#### BYLAW 71-86

A BYLAW OF THE COUNTY OF STRATHCONA NO. 20 IN THE PROVINCE OF ALBERTA, FOR THE PURPOSE OF ADOPTING THE SOUTH OF WYE ROAD AREA REDEVELOPMENT PLAN.

The area within the Area Redevelopment Plan, comprising of approximately 20.8 hectares (51.41 acres), is located within a portion of the NE 21-52-23-W4 and a portion of the NW 22-52-23-W4.

NOW THEREFORE, the Council of the County of Strathcona No. 20, pursuant to the authority conferred upon it by The Planning Act, 1980, R.S.A., enacts as follows:

- This Bylaw be cited as the "South of Wye Road Area Redevelopment Plan".
- 2. Appendix "A" attached hereto and forming part of this Bylaw, entitled South of Wye Road Area Redevelopment Plan, is hereby adopted as the South of Wye Road Area Redevelopment Plan.

Read a first time this <u>23</u><sup>nd</sup> day of <u>leptember</u>, 1986. Read a second time this 14th day of October, 1986. Read a third time and finally passed this 14 th day of October , 1986.

Reeve



Bylaw 71-86

APPENDIX "A"



# SOUTH OF WYE ROAD AREA REDEVELOPMENT PLAN

October 1986

# BYLAW NO. 71-86 APPENDIX "A"

#### SOUTH OF WYE ROAD AREA REDEVELOPMENT PLAN

# PART NE% SECTION 21 and NW% SECTION 22-52-23-W4 COUNTY OF STRATHCONA

# PREPARED FOR: WYE GARDENS OWNERS GROUP

BY: STANLEY ASSOCIATES ENGINEERING LTD. AND THE PHOENIX GROUP CIVIL & EVNIRONMENTAL ENGINEERING CONSULTANTS LTD.

OCTOBER 1986

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#### 1.0 INTRODUCTION

#### 1.1 PURPOSE

The purpose of the South of Wye Road Area Redevelopment Plan is to present general objectives, descriptions and guidelines for future development of an arterial commercial strip along the south side of Wye Road for County Council consideration and approval. This proposed development area extends no more than 200 m (660 feet) south of Wye Road between the RDA and Ash Street.

#### 1.2 DEVELOPMENT INTENT

The South Wye Road strip as defined in this Plan is being proposed for appropriate commercial development because:

 Most commercial development in Sherwood Park has evolved in three basic forms; i) Town Centre (e.g. Eastgate area), ii) the Broadmoor Centre mixed use area, and iii) the strip commercial area along the north side of Wye Road between the RDA and Ash Street. The primary intent of this Plan is to complement the commercial uses along the north side of Wye Road for activities which; i) can not or should not be located in a Town Centre according to County policy, and ii) require a higher degree of visibility, accessibility and convenience not available in a multi-use area such as Broadmoor Centre.



2. Owing to the excellent visibility and access potential offered in the South Wye Road Plan area, the current undeveloped nature of this land is not recognized as its **highest and best use.** Alternatively, the positive marketing attributes of the site can begin to be enhanced through approval of this Plan for the benefit of Sherwood Park residents and the County as a whole.

#### 2.0 SITE DESCRIPTION

#### 2.1 LOCATION

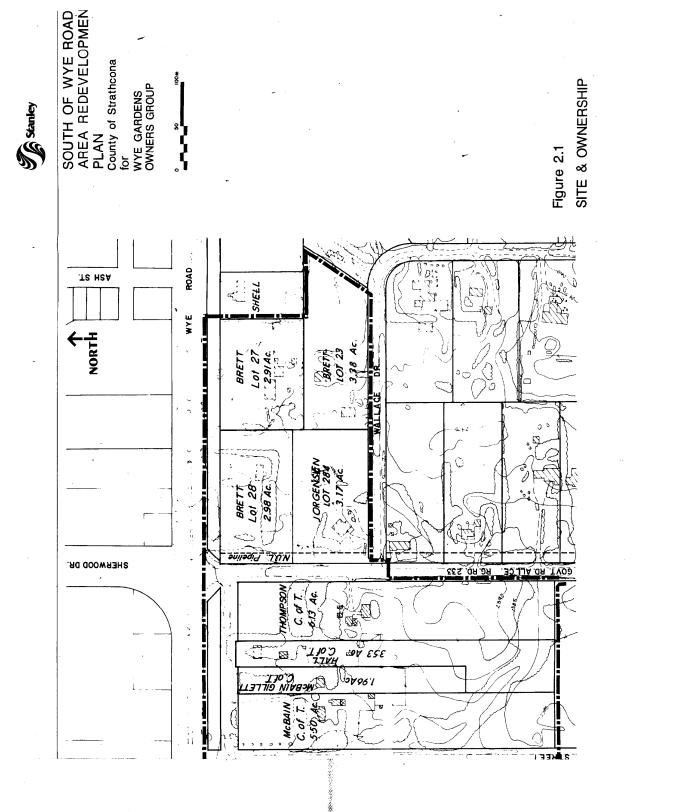
The proposed South Wye Road strip is located within portions of the NE% Sections 21 and NW% 22-52-23-W4 extending a maximum of 200 metres (660 feet) south of the Wye Road right-of-way. The area extends approximately 1,100 metres (3,600 feet) along the south side of Wye Road from the RDA to the west edge of the Shell Service Station lot as shown on Figure 2.1. This Area Redevelopment Plan site contains approximately 25.4 gross hectares (62.9 acres) of land including existing roads and rights-of-way.

#### 2.2 OWNERSHIP

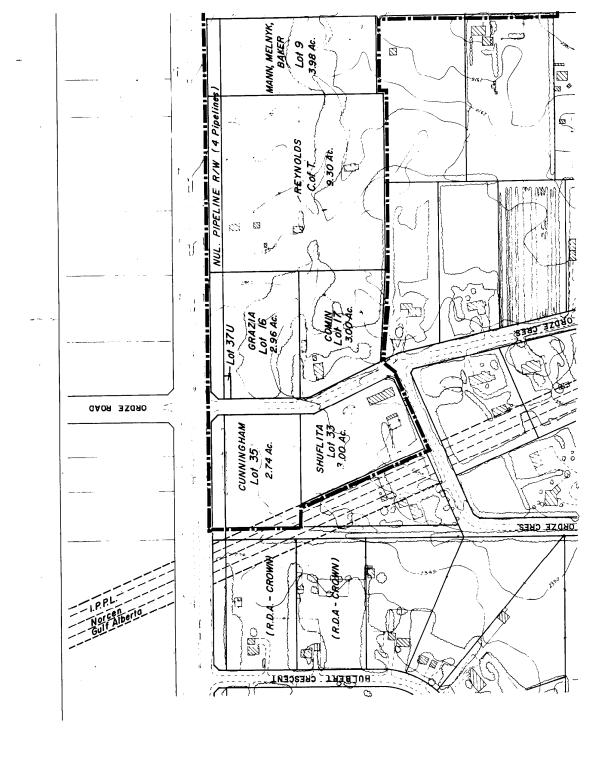
The entire Area Structure Plan site includes 14 separate parcels held under 11 registered ownerships. This Plan is being submitted on behalf of the registered owners within the area. This group owns 22.0 hectares (54.5 acres) or 86 percent of the total plan area.

The remainder of the Plan is registered either as Public Road Allowances (1.9 hectares) or utility right-of-way (1.5 hectares). These pipeline routes, plus those adjacent to the Plan site, are summarized as follows, and shown on Figure 2.1:

	Pipeline Company	Product	Size	Pressure
1.	IPPL	i) Products	20"	High (1200 psi)
		ii) Crude Oil	24"	High
		iii) Crude Oil	34"	High



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	Pipeline Company	Product	Size	Pressure
2.	NUL	Main Gas		
		Transmission		
		Lines parallel		
		to Wye Road	2 12"	High
			1 16"	High
			1 20"	High
3.	NUL	Intermediate		
		line parallel to		
		Range Road 233		
		Sherwood Drive	1%"	Medium
ŧ 4.	Norcen	Crude Oil	6"	High
+ 5.	Gulf Alberta	Crude Oil	12"	High

\* Adjacent to Site.

\*

These easements and rights-of-way are protected within the Plan by eliminating the routes from the net development area concept. All ownership parcels and pipeline routes are shown on Figure 2.1, and listed on Table 2.1.

# 2.3 EXISTING LAND USE

The vast majority of the Plan area is undeveloped land in association with the seven country residential homes found within the site. The only other intensive land use within the South Wye Road strip is the Shell Service Station at the extreme eastern end.

## 2.4 ADJACENT LAND USE

The Plan area has traditionally been part of the Ordze Park - Wye Road Gardens - Campbelltown Heights country residential subdivisions. However, residential parcels within this Area Structure Plan site are subjected to both the negative impacts and market attractions created by their Wye Road proximity. Therefore, only these parcels immediatley adjacent to Wye Road are being proposed for future commercial development.

The impacts of such development on surrounding country residential parcels has been separately addressed in the County's Socio-Economic Impact Study. Further components of the Area Structure Plan dealing with access, landscaping and development control are oriented specifically to minimizing or eliminating physical impacts on neighbouring lands.

# TABLE 2.1 SOUTH WYE ROAD OWNERSHIP LIST WITHIN AREA REDEVELOPMENT PLAN BOUNDARY

	Registered Owner	Description	Size
1.	J. J. and G. P. Cunningham	Lot 35, Plan 228 N.Y.	1.11 ha (2.74 acres)
2.	P. R. And E. Shuflita	Lot 33, Plan 228 N.Y.	1.21 ha (3.00 acres)
3.	E. and F. DeGrazia	Lot 16, Plan 228 N.Y.	1.19 ha (2.96 acres)
4.	F. and P. Comin	Lot 17, Plan 228, N.Y.	1.21 ha (3.00 acres)
5.	C. Reynolds	C. of T 842 004 959	3.76 ha (9.30 acres)
6.	M. Mann, Victor Melnyk and S. Baker	Lot 9, Plan 3784 B.K.	1.61 ha (3.98 acres)
7a.	M. McBain	Block 5 - 8, Plan 3784 B.K.	2.22 ha (5.50 acres)
7b <b>.</b>	M. McBain and D. Gillett (Executrices)	Block 6 - 8, Plan 3784 B.K.	0.79 ha (1.96 acres)
8.	G. H. and H. B.Hall	Block 5 - 8, Plan 3784 B.K.	1.43 ha (3.53 acres)
9.	A. J. and M. Thompson	Block 5 - 8, Plan 782 1399	2.48 ha (6.13 acres)
10a.	M. S. Brett	Lot 28, Plan 4382 M.C.	1.21 ha (2.98 acres)
10b <b>.</b>	M. S. Brett	Lot 27, Plan 963 M.C.	1.17 ha (2.91 acres)
10c.	M. S. Brett	Lot 23, Plan 4382 M.C.	1.36 ha (3.38 acres)
11.	R. Jorgensen	Lot 28A, Plan 512 R.S.	1.28 ha (3.17 acres)

#### SUB-TOTAL PRIVATE PARCELS

Public Roads

Rights-of-Way

22.03 ha (54.54 acres)

1.90 ha (4.71 acres)

1.50 ha (3.70 acres)

TOTAL ARP AREA25.43 ha(62.95 acres)

Note: metric/imperial conversion rounding has occurred.

#### 2.5 CONFORMITY TO EXISTING PLANS

First, this Plan conforms to Part 4.A.3.g. of the County's 1986 General Municipal Plan which provides:

"additional arterial commercial uses may be developed adjacent to the south side of Wye Road between the RDA and Ash Street."

Second, this Area Redevelopment Plan proposes that the South Wye Road strip be considered a part of the Sherwood Park Urban Service Area because of its servicing potential and commercial development attraction. Therefore, the Area Structure Plan conforms to the Urban Settlement and Land Use policies of the Redevelopment Metropolitan Regional Plan which states in part:

Policy 1.3 - Urban municipalities should provide for:

- a) the efficient use of land through infilling, rehabilitation and redevelopment of land at higher densities;
- b) make use of existing public services and capital facilities to promote economical provision of transportation facilities and utilities;

Policy 1.4 - Urban municipalities should provide for a balance of non-residential and residential growth to:

- a) strengthen their non-residential tax base, and
- b) provide the opportunity for their residents to live and work within the same municipality.

#### 3.0 ENVIRONMENTAL CONDITIONS

There are no natural constraints to development within the Area Redevelopment Plan site. Major elements of the environmental site conditions are noted below:

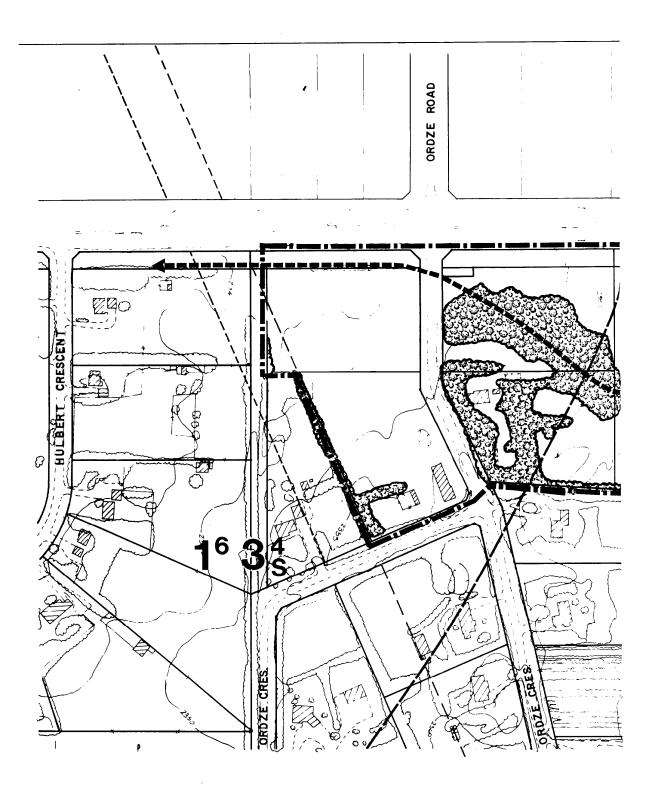
#### 3.1 TOPOGRAPHY

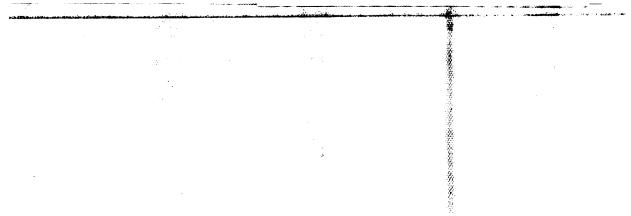
The overall relief of the area is undulating with a general slope from east to west parallel to Wye Road. The site elevations extend from 735 m (2,412 feet) at the east boundary down to 714 m (2,344 feet) at the western extreme, resulting in a roughly 1.8 percent grade across the site which is highly suited to development. This slope is also conducive to gravity sanitary sewer and stormwater flows in a naturally western direction.

