



# LANGDON CROSSING WEST CONCEPTUAL SCHEME

---

NE ¼ 22-23-27-W4M

Bylaw C-6047-2005, Adopted April 26, 2005

---

**MUNICIPAL DISTRICT OF ROCKY VIEW NO. 44**  
**Department of Planning and Development**

Created for  
Greencor Developments Inc.  
205, 355 Centre Street North  
Langdon, AB T0J 1X2

For the use of the  
MUNICIPAL DISTRICT OF ROCKY VIEW NO. 44

**MUNICIPAL DISTRICT OF ROCKY VIEW NO. 44**  
**BYLAW C-6047-2005**

A Bylaw of the Municipal District of Rocky View No. 44 to adopt the attached Schedule 'A', the "Conceptual Scheme", pursuant to Divisions 7 and 12 of Part 17 of the Municipal Government Act.

**WHEREAS** the Council of the Municipal District of Rocky View No. 44 has received an application to adopt a Conceptual Scheme to provide a framework for subsequent redesignation, subdivision and development in a portion of the NE ¼ 22-23-27-W4M and Lot 1, Plan 9512519; and

**WHEREAS** a notice was published on March 29, 2005 and April 5, 2005 in the Rocky View Weekly, a newspaper circulating in the Municipal District of Rocky View No. 44, advising of the Public Hearing for April 26, 2005; and

**WHEREAS** Council held a Public Hearing and have given consideration to the representations made to it in accordance with Section 692, Section 230 and Section 606 of the Municipal Government Act, being Chapter M-26 of the Revised Statutes of Alberta, 2000, and all amendments thereto.

**NOW THEREFORE** the Council enacts the following:

1. That the Conceptual Scheme be adopted to provide a framework for subsequent redesignation, subdivision and development in a portion of the NE ¼ 22-23-27-W4M and Lot 1, Plan 9512519; as shown on Schedule 'A' attached to and forming part of this Bylaw; and
2. This Bylaw shall come into effect upon the date of its third and final reading thereof.
3. That Bylaw C-5294-2000 affecting a portion of the NE ¼ 22-23-27-W4M and Lot 1, Plan 9512519 shall be repealed in its entirety;

**DIVISION 4**

**File: 03222107-2004-RV-470**

First reading passed in open Council, assembled in the City of Calgary, in the Province of Alberta, on March 22, 2005, on a motion by Councillor Solberg.

Second reading passed in open Council, assembled in the City of Calgary, in the Province of Alberta, on April 26, 2005, on a motion by Councillor McLean.

Third reading passed in open Council, assembled in the City of Calgary, in the Province of Alberta, on April 26, 2005, on a motion by Councillor Neustaedter.

---

REEVE OR DEPUTY REEVE

---

MUNICIPAL SECRETARY

SCHEDULE 'A'  
**FORMING PART OF BYLAW C-6047-2005**

A Conceptual Scheme for a portion of the NE ¼ 22-23-27-W4M and Lot 1, Plan 9512519.

# Table of Contents

# Page

<b>1.0</b>	<b>Introduction .....</b>	<b>1</b>
1.1	Conceptual Scheme Purpose.....	1
<b>2.0</b>	<b>Conceptual Scheme Objectives.....</b>	<b>1</b>
<b>3.0</b>	<b>Conceptual Scheme Planning Area .....</b>	<b>2</b>
3.1	Defining the Conceptual Scheme Planning Area .....	2
3.2	Municipal Context .....	2
3.3	Community Context and Land Use.....	3
<b>4.0</b>	<b>Planning Area Attributes .....</b>	<b>3</b>
4.1	Topography .....	3
4.2	Sub-surface Conditions.....	3
4.3	Vegetation .....	4
4.4	Existing Development.....	4
<b>5.0</b>	<b>Proposed Land Use.....</b>	<b>4</b>
<b>6.0</b>	<b>Subdivision and Development Concept.....</b>	<b>5</b>
6.1	Subdivision and Development Concept - Design .....	6
6.2	Subdivision and Development Concept - Residential Density .....	7
6.3	Subdivision and Development Concept – School and Municipal Reserve Dedication .....	9
<b>7.0</b>	<b>Servicing Scenario.....</b>	<b>11</b>
7.1	Sanitary Sewage Management.....	11
7.2	Potable Water .....	11
7.3	Street System .....	11
7.4	Shallow Utilities .....	13
7.5	Storm water Management.....	13
<b>8.0</b>	<b>Subdivision and Development Concept Phasing .....</b>	<b>15</b>
<b>9.0</b>	<b>Conceptual Scheme Implementation.....</b>	<b>16</b>

## List of Exhibits

Exhibit 1 - Planning Area

Exhibit 2 - Subdivision and Development Concept

Exhibit 3 - Subdivision Phasing

## List of Tables

## Page

**Table 1 – Subdivision and Development Concept - Land Use Statistics ..... 5**

**Table 2 - Langdon Crossings West Phasing ..... 15**

## Appendices

### Appendix 1.0

#### Road Cross-Sections

Figure 1: 9.50 Local Residential Road, Typical Line Assignments (15 m R/W)

Figure 2: 10.00 Collector Residential Road, Typical Line Assignments (20 m R/W)

#### Storm Water Management – Swales and Walkways

Figure 3: Plan and Section View of HWY 797, Storm Roadside Swale

Figure 4: Concrete Swale Sections

Figure 5: Lot and Joint Use Area Swale Sections

Figure 6: Asphalt Walkway with Curb Walls

Figure 7: Concrete Walkway with Curb Walls

Figure 8: Dished Walkway

Figure 9: Residential and Collector Road Cross-Sections

### Appendix 2.0

#### List of Supporting Reports (Reference under separate cover)

2.1 Report on the Geotechnical Investigation for the Proposed Subdivision, NE ¼ Sec. 22-23-27-4, Langdon, Alberta, G Tech Environmental Inc. April 1998.

2.2 Langdon Crossings West Storm water Management Study, Lee Maher Engineering Associates Ltd., April 20, 2000.

2.3 Langdon Crossings West Traffic Impact Study, Final Report, Impax Consulting Group Inc., August 17, 2000.

2.4 Langdon Crossings West Traffic Impact Study, Morrison Hershfield Limited, October 08, 2003.

## 1.0 Introduction

This Conceptual Scheme is an update of a Conceptual Scheme adopted by the M.D. of Rocky View No.44 Council on December 19, 2000 as Bylaw C-5294-2000.

Preparation of the Conceptual Scheme has been guided by the Hamlet of Langdon Area Structure Plan, Bylaw C-5049-99, and adopted April 27, 1999 (referred to herein as the Hamlet of Langdon Area Structure Plan).

### 1.1 Conceptual Scheme Purpose

The Conceptual Scheme provides a supporting land use rationale for the redesignation and subdivision of a portion of the NE 1/4 Sec. 22-23-27-W4M to accommodate residential subdivision and development (with some associated land uses). It provides a policy framework intended to be used to guide and evaluate redesignation, subdivision and development proposals within its planning area. The individual policies of the Conceptual Scheme address the land use issues identified by the Hamlet of Langdon Area Structure Plan and provide specific direction to achieve the objectives of this plan and the Conceptual Scheme.

## 2.0 Conceptual Scheme Objectives

The objectives of the Langdon Crossings West Conceptual Scheme are:

- 2.1 To establish the appropriateness of a portion of the NE 1/4 Sec. 22-23-27-W4M for the land uses proposed by the Conceptual Scheme.
- 2.2 To establish a Conceptual Scheme that addresses existing development constraints and opportunities while protecting and enhancing subdivision and development opportunities for all lands within a portion of the NE 1/4 Sec. 22-23-27-W4M and the adjacent community.
- 2.3 To facilitate appropriate and sustainable subdivision design within a portion of the NE 1/4 Sec. 22-23-27-W4M that maximizes lot yields, servicing efficiencies and on-site development opportunities within the context of the Hamlet of Langdon Area Structure Plan and other statutory plans, policies and procedures of the M.D. of Rocky View No.44.
- 2.4 To accommodate the phased subdivision and development of a portion of the NE 1/4 Sec. 22-23-27-W4M.

