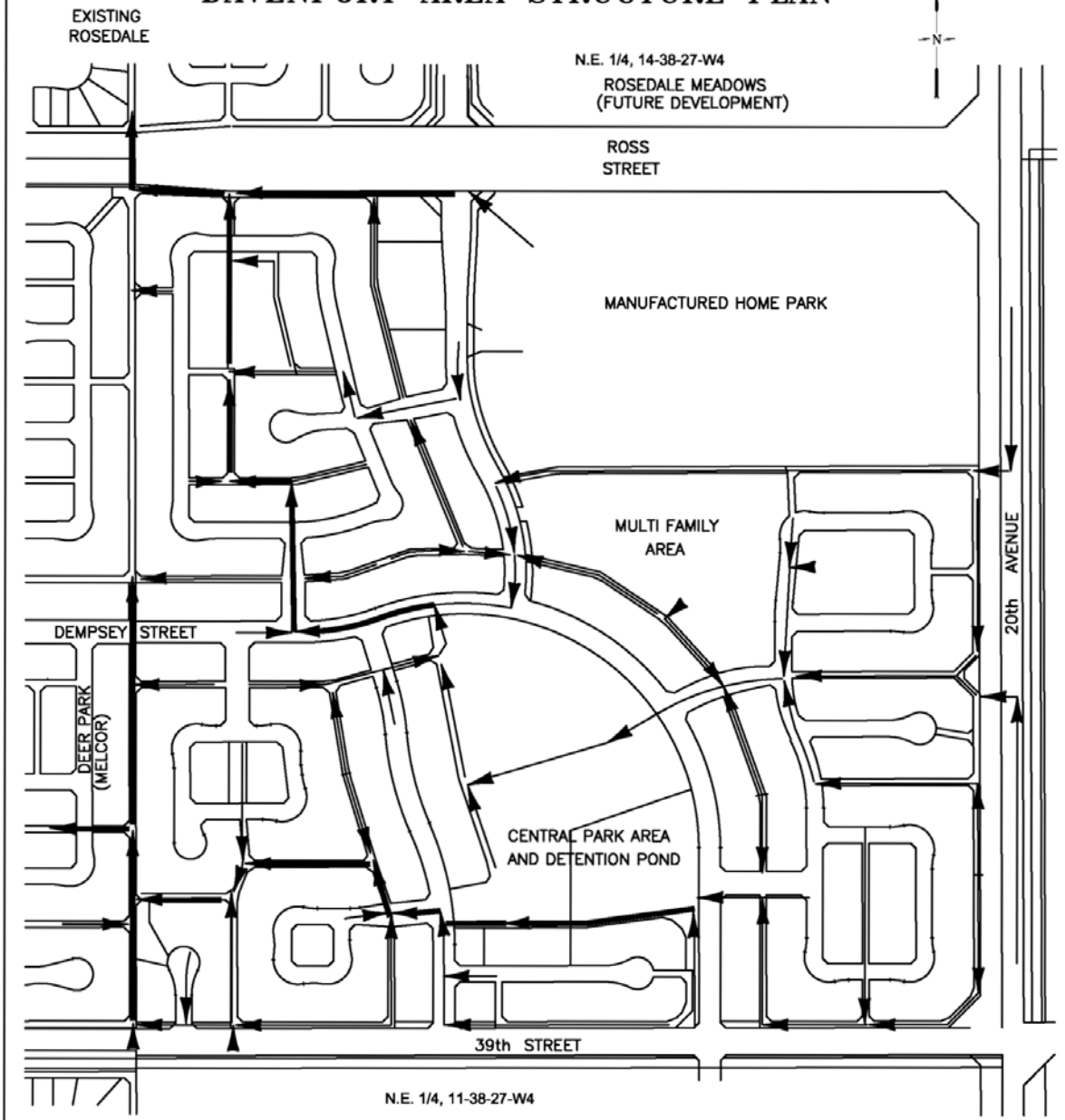
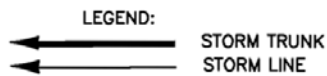


FIGURE 6
STORM SEWERS

SCALE 1:5000



AL-TERRA
ENGINEERING LTD.