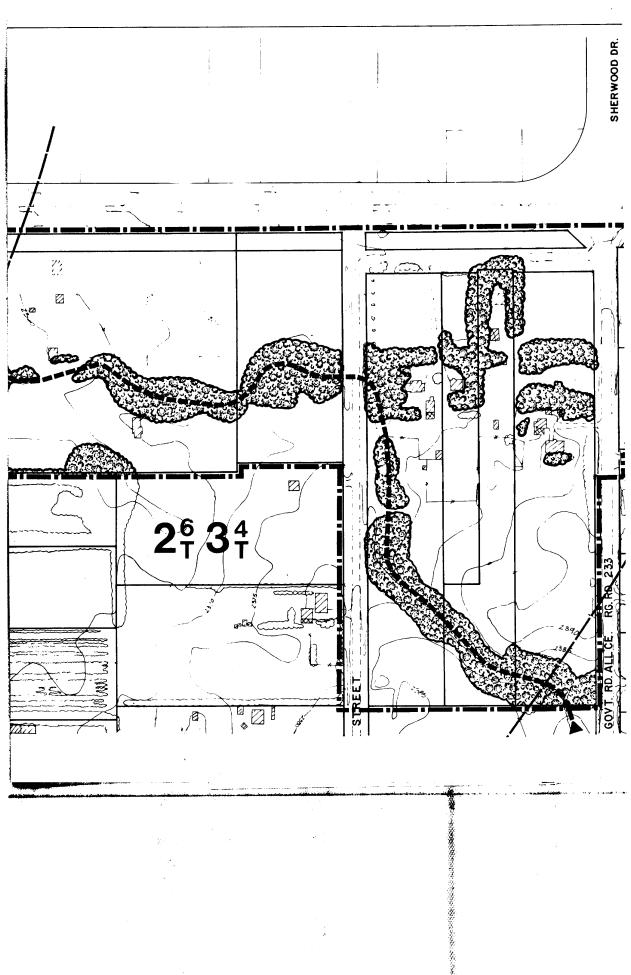
#### 3.2 DRAINAGE

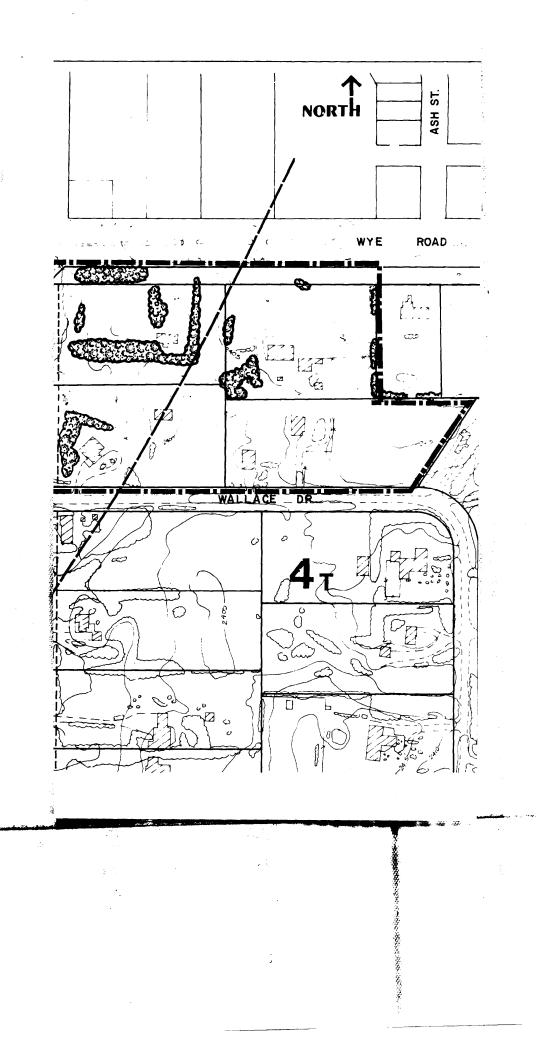
The Gold Bar Creek's intermittent streamcourse enters the site from the south some 200 m (650 feet) west of Sherwood Drive (Range Road 233) as shown on Figure 3.1. Most of this streamcourse in the vicinity of the site is poorly defined and disrupted owing to the pattern of country residential and roadway development. However, site grading as part of commercial lot and roadway development will allow improvement of this route on the plan site. As described in Section 7 of this Plan, the grading will create a re-aligned streamcourse along the south boundary of the study area, **thereby offering improved drainage for upstream lands**. Both this re-aligned streamcourse and an associated service road storm sewer will eventually flow under Wye Road and discharge into an existing 1,200 mm storm sewer to the north.

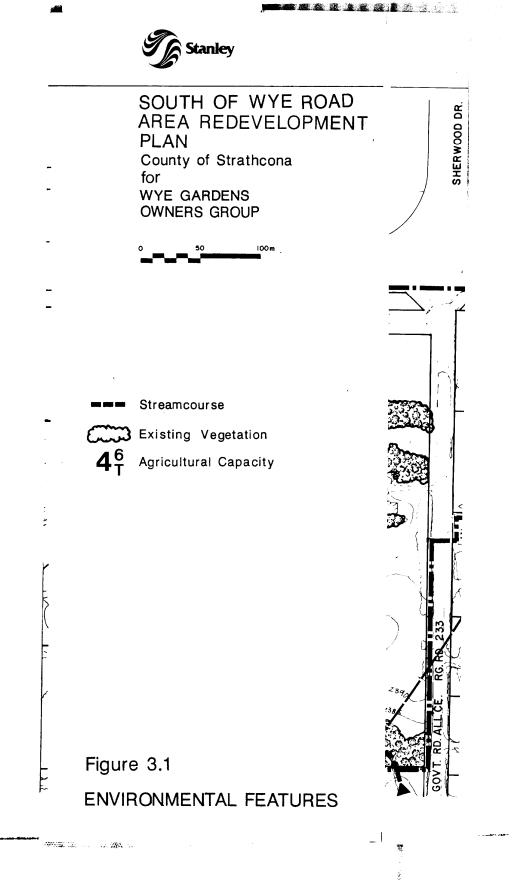
Original Copy of Attached Map is Available for Viewing in the Corporate Secretary's Department











# 3.3 VEGETATION

Existing site vegetation includes some hedgerows along residential entrance roads, and a natural wooded strip along the intermittent streamcourse (see Figure 3.1). The hedgerows contain polar, willows, aspen and a variety of woody shrubs. Willows are common along the streamcourse.

It appears that most natural vegetation on site is reaching biological maturity. In addition, the hedgerows and wooded streamcourse strip will probably be impacted by future site grading. Therefore, detailed preservation of this vegetation may be difficult, but unaffected tree stands and hedgerows can be identified for protection as site landscaping features where possible.

#### 3.4 SOILS

Virtually all of the Plan site involves underlain ground moraine covered with loam soils. Soils are also classified as 4T at the eastern extreme (severe agricultural limitations), 2T/3T in the central area (moderate to moderately severe agricultural limitations), and 1/3S at the western edge (none to moderately severe limitations) as shown on Figure 3.1.

# 4.0 TRANSPORTATION

# 4.1 WYE ROAD

## 4.1.1 Existing Operation

Wye Road will provide the main access/egress and market attraction capability for the Plan area. The route is designated as both a Secondary Highway (#630) and a Sherwood Park arterial.

The main purpose of this road is first to connect Highway 14 and the City of Edmonton with Sherwood Park (Range Road 233) and rural areas to the east. Within the Plan area the road also provides peripheral access to Sherwood Park itself via controlled intersections at Sherwood Drive and Ordze Road, and an uncontrolled collector intersection at Ash Street.

Wye Road west of Sherwood Drive currently handles approximately 30,000 vehicle trips per day, making it one of the highest travelled routes in the County. In fact, Wye Road exhibits more traffic than Baseline Road or Highway 21 according to the County's 1984 Transportation Study.

Wye Road is presently intersected by two points within the Plan area, namely at Ordze Cresent/Road and Sherwood Drive. Two additional median breaks between Sherwood Drive and Ash Street provide all-directional access to two residential lots. These median breaks will be eliminated as part of this proposed development.

#### 4.1.2 Future Operations

Wye Road is designated as a 6-lane Urban Service Area Arterial within the County Transportation Study. As such, it will continue to carry high volumes of traffic. Therefore, no additional Wye Road median breaks are proposed for the Plan area other than the existing Ordze Crescent and Sherwood Drive intersections. However, one limited access (right-in/right-out) point on Wye

Road is also proposed between Ordze Crescent and Sherwood Drive, and one limited access point between Sherwood Drive and Ash Street, to accommodate anticipated traffic movements expected to be generated by the proposed commercial development (see Traffic Impact Assessment – Separate Appendix).

#### 4.2 INTERNAL ROADS

#### 4.2.1 Existing Operation

Access is currently provided to and from the plan area via, i) Ordze Cresent, ii) Sherwood Drive (Range Road 233), and iii) a short Wye Road service road and internal street. Each road right-of-way is 20 metres (66 feet) in width, and provides specific access/egress from the Country Residential parcels to either Wye Road or Sherwood Drive.

#### 4.2.2 Future Operation

Several options for the future transportation system to serve the Plan and adjacent lands are reviewed in the separate Traffic Impact Assessment. Each relies on a parallel Wye Road service road as the major transportation feature, but offers variations to the service road alignment and existing streets in order to minimize commercial traffic impacts.

#### 4.3 RECOMMENDED ROADWAY CONCEPT

As previously noted in the Development Intent portion of this Plan, one major objective of the South Wye Road project is to minimize or eliminate any physical impacts on neighbouring residents. This can be accomplished in part by an internal roadway system within the Plan area which addresses the advantages and disadvantages of each basic transportation option. The resulting roadway concept is shown on Figure 4.1, described in the separate Traffic Impact Assessment and summarized as follows:

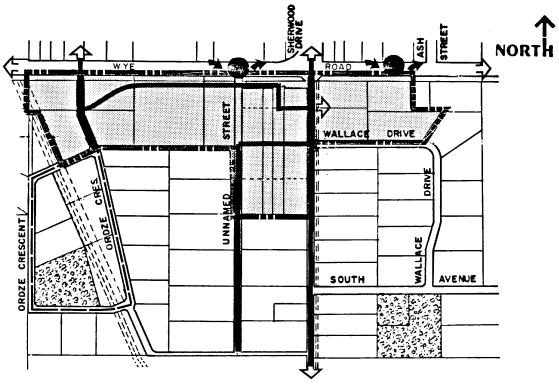
- 20 metre (66 feet) wide service road extending from Ordze Crescent to Sherwood Drive (Range Road 233) including the existing partial service road;
- Ordze Cresent remains as residential/commercial roadway, but signed "for local traffic only" as it exits the Plan area;
- the portion of the unnamed residential street within the Plan area is closed, and a new Sherwood Drive (Range Road 233) access road is constructed along the south plan boundary to align with Wallace Drive to the east.
- two limited access points (right-in/right-out) on Wye Road are proposed, one between Ordze Crescent and Sherwood Drive (Range Road 233), and one east of Sherwood Drive to serve Lots 27 and 28. An additional limited access point located between Ordze Crescent and Sherwood Drive, thereby creating 225 metre (740 feet) equal spacing, <u>may</u> be considered at the detailed design and Development Agreement stages based on further, specific traffic impact assessment.

This recommended roadway concept best satisfies the objective of minimum residential impact by directing a significant portion of residential traffic away from the commercial area yet retaining equally convenient commercial and residential access.

#### 4.4 TRUCK ROUTES

Only the Wye Road service road will be designated as a truck route for commercial deliveries and shipments. Any commercial operations (Arterial Commercial) which may front onto Ordze Cresent or Sherwood Drive will be required to include a delivery lane from the service road to avoid any truck traffic south of the service road.





LEGEND

For Local Traffic Only
 ■ ● Limited Access Points
 Service Road

Figure 4.1

RECOMMENDED ROADWAY CONCEPT

#### 4.5 PEDESTRIAN MOVEMENT

Pedestrian movement to, from and within the proposed arterial commercial area will be influenced by the location, width and status of Wye Road. Residents in the country residential parcels to the south will be able to walk to the area along their individual local roadways. For those north of Wye Road, the pedestrian crossing points will be at Ordze Road, Sherwood Drive and Ash Street. Signals are currently in place at Ordze Road and Sherwood Drive to control and facilitate this pedestrian crossing.

Once on the south side of Wye Road, these pedestrians can use the proposed walkway along the Northwestern Utilities Ltd. right-of-way to access specific parts of the commercial area, as well as internal sidewalks to be designed as part of site and parking lot design.

Owing to the arterial commercial vehicle-oriented nature of the South Wye Road area, pedestrian access demand to the area is estimated to be very small.

#### 4.6 TRANSIT ACCESS

Should bus service be extended to the South Wye Road commercial area, it would normally be provided along the proposed service road. No transit stops on Wye Road itself would then be required. Buses will access the area from Ordze Crescent and Sherwood Drive (Range Road 233) at the service road intersections.

Bus stops will be provided at an appropriate number of locations along the service road. Such stops will be coordinated with the planning of specific developments and driveway access points.

### 5.0 DEVELOPMENT CONCEPT

# 5.1 DEVELOPMENT DETERMINANTS

There are six major site issues which have and will continue to influence the development of the South Wye Road area. These determinants are described as follows:

- 1. A primary objective of this Area Redevelopment Plan is to create development guidelines and patterns which will minimize any disruption on residences to the south. Therefore, proposed land uses are limited to those that are found to be **compatible** with residential development based on similar experiences in Sherwood Park (e.g. North Wye Road and Village-on-the-Lake) and other municipalities.
- 2. The proximity of the site to Wye Road creates a strong market opportunity for **HIGH QUALITY** development on this route. Such development will require a high degree of exposure and will cater primarily to the travelling public as the major source of trade, as opposed to land uses which offer a low degree of business contact.

It is recognized that offices, institutions (eg. banks) and special commercial attractions (eg. movie theatre) may not be permissible within the Plan area since new County policies on commercial development will direct such uses to the Town Centres.

3. Since Wye Road is an important "ENTRANCE" to Sherwood Park, the proposed development must be of a high visual and operational quality. This quality will also optimize the municipal revenue capability of the site (refer to Socio-Economic Impact Assessment). Such quality will be enhanced by requiring that <u>all</u> future uses front on Wye Road and the proposed parallel service road, and by establishing a strict set of

architectural/landscaping guidelines for the area (see Section 6). Such guidelines will have to be followed, to the County's satisfaction, as a condition of issuance of any Development or Building Permit:

The market visibility and convenient access offered by the site will be attractive to "high order" uses. Therefore, it is suggested that only "quality" developments will develop in this location.

