



Barlow Area Structure Plan



THE CITY OF CALGARY
PLANNING DEPARTMENT



Office Consolidation

2019 April

Barlow Area Structure Plan

**BYLAW 10P80
1980 JUNE 17**



THE CITY OF
CALGARY
LAND USE PLANNING & POLICY

NOTE: This office consolidation includes the following amending Bylaws:

Amendment	Bylaw	Date	Description
1	15P82	1982 July 20	<ul style="list-style-type: none"> a. Section 1.4.31 - Revise wording b. Section 1.4.3.1 - Delete text, replace with new text c. Section 1.4.3.3 - Revise text d. Section 2.1 - Revise population projection e. Section 2.2 - Revise text, delete c), renumber f. Section 2.3 - Revise text g. Replace Map 2 (superseded by 23P91, 7P97, 14P98, 3P2000, 14P2006) h. Section 2.3 - Revise text) i. Section 2.4.1 - Delete text, replace with new text ii), add new text j. Section 2.4.3 - Delete text, replace with new text k. Section 2.5 - Delete text, replace with new text l. Section 2.7.2.2 - Reword heading m. Replace Map 3 (superceded by 3P2000) n. Section 2.8.6 - Revise text, delete sentence o. Map 7 - Replace
2	4P83	1983 March 14	<ul style="list-style-type: none"> a. Section 1.3 - Delete text, replace
3	23P91	1991 November 4	<ul style="list-style-type: none"> a. Replace Map 2 - (superceded by 7P97,14P98, 3P2000, 14P2006)
4	18P94	1994 June 20	<ul style="list-style-type: none"> a. Section 2.1 - Delete text b. Section 2.3 - Delete paragraphs, replace with new text
5	7P97	1997 March 10	<ul style="list-style-type: none"> a. Section 1.3 - Delete entire section, replace with new text b. Replace Map 2 (superceded by 14P98, 3P2000)
6	14P98	1998 June 15	<ul style="list-style-type: none"> a. Replace Map 2 (superceded by 3P2000, 14P2006)
7	3P2000	2000 February 14	<ul style="list-style-type: none"> a. Section 1.3 - Delete paragraph, replace with new text b. Replace Map 2 (superceded by 14P2006) c. Replace Map 3
8	14P2006	2006 July 18	<ul style="list-style-type: none"> a. Revise third paragraph Section 2.3 b. Add paragraph to Section 2.3 c. Delete text in Section 2.4.3 d. Delete text & replace text in Section 2.10 (ii) e. Add (v) and (vi) to Section 2.10 f. Add Section 2.13 g. Replace Map 2

9	22P2012	2012 July 16	<ul style="list-style-type: none"> a. Delete and replace Map 2 entitled "Land Use" b. Add "2.4.2 Recreation Facilities" before the last paragraph of Section 2.4.1. c. Insert text after the existing paragraph in Section 2.4.2 Recreation Facilities d. Re-number the existing Section 2.4.2 Environmental Reserve, 2.4.3 Municipal/School Reserve and 2.4.4 Pedestrian-Bicycle Path System accordingly
10	29P2012	2012 November 5	<ul style="list-style-type: none"> a. Add text to the end of Section 2.6
11	26P2019	2019 April 8 <i>Signed: 2019 April 17</i>	<ul style="list-style-type: none"> a. Amend Map 2 entitled 'Land Use', by changing 0.14 hectares \pm (0.34 acres \pm) located at 10808 – 18 Street SE (Plan 0112475, Block 9, Lot 3) from 'High Standard Light Industrial Area' to 'Residential' and 9.81 hectares \pm (24.24 acres \pm) located at 10505 and 10605 – 24 Street SE (Plan 1510561, Block 5, Lots 9 and 10) from 'Heavy Industrial Area' to 'High Standard Light Industrial Area'

Amended portions of the text are printed in *italics* and the specific amending Bylaw is noted.

Persons making use of this consolidation are reminded that it has no legislative sanction, and that amendments have been embodied for ease of reference only. The official Bylaw and all amendments thereto are available from the City Clerk and should be consulted when interpreting and applying this Bylaw.

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Barlow Area Structure Plan

BARLOW AREA STRUCTURE PLAN

1. POLICY CONTEXT FOR DEVELOPMENT IN BARLOW

1.1 INTRODUCTION

In November 1978, City Council approved a work program for the preparation of area structure plans for a number of new development areas. Included in this program was the preparation of three area structure plans for southeast Calgary: Riverbend, McKenzie and Barlow. Riverbend and McKenzie were areas approved by Council for residential development as part of the adoption of the original Balanced Growth Strategy. However, at the time the decision on the Calgary General Municipal Plan (which incorporated the Balanced Growth strategy) was finalized, Council instructed that planning studies be undertaken for the Barlow area as well and that these studies provide for residential development to take place in the area. The boundaries of the residential lands in Barlow were to be determined through work undertaken as part of the process of preparing the Southeast Policy Report, a major policy study for the entire southeast portion of Calgary. Specific work on the separation of residential development from heavy industrial uses was also undertaken as part of the Riverbend Area Structure Plan (see study entitled “An Evaluation of Calgary’s Present and Future Air Quality with Emphasis

on the Southeast Sector”). At the time City Council adopted the Riverbend Area structure Plan, Council established a policy regarding the separation of residential development from heavy industrial uses. This policy was arrived at following consultation with Alberta Environment and has been incorporated into this Plan as well.

1.2 BOUNDARIES OF THE STUDY AREA

The boundaries of the Barlow Study Area are as follows (see Map 1):

- 90th Avenue to the north,
- the Bow River to the west,
- 130th Avenue to the south,
- in the east:
 - (i) in that portion north of Deerfoot Trail, 24th Street East.
 - (ii) in that portion south of Deerfoot Trail, Deerfoot Trail itself.

The area comprises approximately 1,580 acres (639 hectares).

Barlow ASP

Map No. 1

LOCATION

LEGEND



ASP Area

June 1980

City Limits Revised
July 1995



THIS MAP WAS PRODUCED BY:
THE CITY OF CALGARY
PLANNING & BUILDING DEPARTMENT

\\workplan\plans\asp\barlow\location.dgn

DATE PLOTTED: 8-DEC-1998

1.3 DEVELOPMENT CONSTRAINT AREAS

Development constraint areas include lands that may be developed only for certain types of uses subject to specific development setback requirements. The main constraint areas are the floodway along the Bow River, the area adjacent to the two landfill sites (located directly east of the study area) and the separation required from Western Co-operative Fertilizers Limited's ammonia distribution terminal.

Within the floodway, no new buildings or other new structures are to be allowed. Only open space recreation uses should be supported.

Development or subdivision adjacent to the landfill sites must adhere to the provisions of the Provincial Subdivision and Development Regulation applicable at the time the development or subdivision is proposed. **7P97**

As far as maintaining a separation distance from Western Co-operative Fertilizers Limited's ammonia distribution terminal (flare stack) is concerned, the setback recommended by the Major Industrial Accidents Council of Canada between this scale of facility and residential development is 800 metres. In the Barlow area, the actual separation will be approximately 1,100 metres to coincide with 24th Street SE in the west. The setback is to be measured from the flare stack sea level coordinates of 5,647,0009.829 North and 1,014.465 East.

4P83, 7P97, 3P2000

1.4 FACTORS TO CONSIDER IN THE DEVELOPMENT OF THIS AREA

1.4.1 Status of Existing Land Use in the Area

There are only a few major land uses associated with the study area. The status of these are outlined below:

1.4.1.1 C.I.L. Property

The major land use is the Canadian Industries Limited explosives plant which was established in the area in the early 1950's. That portion of the C.I.L. property in Barlow comprises some 728 acres (295 hectares) and covers a large proportion of the study area. Impending closure of this plant has been a major factor in the decision to prepare development plans for Barlow. Development in this area is dependent upon two factors:

- (a) the completion of that portion of Deerfoot Trail scheduled to bisect the C.I.L. property, to commence in 1980.
- (b) the closure and clean-up of the plant site to a condition acceptable for accommodating residential development. This would include:
 - the removal of any potentially harmful or hazardous substances left in the area by the C.I.L. operation and the detonation or decontamination of any products that cannot be removed.

- dismantling and removal of any buildings and equipment used by C.I.L. in their operation.
- regrading of areas that have been disturbed during C.I.L.'s operation to a state acceptable for residential development.

An extensive program has been drawn up for the first point above. This program has been approved by Alberta Environment and is being monitored by them. Prior to the approval of any outline plans for these lands, certification will be required from Alberta Environment that the area is decontaminated to a level that is safe for residential development. Approval of outline plans will be subject to approval and review by City Council of the Certification Report from Alberta Environment.

1.4.1.2 Other Land Uses

The only other land owners in Barlow are Canfarge Limited (Conmac Western) and Genstar. The former is a worked out gravel operation while the latter is a gravel extraction and crushing operation run by a subsidiary of Genstar, Standard General. Genstar has indicated a desire to develop its land residentially when gravel extraction activities are completed. As part of the agreement with The City to extract gravel, Standard General is required to backfill the worked-out areas to "industrial standards." The Conmac Western lands would need to be reclaimed at the developer's expense since no agreement presently exists between the land owner and The City.