### **3.0 Conceptual Scheme Planning Area**

#### **3.1 Defining the Conceptual Scheme Planning Area**

##### **Discussion**

This Conceptual Scheme applies to all lands within that portion of the NE 1/4 Sec. 22-23-27-W4M as identified in Exhibit 1 – Planning Area. The planning area comprises a total area of 149.53 acres (60.40 hectares). The planning area is comprised of two development cells:

1. Langdon Crossings West which comprises 146.53 Acres (59.19 hectares); and
2. Lot 1, Plan 951 2519 which comprises 3.00 Acres (1.21 hectares).

Currently, over sixty (60) percent of Langdon Crossings West (Phases 1 to 4) has been subdivided and is currently being developed. The remaining portion of the Langdon Crossings West lands (Phases 5 and 6) are planned for subdivision and development in 2005. Lot 1, Plan 951 2519 will be developed at a future time by others.

In addition, Main Street Langdon – 1908, comprising 3.83 acres (1.55 hectares), was approved by the Municipality in 1999. Development has proceeded in two phases and when completed will provide important commercial services to the community of Langdon Crossings West and the Hamlet of Langdon. This area has not been included within the planning area of this Conceptual Scheme.

##### **Conceptual Scheme Policy - Planning Area**

Policy 3.1.1 Policies contained in this Conceptual Scheme shall apply to lands identified in Exhibit 1 - Planning Area.

#### **3.2 Municipal Context**

##### **Discussion**

The planning area is located within Division 4 of the M.D. of Rocky View No. 44 approximately 9.95 miles (16 km) east of the City of Calgary and within the Hamlet of Langdon.

The planning area is adjacent to and south of Highway #560 (Glenmore Trail) and adjacent to and west of Highway #797 (Centre Street).



### **3.3 Community Context and Land Use**

#### **Discussion**

At the time of Conceptual Plan preparation, the lands within the planning area were designated Direct Control District (DC-75) under the M.D. of Rocky View No.44 Land Use Bylaw.

## **4.0 Planning Area Attributes**

### **4.1 Topography**

#### **Discussion**

The planning area contains no significant topographical features or terrain issues which may impair its development. Moderate variations in elevation across the planning area results in a number of irregular depressions, which retain storm water during, wet periods of the year. The Langdon Crossings West Storm Water Management Study contains figures illustrating the existing contours of the planning area and the pre-design drainage areas. The existing planning area topography has undergone grading to accommodate residential development and to define a post development storm water drainage pattern.

#### **Conceptual Scheme Policy - Topography**

Policy 4.1.1 Alterations in the existing topography of the planning area can only proceed in accordance with a storm water management plan and overall grading plan, as approved by the M.D. of Rocky View No.44.

### **4.2 Sub-surface Conditions**

#### **Discussion**

Geotechnical investigations were conducted within the planning area and are contained in the Report on the Geotechnical Investigation for the Proposed Subdivision. Having regard for geotechnical conditions within the planning area, the report presents recommendations for development.

#### **Conceptual Scheme Policy - Subsurface Conditions**

Policy 4.2.1 Subdivision and development proposed for the planning area should proceed in accordance with the recommendations of a geotechnical report prepared by a qualified professional engineer in support of a proposal for subdivision and/or development, solely as approved by the Municipal District of Rocky View No.44.

### 4.3 Vegetation

#### Discussion

Prior to development of the planning area, farming practices and human activity had disturbed natural vegetation within the planning area. Subsequent development found no significant natural plant communities within the planning area that require special consideration.

### 4.4 Existing Development

#### Discussion

An existing residence and accessory buildings comprise development within the Lot 1, Plan 951 2519 comprising 3.00 acres (1.21 hectares). Phases 1 to 4 of the Langdon Crossings West community are currently under development.

## 5.0 Proposed Land Use

#### Discussion

Land use proposed for the planning area is in accordance with the provisions of the Hamlet of Langdon Area Structure Plan. Residential land use is proposed as the dominant land use as provided for by the Hamlet of Langdon Area Structure Plan's Future Land Use Scenario. In addition, institutional land uses, joint-use areas and supporting infrastructure integrated into the residential community of Langdon Crossings West.

#### Conceptual Scheme Policy - Land Use

Policy 5.1      Proposals for redesignation of land within the planning area to land use districts pursuant to the M.D. of Rocky View Land Use Bylaw shall be considered appropriate where such proposals will support subsequent subdivision and development which:

1. Recognizes and responds to the physical characteristics of the planning area;
2. Will result in a sustainable residential community at a scale appropriate to the surrounding community;
3. Accommodates the full potential of these lands for residential subdivision and development; and
4. Conforms to the policies of this Conceptual Scheme, the Hamlet of Langdon Area Structure Plan and other relevant policies and regulations of the Municipality.

## 6.0 Subdivision and Development Concept

### Discussion

A concept for the subdivision and development of the planning area for residential land uses is presented in Exhibit 2 – Subdivision and Development Concept.

Land use statistics for the Subdivision and Development Concept are provided in Table 1.

The size and location of the parcels depicted in the Subdivision and Development Concept illustrates the full build-out of the plan area for residential and attendant land uses. In this regard the Subdivision and Development Concept contemplates subdivision to accommodate a range of residential lot sizes planned to accommodate a range of architectural styles.

### Conceptual Scheme Policy - Subdivision and Development Concept

Policy 6.1 Land uses within the planning area shall be generally in accordance with Exhibit 2 - Subdivision and Development Concept.

**Table 1 – Subdivision and Development Concept - Land Use Statistics**

Land Use	Area			
Langdon Crossings West	Acres	Hectares	Percent	Dwelling Units
Residential (Single Detached)	88.41	35.69	59.17	413
Residential (Medium Density)	11.37	4.60	7.60	113
School	12.08	4.88	8.08	
Joint Use / PUL	7.59	3.07	5.07	
Linear Municipal Reserve	2.23	0.90	1.49	
Road Widening	2.17	0.87	1.45	
Roads	22.69	9.18	15.17	
Subtotal	146.53	59.19	97.99	526
Lot 1, Plan 951 2519	3.00	1.21	2.01	8
Total	149.53	60.40	100.00	534

#### Table Notes:

1. Land Use Statistics contained in this table corresponds to Exhibit 2 – Subdivision and Development Concept.
2. Area contained within the planning area shown on Exhibit 2 – Subdivision and Development Concept comprises 149.53 acres (60.40 hectares).
3. Totals may not equal due to rounding and metric conversion.
4. Areas provided are approximate only and are provided for planning purposes only. Final areas should be determined at the tentative plan preparation stage and verified by legal survey.

## 6.1 Subdivision and Development Concept - Design

### Discussion

The Hamlet of Langdon Area Structure Plan encourages innovative neighbourhood design which “*integrates existing design patterns found within the developed areas*” of the Hamlet of Langdon and encourages the maintenance of “*common design elements from one neighbourhood to the next.*”

Following the policies established in the Hamlet of Langdon Area Structure Plan, Langdon Crossings West and this Conceptual Scheme offers a community design that echoes a traditional grid pattern of streets established in other residential neighbourhoods within the Hamlet of Langdon.

The result is a neighbourhood of rectangular shaped residential lots integrated with a system of collector and local streets facilitating vehicular movements. Cul-de-sac roads are used only to modify the grid pattern in such a way that long local streets (which could be used as alternative collector streets) are terminated and traffic is restricted to local vehicles. Pie-shaped or irregular shaped lots remain a minority to more traditional rectangular and regular shaped lots.

The Hamlet of Langdon Area Structure Plan encourages new residential neighbourhoods to “*accommodating a range of lot widths to provide variety and interest to the streetscape*”. Accordingly, Langdon Crossings West comprises lots of varying widths, depths and sizes throughout the community. This provides a range of development opportunities for different residential building forms and architectural styles.

A portion Langdon Crossings West (accessible via Besse Avenue and Bishop Avenue) will comprise lots which range in size from 0.16 acres to 0.18 acres in size. This area is planned to accommodate those parties seeking a smaller home and yard. This area maintains lot widths at 15 metres or greater in order to facilitate the development of a range of bungalow and two-story building forms. Front yards are reduced from 6 metres to 4 metres in order to maximize rear yard privacy areas and to create a more intimate streetscape appropriate to the size of the residential units. In accordance with the wishes of the Municipality, a small tot lot (Municipal Reserve Lot) will be located directly north of the intersection of Mckinnon Street and Besse Avenue.

A central feature of Langdon Crossings West are its concrete sidewalks, linked green-spaces and joint use areas which facilitate safe pedestrian movements through the community. The joint-use areas comprise over ten (10) acres in area and serve as secondary pedestrian corridors and as well as a component of the overall storm water management system for the community. The joint use / open space areas also provide valuable green areas (in addition to Municipal and School Reserve dedication) into the community creating areas for informal recreation use and social interaction by community residents.