EDMONTON RED DEER

REVISED SEPT 24/01

7.1.2. **Major Overland Drainage System** (continued)

park system. This pond will be designed to accommodate the necessary quantities of water directed to it from a 1 in 100 year storm event.

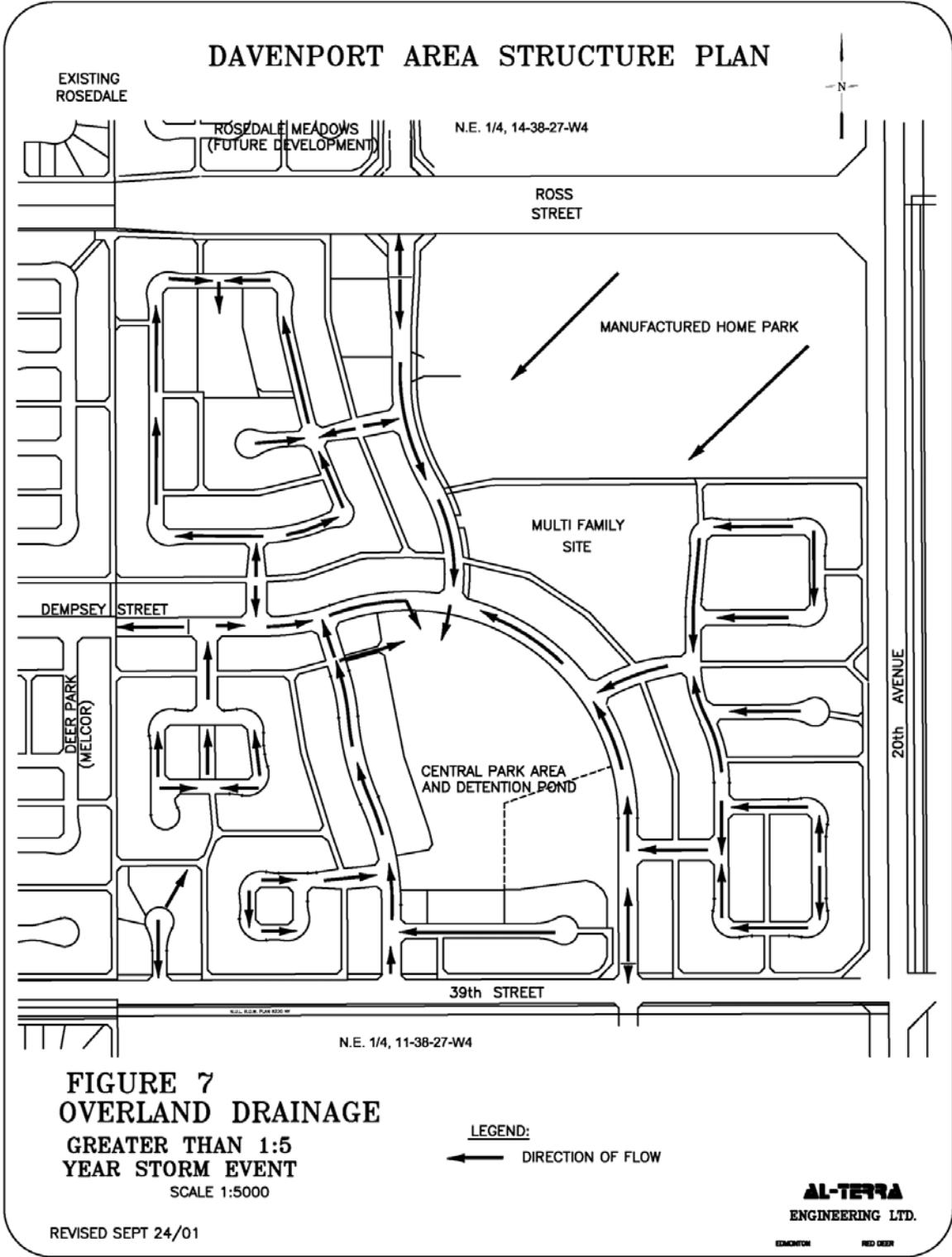
Figure 7 illustrates the major overland flow routes for this quarter section. As illustrated, approximately 80% of the storm runoff from a major storm event can be directed towards the central park site. A further 16% will drain to the secondary site in the north west corner of the quarter section. The topography of the quarter section dictates what can and cannot be drained to the central park area. The remaining overland flow runoff would drain northward, onto Ross Street, southward, onto 39th Street, or eastward, onto Dempsey Street.