These existing uses present constraints to immediate development. This is discussed in more detail in Section 2 - Land Use.

Land lying within the Bow River floodway and areas of excessive slopes are undevelopable and are the main components of the open space planned for this area. Such areas coincide with significant vegetation, wildlife and landscape zones (see Section 3 - Background Information).

1.4.2 Existing Land Uses in Adjacent Areas

In October 1979, Council adopted two area structure plan bylaws, one for Riverbend, immediately north of Barlow, and one for McKenzie, just south of Barlow, both for residential development. Development in Riverbend is expected to begin immediately and to be completed in five to six years. Development in McKenzie, also to begin immediately, will take longer to complete. The 31,000 people that have been allocated to these areas (9,000 in Riverbend and 22,000 in McKenzie) plus development in Barlow suggests that such things as large regional service centres, decentralized City services and other community services may need to be examined for possible location in Barlow. These are discussed in Section 2 - Land Use.

The primary land use to the east of the study area is industrial. This area is dealt with by the Southeast Policy Report.

1.4.3 City Servicing in the Area

1.4.3.1 Transportation Facilities

The principal components of the transportation systems serving the Barlow area are:

- Deerfoot Trail - proposed for completion from 17th Avenue to Glenmore Trail in 1980 and to Highway 901 by 1984.
- 24th Street East - proposed upgrading to major street status between Glenmore Trail and Deerfoot Trail with interchanges at each end as the need arises.
- 18th Street East as a major road through Riverbend commensurate with development. This facility is proposed to pass through the north half of Barlow and join up to 24th Street north of Deerfoot Trail.
- Primary collectors south of Deerfoot Trail - a primary collector road interconnecting major roads at either end will provide access to the residential area of Barlow south of Deerfoot Trail. **15P82** The major at the south end would connect with 130th Avenue South and at the north end with Deerfoot Trail.

The road system in the south portion of Barlow is designed to encourage through traffic to and from McKenzie to use Deerfoot Trail, while in the north portion it is assumed that commuters will use 18 Street from either Glenmore Trail or Deerfoot Trail to gain access to the residential area.

Interim construction of Deerfoot Trail, with at-grade intersections at 24 Street, Barlow Trail, 130 Avenue and McKenzie Boulevard, will accommodate a population in Barlow up to 22,500. Residential development beyond this threshold should not be approved until Deerfoot Trail can be upgraded to freeway standard, particularly at 24 Street where a grade-separated interchange will be most urgently required.

15P82

1.4.3.2 Utilities Provision

Provision of water, storm and sanitary sewer services to Barlow is not expected to pose any great problems. The general manner of providing them is noted here, but a more detailed description can be found in Section 2 - Land Use.

- (a) Water - A 36 inch feeder main presently proposed to cross the Bow River at about Anderson Road would then traverse Barlow at about 114th Avenue to Barlow Trail, then north along Barlow Trail to eventually hook up to an existing 42 inch feeder main on Glenmore Trail. This facility would eventually be capable of serving Barlow and a much larger area to the east. Until this facility is included in the 5-year Capital Budget, however, development is constrained to the central part of Barlow.
- (b) Storm Sewers - One major system, the Shepard Trunk, is proposed through the southern portion of the area. The remainder of the area can be serviced by separate systems, outfalling to the Bow River.

- (c) Sanitary Sewers - An existing 48-inch trunk sewer, along the Bow River and the Barlow Area, will be providing service along the northern portion of the area. The southern portion will be serviced by a new sewer, connecting to the east side of the existing sanitary sewer syphon under the Bow River along 114 Avenue South.

1.4.3.3 School Related Policy

Joint Use Sites for community and school uses will be provided in the normal manner out of municipal/school reserve. Construction of facilities may be several years away and residents are advised that students will be bussed to schools with spare capacity.

The provision of major educational/recreation centres has been dealt with in the Southeast Policy Report. As it affects Barlow, one such centre, which may include senior high schools, may be located at the *northwest quadrant of Deerfoot Trail and 130 Avenue SE.* **15P82** Other locations for this facility are also being investigated.

15P82

2. LAND USE

2.1 INTRODUCTION

The Barlow Area Structure Plan encompasses lands along the east side of the Bow River between Riverbend and McKenzie (see Map 1 - Location). The area is on average about 3 miles long and about ½ mile wide. The Plan covers about 1,580 acres (639 hectares). It is approximately 8 miles (12.9 kilometres) from Downtown at the north end. Parts of the area then are, compared to other new development areas in the city, relatively close to Downtown. The transportation system in place or proposed in the Southeast makes Barlow accessible to many parts of the city. However, existing traffic from the Southeast and that likely to be generated when Riverbend and McKenzie are developed means that the transportation network feeding into Downtown will be at capacity. This constraint has been dealt with in Section 1.4.3.

As can be seen in Map 2 - Land Use, Deerfoot Trail bisects Barlow into two distinct areas, so much of this plan will need to specifically address one area or the other. These will be referred to as the north or south sector of Barlow. Consideration of some aspects of the plan will, however, cover both the sectors (e.g. treatment of escarpments or the River Valley).

Particularly noteworthy is the fact that this area joins together, as a continuous band of development, two planned communities, Riverbend and McKenzie, which are relatively isolated. **15P82, text deleted 18P94**

2.2 THE LAND USE COMPONENTS

Barlow will comprise several major land uses which are listed below:

- (a) Residential - primarily suburban in nature - about 1,400 acres (567 hectares). **15P82**
- (b) Light Industrial - located between 18th and 24th Street East - 279 acres (112.9 hectares).
- (c) Deleted **15P82**
- (c) Open Space along the Bow River - primarily floodway and regional park space - 240 acres (105 hectares).

2.3 RESIDENTIAL LAND USE

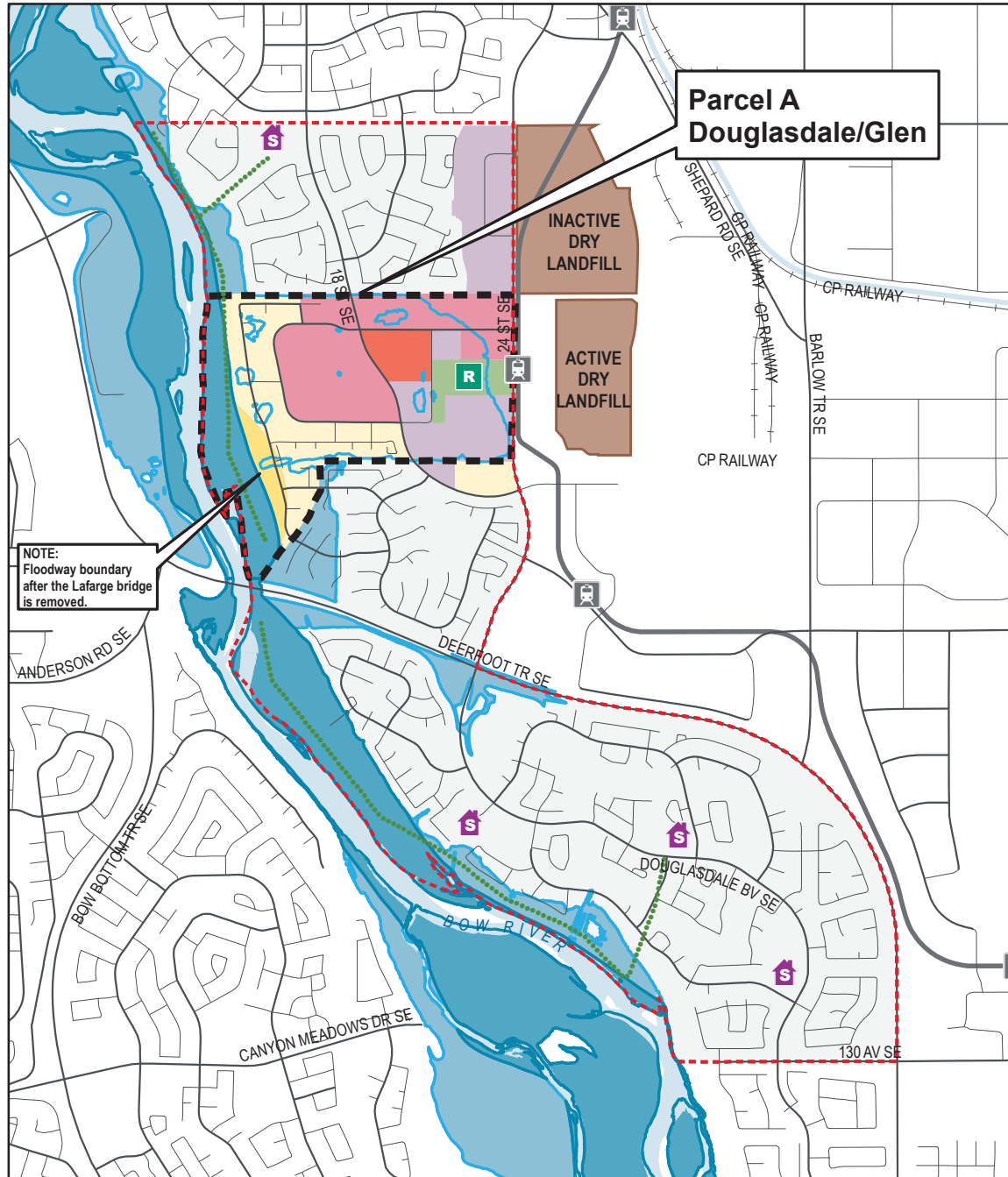
Approximately 1,400 gross acres (567 hectares) of land are designated on the Land Use Plan (see Map 2) for residential and associated uses (reserve lands, roads, utilities, commercial and institutional uses). **15P82**

Barlow has been divided into two parts for purposes of discussing certain aspects of residential development. Deerfoot Trail will be the dividing line between the two sectors. When seen this way, the north sector relates better to Riverbend to the north than the south sector, which relates better to McKenzie south of it. An industrial component east of 18th Street is dealt with as part of the discussion of the entire study area.