Hamlet commercial services found at Main Street Langdon - 1908 and in other parts of the Hamlet are within easy walking distance Langdon Crossings West. A school site was provided in Phase 1 of subdivision and is located at the eastern and principal entrance to the community. School facilities are now developed on this site.

The range of residential lot sizes, pedestrian linked open space and a modified traditional grid system of streets within the Langdon Crossings West community result in a livable community appropriate to the small urban community of Langdon.

### **Conceptual Scheme Policy - Subdivision and Development Concept Design**

- Policy 6.1.1 Subdivision of land within the planning area shall be generally in accordance with Exhibit 2 - Subdivision and Development Concept.
- Policy 6.1.2 Lot layouts shown in Exhibit 2 – Subdivision and Development Concept are conceptual only and may not reflect the a final design, number or sizes of lots that may be proposed in future tentative plans of subdivision. The final size, configuration and design of individual parcels proposed through subdivision shall be determined at the tentative subdivision plan approval stage and conform to the provisions of the Hamlet of Langdon Area Structure Plan.
- Policy 6.13 A 1.5 metre sidewalk shall be constructed on one side of each roadway in the planning area.

## **6.2 Subdivision and Development Concept - Residential Density**

### **Discussion**

The Subdivision and Development Concept offers a residential density of 3.5 units per gross acre (including areas of medium residential land use) which is below the 4.5 units per gross acre allowed under the Hamlet of Langdon Area Structure Plan.

Single detached residential land use is the dominant development form within the Langdon Crossings West community comprising 59.17 percent of the planning area. The community is characterized by a mix of lot sizes which range from 0.324 acres (0.131 hectares) to 0.16 acres (0.065 hectares). This mix of lot sizes will facilitate a wide range of housing choices for new residents, increase the range of affordable housing within the community and introduce variation in the look and feel of the community.

At full build-out of the Langdon Crossings West community, the average single detached residential lot size will be 0.214 acres (0.087 hectares) which is significantly larger in size than comparable single detached lots found in adjacent urban centres. This is in keeping with spirit and intent of the Hamlet of Langdon Area Structure Plan which seeks to complement and preserve existing and approved lot sizes within the existing Hamlet while balancing the efficient use of infrastructure and the land resource.

### **Conceptual Scheme Policy - Residential Density**

Policy 6.2.1 Residential density (single detached and medium density residential) within the planning area shall be generally in accordance with Exhibit 2 - Subdivision and Development Concept.

#### **6.2.1 Single Detached Residential**

##### **Discussion**

At full build-out, the planning area will contain 534 residential parcels (single detached and medium density lots). Residential land use will comprise 68.78 percent of the planning area.

#### **6.2.2 Medium Density Residential**

##### **Discussion**

The Subdivision and Development Concept provides for 11.37 acres (4.60 hectares) in two areas for the development of medium residential development. Medium density residential areas are planned to accommodate approximately 10 units per acre in accordance with the provisions of the Hamlet of Langdon Area Structure Plan.

The area located in the northeasterly corner of the planning area comprises 5.80 acres (2.35 hectares). Access to this area is via internal roads. This area is planned to accommodate approximately 58 dwelling units.

The area located in the southeasterly corner of the planning area (west of the commercial area – Main Street Langdon - 1908) comprises 5.57 acres (2.25 hectares). Primary access to this area is via the community's internal road network. This area was approved for subdivision in 2000 and is currently under development. It was planned to accommodate 55 dwelling units.

Specific site planning and architectural standards proposed for the medium density residential areas identified in the Subdivision and Development Concept are planned to develop in accordance with the provisions of the Hamlet of Langdon Area Structure Plan. This Conceptual Scheme contemplates that a Direct Control District (with special guidelines) of the Land Use Bylaw will be used to regulate the development of the medium density residential areas.

### **Conceptual Scheme Policy - Medium Density Residential**

Policy 6.2.2.1 Specific site planning and the architectural standards proposed for developments proposed within the medium density residential areas as identified Exhibit 2 - Subdivision and Development Concept shall be in accordance with the provisions of the Hamlet of Langdon Area Structure Plan.

Policy 6.2.2.2 A “Direct Control District (with special guidelines)” of the Land Use Bylaw should be applied to the medium density residential areas as identified in Exhibit 2 – Subdivision and Development Concept. The “Direct Control District (with special guidelines)” should regulate land use and contain development regulations in accordance with the provisions of the Hamlet of Langdon Area Structure Plan.

Policy 6.2.2.3 An “Interim Direct Control District” (which has the effect of establishing land use only) may be applied to the medium density residential areas at the tentative subdivision plan approval stage. An “Interim Direct Control District” shall contain provisions requiring subsequent amendments to the district to include detailed development regulations in response to specific development proposals and in accordance with the Hamlet of Langdon Area Structure Plan.

Policy 6.2.2.4 The maximum number of medium density residential units permitted in the planning area is one hundred and eighteen (118).

### **6.3 Subdivision and Development Concept – School and Municipal Reserve Dedication**

#### **6.3.1 School Reserve Dedication**

##### **Discussion**

During the subdivision of Phase 1 of Langdon Crossings West, a 12.40 acre (5.02 hectares) school site at the east entrance to the community was dedicated as Municipal School Reserve. Locating the school site at the entrance of the Langdon Crossings West community provides direct access to the provincial highway network and the municipal road system. Further, this location avoids and minimizes bus traffic conflicts with residential land use and places the school at a visually prominent and important location within the community.

##### **Conceptual Scheme Policy - School Reserve Dedication**

Policy 6.3.1.1 Where school reserve is owing as a result of subdivision approvals for lands within the planning area, the provision of these reserves may be in accordance with the provisions of the Municipal Government Act.

Policy 6.3.1.2 The school reserve provided for in Exhibit 2 - Subdivision and Development Concept is an important design element for the proposed residential community. The location of the school reserve, the general parcel configuration and size is considered appropriate and should be maintained in subsequent applications for subdivision approval to the Municipality.

### 6.3.2 Joint Use / Linear Municipal Reserve Dedication

#### Discussion

In accordance with the provisions of the Hamlet of Langdon Area Structure Plan, the Subdivision and Development Concept provides a system of interconnected open spaces integrated into the storm water management system.

Joint use areas comprise 7.59 acres (3.07 hectares) or 5.07 percent of the planning area. These areas channel and contain storm water flows from the community. Additionally, they function as pedestrian pathways facilitating pedestrian movements.

Complementing the joint use area is the linear municipal reserve which comprise 2.23 acres (0.90 hectares) or 1.49 percent.

#### Conceptual Scheme Policy - Joint Use / Open Space Dedication

Policy 6.3.2.1 Where municipal reserves are owing as a result of subdivision approvals for lands within the planning area, the provision of these reserves may be in accordance with the provisions of the Municipal Government Act.

Policy 6.3.2.2 The system of linked open spaces (joint use areas and linear Municipal Reserve) provided for in Exhibit 2 - Subdivision and Development Concept is an important design element for the proposed residential community. This system of open spaces (open space / joint use) areas shall be maintained in subsequent applications for subdivision approval to the Municipality.

Policy 6.3.2.3 Open space / joint use areas in concert with the dedication of school reserve and as provided in Exhibit 2 - Subdivision and Development Concept shall be considered to be creditable reserve dedication if dedicated as either municipal reserve or environmental reserve. The Municipality may require that land that accommodates stormwater management facilities (swales, wet ponds, dry ponds) be dedicated as a public utility lot (s) and/or environmental reserve pursuant to the Municipal Government Act. In the case that the Municipality requires the open space/joint use areas to be dedicated as public utility lots or environmental reserve, cash-in-lieu of municipal reserves will be provided by the developer for the remaining municipal reserves owing above that which was provided by the dedication of the  $\pm$  12.4 municipal and school reserve land.

Policy 6.3.2.4 In accordance with the principles of “Crime Prevention through Environmental Design”,

landscaping of the linear Municipal Reserve should be limited to grasses and/or low shrubs in order to maximize pedestrian visibility, safety and security.

Policy 6.3.2.5 The Developer should dedicate a 0.16 acre Municipal Reserve lot at the intersection of Mckinnon Street and Besse Avenue in order to accommodate the development of a tot-lot. This dedication may comprise an over-dedication of municipal and school reserve land pursuant to the Municipal Government Act.