- 4. The financial and development limitations which will be placed on future uses within the Plan area require that maximum land use FLEXIBILITY should be encouraged, within the parameters of this Plan and other site planning policies (e.g. Land Use Bylaw). In other words, the County and the Developer should be provided the ability to attract a wide range of appropriate land uses into the area because of competitive market conditions. County policy on commercial development will also encourage different types of commercial development in other areas such as Town Centres.
- The role of Wye Road as a Sherwood Park entrance, and the alignment of pipeline rights-of-way offer certain OPEN SPACE development opportunities within the Plan area.
- 6. The sensitive and high-quality aspects of South Wye Road development must be dealt with through strong LAND USE CONTROL TECHNIQUES. The Direct Control District is proposed to provide Council with direct control over the use and design of development in areas of unique character, sensitivity or special environmental concern. There may be permitted or discretionary uses contained in a Direct Control District, plus general or specific development regulations specially created for the District. Council will evaluate each proposed development within the District based on its compliance with:

- the objectives and policies of the associated Area Redevelopment Plan;
- ii) any applicable development regulations of the Municipality;
- iii) the guidelines of an architectural/landscape control program, and;
- iv) the development potential of and impact on abutting areas.

#### 5.2 PROPOSED LAND USE

Based on the preceeding development determinants affecting the Plan area, this Area Redevelopment Plan proposes five land uses. The relatively small size of the Plan area, its proposed use as a commercial area, and the important determinant of development flexibility do not allow a more specific delineation of land uses.

The basic land use pattern proposed for the Plan site is described as follows, and shown on Figure 5.1

- 1. <u>Arterial Commercial</u> Lands immediately adjacent to the site entrances at Ordze Crescent and Sherwood Drive and adjacent to Wye Road are proposed for commercial activities which rely the most on prominent exposure and convenient access/egress to Wye Road. Actual developments will be limited by the following basic siting requirements:
  - full-depth lots (max. 170 metres) will be oriented only to the frontage service road;
  - ii) lots less than 0.60 hectares (1.5 acres) in size or 100 metres deep may be oriented to adjacent side streets, namely Ordze Crescent and Range Road 233.

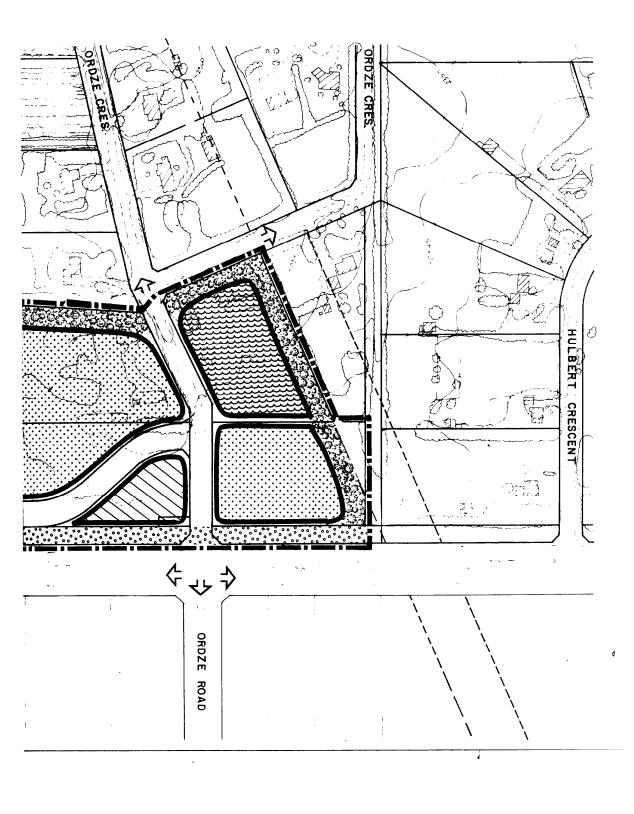
The Arterial Commercial areas are intended as a high quality development area mainly because they will be located at entrances to Wye Road and therefore will be the most visible. The areas will serve commercial activity originating mainly from vehicular traffic. Examples of land uses

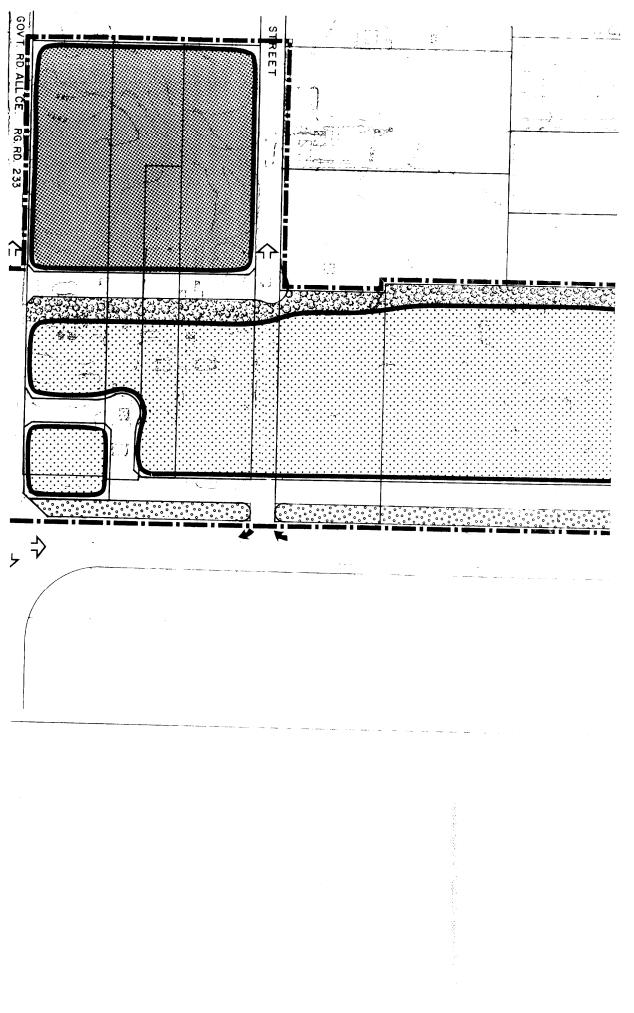
intended to reflect this prominent visibility and level of service are motel/motor hotels, vehicle oriented businesses, drive-in services, vehicular and recreational dealerships, small scale "local" shopping complex, grocery store, hardware stores and furniture stores, and any similar uses as approved by Council. Two basic determinants of acceptable land use would be:

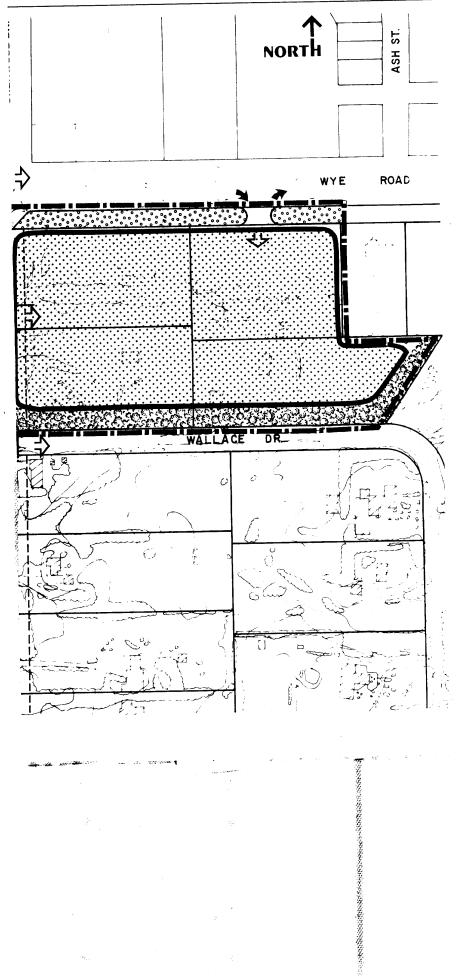
- services oriented to the daily needs of rural and urban County residents using Wye Road for daily trips through and within Sherwood Park, and
- ii) retail and wholesale activities which because of land requirements and building sizes should not or will not be located within other commercial areas of Sherwood Park.
- 2. <u>Public Open Space</u> Since Wye Road acts as an "entrance" to Sherwood Park, an appropriate parcel within this Plan area can be designated as a mini or ornamental park specifically for traveller and information-related uses. This parcel is proposed at the southeast corner of Ordze Crescent and the Wye Road service road (part of Lot 16). It is intended for use by the County for a variety of purposes ranging from County information displays and signs, to a tourist day-only rest stop or ornamental display.

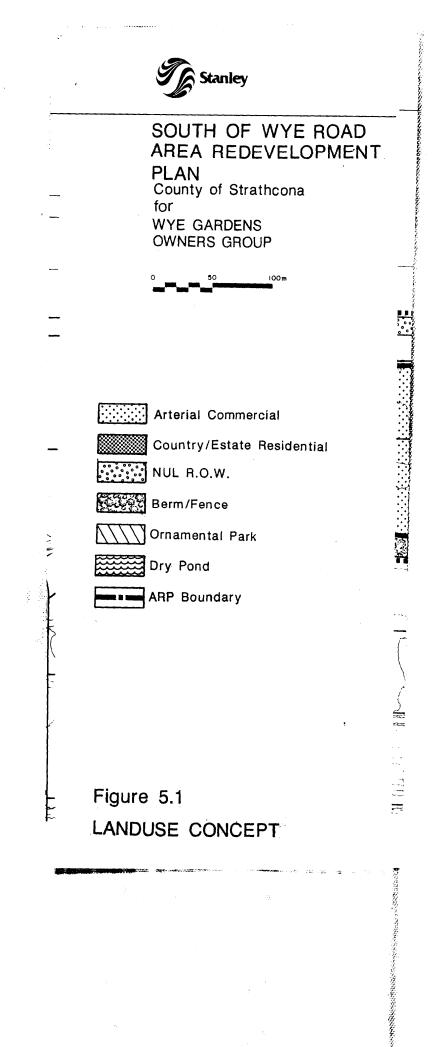
A second Open Space area is proposed at the extreme western edge of the Plan area involving the four pipeline easements. This small parcel is part of the potential alignment of a future walkway/bikeway system along such areas which is currently being considered by the County in the Outdoor Master Plan.

Original Copy of Attached Map is Available for Viewing in the Corporate Secretary's Department









The eventual size of each open space area will be dependent on further Owner Group/County negotiations. For the purposes of this Plan, the ornamental park is approximately 0.40 hectares (1.0 acre) in size, and the walkway/bikeway parcel is roughtly 0.10 hectares (0.25 acre). Should further subdivision of the 9.3 acre (Reynolds) parcel, Lot 27, Plan 963 M.C. or Lot 28, Plan 4382 K.S. occur, the developer will be expected to provide the required ten percent reserve dedication, or money-in-lieu if additional open space is not required within the predominantly commercial area.

3. <u>Landscaping/Berming</u> - Two major types of area landscaping are proposed in the land use concept. This does not include the specific site landscaping which will be required for each future development site as part of Direct Control zoning, the Architectural/Landscape guidelines and/or the Development Agreement process.

The first type of area landscaping is provided by the 14 metre (46 feet) Northwestern Utilities right-of-way extending the entire length of the Plan area parallel to Wye Road. It is proposed that this strip be preserved as a landscaped buffer between Wye Road and the proposed service road. Treatment may include - low berms and cluster planting plus pedestrian walkways subject to Northwestern Utilities agreement. Such treatment of the right-of-way will enhance the "quality" appearance yet not reduce market exposure.

The second area landscape feature is a proposed buffer/berm strip virtually surrounding the commercial components of the Plan area (see Figure 5.1). It is intended to follow property lines wherever possible. The main purpose of this strip is to facilitate construction of a visual barrier and noise attentuation feature separating the commercial development from abutting country residential parcels immediately to the south. The proposed design details of this buffer/berm strip are presented in Section 6.0 of this Plan.

 <u>Stormwater Pond</u> - In order to comply with post-development runoff requirements, a stormwater detention pond (dry pond) is included as part of

the South Wye Road servicing scheme. There are a number of pond location options which can be considered from an engineering perspective. However, all such locations will be oriented to the western extreme of the Plan area since this is the low point. The western lands are also in close proximity to the existing 1,200 mm storm sewer north of Wye Road at Ordze Road.

The proposed storm pond location for South Wye Road is located either on Lot 33 at the western extreme of the Plan area, or another suitable location within this general area in accordance with the County's stormwater pond (dry) guidelines. More detailed stormwater management studies at the detailed development stage will also pay special attention to upstream and downstream effects through adequate engineering design.

The pond location also complements the proposed walkway/bikeway system being proposed along the adjacent pipeline easements.

5. <u>Country/Estate Residential</u> - the southern half of the McBain, Hall and Thompson parcels extending 191 metres (627 feet) west of Sherwood Drive (Range Road 233) are included in the Plan to help establish continued residential land use south of the proposed arterial commercial strip. This area is designated as Country/Estate Residential land. The designation reflects the existing residential nature of lands south of the proposed commercial strip, plus the potential for more intensive "Estate Residential" development in the future based on the County's 1986 General Municipal Plan. Such redevelopment into minimum 1,350 square metre (1/3 acre) estate lots, conditional on appropriate utility provisions, will require replotting scheme or resubdivision procedures.

#### 5.3 STATISTICAL SUMMARY

#### 5.3.1 Land Use

The estimated land use breakdown for the South of Wye Road Area Redevelopment Plan is presented as follows based on the conceptual layout:

## TABLE 5.1

## PROPOSED LAND USE SUMMARY

	Proposed Land Use	Hectares	Acres	%
a)	Arterial Commercial	13.7	33.7	53.6
b)	Country/Estate Residential	3.6	9.0	14.3
c)	Open Space	0.5	1.3	2.1
d)	Service Road	1.6	4.0	6.3
e)	Berm/Buffer	2.0	5.0	7.9
f)	Wye Road Buffer (NUL R/W)	1.4	3.4	5.4
g)	Internal Roads	1.6	4.0	6.3
h)	Storm Pond Area	1.0	2.5	4.0
	TOTAL ARP SITE	25.4	62.9	100.0

#### 5.3.2 Employment

Based on employment generation factors used in municipal transportation studies, the total estimate employment which could result from a fully development South Wye Road arterial commercial area is calculated as follows:

# TABLE 5.2EMPLOYMENT ESTIMATE

Land Use	Potential Net Area	Average Employment Factor	Total Employment Potential
Arterial Commercial	13.7 ha	30-40/ha	410-550

#### 6.0 ARCHITECTURAL/LANDSCAPE GUIDELINES

#### 6.1 GENERAL

The location of the South Wye Road Plan area represents an integral part of the Wye Road entrance corridor to and from Sherwood Park. This corridor is presently characterized by multi-purpose and highway commercial development along the north side from the RDA to Ash Street.

Virtually all of this existing corridor development is inward-facing with multitenancy and stand alone operations oriented to internal parking and building access. Therefore, in some cases, the rear of the building with its rather blank facade, storage areas and service entrances are left facing Wye Road. Also, the mixture of inward facing, flankage (e.g. Peterson Dealership) and corner orientations (e.g. McDonald's) has created a confusing streetscape without any common form. No major architectural or landscaping features appear to be oriented to Wye Road along the existing northern development.