Barlow ASP

Map 2

Land Use



- Municipal/School Reserve
- Recreation Facility
- Proposed LRT Station
- Pedestrian/Bicycle Path System
- Parcel A (Douglasdale/Glen)
- Proposed LRT Alignment
- Commercial
- Heavy Industrial Area
- High Standard Light Industrial Area
- Office Park High Standard Light Industrial
- Park
- Residential
- Special Study Area Future Residential
- Land Fill Area
- Flood Fringe
- Floodway
- Plan Area

Approved: 10P80
Amended: 26P2019

The north area, north of Deerfoot Trail, consists of 625 acres (253 hectares), excluding the industrial sector. Major land uses in this area include residential, industrial and high standard light industrial, commercial and open space.

15P82, 14P2006

The south sector, south and west of Deerfoot Trail, encompasses about 940 acres (375 hectares). **15P82** Again, a major land use in this area, aside from the residential, is open space. The proposed Calgary River Valleys Plan and the Parks/Recreation Department have suggested a regional park facility of about 150 acres (61 hectares) just south of Deerfoot Trail, along the Bow River. This land use plus about 35 acres (15 hectares) of floodway south of that would reduce the developable portion of the south area from 940 acres (375 hectares) to about 820 acres (332 hectares). **15P82** Thus, in total, some 1,400 acres (565 hectares) are available for residential and associated uses. **15P82** This excludes 280 acres (112.9 hectares) east of 18th Street, which have been set aside for industrial purposes.

The ultimate layout and design of residential areas will be finalized for Barlow at the outline plan stage. As noted earlier, however, development of Barlow should be sensitive to the following factors:

- the excellent views to the west,
- the proximity of development to the Bow River and open spaces along it,
- the nearness of heavy industry and potential light industry in the eastern part of the area,
- adjacent development in Riverbend and McKenzie,
- the impact of Deerfoot Trail.

While the specific distribution of residential densities throughout Barlow will be established in accordance with the above factors and the general locational principles set out in the Calgary General Municipal Plan, this Area Structure Plan determines the overall density to be permitted.

The average residential density within the Barlow area shall be within the range of 5 to 6 units per gross acre (12.3 to 14.8 units per hectare). Assuming an occupancy rate of 3 persons per dwelling, and a total residential area of 1,400 acres (567 hectares), the population in Barlow is anticipated to be between 21,000 and 25,000 people.

15P82, 18P94

There are exceptions to the residential density policy, however. Considering the extent of suitable developable residential lands remaining in the Barlow ASP area, the allowable density within Parcel A (Douglasdale/Glen) as shown on Map 2 - Land Use, of 15 units per gross acre (6.07 units per hectare) is considered appropriate.

14P2006

2.4 OPEN SPACE AND RESERVE LANDS

2.4.1 Open Space

In developments north and south of Barlow, the Bow River Valley is the most significant open space feature. It will constitute the major open space component. This one open space component comprises environmental reserve and lands identified through the proposed Calgary River Valleys Plan and the City Parks/Recreation open space requirements. The policies of the above deal with important natural features, development setbacks from escarpments and rivers, continuation of trail development throughout the city, the preservation of major undeveloped escarpments and the location of municipal reserve.

Application of these policies in Barlow will result in:

- *a natural environment park south of Deerfoot Trail, adjacent to and including the floodway of the Bow River (see Map 2 - Land Use). The final boundaries of this park should be looked at in the context of a master plan for the park, and shall be determined either before or at the time of outline plan approval.* **15P82**
- *a 20 acre (8 hectare) passive recreational area identified by the Calgary River Valleys Plan (within the environmental reserve area), north of Deerfoot Trail along the Bow River (see Map 2 - Land Use).*

- about 15 acres (6 hectares) of land north of the above, contained within the floodway, and therefore automatically undevelopable.

2.4.2 Recreation Facilities

22P2012

The Parks/Recreation Department, in conjunction with the School Boards, provides major education/recreation complexes on the basis of one for every 75,000-100,000 population. Approval of the Barlow area does not bring the total population in this sector to the level needed. However, future development east of McKenzie as noted in the amended Calgary Plan does. The Southeast Policy Report has suggested that sites for a major education/recreation facility be set aside at the northeast corner of Deerfoot Trail and 24th Street and in an area east of McKenzie. *However, the former site is no longer considered to be appropriate for this purpose, and instead a site in the northwest quadrant of the Deerfoot Trail/130 Avenue interchange is now being considered* **15P82**

A Recreation Facility, as identified on Map 2 will serve the recreational needs and interests of residents in the surrounding communities and the employees of the adjacent high quality industrial business park.

The Recreation Facility Site shall comprise approximately 6.68 hectares of municipal reserve and/or fee simple land that is configured to accommodate a multi-purpose recreation facility and its related facilities that may include, but

are not limited to, a library, supportive office or retail uses, community facilities, cultural uses, institutional uses, or other uses within the site that are deemed compatible and appropriate.

The Recreation Facility should:

- be designed to prioritize pedestrian environments and access;*
- be oriented towards the street to offer direct pedestrian access to the primary entrance from the sidewalk;*
- be suitably integrated and connected with adjacent uses;*
- have strong pedestrian connectivity to the LRT Station;*
- connect to sidewalks and regional pathways, and be conveniently and directly accessible to pedestrians both within and adjacent to the site*
- be architecturally designed to integrate into the local identity established and to signify its importance as a community landmark;*
- be multi-purpose in design in order to respond to diverse needs, interests, levels of ability, skill and changing community lifestyle needs over time;*
- incorporate a comfortable and interesting outdoor social space to enhance the public realm;*

- integrate works of public art; and*
- be designed to allow for future intensification to higher densities or to add additional uses.*

Parking within the Recreation Facility Site should be located in a manner that does not compromise the pedestrian orientation of the area. Opportunities for reduced parking requirements, as well as structured or underground parking should be considered.

As the Recreation Facility Site is impacted by permanent and operating setbacks from adjacent landfills, site design must comply with regulations regarding these setbacks. **22P2012**

2.4.3 Environmental Reserve 22P2012

As noted in the previous section, much of what is environmental reserve in Barlow is in the River Valley area and has been identified either through the Calgary River Valleys Study or through the Parks/Recreation policy statements. There are other areas in Barlow which, because of their present state, are undevelopable (see Map 6). These are:

- the major escarpment through the middle of the south portion of Barlow.**
- an elongated hill in the southern most part of South Barlow known as the “sugar loaf,”**
- and an east-west escarpment between Riverbend and Barlow in the north.**

The last two of these (marked 3 on Map 6), while of a steepness sufficient to prohibit development, may be required to provide fill for gravel operations, or to provide proper slopes for orienting development towards the Bow River. However, as noted in Part 3 - Background Information, Section 3.1.3, these area should be investigated for potentially significant archaeological and fossil remains before development proceeds. Neither of these two areas are considered significant in terms of their environmental resources. The major escarpment through the middle of South Barlow does eventually abut the Bow River. This end of it will be dedicated as environmental reserve. Where it diverges away from the Bow River, it will need to be disturbed both for the internal road system in the south sector and by Deerfoot Trail. It is very important, however, that the interface at the junction of the floodway and the escarpment in the very south be sensitively treated. The City and the developer must work closely on this matter.

2.4.4 Municipal/School Reserve 22P2012

The Planning Act requires a maximum of 10 percent of land being subdivided to be dedicated to the municipality for municipal and school reserves. In the case of Barlow, this amounts to about 140 acres (56.5 hectares) in the residential area. 15P82

The Site Planning Sub-Committee has identified the need for the following school and community reserve facilities in Barlow:

(i) the North Sector

- one 12 acre (4.9 hectare) joint-use site for a public school, half of which will be accommodated in Riverbend;
- deleted 14P2006
- one 18 acre (7 hectare) joint use site for a public school.