Minor detention facilities will be incorporated into the manufactured home park area. These will be formed by a “V” section profile roadways set at about 3%, producing ‘collection bowls’ for ponding within the roads themselves. Unit clusters will be graded to maintain elevations over that required for the 1 in 100 year storm events. City of Red Deer Guidelines will be followed throughout the design work where applicable.

7.2 **Sanitary Sewer System:**

The sanitary sewer system required to service the subject quarter section is a direct extension of the existing sanitary sewer system located in the Deer Park (Melcor) quarter section. Figure 8 conceptually illustrates the proposed tie-in points into the existing sanitary sewer system. Figure 8 also conceptually illustrates the proposed routing of the sanitary sewer system within the subject quarter section, and the proposed pipe sizes.

Sanitary system modeling, to the sanitary trunk tie-in points, will be completed as part of the preliminary engineering analysis for this quarter section.



DAVENPORT AREA STRUCTURE PLAN

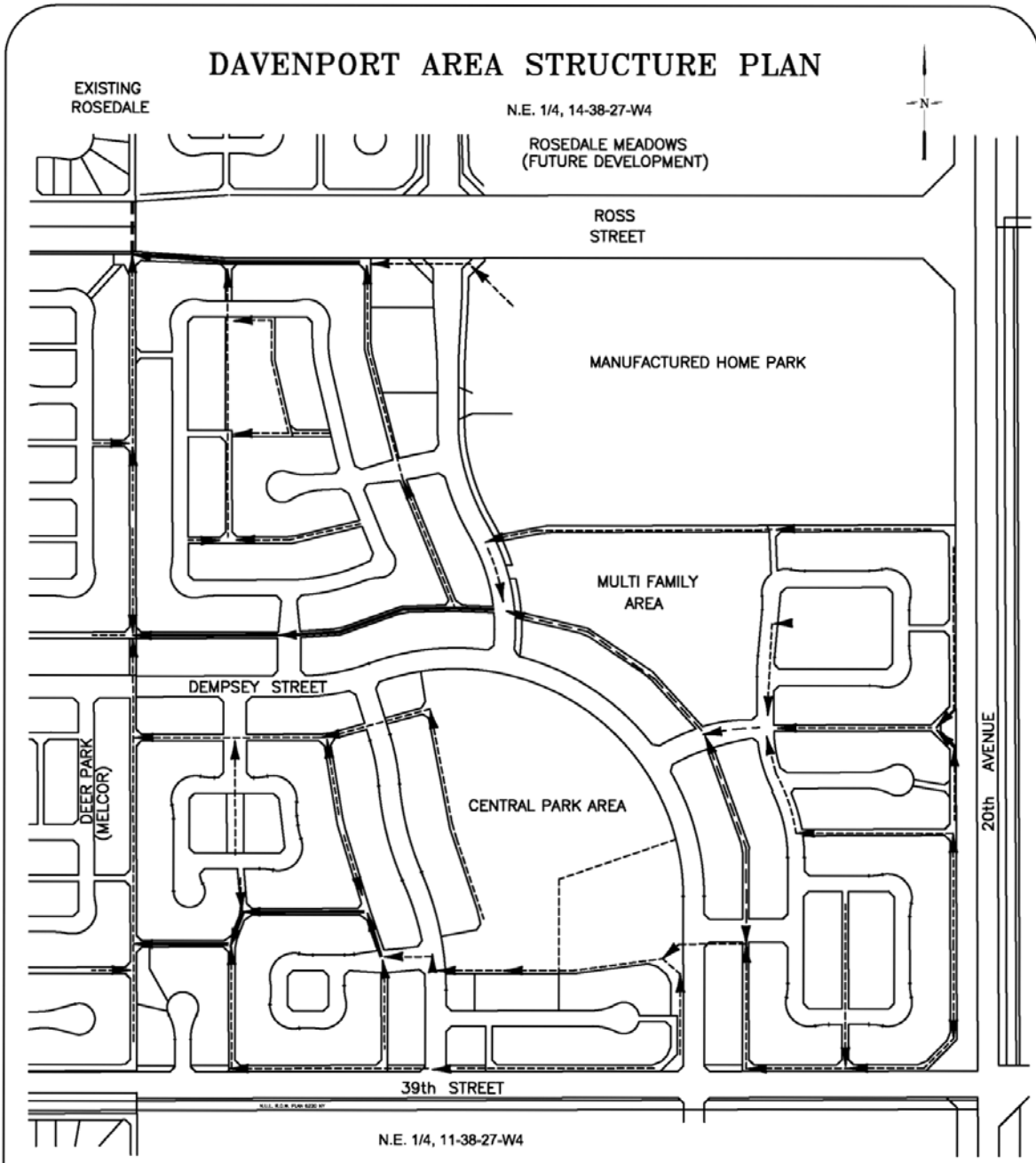


FIGURE 8
SANITARY SEWERS
 SCALE 1:5000

LEGEND:
 ———> 250mm SAN
 - - - -> 200mm SAN

AL-TERRA
 ENGINEERING LTD.

REVISED SEPT 24/01

EDMONTON REG. DEC. 2001

7.2 Sanitary Sewer System: (continued)

All facilities required for the sanitary sewer system, which will become the responsibility of the City of Red Deer to maintain, will be designed in accordance with the City of Red Deer design guidelines.

7.3 Water Distribution System:

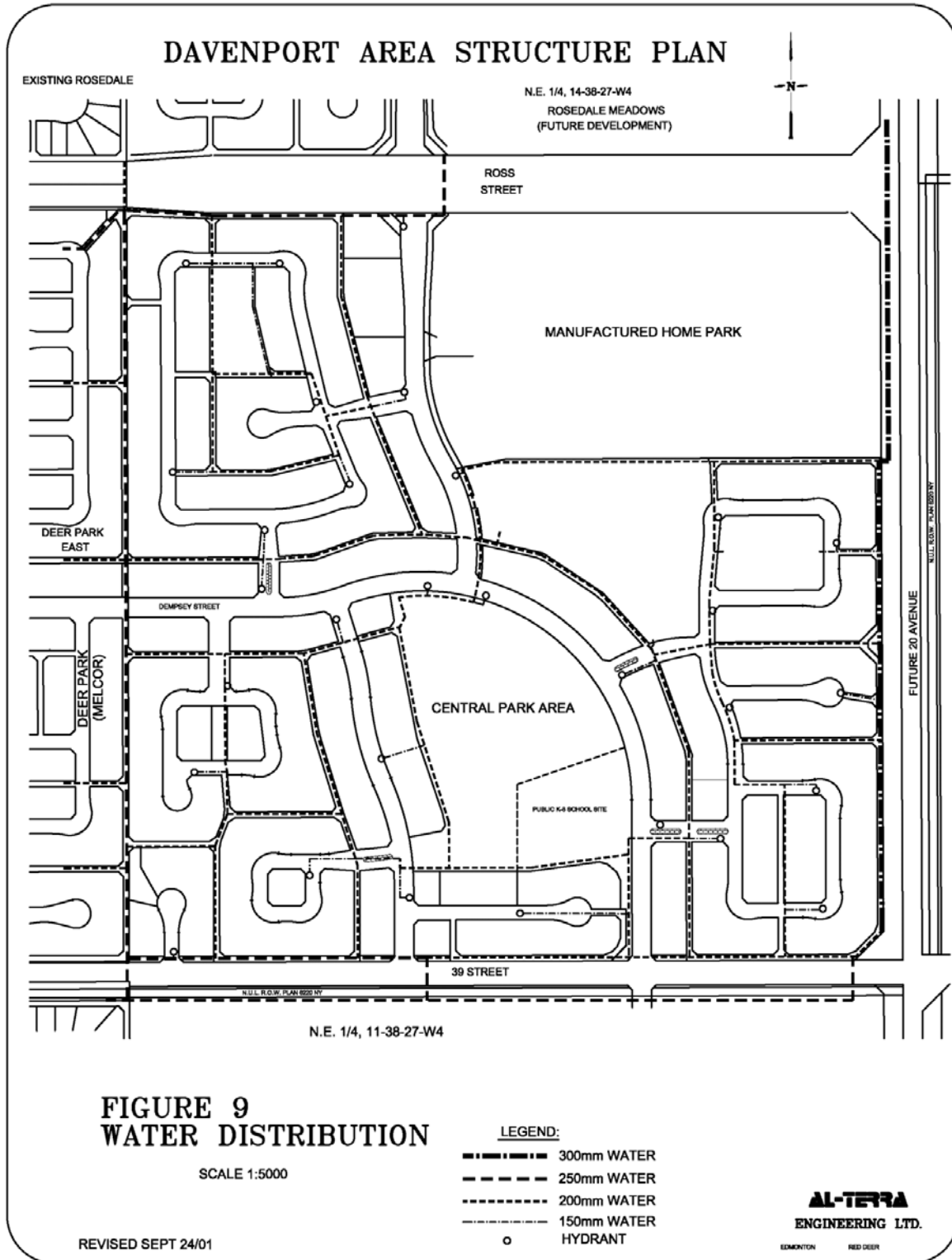
The water distribution system required to service the subject quarter section is a direct extension of the existing water distribution system located in the Deer Park (Melcor) quarter section. Figure 9 conceptually illustrates the proposed tie-in points into the existing water distribution system. Figure 9 also conceptually illustrates the proposed routing of the water distribution system within the subject quarter section, and the proposed pipe sizes.