The South Wye Road Plan attempts to improve on this situation by proposing that the majority of proposed arterial commercial areas will front onto Wye Road and an associated service road. This orientation will begin to establish a more orderly and controlled development compatible with high quality public exposure, plus operational separation from neighbouring Country Residential lots to the south.

The following guidelines relate to future arterial commercial development within the Plan area. Future redevelopment or development of the Country/Estate residential portion will be dependent on replot or resubdivision plans.

#### 6.2 THE CONCEPT

The overall development concept for South Wye Road is previously explained in Section 5 of this Plan. The concept is based on three major design factors:

- the development form must maximize compatibility with neighbouring areas;
- the development form must rely on the high accessibility and exposure opportunities available from Wye Road;
- iii) the 1986 General Municipal Plan commerical policies define the basic types of commercial development which the County Council will approve within the Plan area.

The first result of these design factors is a mixture of clustered arterial commercial nodes at the Plan entrances. These clusters are then linked into a comprehensive development by arterial commercial strips varying in depth and associated development potential. This basic form results in three separate land use parcels proposed for the site:

- i) arterial commerical and open space node at the Ordze Crescent entrance;
- a arterial commercial node at the Sherwood Drive (Range Road 233) entrance;
- iii) an arterial commercial strip between the two entrances running parallel and strongly oriented to Wye Road.

The arterial commercial areas at each major entrance are intended as high quality characterized first by average 0.6 hectares (1.5 acres) parcels. Individual business configurations will offer a gross floor area between 1,850 m<sup>2</sup> - 3,000 m<sup>2</sup>. Excellent access and visibility to these nodes from Wye Road and internal roads will enhance the proposal, and attract higher quality developments such as a motor hotel and restaurants.

The arterial commercial strip between these nodes is reserved for larger highway-related lots and businesses in excess of 0.6 hectares (1.5 acres) and  $3,000 \text{ m}^2$  respectively.

All buildings within the Plan area will be low rise structures with a maximum F.A.R. of 2. The height and density limitations are intended to minimize off-site impact from visual intrusion and overshadowing.

The remainder of the Plan Concept includes Wye Road landscaping, a berm/buffer and fencing strip along the commercial plan boundary, an ornamental park at the Ordze Crescent entrance, and provision for an area walkway/bikeway system.

The resulting general development pattern for the Plan Area is conceptually shown on Figure 6.1

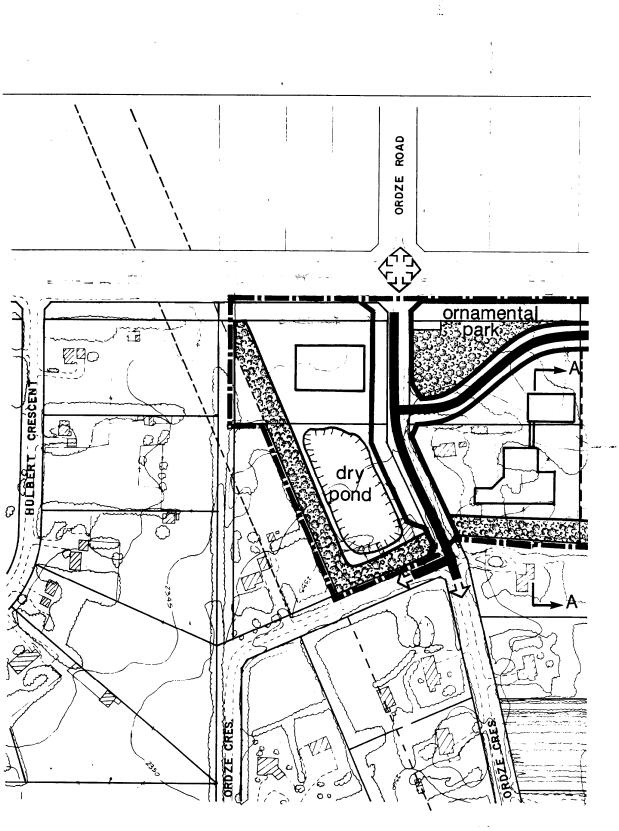
#### 6.3 LAND USE GUIDELINES

The character areas identified in this Plan correspond generally to the provisions of existing County Land Use Bylaw Districts as follows:

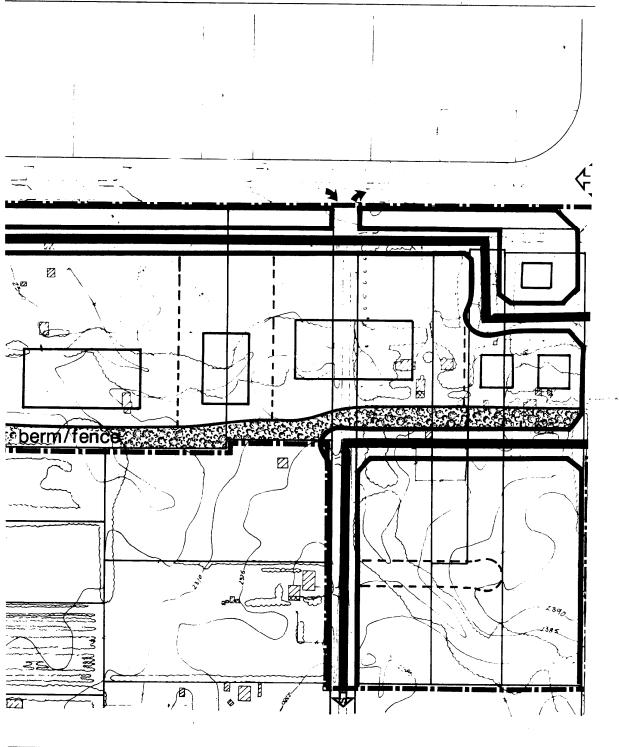
Character Area	Partial Examples of Land Use	Example of Land Use Bylaw District
Arterial Commercial Nodes	<ul> <li>motel/motor hotels</li> <li>drive in services</li> <li>drive through vehicle services</li> <li>restaurants</li> <li>personal services</li> </ul>	C-3 Highway Commercial
Arterial Commercial Strip	<ul> <li>dealerships</li> <li>retail furniture stores</li> <li>home improvement centres</li> <li>grocery stores</li> <li>hardware stores</li> </ul>	C-4 Service Commerical

Allowable uses and site regulations in each character area will be developed as part of the Direct Control District review and negotiations on each individual Development Permit proposal based on the objectives of this Area Redevelopment Plan.

Original Copy of Attached Map is Available for Viewing in the Corporate Secretary's Department

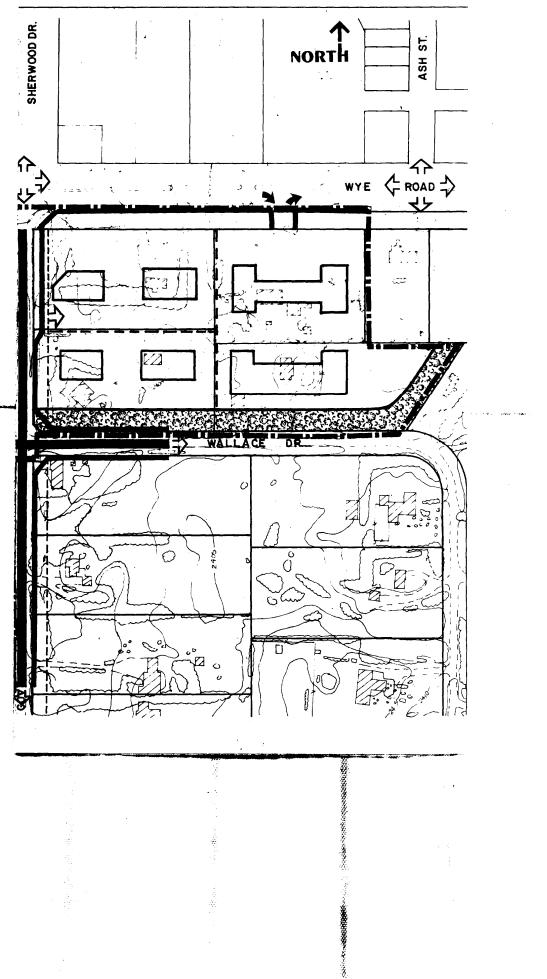


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Stanley SOUTH OF WYE ROAD AREA REDEVELOPMENT PLAN County of Strathcona for WYE GARDENS **OWNERS GROUP** 100m ► A SEE CROSS SECTION FIGURE 6.3 ► A ì. t į 11 T, ίł -Figure 6.1 DEVELOPMENT PATTERN CONCEPT UNITE BOARD いるのないろうない

Suggested development densities for the Plan area are proposed as follows:

Character Area Use	Proposed F.A.R.
Restaurant	1.0
Motel/Motor Hotel	2.0
Retail Arterial Commercial	1.0
Grocery Store	2.0

#### 6.4 GENERAL ARCHITECTURAL GUIDELINES

To achieve the high quality commercial environment desired, generalized architectural guidelines are proposed as follows:

- All developments must have direct access from the service road or from an internal site circulation road connecting with the service road.
- All building frontages must be oriented to the service road unless a corner location allows dual frontage.
- Exterior building materials must be aesthetically compatible with adjacent developments and must be approved by the County of Strathcona.
- o Building forms should be articulated to create visual interest and contribute to the overall commerical fabric within the area.
- Major gateways (entrances) to the Plan area at Ordze Crescent and Sherwood Drive shall be identified by way of appropriate signage and landscaping.
- Prior to any development approvals within the Plan area, a landscape master plan shall be prepared incorporating general site landscaping requirements, screening of parking and storage areas, and special feature landscaping at site entrances and along peripheral berms/buffers.

- o Parking areas shall be development at grade and designed for pedestrian access and safety.
- Individual service lanes shall be provided to each individual building from the service road or peripheral public street through the site (e.g. no continuous back lane).

#### 6.5 LIGHTING GUIDELINES

Light pollution is generally defined as light spilled into unwanted areas caused by luminaires (light fixtures) not controlling the light output from the source. In the case of the South Wye Road commercial area, this can be prevented from occurring on adjacent residential properties by:

- Designing the placement of luminaire only with respect to the area required to be lite, thereby preventing glare and light spillage into surrounding areas.
- o Control the hours of liminaire operation.
- o Use as many low wattage fixtures on short poles as possible.
- o Install a dimming system which automatically dims to low output at appropriate hours.
- Where required for security and safety reasons, high wattage/high pole luminaires should use a combination of high pressure sodium lighting to maximize uniformity of illumination, and the dimming system and/or controlled hours of use.

In summary, light pollution can be avoided in the South Wye Road area by controlling wattage and the placement of luminas as part of the Development Permit process.

#### 6.6 GARBAGE/LITTER GUIDELINES

The appearance of heavy-duty garbage containers within commercial areas is usually a concern of nearby residents. These containers are unsightly and should be screened from public view, preferably in a manner that makes them as inconspicuous as possible. Examples of garbage control guidelines which should be applied to the South Wye Road proposed commercial area include:

- o Freestanding garbage areas will not be permitted.
- Garbage containers will be enclosed within a permanent, attractive, screened structure.
- Any external garbage enclosure will be located next to the principal building and will be visually linked only to this building - freestanding garbage enclosures away from the principal building will not be permitted.
- o Garbage enclosures will be constructed of materials the same or similar to external materials on the principal building, and will be durable.

The control of litter is basically a social problem rather than a land use planning or development problem. However, design guidelines can be incorporated into the South Wye Road proposed commercial area to maximize litter control, such as:

- Encourage voluntary responsibility by store owners to regularly collect litter on their site and abutting areas (can be enforced if necessary through existing County and Provincial legislation).
- Require placement of litter receptacles at strategic locations such as at main doors, at gas pump islands, and at any gathering site on or adjacent to a business.



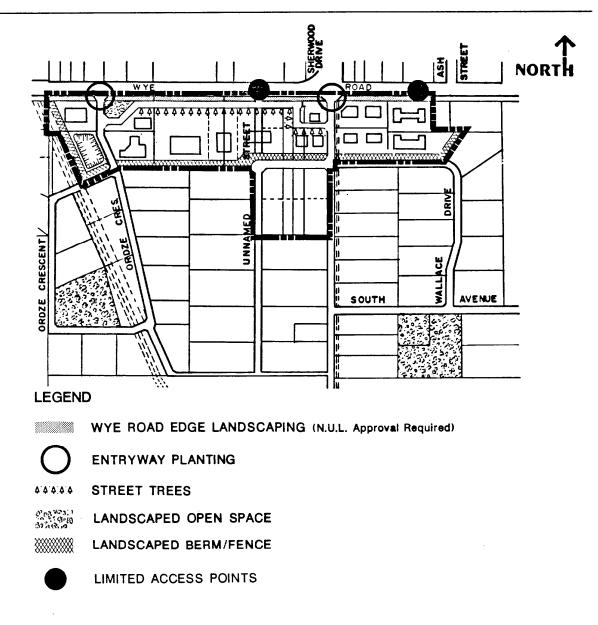
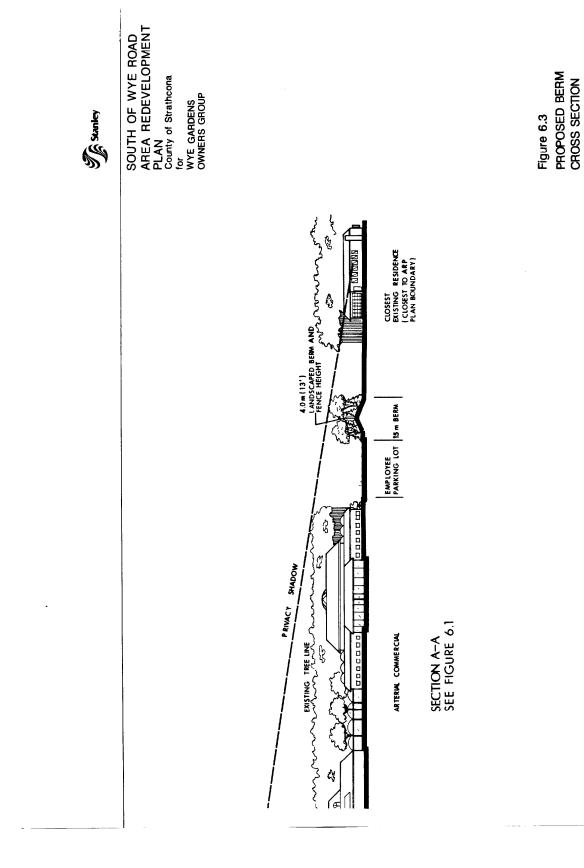


Figure 6.2 GENERAL LANDSCAPE CONCEPT  Placement of a solid fence on top of the proposed buffer/berm strip will collect any litter not collected at the site and thereby stop it from blowing onto adjacent residential areas.