(ii) the South Sector

- one 10 acre (4 hectare) joint-use site for a public school;
- one 9 acre (3.6 hectare) joint-use site for a separate school;
- one 18 acre (7 hectare) joint-use site for two public schools. 15P82

The Sub-Committee suggested that some of these facilities may be grouped together to take advantage of easier maintenance and larger open spaces. Text deleted 15P82, 14P2006

All of the joint-use site locations are approximate and may be revised at the Outline Plan stage.

With the above facilities accounted for, most of the municipal/school reserve is used up. Tot-lots also need to be provided on the basis of one tot-lot per 40 acres (16 hectares) of developable land. 17.5 acres (7 hectares) would be required for tot-lot provision. 15P82 Tot-lots should be

carefully located and designed and of a size large enough to accommodate both passive recreational use as well as safe creative play by pre-school children (*i.e., minimum 0.5 acre*). **15P82** These uses utilize all of the municipal/school reserve in the north and south sector. The disposition of the reserve associated with the industrial area (about 28 acres - 11.3 hectares) will be determined at the outline plan stage through negotiation between The City and the developers.

Two possibilities for the use of this land are the establishment of an athletic park in the industrial area or to transfer the reserve (or part of it) to areas deemed as appropriate additional open space along the river.

2.4.5 Pedestrian-Bicycle Path System 22P2012

A pedestrian-bicycle path system is indicated on Map 2 - Land Use linking the major community open space systems. It is classified as a mode of transportation and is, therefore, generally accommodated as part of the 30 percent road and utility dedication except where passing through open spaces, in which case, it is part of the open space plan.

2.5 COMMERCIAL/OFFICE LAND USE

In the context of the Southeast Policy Report, commercial needs for the entire population in this southeast sector are discussed. Given that there is a potential future population of over 100,000 people in this sector (Calgary General Municipal Plan), the Policy Report suggests major shopping facilities in the southeast sector - a regional shopping centre. This facility is not felt to be appropriate in Barlow itself. Alternative locations for it are discussed in the Southeast Policy Report.

However, Barlow is large enough to support commercial facilities of its own. The existence of sector centers both at Glenmore Trail/18th Street SE in Riverbend and at 146th Avenue South near Deerfoot Trail in McKenzie suggest that perhaps a third sector centre may be required to meet the shopping needs of Barlow residents. It is suggested that this site be located *within the northeast quadrant of the future Deerfoot Trail/24th Street interchange, which is beyond the limits of this Area Structure Plan and will be incorporated within the Southeast Industrial Area Structure Plan.* **15P82** It is suggested in this location to facilitate easy access by public transit and by car. The size, location and need for this Sector Centre will be dependent, to some extent, on the location of the major regional shopping centre proposed for the southeast. It is suggested that two or three 3-5 acre (1-2 hectares) sites be included in the outline plans for Barlow.

2.6 INDUSTRIAL LAND USE

The fact that Barlow abuts the largest and most heavily industrialized area in Calgary warrants consideration here. Ordinarily, the interface between residential and industrial areas would be a problem. This was partially alleviated in Riverbend through the provision of a small light industrial park to act as a buffer to heavier industry to the east. Subsequently, the Southeast Policy Report made recommendations as to appropriate land uses in a transition area between residential and heavy industrial areas. It is suggested that the area between 18th Street and 24th Street East in North Barlow be considered for high standard light industrial uses. Uses in this area will include such things as any office, business or commercial establishment, child care facilities, essential public services and public utilities. An exception to this designation is the existing Consolidated Concrete Ltd.'s plant which will remain in this area with an I-3 (heavy industrial) designation (see Map 2 - Land Use). This plant is not expected to have any deleterious effect on the residential area to the west.

In the case of the concrete plant being decommissioned, the site may be developed as an Activity Centre, with high standard light industrial uses as described above, subject to environmental site testing and the land being reclaimed to an acceptable standard. Applications in this area should take into consideration the Activity Centre Policies in Section 3.1 and 3.3 of the Municipal Development Plan.

29P2012

2.7 TRANSPORTATION

2.7.1 Area Transportation Components

2.7.1.1 Deerfoot Trail

A portion of Deerfoot Trail from Anderson Road to Barlow trail is expected to be completed by 1982. This facility would be the main access to and from the south portion of Barlow (south of Deerfoot Trail) and for a portion of the north part of Barlow (north of Deerfoot Trail). The timing of the construction of this facility then imposes a minor constraint on the staging of residential development in Barlow.

2.7.1.2 24th Street SE

The realignment of 24th Street East (see Map 3 - Area Transportation System) as a major street and the construction of an at-grade intersection at 24th Street and Deerfoot Trail will occur as part of the Deerfoot Trail construction program. While 24th Street is considered a predominantly industrial major, industrial and residential traffic will mix on 24th Street from about 114th Avenue south to Deerfoot Trail. This is necessary to get residential traffic onto Deerfoot Trail and to provide access to Deerfoot Trail to industrial traffic from the north in this sector.

2.7.2 Internal Transportation Components

The internal transportation system as presented in this document is conceptual and is subject to revision upon further analysis at the Outline Plan stage.

2.7.2.1 18th Street East

Just as 18th Street East will be the transportation spine for residents in Riverbend, it will also be the major access to and from the North Sector of Barlow (see Map 3). It will carry on down through the North Sector and connect up with 24th Street East, near 114th Avenue South. Upon leaving the south of Riverbend, 18th Street will curve to the east, as shown on Map 3 and follow the line delineating the residential from the light industrial area to the east of Barlow.

2.7.2.2 24th Street Major Stub and Primary Collector South of Deerfoot Trail

24th Street (see Map 3) will provide the major access to and from the south portion of Barlow and to the major open space along the Bow River in South Barlow. *This primary collector will serve as the main access route to and from the southern portion of Barlow, with Deerfoot Trail expected to carry the bulk of through traffic to and from the McKenzie area to the south.*

15P82

2.7.2.3 Collector Streets

The approximate locations of sufficient collector streets to serve Barlow have been noted on Map 3 as well. These are noted here so that land use components can be laid out in approximate locations. The collector system may change somewhat to better suit eventual grades and land uses.

2.7.3 Public Transit

Efficient transit operation in Barlow will require two systems to operate. One will operate in the North Sector of Barlow in conjunction with the service for Riverbend and for the light industrial area to the east of Barlow and will terminate at the Macleod Trail/61st Avenue South L.R.T. Station. The other will operate in South Barlow in conjunction with service to McKenzie. These systems will link up the collector systems in Riverbend, Barlow and McKenzie and will be determined at the Outline Plan stage. Initially this system will feed to the Anderson Road/Macleod Trail L.R.T. Station and eventually to the proposed L.R.T. line along Highway 901.