## **7.0 Servicing Scenario**

### **7.1 Sanitary Sewage Management**

#### **Discussion**

Sanitary sewage management for development within the planning area will be accommodated through connection to the Hamlet of Langdon municipal sewage collection and treatment system.

#### **Conceptual Scheme Policy - Sanitary Sewage Management**

Policy 7.1.1 Sewage treatment shall be by connection to the Hamlet of Langdon municipal sewage collection and treatment system.

### **7.2 Potable Water**

#### **Conceptual Scheme Policy - Potable Water**

Policy 7.2.1 The potable water supply required to service subdivision within the planning area shall be via connection to the Langdon Waterworks Ltd. treatment and distribution system.

Policy 7.2.2 Fire hydrants in the Conceptual Scheme as part of the fire fighting infrastructure shall be to the satisfaction of the Municipality.

### **7.3 Street System**

#### **7.3.1 Access to Highway #560 and #797**

##### **Discussion**

Access from the planning area to Highway #560 (Glenmore Trail) is restricted with primary access to the planning area from Highway #797 (Centre Street). Residential lots adjacent Highway #560 have been increased in depth to facilitate the construction of noise attenuation berms and to allow the development of single family residences to meet the minimum setback requirements established by the Hamlet of Langdon Area Structure Plan.

#### **7.3.2 Street Pattern**

##### **Discussion**

The street pattern proposed by the Subdivision and Development Concept is based upon a hierarchy of roads comprising collector and local roads. The proposed street pattern is consistent with the provisions of the Hamlet of Langdon Area Structure Plan.

Two collector streets facilitate the movement of traffic through the planning area and to adjacent municipal road network and Provincial Highway system:

- Brander Avenue is the east-west collector which intersects with Main Street (Highway #797) and Anderson Avenue. Brander Avenue further provides a future road linkage to the NE ¼ Sec. 22-23-27-W4M.
- McKinnon Street is the north-south collector which extends south from Brander Avenue to a future road linkage and intersection with Railway Avenue.

Appendix Figure 3 provides a typical cross-section of the collector roads proposed by the Subdivision and Development Concept.

The balance of the roads proposed by the Subdivision and Development Concept are local roads, which are intended to serve the need of the residents of the community. Appendix Figure 3 provides a typical cross-section of the local roads proposed by the Subdivision and Development Concept.

Residential streets are multi-purpose facilities that are shared by pedestrians, cyclists, automobiles, trucks and service vehicles. The negative impact of traffic on the community has been identified as a concern within the planning area, detracting from the safety and livability of the street. In response, the streets within the planning area may consider incorporation of traffic calming measures into the design of the community. The Institute of Transportation Engineers has developed a definition of traffic calming as follows:

*"Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorized street users"*  
*Canadian Guide to Neighbourhood Traffic Calming (1998)*

When used appropriately, traffic calming can be utilized as an effective means of reducing vehicle speeds and minimizing conflicts between street users, preventing potential future safety issues from occurring while enhancing neighbourhood livability and adding aesthetic value.

### **Conceptual Scheme Policy - Street System**

- Policy 7.3.1 Access to subdivision proposed within the Plan Area shall be in accordance with Road Linkage Policy 304.
- Policy 7.3.2 Internal roads shall be constructed to municipal standards in accordance with the Servicing Standards for Residential Subdivisions and Road Construction adopted by Council on May 04, 2004, as amended and in accordance with the Typical Cross Sections contained in Appendix 1.
- Policy 7.3.3 Traffic circles or roundabouts proposed in the planning area should be located on collector roads in accordance with Exhibit 4 – Subdivision and Development Concept. The functional design of any proposed traffic circles within the planning area shall be considered at the Tentative Plan of subdivision stage.
- Policy 7.3.4 Incorporation of traffic calming devices within the planning area may be considered appropriate provided that they will not negatively effect access for emergency vehicles, maintenance equipment or other vehicles and would not pose a safety concern.

- Policy 7.3.5 A Traffic Analysis (TIA) for the entire Conceptual Scheme area (all phases) shall be completed to the sole satisfaction of the Municipality and Alberta Infrastructure prior to the approval of the Phase 1 plan of subdivision, and it shall examine the functioning of the intersection of Highway #797 and Highway #560 as well as the intersections of Highway #560 and Highway #797 that provide access from the planning area (in terms of Level of Service, need for intersectional improvements, illumination and signalization), and shall include details on the functional design of each intersection.
- Policy 7.3.6 All intersectional and road improvements identified in a TIA pursuant to Policy 7.3.4 above necessary to provide access to the Conceptual Scheme area, shall be completed by the developer at his/her expense.
- Policy 7.3.7 Access to the Conceptual Scheme area shall be via the intersection at Centre Street (Highway #797) for the subdivision in Phase 1 as shown on Exhibit 2. As a condition of subdivision approval for Phase 5, the Applicant shall provide a second means of access to the planning area, to the satisfaction of the Municipality.
- Policy 7.3.8 The Municipality and Alberta Infrastructure may require road widening agreements or road widening to be dedicated at each phase of subdivision.
- Policy 7.3.9 Primary access from the 5.44 acre Medium Density Residential site shown on Exhibit 2 directly to Highway # 797 shall only be permitted through the completion of a Traffic impact Analysis acceptable to both the Municipality and Alberta Infrastructure. If direct access is not acceptable to the Municipality and Alberta Infrastructure, primary access to the site shall be through the internal road network.

## **7.4 Shallow Utilities**

### **Conceptual Scheme Policy - Shallow Utilities**

- Policy 7.4.1 The appropriate utility company providing service to the planning area will provide shallow utilities.

## **7.5 Storm water Management**

### **Discussion**

Storm water management within the planning area has been considered in the Subdivision and Development Concept. On-site and off-site storm water management issues have been addressed in the attendant Langdon Crossings West Storm Water Management Study, April 2000 prepared in support of this Conceptual Scheme. The subdivision and development of Langdon Crossings West Phases 1 to 4 was subdivided in accordance with a storm water management program and attendant “best management practices” approved by the Municipality.

The storm water management system divides the planning area into 11 sub catchment areas. While some storm water flows are directed to the existing ditch system adjacent to the planning

area, the majority of the storm water is directed south through the joint use areas (Appendix Figure 5) and street system to a wet pond (located in the southerly portion of the planning area). The wet pond is used to settle suspended solids and improve the quality of the collected storm water prior to its discharge to the existing Municipal Drainage Ditch and Weed Lake. The management of post - development storm water within the planning area is addressed with:

- the provision of curb and gutter on both sides of all streets (Appendix 1.0 - Figure 9);
- rear yard and park concrete swales (Appendix 1.0 - Figure 4);
- concrete road crossing swales (Appendix 1.0 - Figure 4);
- dished asphalt walkways (Appendix 1.0 - Figure 6);
- dished concrete walkways (Appendix 1.0 - Figure 7);
- dished asphalt and concrete walkways (Appendix 1.0 - Figure 8).

Weed Lake is a sensitive component of the natural drainage system near the outlet of a larger watershed. The restoration of Weed Lake as a viable wetland and the subsequent preservation of this wetland is a goal of the MD of Rocky View No. 44 and Ducks Unlimited Canada. Stormwater Management must be designed with consideration of impacts downstream and specifically Weed Lake.

### **Conceptual Scheme Policy - Storm Water Management**

- Policy 7.5.1 Storm water management within the planning area shall be in accordance with the Servicing Standards for Residential Subdivisions and Road Construction adopted by Council as amended and in accordance with the conclusions and recommendations of the Langdon Crossings West Storm Water Management Study, April 2000, prepared by Lee Maher Engineering Ltd.
- Policy 7.5.2 An overall grading plan for the planning area should be considered at the tentative plan approval stage and at the first phase of subdivision and development. The overall grading plan should implement the conclusions and recommendations of the Langdon Crossings West Storm Water Management Study, April 2000, prepared by Lee Maher Engineering Ltd.
- Policy 7.5.3 The issuance of a development permit for grading of all or part of the planning area to accommodate and implement the required works of a storm water management plan prepared in accordance with the conclusions and recommendations of the Langdon Crossings West Storm Water Management Study, April 2000, prepared by Lee Maher Engineering Ltd. and this Conceptual Scheme is considered appropriate by the Municipality prior to the redesignation of all or part of the planning area to residential or other land uses.
- Policy 7.5.4 Notwithstanding policies 7.5.1 - 7.5.3, Storm water management and design within the planning area must have consideration to the entire drainage basin and possible impacts to the Weed Lake Restoration Project.
- Policy 7.5.5 Notwithstanding anything else in this Conceptual Scheme to the contrary, any stormwater management facility proposed to be located within the right-of-way of

Highway #797 and Highway #560 require the approval of and are at the discretion of the Municipality and Alberta Infrastructure.