#### 6.7 NOISE ATTENUATION GUIDELINES

Noise from sources such as on-site vehicles, customers partonizing a commercial establishment, and possibly from cooling or refrigeration equipment may create a nuisance to immediately adjacent residents. Development guidelines for the South Wye Road area to avoid this impact include:

- All sites and buildings will be designed to eliminate vehicular circulation and other business, support or customer activity alongside a residential property line (see General Architectural Guidelines).
- Where possible, outdoor (roof-mounted) cooling equipment which may cause noise will be located as far away from a neighbouring residential property as possible. Also, the screening of such equipment will be designed for both visual and noise attentuation purposes.
- No outdoor public address or other sound systems will be allowed within the area unless authorized by the County of Strathcona on a temporary basis (eg. special event).
- o To ensure maximum noise attenuation, the entire boundary between proposed commercial development and adjacent or nearby residential parcels will be both buffered and fenced (see General Landscaping Guidelines - Section 6.9).



#### 6.8 SIGNAGE AND STREETSCAPE GUIDELINES

The overall character of the proposed South Wye Road development will be complemented by a number of special site features required as follows:

- The Ordze Crescent and Sherwood Drive entryways shall be identified by low height signage integrated with soft landscaping.
- No commercial signs will be allowed within the area immediately adjacent to these entryways.
- Commerical signage will be permitted within the internal streetscape along the service road, Ordze Crescent and Sherwood Drive provided that it is unobtrusive and visually integrated with landscaping features along the road rights-of-way.
- Entry and internal commercial signage will share a common design theme by way of shape and construction wherever possible, and variety will be introduced in the form of corporate graphics and logos.
- Regulatory signs (i.e. traffic control and parking) and ancilliary private information and directional signage will be carefully integrated with other streetscape elements to minimize visual clutter.
- o No on-street parking will be allowed on the service road.
- Additional commercial signage will be permitted on the face of individual buildings or free-standing within 2 metres of a building provided that the design of this signage is integrated with the architectural plans proposed.
- Each Development or Building Permit application within the Plan area must include a signage design and location plan.

#### 6.9 GENERAL LANDSCAPING GUIDELINES

The landscaping concept for the Plan area is shown on Figure 6.2, and features:

- Landscaping along the NUL right-of-way parallel to Wye Road which may include low berms and cluster planting with pedestrian walkways subject to Northwestern Utilities agreement.
- o Entryway planting to assist in defining major access points to the area.
- Street trees along the south boundary of the service road to enhance the commercial lot image yet planted so as not to obstruct commercial visibility from Wye Road.
- o An internal landscaped open space (ornamental park) at the southeast corner of the Ordze Crescent/service road intersection (Lot 16) to complement the quality appearance of the area and provide a functional amenity and public information/rest area especially for visitors to the County.
- A visual screening and noise attenuation strip along the south, west and partial east Plan boundary from the RDA to Lot 27 to minimize visual, light and noise intrusion south of the area, and comprised of a 15.24 metre (50 feet) wide right-of-way with a 2.0 metre (6.5 feet) earth berm on a 4:1 slope, plus a 2.0 metre (6.5 feet) solid fence on top and associated berm planting. Examples of attractive fencing material which also provide noise attenuation and litter control effects include textured concrete or solid wood. A cross-section of the proposed berm/fence strip is shown on Figure 6.3.

#### 6.10 BUILT FORM

The eventual built form of the proposed development will be influenced largely by the general and more specific architectural guidelines applied by the County, and by the requirements of each commercial operator within the site. However, a number of general built form recommendations can be made at this early stage of the development process. These recommendations are intended to be applied and expanded through the County's Development and/or Building Permit procedures.

In general terms, a low-rise "residential" type image is proposed for the Plan area. This is intended to reflect both the overall atmosphere of Sherwood Park and the sensitive relationship of the area to neighbouring Country Residential parcels. Proposed elements of this style include:

- Sloped roof forms which minimize the impact of building bulk and provide shelter at building entrances.
- o Roof top mechanical equipment is screened from view by the roof form.
- Building angles and varied roof lines are encouraged to reduce building monotony.

#### 7.0 UTILITY CONCEPTS

This section discusses conceptual water, sanitary sewer, and storm sewer services. A review of previous technical reports relevant to municipal services affecting the offsite piping was carried out. As well, discussions with the County of Strathcona were held to determine the Engineering Standards of the County.

#### 7.1 WATER DISTRIBUTION SYSTEM

#### 7.1.1 Design Criteria

An average daily base demand of 1500 Igpad (Imperial gallons per acre per day) was used to determine the water demand for the development. The relative peak demands were computed by using acceptable peak factors for the overall gross development area of 63 acres, of which 33 acres are arterial commercial use, with the figures as follows:

Average daily demand:	50 Igpm (4 L/s)
Peak hourly demand:	200 Igpm (16 L/s)
Maximum daily demand:	100 Igpm (8 L/s)

With respect to fire-flows, a flow of 3000 Igpm (240 L/s) was used.

The relative impacts on the distribution pipe sizing and system on water demand are as follows:

- a) Water supply connections from existing water distribution piping to provide fire-flow plus maximum daily demand (1600 Igpm).
- b) Offsite piping to provide fire-flows plus maximum daily demand (1600 Igpm) for this development, as well as any other development foreseen by the County.

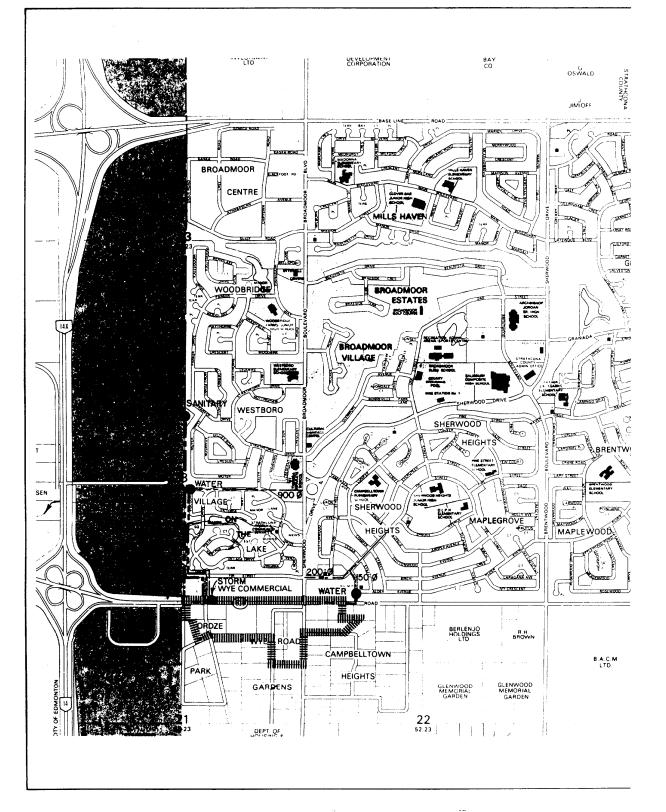
- c) Minimum of two connections to the development, with one connection providing at least the fire-flow demand (3000 Igpm).
- d) In the event of a service disruption, the minimum flow to the development should provide at least the maximum daily or peak hourly demand (100 -200 Igpm).
- e) Hydrant spacing to be compatible with 3000 Igpm fire-flows, in accordance with the Fire Underwriters' regulations.
- f) Service connections to individual lots to be based on peak hourly flow.

### 7.1.2 Proposed Water Distribution System

The proposed system connects to an existing 36" (900 mm) trunkmain located in the 5½ 28-52-23-4, on Village Drive, to provide the necessary fire-flows and maximum daily demand. The second connection, to provide at least the maximum daily demand, is suggested at Ash Street. The offsite alignments are shown in Figure 7.1 - Offsite Utilities. The suggested sizes of the mains are 16" (400 mm) and 6" (150 mm). A detailed analysis would be done during the design stage. Watermains may be oversized to serve Country Residential areas to the south in the future.

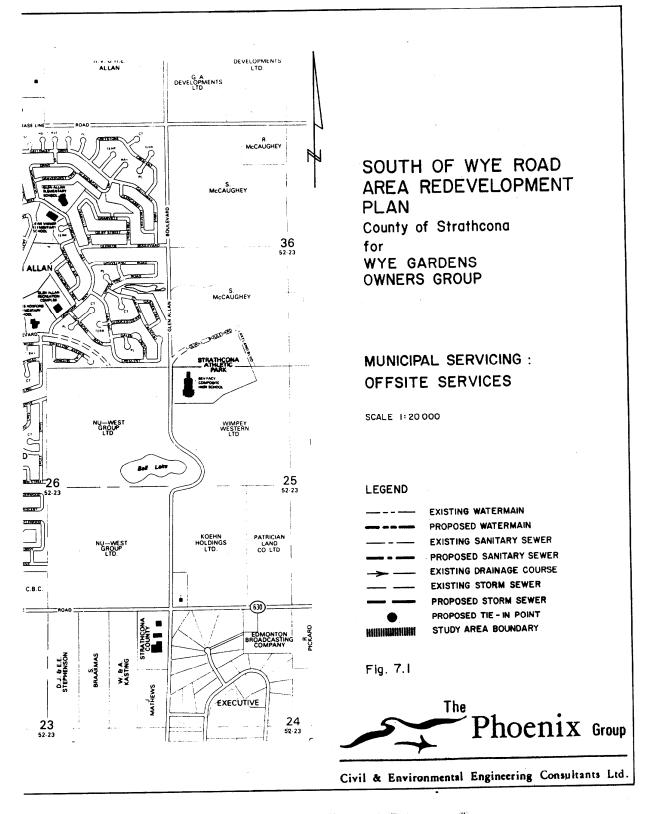
The on-site distribution system, sized tentatively as 16" (400 mm) as well, should incorporate proper hydrant spacing and isolation valves at existing and anticipated connections, with a spacing not exceeding 460' (140 m).

The on-site distribution system is shown in Figure 7.2 - Water Distribution Concept.



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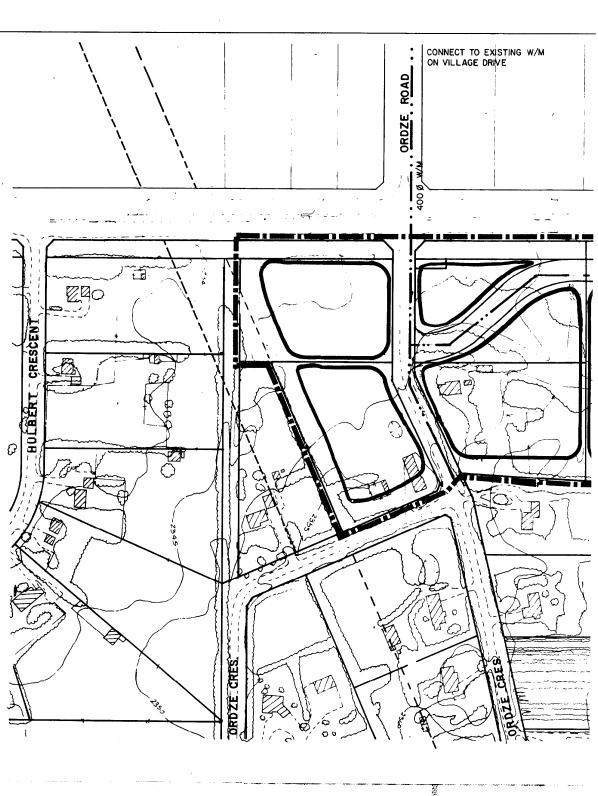
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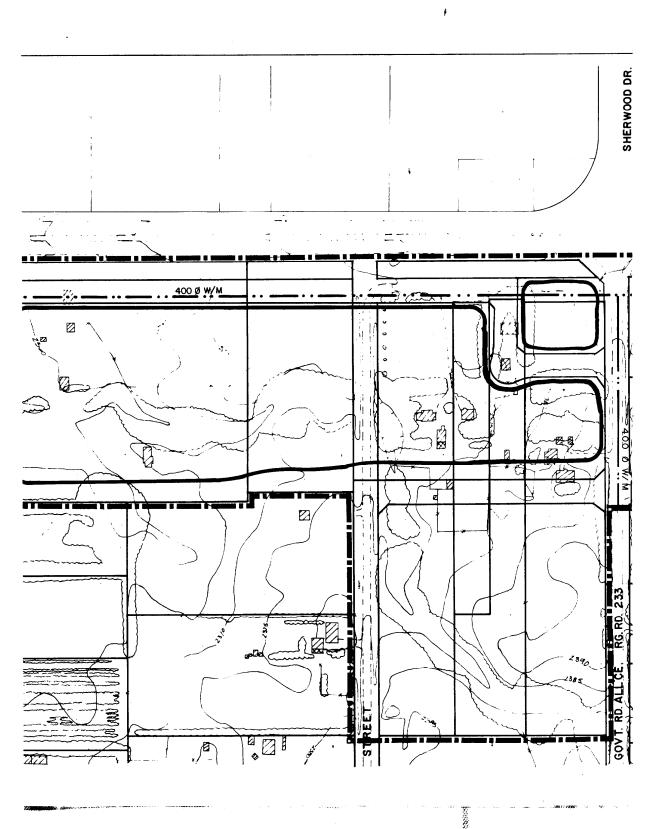
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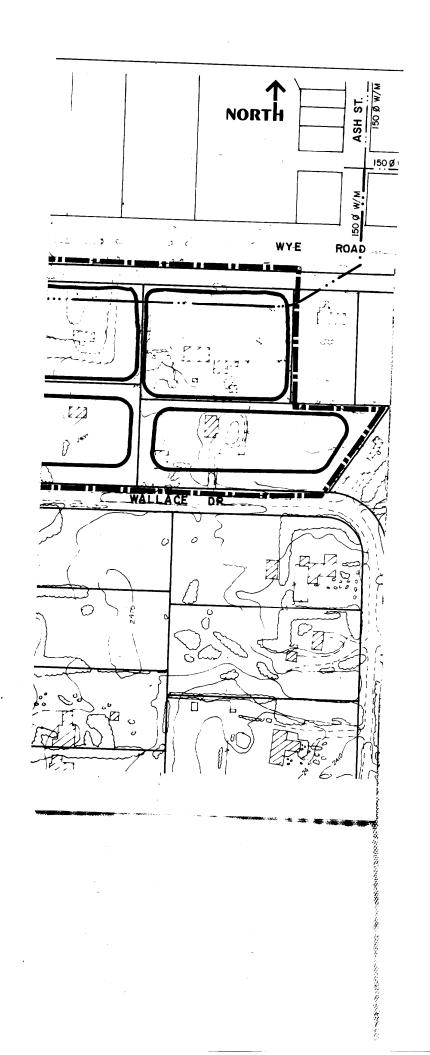
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SOUTH OF WYE ROAD AREA REDEVELOPMENT PLAN County of Strathcona for <u>₩/</u>м WYE GARDENS **OWNERS GROUP** 100 m MUNICIPAL SERVICING: WATER DISTRIBUTION CONCEPT LEGEND 1.41 EXISTING WATERMAIN PROPOSED WATERMAIN STUDY AREA BOUNDARY Fig. 7.2 The Phoenix Group Civil & Environmental Engineering Consultants Ltd.