Water supplies within the manufactured home park will consist of 150mm feeds to hydrants and 50mm sub-feeds to residential units tapped from a 200mm main from Ross Street. Individual homes will have a standard 20m (3/4") domestic feed, while the Club House facility will be supplied by 25mm (1") line.

All facilities required for the water distribution system, which will become the responsibility of the City of Red Deer to maintain, will be designed in accordance with the City of Red Deer Design Guidelines.

7.4 Shallow Utilities

The City of Red Deer Electric Light and Power Department, Telus Corporation, Shaw Cable and Northwestern Utilities have been contacted regarding the subject quarter section. All of the franchise utilities have advised that there is adequate capacity to provide servicing in the general area. The utility companies



Note: Any reference to a specific school authority in this plan is only an indication of a school authority's site preference. The allocation of identified school sites will be determined by the Joint Use Committee. (Bylaw 3217/B-2021)

7.4 Shallow Utilities (continued)

will review and address the servicing alternatives in more detail during the circulation and review of the Outline Plan.

8.0 REPORTS FROM SPECIALIZED CONSULTANTS:

8.1 Geotechnical Investigation:

The geotechnical report for this quarter section was prepared by HBT Agra Limited in August of 1993. Copies of this report have been submitted to the City of Red Deer Engineering Department on December 17, 1997.

8.2 Phase 1 Environmental Site Assessment:

A Phase 1 Environmental site assessment was completed for this quarter section, by Agra Earth & Environmental Ltd. in September of 1997. A copy of this report was submitted to Parkland Community Planning Services on October 22, 1997.