## 8.0 Subdivision and Development Concept Phasing

### Discussion

The provisions of the Hamlet of Langdon Area Structure Plan guide the preferred subdivision and development phasing contained in this Conceptual Scheme. Exhibit 5 – Subdivision Phasing identifies a preferred subdivision and development phasing for the Subdivision and Development Concept. Following design concepts prepared in 2000, Phases 1 to 4 of Langdon Crossings West is approved and is under development. Phases 5 and 6 will be the final phases of Langdon Crossings West. Table 2 - Langdon Crossings West Phasing provides statistics for Langdon Crossings West phasing.

**Table 2 - Langdon Crossings West Phasing**

Phase	Area (Acres)	Area (Hectares)	Percentage of Total Planning Area	Single Detached Dwelling Units	Medium Density Dwelling Units	Sub-total All Dwelling Units
Phase 1	42.686	17.275	28.55	78	55	133
Phase 2	17.588	7.118	11.76	41	58	99
Phase 3	19.718	7.980	13.19	59	0	59
Phase 4	10.243	4.144	6.85	36	0	36
Phase 5	33.635	13.613	22.49	112	0	112
Phase 6	22.660	9.170	15.15	87	0	87
Sub-total: Langdon Crossings West	146.53	59.19	97.99	413	113	526
Lot 1, Plan 951 2519	3.00	1.214	2.00	8	0	8
Total: Planning Area	149.53	60.40	100.00	421	113	534

Table Notes:

1. Table statistics contained in this table corresponds to Exhibit 3 – Subdivision Phasing.
2. Area contained within the planning area shown on Exhibit 3 – Subdivision Phasing comprises 149.53 acres (60.40 hectares).
3. Totals may not equal due to rounding and metric conversion.
4. Areas provided are approximate only and are provided for planning purposes only. Final areas should be determined at the tentative plan preparation stage and verified by legal survey.

### Conceptual Scheme Policy – Phasing

Policy 8.1 Exhibit 3 - Subdivision Phasing illustrates the preferred phasing within the planning area and in accordance with this Conceptual Scheme's Subdivision and Development Concept.

- Policy 8.2      While the phasing of subdivision and development within the planning area is matched to a logical progression of servicing and other factors, applications for subdivision approval and development may proceed outside the phasing pattern established in this Conceptual Scheme provided the required infrastructure is in place and/or available to sustain the planned subdivision and development.

## **9.0 Conceptual Scheme Implementation**

### **Discussion**

The Subdivision and Development Concept has been designed to be compatible with adjacent land uses in the Hamlet of Langdon and in accordance with the provisions of the Hamlet of Langdon Area Structure Plan.

It is anticipated that subdivision and development of the planning area, in accordance with the provisions of this Conceptual Scheme, will maximize the development potential of the planning area, create a sustainable residential community and facilitate the development of a new residential neighbourhood within the Hamlet of Langdon.

Subdivision of the planning area is guided by the policies herein and implemented through conditions of subdivision approval by the M.D. of Rocky View No. 44.

### **Conceptual Scheme Policy - Implementation**

- Policy 9.1      The M.D. of Rocky View No. 44 shall implement the provisions of this Conceptual Scheme through the redesignation, subdivision and development approval processes.

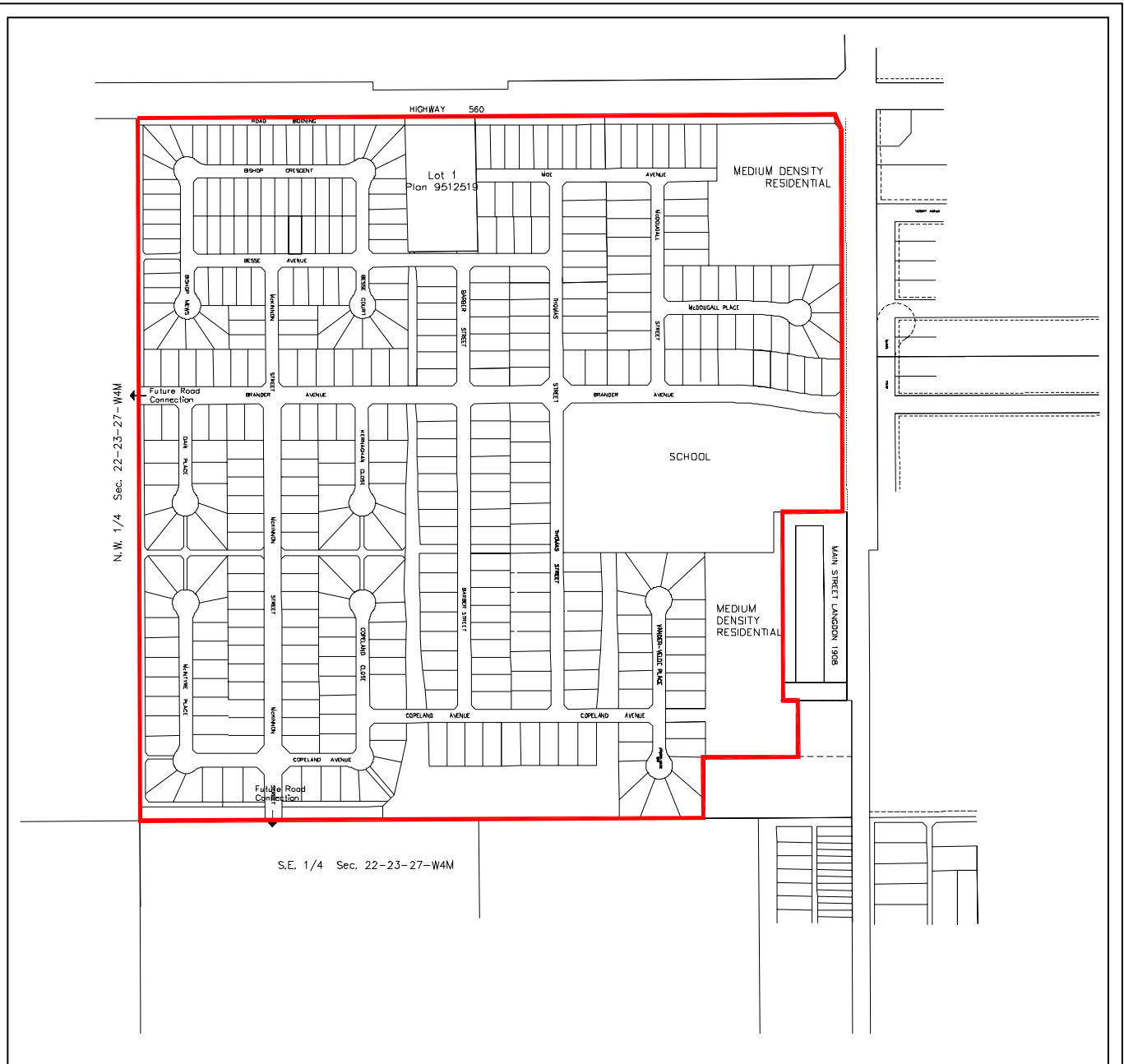
## List of Exhibits

Exhibit 1 - Planning Area

Exhibit 2 - Subdivision and Development Concept

Exhibit 3 - Subdivision Phasing

## LANGDON CROSSING WEST CONCEPTUAL SCHEME



### Langdon Crossings West Conceptual Scheme NE 1/4 Sec. 22-23-27-W4M

#### Exhibit 1 - Planning Area

Area contained within the Planning Area comprises 149.53 acres (60.40 ha).

1. Langdon Crossings West being a portion of the N.E. 1/4 Sec. 22-23-27-W4M comprising 146.53 acres (59.25 ha), and
2. Lot 1, Plan 951 2519 comprising 3.00 acres (1.214 ha).