#### 7.2 SANITARY SEWERAGE SYSTEM

#### 7.2.1 Design Criteria

A base wastewater flow equal to 100% of the expected water demand from this development was used to calculate the sanitary sewer requirements. Included in the flow calculations was an infiltration allowance. Hydraulic parameters used to develop the conceptual wastewater servicing scheme were as follows:

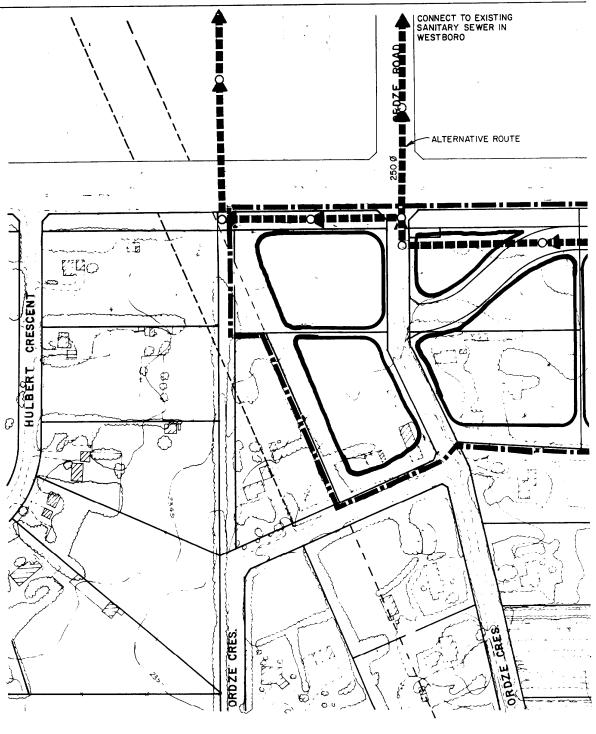
a)	Wastewater Volume:	1500 Igpad
ь)	Infiltration:	500 Igpad
c)	Roughness coefficient:	0.013
d)	Min. flow velocity:	2 fps
e)	Peak factor:	3.0
f)	Minimum flow factor:	0.3
g)	The expected flows from the	
	development are average	
	Average Daily flow:	0.20 cfs
	Peak flow:	0.6 cfs

#### 7.2.2 Proposed Sanitary Sewerage System

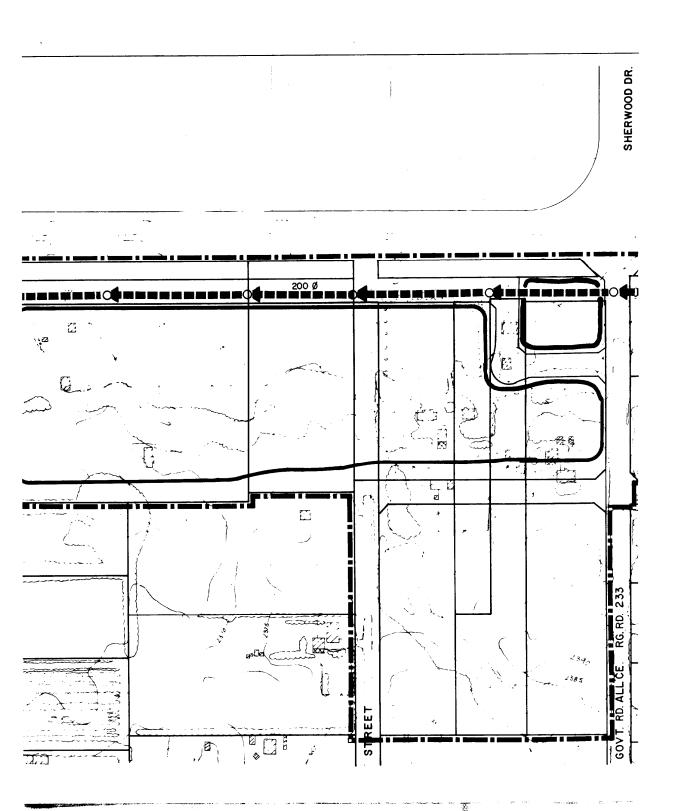
According to the parameters used, and as a result of the grade of the terrain, the development can be serviced by gravity without the provision of a lift-station.

Figure 7.3 - Sanitary Sewerage Concept shows two alternate routes to service the development. One alignment has been shown paralleling the east boundary of SW% 28-52-23-4, while the other traverses initially through SE% 28-52-23-4, then northwards along the east boundary of SW% 28-52-23-4. The alternate route through the SE% has been proposed to avoid possible conflicts with the existing high pressure gas mains located in the N% 21-52-23-4 and in the SW% 28-52-23-4.

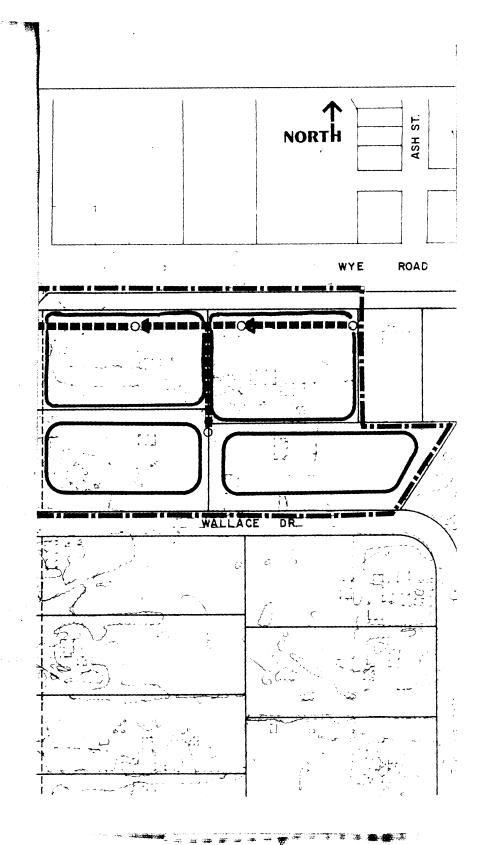
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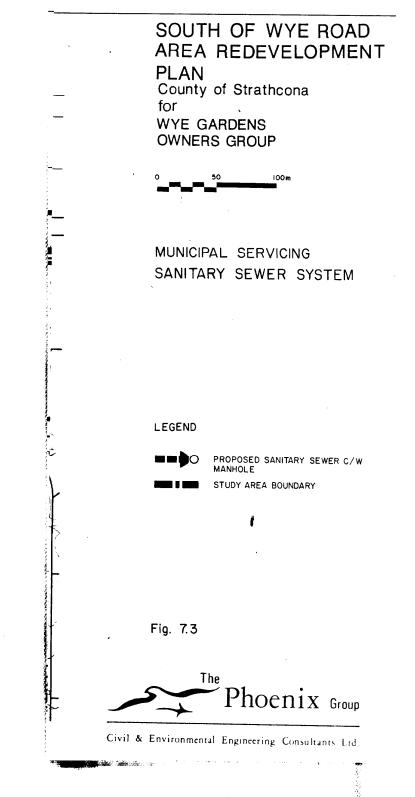
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A possible oversizing of a portion of the offsite pipe should be considered to provide additional capacity for sanitary flows from the Village-on-the-Lake, and Country Residential areas to the south. Discussions with the County will be initiated before final design.

No connections from weeping tiles are to be allowed into the sanitary sewers, as per the current stipulations of the County's Engineering Department.

The system consists of an 8" (200 mm) and 10" (250 mm) pipe, with grades varying from a minimum of 0.4% to 0.8%. During detailed design, a horizontal separation from the water system is to be a minimum of 10' (3 m). The manhole spacing is not to exceed 400' (120 m). The sanitary services to the lots are to be sized according to the lot sizes, with a minimum service size of 4" (100 mm).

#### 7.3 STORMWATER MANAGEMENT SYSTEM

#### 7.3.1 Design Criteria

Along with efficient drainage of the proposed development, the management of storm run-off takes into account the non-disruption of flow patterns on the upstream as well as downstream side of the development.

Information and design criteria used to develop the stormwater management system are as follows:

- a) Discharge location on north side of Wye Road. System to connect to an existing 48" (1200 mm) storm sewer.
- b) Storm detention pond to limit flows to acceptable values depending on capacity of the 1200 mm diameter sewer, and Goldbar Creek.
- c) City of Edmonton storm intensity duration curves used to estimate stormwater volumes and flows (5 yrs: minor system, 100 yrs: major system).

- d) Wykoff Singh formula used to calculate the stormwater pond volume.
- e) Rational method used to estimate stormwater flows.
- f) Run-off Coeff 0.7 for the commercial areas.
- g) Time of concentration: 15 minutes.
- h) Roughness Coefficient: 0.013.
- i) Minimum bury: 5' (1.5 m)
- j) Outflow from detention pond to be limited to pre-development flows.

#### 7.3.2 Proposed Stormwater Management System

The proposed management system consists of storm sewers, exiting into a detention pond, from which a controlled outflow would drain into the existing 4 inch (1200 mm) storm sewer.

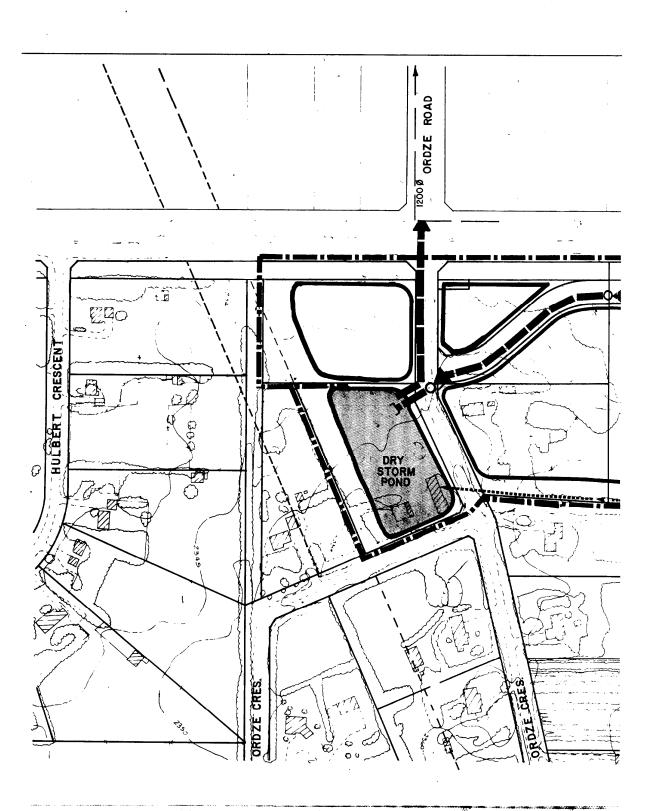
The proposed placement of the berm along the south commercial boundary will inhibit any run-off from the south into the development area. Thus, the on-site stormsewer system would be tied into a toe-ditch on the south toe of the berm. This grassed ditch would be designed to handle run-off from the south face of the berm (residential parcels), as well as from the immediate vicinity to the south of the berm.

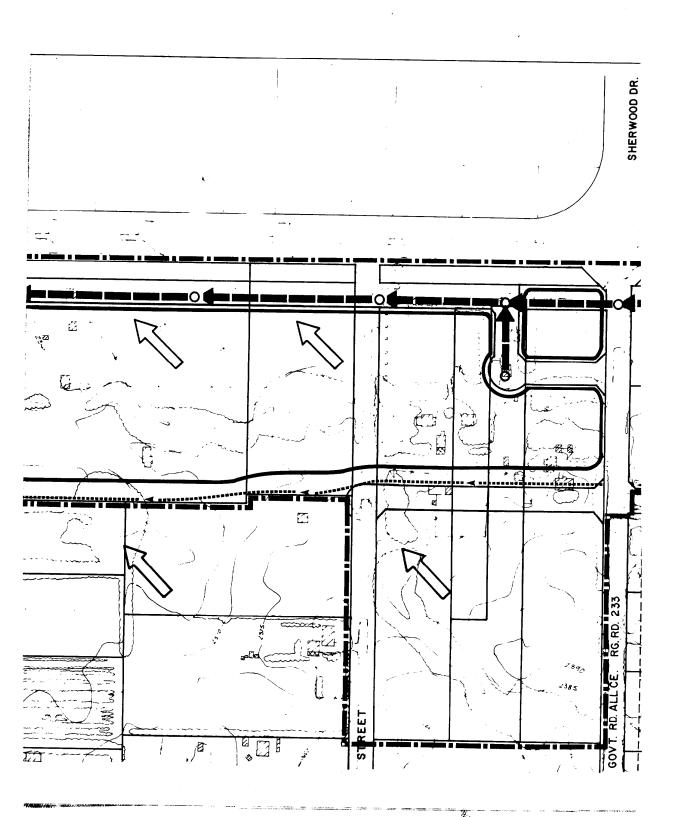
The area of the detention pond, would be 2 to 2.5 acres depending on the shape and depth available during detailed design. The side-slopes of the pond would be 7 horizontal to 1 vertical to facilitate maintenance. The pond would normally be dry and would serve as a detention facility only in the event of precipitation.

The conceptual system is shown in Figure 7.4 - Stormwater Concept.

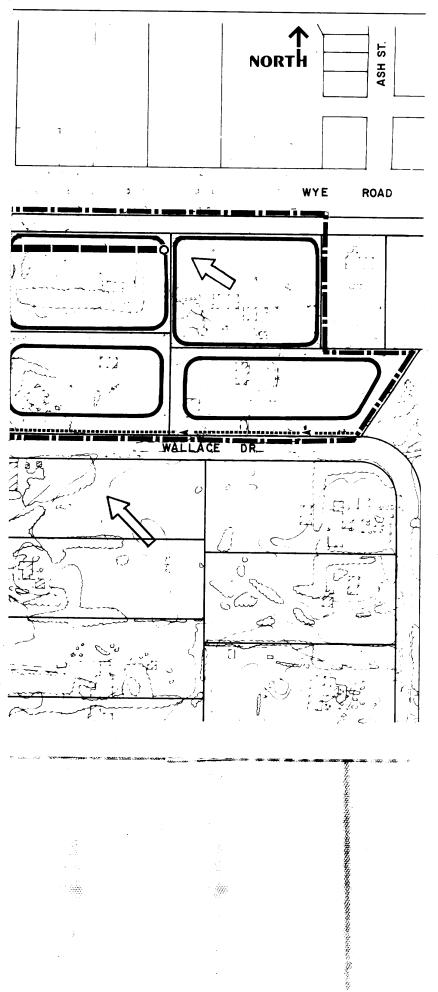
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SOUTH OF WYE ROAD AREA REDEVELOPMENT PLAN County of Strathcona for WYE GARDENS OWNERS GROUP

MUNICIPAL SERVICING STORMWATER MANAGEMENT

# LEGEND



EXISTING STORM SEWER PROPOSED STORM SEWER C/W MANHOLE STUDY AREA BOUNDARY

PROPOSED TOE OF DITCH

# Fig. 7.4

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Civil & Environmental Engineering Consultants Ltd.