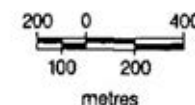
Barlow ASP

Map No. 3 TRANSPORTATION SYSTEM

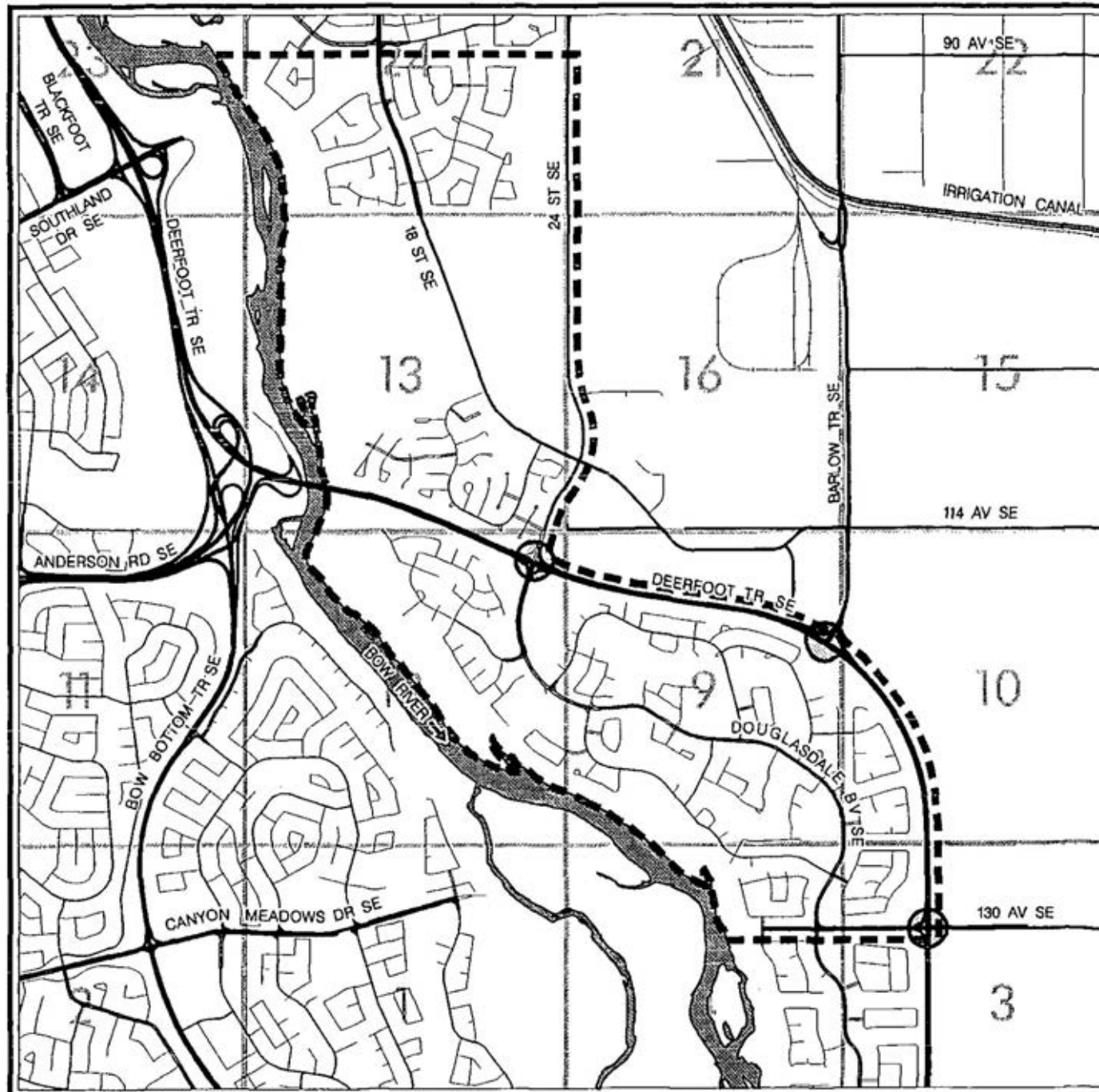
LEGEND

- Expressway
- Major Road
- Collector Road
- Minor Road
- Interchange
- - - ASP Boundary

June 1980



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PLANNING & BUILDING DEPARTMENT
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DATE PLOTTED: 5-MAR-1988



2.8 UTILITIES

Provision of City utilities (water, storm and sanitary sewers) does not pose any serious constraint to development in Barlow. The precise method of providing these and other utilities is noted.

2.8.1 Sanitary Sewer Service

Sanitary sewage from Barlow will be carried to the Fish Creek Sewage Treatment Plant by the existing and proposed sanitary trunk, shown on Map #4. The proposed trunk shown will be constructed by the City on an acreage assessment basis.

2.8.2 Storm Sewer Service

Storm sewers servicing the southern portion of the area, will drain to a new outfall to be built as part of the Shepard Storm Trunk. The northern portion of outfalling to the Bow River. The size and location of these systems will be established by consultations between the City of Calgary and Alberta Environment. The City proposes to construct a storm sewer acreage assessment trunk through the Barlow Sector as shown on Map #4.

2.8.3 Water Servicing

The developers of Barlow will be responsible for extending the distribution systems from existing and proposed feeder mains as development occurs. A final location of water mains will be dependent upon the street pattern developed.

Barlow ASP

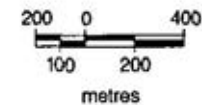
Map No. 4

DEEP UTILITIES

LEGEND

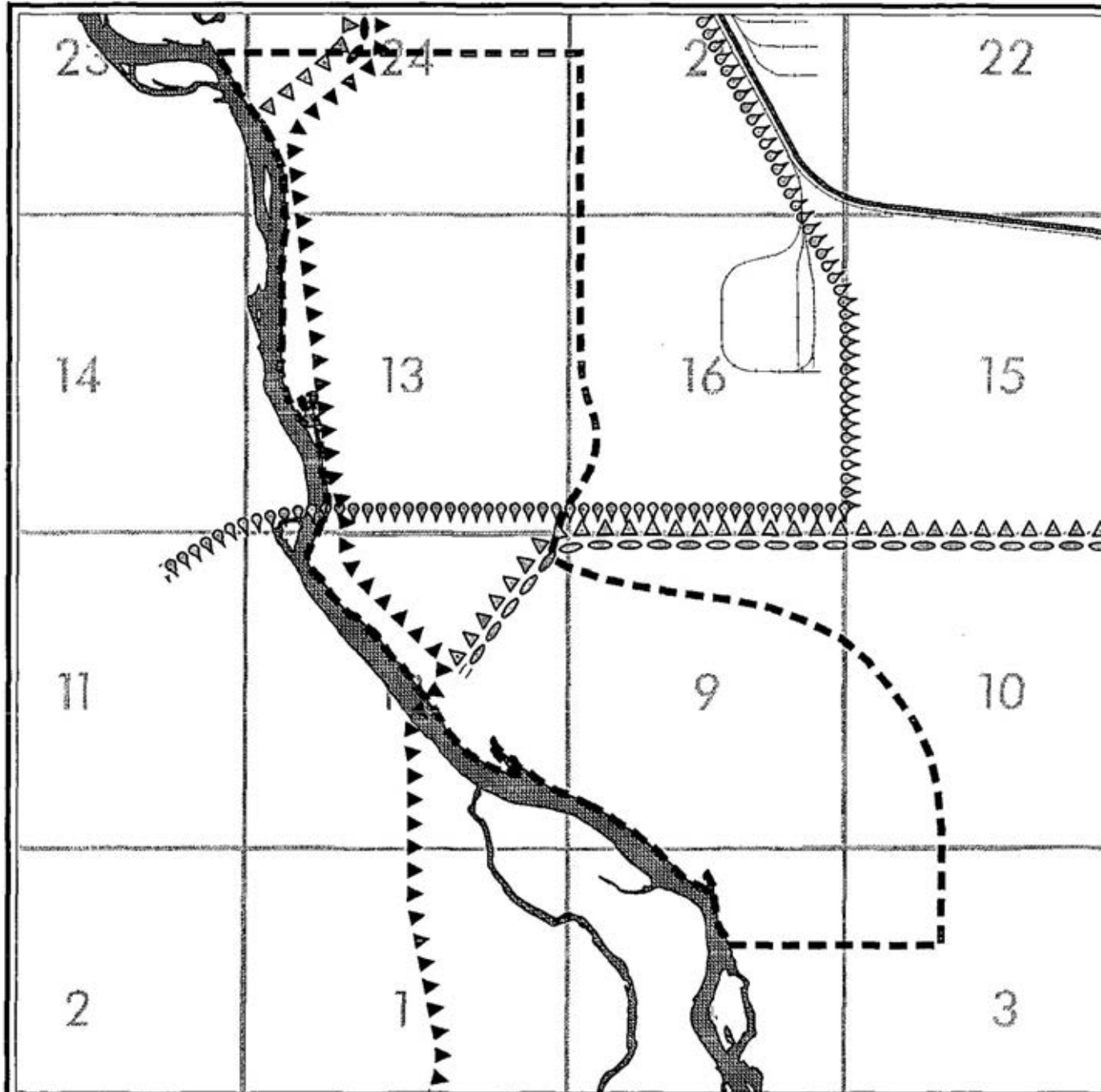
- Existing Water Main
- Proposed Water Main
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Sanitary Sewer
- Proposed Sanitary Sewer
- ASP Boundary

June 1980



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Barlow Area Structure Plan

2.8.4 Natural Gas Service

Natural gas will be supplied to Barlow by Canadian Western Natural Gas Company.

The Barlow area will be serviced by a major gas line (in the 323.9 mm to the 406.4 mm size range) extending from Riverbend in the north and from McKenzie in the south (see Map 5). The sequencing of development in Barlow would, therefore, be best from the north and south borders toward the middle, for natural gas servicing purposes. If rights-of-way can be provided through the northern and southern edges of Barlow prior to their development, then the middle portion could develop earlier. Natural gas can be provided with about a two month minimum lead time for distribution mains.

There are three existing high pressure natural gas lines within the boundaries of the subject area, as indicated on Map 5, which supply gas to gravel extraction and crushing operations and the C.I.L. plant. Until such time as the operation of the gravel extraction and the C.I.L. plant operation cease, and the high pressure lines are subsequently abandoned and removed, Canadian Western must enforce a 15.24 m setback from each high pressure line to any habitable buildings. Any relocation or alteration to any of the high pressure lines prior to abandonment will be entirely at the developer's expense.

2.8.5 Telephone Service

Telephone service to Barlow will come from the north in the form of an underground conduit located in the widened Barlow Trail alignment. Residents of Barlow will be part of the Ogden exchange and serviced from its location at 40th Street and 90th Avenue SE.

2.8.6 Electric System Service

Electric service to this area will be provided through the City Electric System.

Five 13.2 KV feeders will be required to service the subdivision, *three* north and two south from #32 Substation as shown on Map 5 **15P82**. The two south feeders are spaced to give coverage to the entire south portion of Barlow. The *three* north feeders will follow the existing and partially existing alignments. **15P82 Sentence deleted 15P82**

A 138 KV overhead line exists beside the existing 13.2 KV line just noted above and carries on down beside the Bow River in the south part of Barlow down to McKenzie (see Map 5). Its present "H" frame type structures are incompatible with residential development and major road rights-of-way. If relocated to single pole structures on the side of the relocated 18th Street, a 30 foot blow-out easement would be required on the property side of the line. The structures themselves are still somewhat unattractive. There is a possibility of moving this line completely to the 24th Street alignment. The costs of either move would need to be analyzed before a decision is made. Smaller easements are also required for the four 13.2 KV feeders mentioned earlier.