North

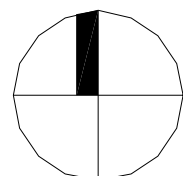


Exhibit is not to scale.  
March 2005



# LANGDON CROSSING WEST CONCEPTUAL SCHEME



## Langdon Crossings West Conceptual Scheme NE 1/4 Sec. 22-23-27-W4M

### Exhibit 2 - Subdivision and Development Concept

North

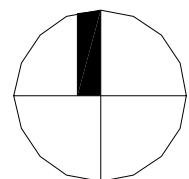
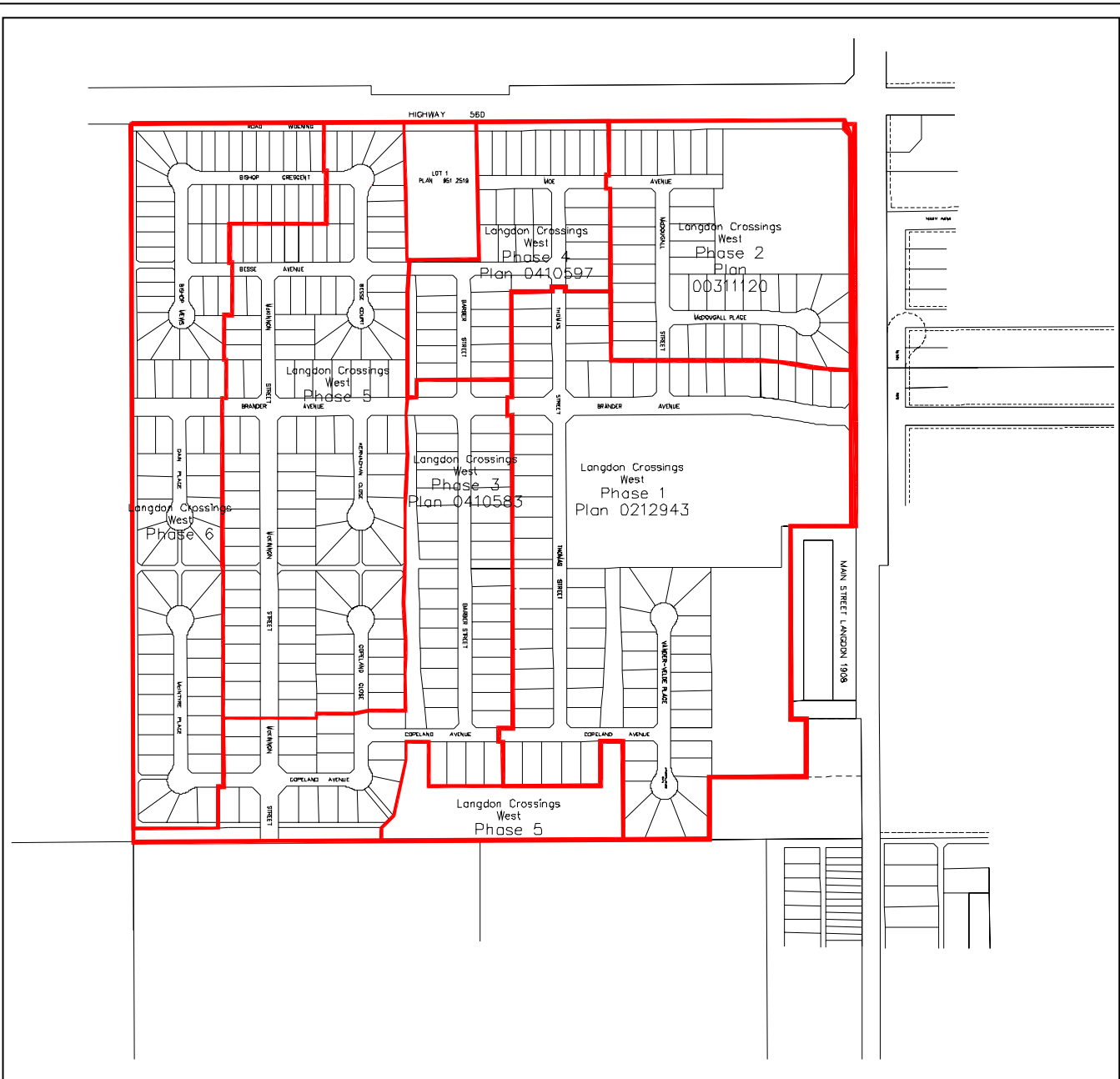


Exhibit is not to scale.  
March 2005

## LANGDON CROSSING WEST CONCEPTUAL SCHEME



Langdon Crossings West Conceptual Scheme  
NE 1/4 Sec. 22-23-27-W4M

## Exhibit 3 - Phasing

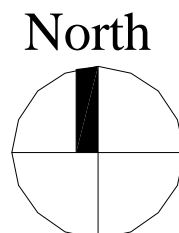


Exhibit is not to scale.  
March 2005

## Appendix 1.0

### Road Cross-Sections

Figure 1: 9.50 Local Residential Road, Typical Line Assignments (15 m R/W)

Figure 2: 10.00 Collector Residential Road, Typical Line Assignments (20 m R/W)

### Storm Water Management – Swales and Walkways

Figure 3: Plan and Section View of HWY 797, Storm Roadside Swale

Figure 4: Concrete Swale Sections

Figure 5: Lot and Joint Use Area Swale Sections

Figure 6: Asphalt Walkway with Curb Walls

Figure 7: Concrete Walkway with Curb Walls

Figure 8: Dished Walkway

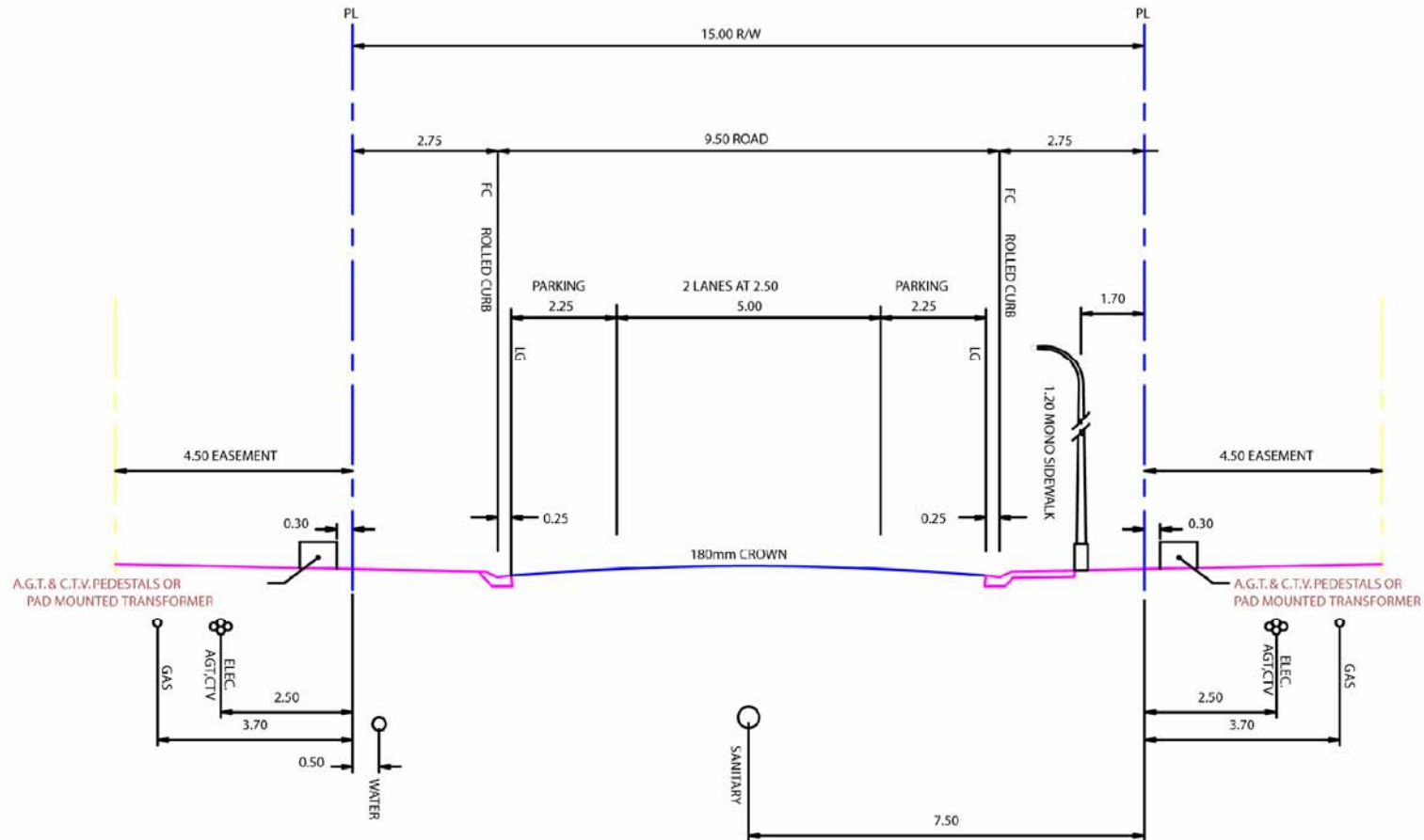
Figure 9: Residential and Collector Road Cross-Sections

# LANGDON CROSSING WEST CONCEPTUAL SCHEME

LANGDON CROSSINGS WEST

FIG. 1

9.50 RESIDENTIAL ROAD



TYPICAL LINE-ASSIGNMENTS  
RESIDENTIAL 9.50 ROAD

( 15.00 R/W )

NTS.