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#### 7.4 RECOMMENDATIONS AND CONCLUSIONS

a) <u>Water Distribution System</u>: A looped distribution system should be provided, to facilitate fire-flows, as well as maximum daily demand. The existing network in the County is capable of providing the water supply needed. Thus, the conceptual system provided would meet the needs of the proposed development.

Oversizing of the offsite watermains should be taken into account if any extention south of the proposed development is to be considered by the County.

- <u>Sanitary Sewerage System</u>: The terrain is conducive to gravity servicing. The conceptual layout provided herein would be adequate to service the proposed development.
- c) <u>Stormwater Management</u>: A dry detention pond, along with the minor and major drainage systems, would serve the development adequately without jeopardizing the downstream receiving bodies.

Adequate and proper grading of the lots during development must be provided to avoid local problems, and to ensure the proper functioning of the system as designed.

The exact alignments, depths, sizes and final pond location are subject to detail design plus Alberta Environment approvals.

d) Sub-soil investigations should take place before detailed design is undertaken.

7.6

#### 8.0 DEVELOPMENT STAGING CONCEPT

The servicing scheme outlined in Section 7 shows that proposed water service will originate via a new Ash Street or Ordze Road main. Similarly, a potential sanitary sewer extension into the area is possible via an Ordze Road/Cresent route. Finally, the western portion of the Plan area is the low point and outfall for the proposed stormwater management scheme.

This servicing pattern suggests that development staging may begin at the Ordze Crescent and Sherwood Drive access points. It could then progress along the new service road in association with phased utility extensions and market demand.

Actual development will include the imposition of a redevelopment levy as per Section 65 of the Alberta Planning Act. Exact amounts of levy will be determined by the County of Strathcona Council under a separate bylaw or provisions of development agreements. The redevelopment levy will be imposed for the following purposes:

- 1. The public (ornamental) park area on Lot 16;
- 2. Construction and landscaping of the berm and fence;
- Realignment of the street in Wye Gardens to connect with Sherwood Drive (Range Road 233);
- 4. Improvements to upstream and downstream drainage system;
- 5. Construction of the stormwater pond and internal drainage system;
- 6. Replotting or resubdivision scheme;
- Improvement to Wye Road (i.e. deceleration and acceleration lanes, additional signals, accesses);
- 8. Provision of service road;
- 9. Landscaping Northwestern Utilities Ltd. right-of-way;
- 10. Provision of on-site public utilities.

8.1



# SOUTH OF WYE ROAD AREA REDEVELOPMENT PLAN

APPENDIX TRAFFIC IMPACT ASSESSMENT

October 1986

## APPENDIX

# TRAFFIC IMPACT ASSESSMENT SOUTH OF WYE ROAD AREA REDEVELOPMENT PLAN

STANLEY ASSOCIATES ENGINEERING LTD.

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October, 1986

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#### 1.0 INTRODUCTION

#### 1.1 BACKGROUND

Over the past several years there have been tentative steps initiated by landowners south of Wye Road to re-zone their lands to permit some form of commercial development. In June, 1986, Stanley Associates Engineering Ltd. was commissioned to prepare an Area Redevelopment Plan. An important component of such a document is the analysis of the traffic of impacts associated with development upon existing elements of the transportation infrastructure.

The objectives of the assessment of traffic implications includes:

- estimation of traffic to be generated by such a development,
- determination of the road network to serve the development,
- identification of impacts upon the existing road system,
- identification of improvements to the road system to minimize negative impacts upon th country residential areas located south of the site.

#### 1.2 THE SITE

The lands under consideration are located adjacent the south side of Wye Road and run from the Edmonton Restricted Development Area on the west to the west edge of the Shell Service Station near Ash Street on the east. The net developable (commercial) area is estimated to be about 13.7 ha (33.7 Acres).

#### 1.3 EXISTING TRANSPORTATION

The site is served by two arterial roadways:

 Wye Road is a divided multi-lane east-west arterial facility. In this area it is carrying 20,000 - 30,000 vehicles/day. The road is functioning as a primary regional connector to the City of Edmonton.

- Sherwood Drive passes through the site near the eastern boundary of the Plan. North of Wye Road, within Sherwood Park, the road is a divided multi-lane urban arterial. To the south, including the portion passing through the site, it is constructed as two lane rural collector. The function is to provide a linkage between people living in the adjacent country residential subdivisions and Wye Road and Sherwood Park.

In addition, two other roads pass through the site; Ordze Cresent, and an unnamed north-south road lying between Ordze Cresent and Sherwood Drive. Both serve as access routes to country residential subdivisions.

Figure A1.1 illustrates the lands being considered within the Area Redevelopment Plan along with the surrounding road network.

Traffic count information was obtained from the County and is summarized in Table A1.1.

# TABLE A1.1 EXISTING TRAFFIC VOLUMES

Location	A.M. Peak Hour (vph)	P.M. Peak Hour (vph)*	
Ordze Road/Cresent - North of Wye Road - South of Wye Road	430 25	47 <i>5</i> 30	
Wye Road - west of Ordze Road - west of Sherwood Drive - east of Sherwood Drive	2,760 2,635 1,570	3,025 2,900 1,725	
Sherwood Drive - south of Wye Road - north of Wye Road	91 1,193	100 1,300	

\* P.M. peak hour volumes estimated by increasing A.M. peak hour volumes by 10%

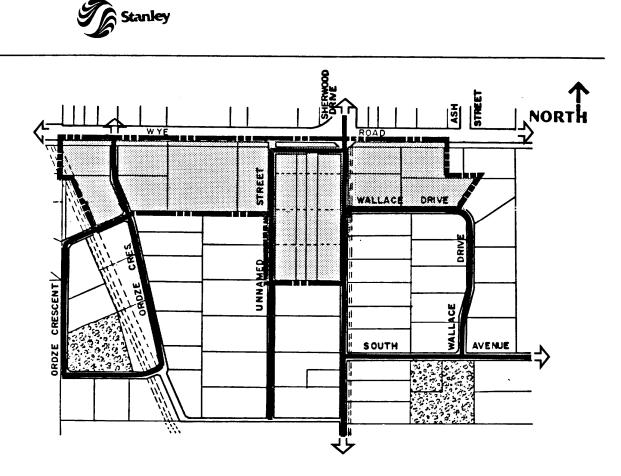


Figure A1.1 SITE AREA AND EXISTING ROAD SYSTEM

#### 2.0 THE PROPOSED DEVELOPMENT

The Plan is proposing one basic type of commercial use, namely arterial commercial. Arterial commercial developments are generally smaller (minimum 0.6 ha) and more intense in nature. Examples include restaurants, motels, drivein services and drive-through services, grocery stores, hardware stores, car dealerships and RV dealerships.

The following summarizes the types of development that are proposed within the plan area.

#### TABLE 2.1 PROPOSED DEVELOPMENT

	West of Sherwood Drive (ha)	East of Sherwood Drive (ha)	Total (ha)
Arterial Commercial	9.3	4.4	13.7

The total commercial developable land consists of 13.7 ha. For traffic analysis purposes the distribution of uses on either side of Sherwood Drive has been illustrated. It is estimated that over 80% of the eventual commercial development sites will be located between the RDA and Sherwood Drive.

#### 3.0 TRAFFIC GENERATION

#### 3.1 GENERAL

The highest volumes on the roadways that will be impacted by development of the Plan lands occur during the P.M. peak hour on a weekday. For this reason the traffic generation component of the study will focus upon the trips generated during this time period.

#### 3.2 TRIP GENERATION ESTIMATES

In order to estimate the magnitude of travel activity, assumptions have been made as to the probable types of development that will occur throughout the site and applied average of trip generation rates to each. The work has been based upon estimates of the number of arterial commercial parcels that could be made available. For planning purposes the average Arterial Commercial site is estimated to be about 0.9 ha in size. The following represents a preliminary estimate of the number of sites that may develop on either side of Sherwood Drive.

	West of Sherwood Drive	East of Sherwood Drive
Arterial Commercial	13	3

For both areas, the following represents a potential configuration of development that will be used to estimate trip generation.

#### TABLE A3.1

# ARTERIAL COMMERCIAL

# DEVELOPMENT OPTIONS FOR PLANNING ANALYSIS

#### A. West of Sherwood Drive

-	Fast food restaurants or equivalent	3
-	Regular sit down restaurant or equivalent	1
-	Motel or equivalent	1
-	Service station or equivalent	1
-	Small commercial or equivalent	2
-	Auto dealership or equivalent	1
-	Home improvement store or equivalent	1
-	Multi-Tenancy commercial complexes	2
-	Supermarket or equivalent	_1
		13

# B. East of Sherwood Drive

-	Sit down restaurant or equivalent	1
-	Small commercial	1
-	Home improvement or equivalent	_1
		3

Table A3.2 illustrates the trip generation rates that have been applied to each of these different development scenarios:

## TABLE A3.2

# TRIP GENERATION RATES\*

# (P.M. Peak Hour of Adjacent Roadway)

Fast Food Restaurant	34.0 veh trips/100 sq m
Sit Down Restaurant	11.3 veh trips/100 sq m
Service Station	25.0 veh trips/site
Small Commercial	18.0 veh trips/100 sq m
Motel	0.65 veh trips/room
Auto Dealership	4.9 veh trips/100 sq m
Home Improvement	3.4 veh trips/100 sq m
Supermarket	9.5 veh trips/100 sq m
Commercial Complex	6.4 veh trips/100 sq m
	A.5

Source: Trip Generation - An Information Report by ITE, and Trip Generation and Travel Characteristics Guidelines by City of Edmonton Transportation Department.

The generation rates in Table A3.2 are based upon free standing independent sites. However, with each of these developments linked on a common transportation corridor people will tend to combine their trips (i.e. shopping trip combined with stopping to eat, stopping at service station and home improvement). For this reason it has been assumed that the combined trip generation rates will be reduced by 25%. Table A3.3 presents the estimates of the total P.M. peak hour vehicle trips that will be generated by the developments on both sides of Sherwood Drive.

## TABLE A3.3 TOTAL P.M. PEAK HOUR TRIP GENERATION

West of Sherwood Drive	1,350	veh/hr
East of Sherwood Drive	250	veh/hr
	1,600	veh/hr

This development will <u>not</u> increase traffic volumes on the adjacent road network by the total trips in Table A3.3. This is because during P.M. peak periods, travel activity to retail establishments consists of three different trip types:

- those who are already in the middle of a trip, travelling past the establishment and decide to stop;
- those who are already in the middle of a trip, and decide to make a diversion to visit the establishment;
- those who make a specific trip to the establishment.

For this particular area it is estimated that stop-in traffic along Wye Road and Sherwood Drive could account for up to 50% of the total traffic generated.

Therefore, on this basis, the maximum total trips that would be added to the network would be 800 vph.

# 3.3 EVALUATION AND RECOMMENDATIONS

Estimates of traffic flow distribution were prepared and assigned to the existing roadway network. Table A3.4 summarizes the results of this process:

# TABLE A3.4 EXISTING TRAFFIC FLOW ESTIMATES WITH FULL DEVELOPMENT OF SOUTH WYE COMMERCIAL

		P.M. Peak Hour (vph)
Ordze Cr	esent	
-	South of Wye Road	800
Wye Road	1	
-	West of Ordze Cresent	3,500
-	West of Sherwood Drive	3,300
-	East of Sherwood Drive	2,300
Sherwood	Drive	
-	South of Wye Road	800
-	North of Wye Road	1,700

Capacity analysis of the intersections of Wye Road with Ordze Cresent/Road and Sherwood Drive has been conducted to determine the impacts of this increased flow upon the main arterials. Table A3.5 summarizes the results of the assessment.

#### TABLE A3.5

(EXISTING TRAFFIC VOL	.UMES &	FULL DE	EVELOPN	IENT ON	THE SI	TE)
Intersection	OPTION I Access only At Two Inter- sections		OPTION II Same as I with one extra right in/right out access point		OPTION III Same as I with two extra right in/right out access points	
			- <u></u>		- <u>-</u>	
	Y max	R.C.*	Y max	R.C.	Y max	R.C.
Wye Rd. & Ordze Cresent/Rd	0.88	0%	0.78	8%	0.70	21%
Wye Rd & Sherwood Dr.	0.66	26%	0.66	26%	0.66	26%
* R.C. reserved capacity						

#### INTERSECTION ANALYSIS (EXISTING TRAFFIC VOLUMES & FULL DEVELOPMENT ON THE SITE)

The following conclusions regarding site access are:

- the Wye Road/Ordze Cresent intersection will be very close to capacity because of the increased demands due to the north/south flowing traffic.
- the Sherwood Drive/Wye Road intersection will also be close to capacity because of the increase in north/south green time requirements to accommodate the increased flows.
- the spacing between the service road intersections and Wye Road must be cognizant of the turning maneuvers required by traffic wishing to access the developments.

In conclusion, the following actions are recommended regarding traffic access to the South Wye Road Plan area:

- two right turn in and out access points should be provided between Ordze Cresent and Sherwood Drive. This action will reduce the north-south demands at the two intersections. As a result there will be capacity increases of up to 10%. In addition, the reduction in turning activity at the service road intersections will increase the safety of operation at these two points.
- Ordze Cresent and Sherwood Drive between Wye Road and the service road should be widened to a four lane undivided cross-section. This will allow through traffic to proceed without delays associated with traffic that will be turning onto the service road.

#### 4.0 SITE ACCESS OPTIONS

#### 4.1 GENERAL

Evaluation of the estimated trips that will be generated by the proposed land uses has concluded that access to the lands is required at Ordze Cresent, Sherwood Drive, and right in/right out access points. The basic concept to provide a service road somewhere within the Plan is to ensure that all properties are provided with some form of roadway access. The following reviews each of the options identified.

# 4.2 OPTION #1 - FRONT SERVICE ROAD (FIGURE A4.1)

In this case a service road will be constructed immediately adjacent to the north boundary of the site. This roadway will link with the existing network at Ordze Cresent, Sherwood Drive. Minimum bulbing standards will be applied at both Ordze Cresent and Sherwood Drive.

# 4.3 OPTION #2 - REAR SERVICE ROAD (FIGURE A4.2)

With this option the service road will be constructed in an east-west direction along the south boundaries of lands forming part of the Plan. Access to and from Wye Road would be from the same roadways as Option 1; Ordze Cresent and Sherwood Drive. To provide the additional access, either direct driveways will have to be located or some form of limited joint access facility will be required at the front of the properties.