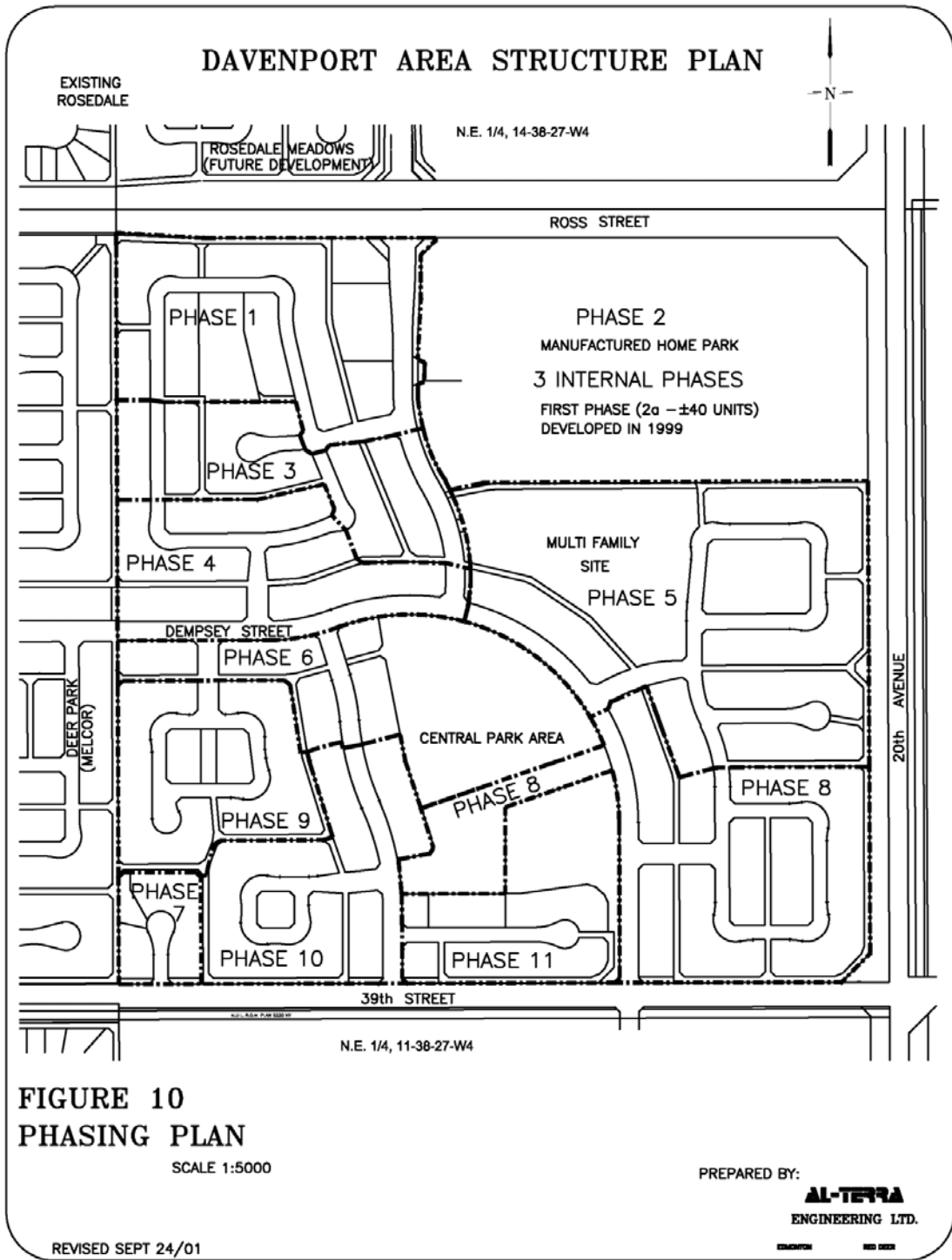
9.0 PHASING OF DEVELOPMENT:

Figure 10 illustrates the proposed phasing of development. The present location of utilities dictates the initial few phases of development. Market conditions or trends will influence the actual phasing of later development. As noted earlier, phases 1 through 4 have been developed.

Parkside Holdings Ltd. has developed a first phase of the manufactured home park in 1999. As indicated on Figure 10, Mr. John Ratzke has assumed that development of the manufactured home park will occur in three phases. Development will proceed from west to east.

10.0 CLOSURE

This report addresses the key component of the Davenport (Deer Park East) quarter section outline plan. The concept, as proposed, should create another novel community within the City of Red Deer. We expect that, following the completion of the development of the manufactured home park, by Parkside Holdings Ltd., the expectation for these facilities, in Central Alberta, will change.



APPENDICES:

APPENDIX "A"

- * Certificate of Title
- * Remote Land Title Search

APPENDIX "A":

Certificate of Title

Remote Land Title Search