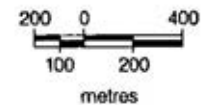
Barlow ASP

Map No. 5 SHALLOW UTILITIES

LEGEND

- ◆◆◆◆ Proposed Gas Main
- ◆◆ Existing High Pressure Line
- ◆◆ Private Existing High Pressure Lines
- ***** Existing 13.2 KV Line
- ***** Proposed 13.2 KV Line
- ***** Existing 138 KV Line
- 32 Substation
- - - ASP Boundary

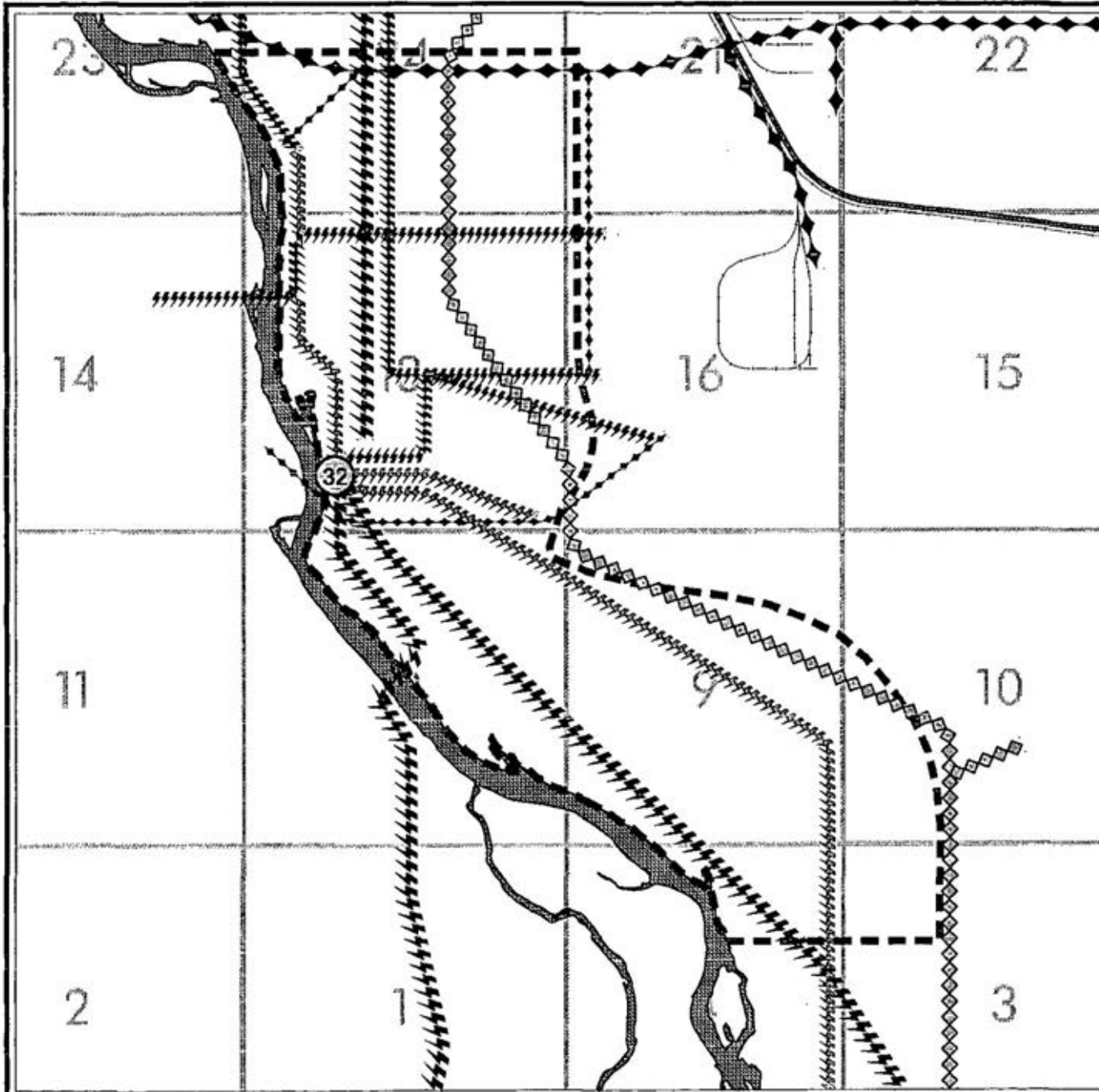
June 1980



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Workplan/plan/barlow/02.dgn

DATE PLOTTED: 4-MAR-1998



2.9 COMMUNITY SERVICES

The population envisaged for Barlow and that already approved in Riverbend and McKenzie, plus possible future residential development east of McKenzie, warrant the provision of many community services in this development sector. Several of these services will need to be located in Barlow. They are noted in Section 3.2. The provision of these services does not, however, warrant the establishment of a Decentralized City Services Site in Barlow such as that proposed at the Anderson Road/Macleod Trail L.R.T. Station site.

Some of these services may be able to share facilities in the future development areas south of Barlow. For example, the major Educational/Recreational Joint Use Sites suggested in the Southeast Policy Report to serve the residential population in the entire southeast sector, may also serve Social Service, Planning Department, Health and Library decentralized needs for an area around that facility.

Insofar as a local community facility is concerned, the Planning Department will negotiate an acreage assessment with the developers in this area for the purpose of establishing a fund for the construction of Community Halls and associated sports facilities. Details of this fund are noted in Section 3.2.7.

2.10 DESIGN COMPONENTS OF BARLOW

Given the above noted physical components which together form the basis for developing the area, it now becomes important to provide some guidelines for designing Barlow to take best advantage of them. These are noted here:

- (i) Overall, there should be an attempt to get over the impression of the area as an industrial sector, undesirable for residential development. To do this, the community should be buffered and oriented away from the industrial segment as much as possible. Further, the developers may wish to change the name of the area or segments of it at the Outline Plan stage.
- (ii) The excellent views to the south and west and the proximity of development to the Bow River and open spaces along it should be exploited fully. While views are not so unique in Calgary, they have not always been fully utilized. With the orientation of the land in Barlow and the Outline Plan Requirement (Section 3.3) of attention to energy conservation, this area could be very practically designed. This orientation would also result in excellent views of the Bow River and open spaces along it. As noted in the Riverbend Area Structure, wide open views should result in a feeling of spaciousness which would allow innovative small lot, zero lot line and multi-family housing which does not result in a sense of overcrowding. This would suggest that apart from where

higher densities might usually be located, locations should be entertained near the river and open space where they could make good use of these amenities and not obstruct views. *deleted* **14P2006**

The maintenance of these views should also avoid feelings of higher densities being a barrier to spaces beyond. *In areas shown as Parcel A (Douglasdale/Glen) street-end views to the river shall be maintained.* **14P2006**

- (iii) Not only should the views of these open spaces be exploited, but the relative closeness of all parts of Barlow to the river and open spaces should be as well. Trail systems to the river should be examined as should a variety of activities on and along the river.
- (iv) The Deerfoot Trail will act as a real and perceived barrier to residents of the north and south portions of Barlow. As such, the respective developers are encouraged to develop the north sector in concert with the development in Riverbend to the north and the south sector with the McKenzie area. The only links between the two areas will be via major streets or the pedestrian/ bicycle path system (see Map 2).
- (v) In areas shown as Parcel A (Douglasdale/ Glen), careful consideration should be given to the design of new housing adjacent to the office park and industrial areas to ensure that an appropriate edge

condition is established and that a high standard of residential amenity can be achieved.

- (vi) Crime Prevention through Environmental Design (CPTED) principles will be applied to all development in the Barlow Plan Area. **14P2006**

As noted in Part 3 - Background Information, the Barlow area is comprised of several landscape units. Most of Barlow is located on the Bow River floodplain and in the old Ogden channel. However, the gravel extraction industries in the north and the grades for development near Deerfoot Trail will mean that much of the area is open to reworking. It is suggested that the north sector be gradually graded from 24th Street to the open space and the river to the west. When this regrading is being discussed, consideration should also be given to further delineating the light industrial area from the residential area through differing grades. Most of the south portion of Barlow is on upland plains and should not be disturbed except where access to other parts of Barlow is required.

2.11 SEQUENCE OF DEVELOPMENT

There are a number of factors to consider in determining a sequence of development in Barlow:

- the timing of the relocation of the C.I.L. explosives plant,
- natural gas servicing may be easier to some parts of Barlow than others,

- the maintenance of a 15.24 m setback from high pressure gas lines serving gravel extraction and C.I.L. operations until these lines are abandoned and removed,
- the area can be more efficiently served by telephone if it develops in a contiguous manner from the north,
- the continuation of the gravel extraction operation in North Barlow until this resource is exhausted,
- the construction of Deerfoot Trail through the central portion of Barlow,
- the provision of water service to the north part of the north sector may fall behind the central portion.

While these points could constrain immediate development in portions of Barlow, they are all subject to changing quickly. Therefore, it is recommended that these factors be reviewed at the Outline Plan stage to determine the time at which development in any particular part of Barlow can proceed.