# 4.4 OPTION #3 - COMBINATION (FIGURE A4.3)

This option attempts to combine features of the previous two concepts. Service road access from/to Ordze Cresent and Sherwood Drive will be provided at least

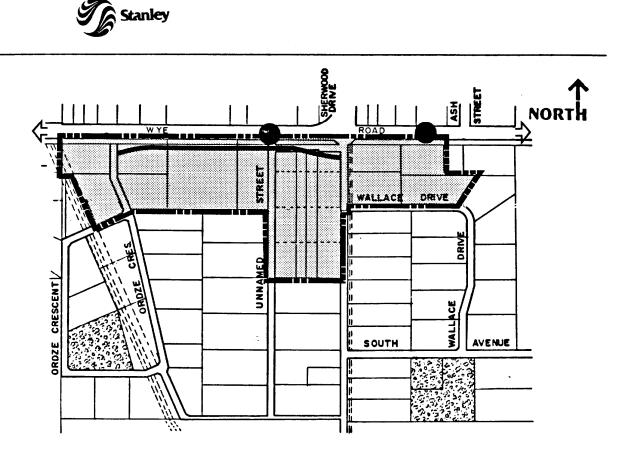


Figure A4.1 SERVICE ROAD CONCEPT OPTION No.1 FRONT SERVICE ROAD TIGHT BULB

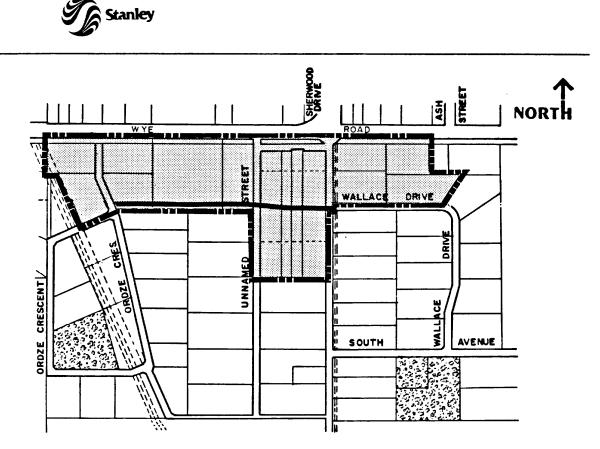


Figure A4.2 SERVICE ROAD CONCEPT OPTION No.2 REAR SERVICE ROAD

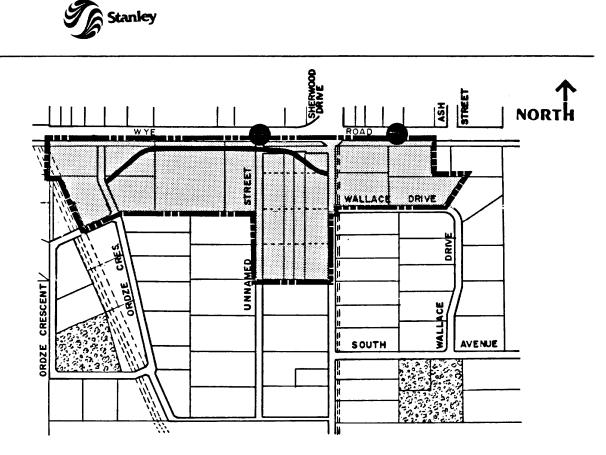


Figure A4.3 SERVICE ROAD CONCEPT OPTION No.3 FRONT SERVICE ROAD WIDE BULB 100 metres (300 feet) south of Wye Road. The precise definition of the service road bulbing and setback would be determined on the basis of queue requirements. In order to function as a front service road, the roadway will be angled to return to a position immediately adjacent Wye Road.

#### 4.5 EVALUATION AND RECOMMENDATION

From the perspective of accommodating the estimated traffic, each option performs in a similar manner. With the rear service road option, provision of the right in - right out access points may be somewhat more difficult to implement than with the other options. The recommendations for four laning of short sections of Ordze Cresent and Sherwood Drive are common to all schemes. However, marketing and local area concerns may be affected by these particular alternates. Table A4.1 summarizes the advantages and disadvantages.

## TABLE A4.1

## EVALUATION OF SERVICE ROAD OPTIONS

	Option	Advantages		Disadvantages
1 -	Front (Tight Bulb)	<ul> <li>all buildings oriented to Wye Road, Ordze Cresent or Sherwood Drive</li> <li>backs of properties can be landscaped to provide a buffer for adjacent residential areas</li> <li>road noise from service road not noticeable in residential areas</li> <li>the two right in/right out access points can be incorporated</li> <li>Wye Road deacceleration lanes can be used for queuing.</li> </ul>	-	may incur some delays at intersections as set back from Wye Road is minimal
2 -	Rear	<ul> <li>service road intersections set well back from Wye Road</li> </ul>	-	access route from Ordze Cresent not easily visible from Wye Road some buildings could have the backyards facing Wye Road right in/right out access points would have to directly enter individual properties or provide limited joint access roads at the front Traffic and related noise could bother residents in adjacent subdivisions to the south
3 -	Combination (Wide Bulb)	<ul> <li>service road intersections set back from Wye Road</li> <li>some properties will have road at front</li> <li>the right in/right out access points can be incorporated</li> <li>increased service road frontage can be offerred</li> <li>commercial area traffic kept away from residential areas</li> <li>adequate queuing provided along Ordze Cresent and Sherwood Drive</li> </ul>	-	visibility of access routes from Wye Road not as good as with Option #1 service road setback may create traffic impacts on abutting residential lands isolated small parcels between bulb and Wye Road may not be marketable

A.12

The transportation system to serve this plan area must achieve the following objectives.

- be easily visible and understood by people travelling along Wye Road,
- not affect the efficient and safe operation of Wye Road,
- minimize traffic and related intrusions into adjacent residential subdivisions.

It is recommended that Option #3 - Front Service Road with Wide Bulb - be implemented. This option provides safety of operation, while having limited if any impact upon the market viability of the site and interference with adjacent residential lands when properly designed.

#### 5.0 AREA ROADWAY NETWORK

#### 5.1 GENERAL

Residents living in the residential areas south of the Plan lands have continually expressed transportation related concerns. The focus has been on the subjects of noise and intrusion of non-resident traffic. The following discusses each of these two areas.

#### 5.2 TRAFFIC NOISE

It has been previously estimated that during the P.M. peak hour, development of these lands could increase the flow of traffic on major links of the road system by 300 - 500 vehicles. This represents an increase of about 10% in the total traffic flows on Wye Road. It is estimated that with the service road located adjacent to Wye Road the increase in noise level will be less than 1 dBA leq. This is a very small increase and would not be noticeable within the residential subdivisions. With the proposed buffering/berming in this Plan, it is anticipated that overall noise levels could be <u>reduced</u> within the residential areas.

#### 5.3 TRAFFIC INTRUSIONS

The potential for traffic from the commercial areas to travel into residential areas exists west of Sherwood Drive. Three different network options have been identified to address resident concerns.

#### 5.3.1. Option #1 - Do Nothing (Figure A5.1)

The residential access routes would not be changed from their present configuration. Existing traffic using Ordze Cresent, estimated to be about 30 vph in the P.M. peak hour will have to share the roadway with the other shopping-oriented traffic. However, the majority of these vehicles would be

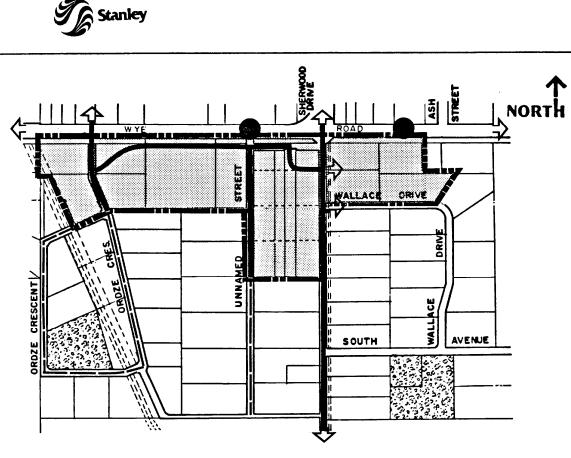




Figure A5.1 AREA ROADWAY NETWORK OPTION No.1 [DO NOTHING] turning onto and off of the service road south of Wye Road. Traffic using the unnamed roadway west of Sherwood Drive will have to use the new service road.

## 5.3.2. Option #2 - Close Present North-South Linkages (Figure A5.2)

With this option all connections between the residential areas and the commercial developments will be severed. Two new east-west connections will be constructed to allow residents to enter their subdivisions from Sherwood Drive.

#### 5.3.3 Option #3 - Combination (Figure A5.3)

This alternative attempts to be cognizant of local area factors which must be considered as part of any review of network changes. It recognizes that residential traffic presently using the north-south road west of Sherwood Drive will not want to use a commercial area service road as a link in trips to and from their homes. As such the new east-west link to connect with Wallace Drive is proposed. The difficulty in constructing an east-west link from the south end of Ordze Road, has resulted in leaving this facility as it is presently constructed. However, 'Local Traffic Only' signs will be added at the north boundary of the residential area.

#### 5.3.4 Evaluation and Recommendations

Table A5.1 highlights the advantages and disadvantages of these different alternatives.

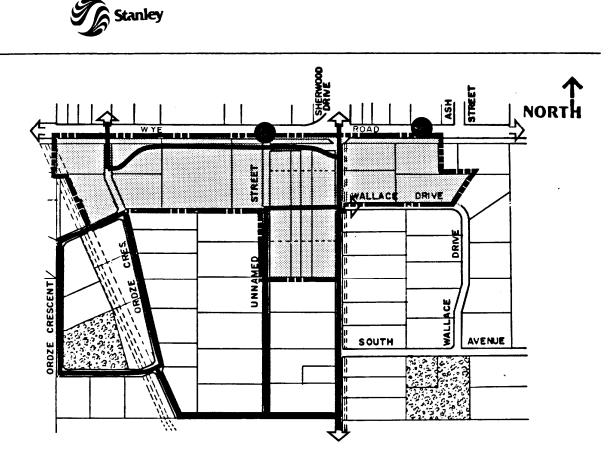
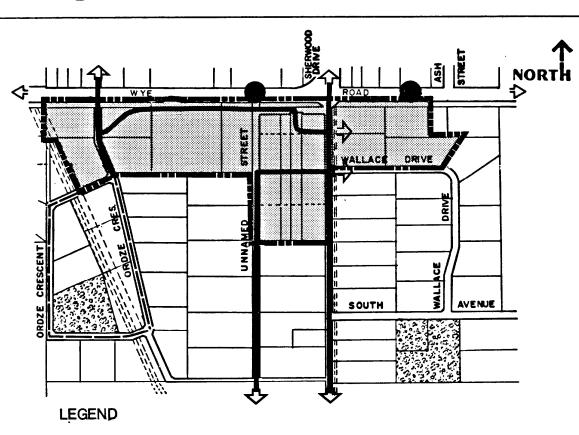


Figure A5.2 AREA ROADWAY NETWORK OPTION No.2 [CLOSE EXISTING RESIDENTIAL CONNECTIONS]



<sup>---</sup> For Local Traffic Only

Stanley

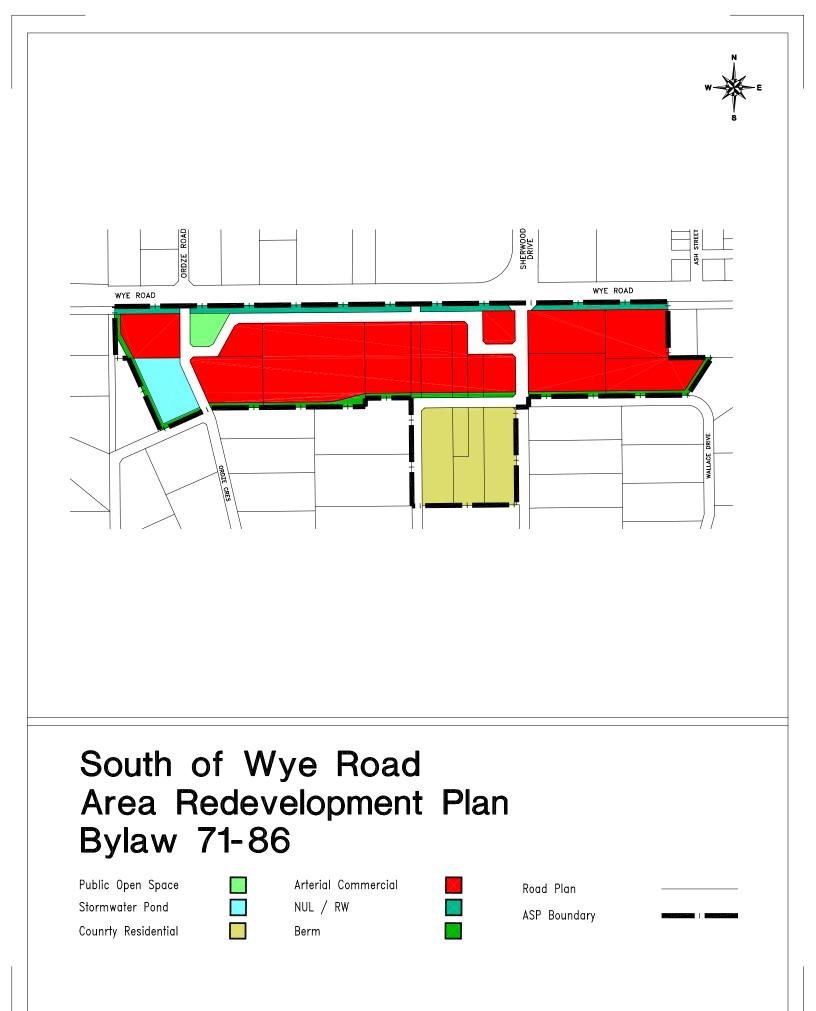
Figure A5.3 AREA ROADWAY NETWORK OPTION No.3 [COMBINATION]

# TABLE A5.1

# INTERNAL ROADWAY OPTION EVALUATION

	Option		Advantages		Disadvantages
1 -	Do-Nothing	-	No extra roads must be constructed	-	no functional separation between commercial and residential areas
				-	some residential traffic must use commercial area service road for trip to and from home
				-	Ordze Cresent will be used by residential and commer- cial traffic
2 -	Close Both Roads	-	residential traffic completely separated from commercial traffic	-	Ordze Crescent traffic faced with increased travelled distances (maximum 2 km to Wye Road)
		-	no residential traffic required to use service road	-	construction of new east- west route to the south required which will be extremely difficult and expensive
		-	could see small improvement in operation of Ordze Road/Wye Road intersection	-	new east-west route along south Plan boundary to Wallace Drive may create attraction for continued commercial expansion to the site, and create traffic noise along resi- dential boundaries
3 -	Combination	-	no residential traffic required to use the service road	-	Ordze Park residents must share part of Ordze Cresent with commercial area oriented traffic
			moving unnamed road could provid developers with more frontage on Wye Road in exchange for Sherwood Drive	le	
			Wye Road Gardens retains similar service road access to Sherwood Drive		
					A.16

It is recommended that Option #3 be implemented, as it appears to minimize the impacts of commercial development of the lands within the Plan area on the residential areas, while maintaining their present high level of access to the County's major transportation infrastructure.



DWG NAME: XXXXX