A further constraint is imposed on those lands in Barlow owned by C.I.L. No outline plans will be approved for this portion of Barlow until Alberta Environment is satisfied that the area is suitable for residential development and the City receives certification of this from them.

2.12 FINANCIAL IMPLICATIONS

The City may incur some costs in developing this area beyond what would normally be required. In particular, these costs accrue to a portion of

the regional park, south of Deerfoot Trail, next to the Bow River. About 50 acres (20 hectares) of the 150 acre (61 hectares) park may need to be purchased by the City, since all municipal/school reserve will be required for local amenities.

The 50 acres (20 hectares) of additional land which may be required as part of the regional park would be purchased at an approximate cost of fifty thousand dollars per acre or, two million five hundred thousand dollars (1980 approximate prices provided by the City Land Department).

2.13 ENVIRONMENTAL REVIEW

- (i) *The ASP seeks to protect environmentally significant areas within the Bow River Floodway and Floodplain.*
- (ii) *Existing policies for erosion, sedimentation, brownfield remediation, and environmental measures already exist in Provincial and Municipal regulation and will be applied to Parcel A (Douglasdale/Glen). All development must comply with relevant legislation concerning environmental impacts and mitigation measures; and*
- (iii) *Future residential development within the area identified as a Special Study Area for Future Residential is subject to the disposition of the Canmore (Lafarge) Bridge, remediation, and any necessary Municipal and Provincial review and approvals confirming floodway location and suitability of this area for residential development.*

14P2006

3. BACKGROUND INFORMATION

3.1 AREA ENVIRONMENTAL FACTORS

3.1.1 Topographic Areas

The Barlow area is comprised of six landscape units (see Map 6):

- upland plain,
- valley escarpment,
- till ridges,
- Ogden channel,
- Bow River floodplain,
- Bow River floodway.

The till ridges and some of the valley escarpments will be modified by the backfilling practices of gravel operations in the north portion of the sector.

3.1.2 Vegetation

The north half of the North Sector in Barlow has been greatly disturbed by gravel extraction operations. One gravel pit, Standard General, is still in operation and will severely disturb almost all the vegetation on that site by 1983. An older worked-out pit south of this would have to be totally worked over to be acceptable for any other use. A great portion of the C.I.L. lands which comprise most of the rest of Barlow are undisturbed - especially along the Bow River. Vegetation in the remainder of this area consists primarily of a variety of grasses which do not appear to be particularly unique nor used by any significant animal species.

The banks of the Bow River support varied grasses and are well treed with mature species, predominantly cottonwood. This cover provides a wildlife habitat for a variety of urban tolerant species. The presence of this significant tree cover is recognized by the City and is dealt with in the Calgary River Valleys Plan.

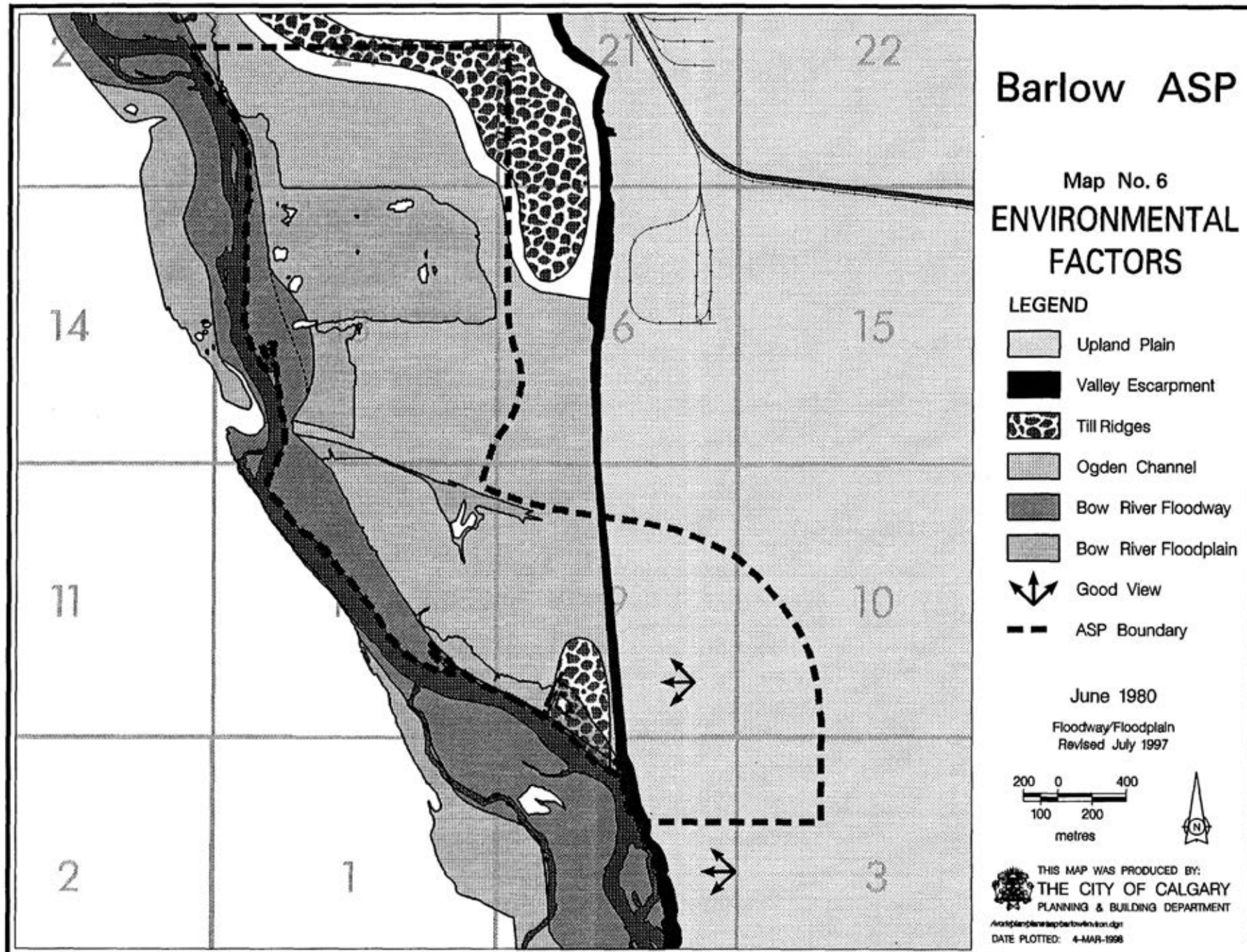
3.1.3 Archaeology

In accordance with provincial requirements, a preliminary archaeological study has been conducted in the study area. A total of 29 pre-European cultural sites have been discovered of which 15 sites require additional study to investigate the extent of their value and significance. Seven of these sites, probable campsite and firepits, are located on the prairie level above the river escarpment. The remainder lie on the floodplain and floodway areas. A buffalo kill site and related campsite is to be investigated adjacent to the river and the transformer station on C.I.L. property. The “sugar loaf” area offers the most potentially significant signs and may require major excavation.

Scattered paleontological remains are found in gravel extraction pits and should be collected by work supervisory personnel for delivery to Alberta Culture.

3.1.4 Views

While the views to the Bow River and the mountains beyond are better along the escarpments in Riverbend and McKenzie, the very southern tip of Barlow has excellent views (see Map 6). While the views in the rest of the area are not significant, orientation of the residential community towards the open spaces along the Bow River should provide a good portion of Barlow residents with better than average views.



3.2 COMMUNITY SERVICES

3.2.1 Decentralized City Services

Barlow will have some of its services provided from the proposed Decentralized City Services facility at the Anderson Road/Macleod Trail L.R.T. Station site. This facility will provide services such as taxes, licensing, assessment, electrical systems, planning, finance and parks. Other necessary services provided by the City will be located in or near to Barlow and will be provided as noted below.

3.2.2 Libraries

Given that the branch library facility in Ogden is being phased out, there will be no existing library facilities in this Southeast Sector. The Library Board has indicated the need for two branch libraries within the residential areas to be developed in the Southeast. It was suggested that one of these be located in Barlow. Leased space would be utilized to accomplish this. Such space could be found within neighbourhood shopping centres or the sector shopping centre. This could be determined when the population in the area is sufficient to warrant that service.

3.2.3 Police Services

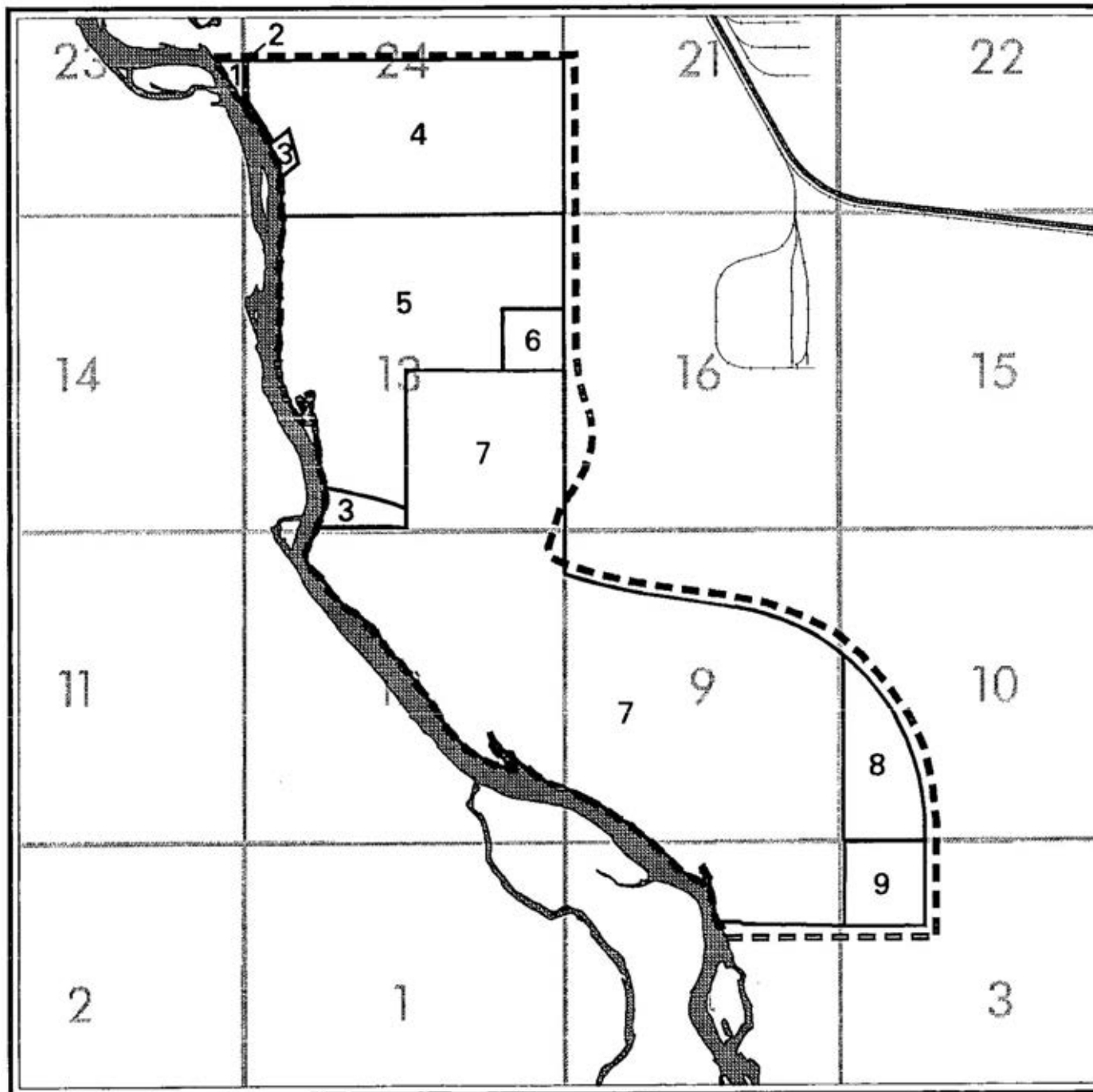
Police service to Barlow will be provided from the district office located at Macleod Trail and 90th Avenue SW which is to be completed in 1980. An additional district office is to be built in West Midnapore within the next several years and will also serve part of Barlow. A district office will not be built in the Southeast Sector unless development of areas further south of the present city limits occurs. This office would be located south of the present city limits and would require the purchase of about a 2 acre (0.8 hectares) site.

3.2.4 Fire Service

The criteria for the building of a fire station are:

- (a) a five minute response time,
- (b) about a one and one half mile radius,
- (c) one station per 25,000 population.

An existing station at 78th Avenue and 40th Street SE will not likely be adequate to serve development in Barlow. Once the population in Riverbend and Barlow is approved for over 20,000 population, a station site should be purchased in North Barlow. It would need to be between 3/4-1 acre (less than 1 hectare) in size. A station is already planned in the north of McKenzie. This station would adequately serve South Barlow.



Barlow ASP

Map No. 7

LAND OWNERSHIP

LEGEND

- 1 Lorne William Mackie
- 2 Burns Limited
- 3 The City Of Calgary
- 4 Genstar Construction Limited
- 5 Canfarge Limited
- 6 Consolidated Concrete Limited
- 7 Canadian Industries Limited
- 8 Shell Canada Limited
- 9 Simpson Ranching Limited
- ASP Boundary

Amended
1982 July 15 15P82
Approved
1980 June 10P80

200 0 400
100 200
metres



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DATE PLOTTED: 4-MAR-1998

3.2.5 Local Board of Health

The Local Board of Health has determined the need for a service facility in the Southeast Sector. This facility will likely be located in leased space in an office or shopping facility unless a more centralized City service facility is provided. It would need to be near good transit and road access facilities. The area will be serviced by existing facilities at South Centre and in Forest Lawn until the population living in Barlow is sufficient to warrant the facility in the area.

3.2.6 Social Services

While the Social Service Department has indicated a need for a facility in the Southeast Sector, it would not be located in Barlow, but rather, further south in the larger growth area envisaged in McKenzie and east of that. Until that time, Barlow will be served via existing facilities at South Centre.

3.2.6.1 Pre-School

Day care facilities will be required. There should also be early childhood services providing programs and space for kindergartens and nursery schools.

3.2.6.2 School and Teenage Programs

Recreation and athletic programs oriented to this age group should be provided in conjunction with the education facilities. A community facility should include a teenage drop-in centre when a need for this is demonstrated.

3.2.6.3 Adult Programs

Social services required for this group include individual and family counseling, family life education programs, etc.

3.2.7 Fund for Community Facilities

As noted in Section 2.9 a Fund is to be set up for the construction of a Community Association Hall and associated sports facilities. Further:

- (a) the acreage assessment be sufficient to afford a reasonable sized facility with sports amenities,
- (b) the Fund be turned over to the future Community Association upon election of a representative executive and the approval of a Development Scheme for the facilities by The City,
- (c) the Fund be used for capital purposes only,
- (d) the Community Association consult with the developers regarding the design of the facility.

3.3 OUTLINE PLAN REQUIREMENTS

Outline Plans must include the following information:

- (1) North Arrow.
- (2) Scale (no greater than 1:2000 metric).
- (3) Contours (minimum 5 feet interval or 1.0 metre interval).
- (4) Key plan showing relationship of outline plan to the McKenzie Area Structure Plan, and previous phases.
- (5) Entire road system showing category and carriage way/right-of-way dimension.
- (6) All roads designed are to have curbs and gutters as a minimum standard, preferably curbs and sidewalks.
- (7) Identify land purchase option agreement areas.
- (8) All reserves and identification as to type (e.g., MR, MSR, SR and ER. Relevant school boards having an interest in MSR and SR sites, where this information is known). Also identify location of any proposed community association facility.
- (9) Gross area of outline plan in imperial and metric units; areas, percentages of public dedication based upon area after any ER and Land Purchase dedications to be shown on plan.
- (10) Proposed utility layout and any existing utility lines including gas lines, pipelines and overhead power lines, etc.
- (11) Proposed land uses including densities in u.p.a. and u.p. ha.
- (12) Pedestrian/Bicycle systems.
- (13) Identify areas having specific features, including structures that may require individual attention in site design.
- (14) There is a need for a comprehensive report indicating the treatment of unique design features, the justification for specific land uses and an explanation of the subdivision concept and any other aspects requiring explanation. On DC sites an indication of reason for DC and specific guidelines proposed. On all commercial sites provide information on the proposed size of primary and secondary trading areas and proposed amount of gross leaseable commercial area.

- (15) Data sheet separate from statistics which must be shown ON THE PLAN.
- (16) Where unstable land exists, the Plan should show the top of slope line and the building setback lines determined from a Slope Stability Soils Report, undertaken by a qualified soils consultant.
- (17) Public facilities as identified in Area Structure Plan (e.g., firehalls, libraries, etc.).
- (18) Existing edge conditions/uses having an influence on the subdivision; include distance from features such as heavy industrial uses.
- (19) Setback provisions from pipelines and structures carrying, storing or regulating petroleum products.
- (20) Documentation of the possible future subdivision of abutting lands is required for analysis of commercial areas, joint use sites and transportation corridors.
- (21) Indicate ownership on boundaries and identify;
- (22) Prior to the approval of development for any portion of the area, an outline plan for the entire subdivision shall be submitted in accordance with the above provisions.
- (23) In a situation where over or under dedication of reserves in any outline plan or ownership area occurs, arrangements to ensure the provision of the reserves in the appropriate location shall be made to the satisfaction of C.P.C. prior to the approval of any of the outline plans involved.
- (24) Energy conservation is one of the criteria to be given serious consideration during the formulation of outline plans.
- (25) Noise attenuation for residential developments adjacent to major transportation facilities will be provided by the developer to the satisfaction of the Transportation Department.
- (26) Normally all roads in the study area with a standard of a major and above, are truck routes according to normal City policy. All truck routes are subject to revision at the outline plan stage, particularly with reference to the light industrial areas which may be unrestricted truck areas or have industrial collectors.