## NOTES:

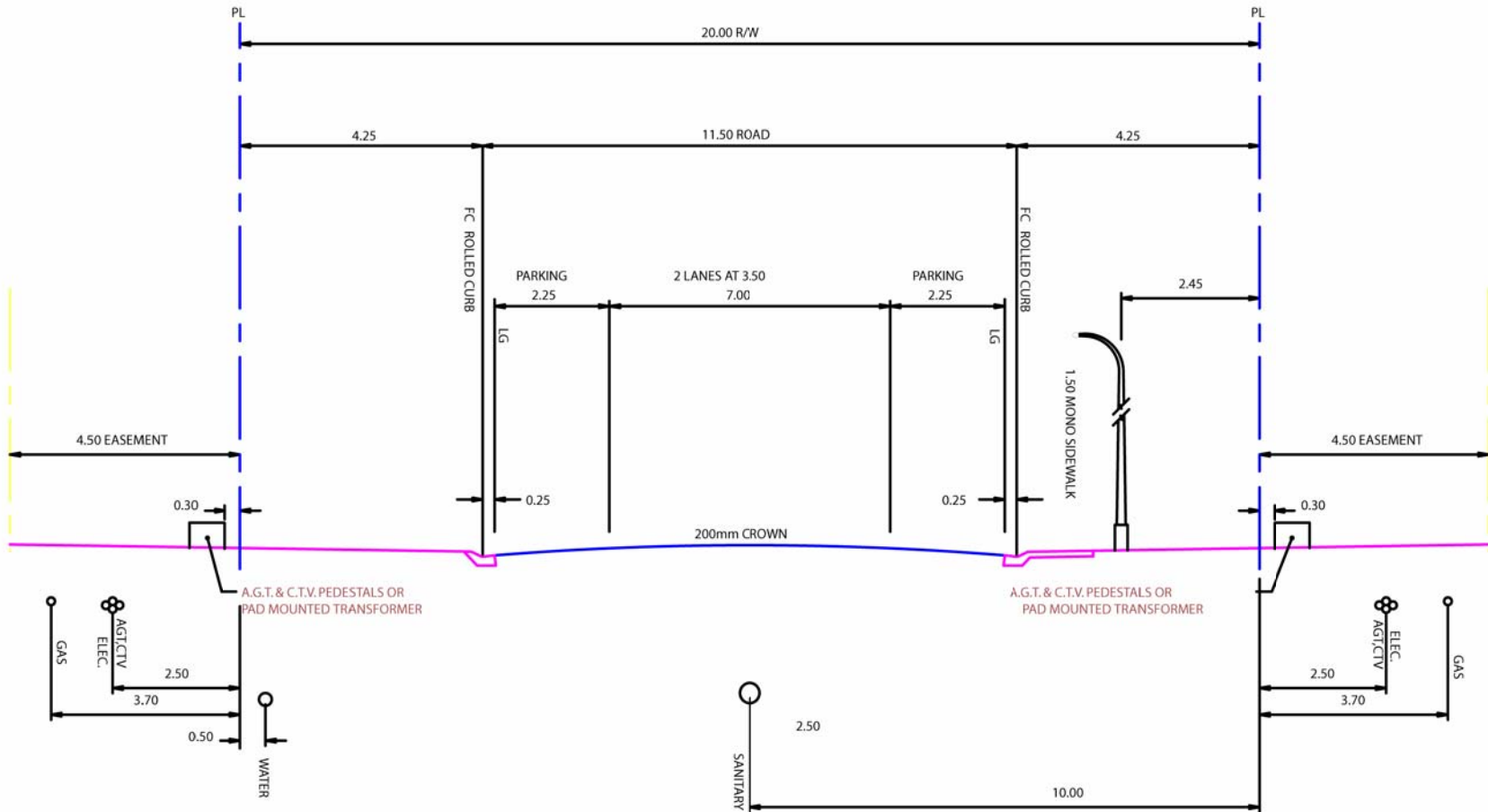
1. CURB STOPS TO PLACED 0.30 INSIDE PROPERTY LINE
2. HYDRANT ON 0.75 LINE
3. HYDRANT VALVES 1.00 OFF MAIN LINE
4. PRE-INSTALLED SERVICE CONNECTIONS TO BE INSTALLED 6.00 INSIDE PROPERTY LINE WHEN CROSSING GAS AND OTHER SHALLOW UTILITIES.
5. HYDRANT AND SERVICE VALVES SHALL MAINTAIN A MIN. 3.00 SEPARATION TO THE EDGE OF TRANSFORMERS, JUNCTION TERMINALS OR ANY OTHER SURFACE STRUCTURES.

# LANGDON CROSSING WEST CONCEPTUAL SCHEME

LANGDON CROSSINGS WEST

FIG. 2

11.50 COLLECTOR ROAD



TYPICAL LINE-ASSIGNMENTS  
COLLECTOR 11.50 ROAD

( 20.00 R/W )

N.T.S.

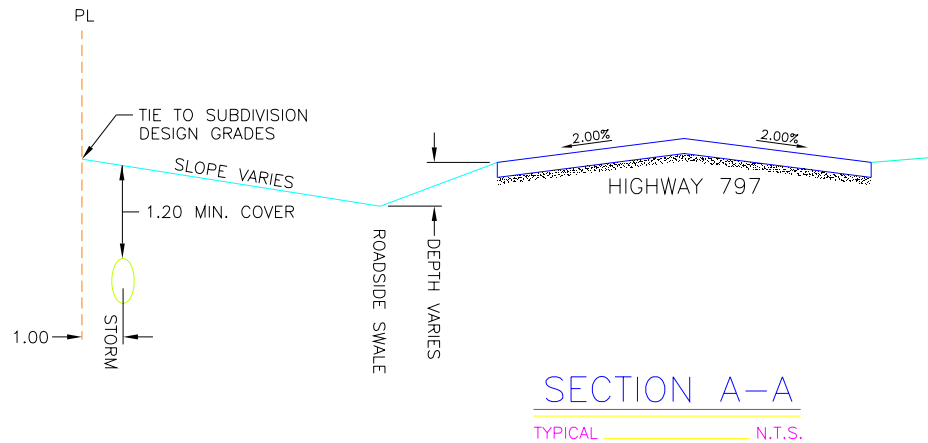
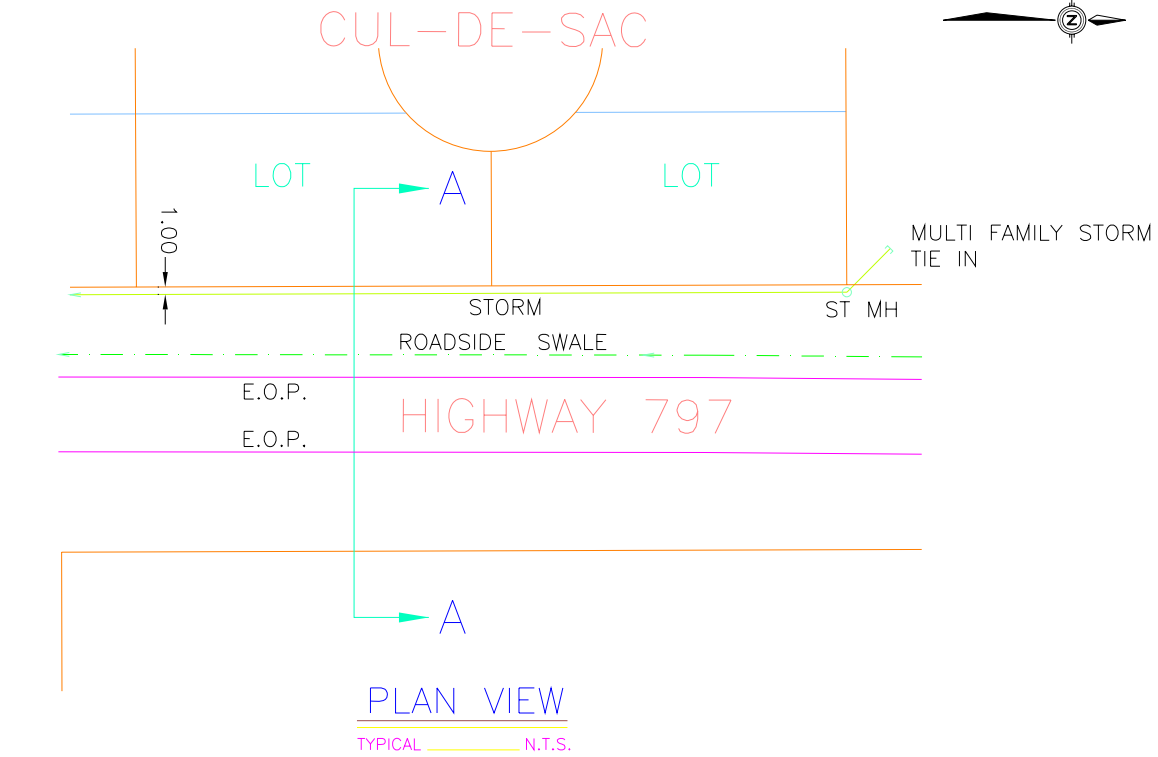
## NOTES:

1. CURB STOPS TO PLACED 0.30 INSIDE PROPERTY LINE.
2. HYDRANT ON 0.75 LINE.
3. HYDRANT VALVES 1.00 OFF MAIN LINE.
4. HYDRANT AND SERVICE VALVES SHALL MAINTAIN A MIN. 3.00 SEPARATION TO THE EDGE OF TRANSFORMERS, JUNCTION TERMINALS OR ANY OTHER SURFACE STRUCTURES.
5. PRE-INSTALLED SERVICE CONNECTIONS TO BE INSTALLED
- 6.00 INSIDE PROPERTY LINE WHEN CROSSING GAS AND OTHER SHALLOW UTILITIES.

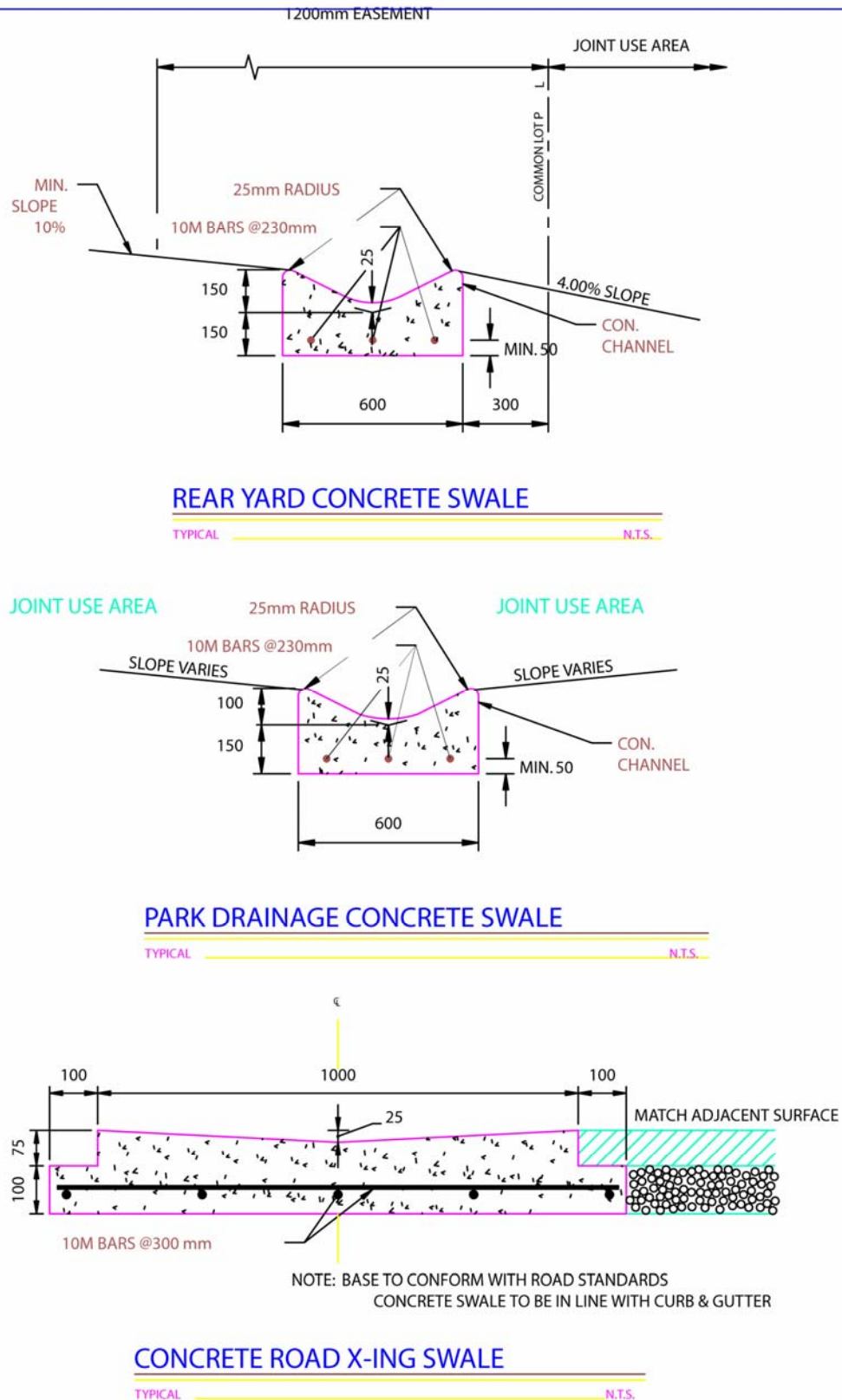
# LANGDON CROSSING WEST CONCEPTUAL SCHEME

LANGDON CROSSINGS WEST  
PLAN AND SECTION VIEW OF HWY 797

FIG. 3



# LANGDON CROSSING WEST CONCEPTUAL SCHEME



LANGDON CROSSINGS WEST

CONCRETE SWALE SECTIONS

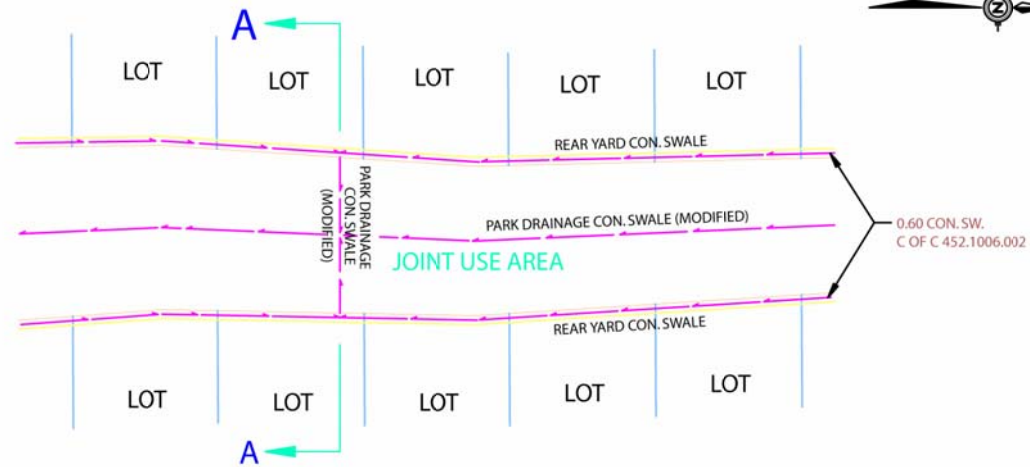
FIG. 4

## LANGDON CROSSING WEST CONCEPTUAL SCHEME

LANGDON CROSSINGS WEST

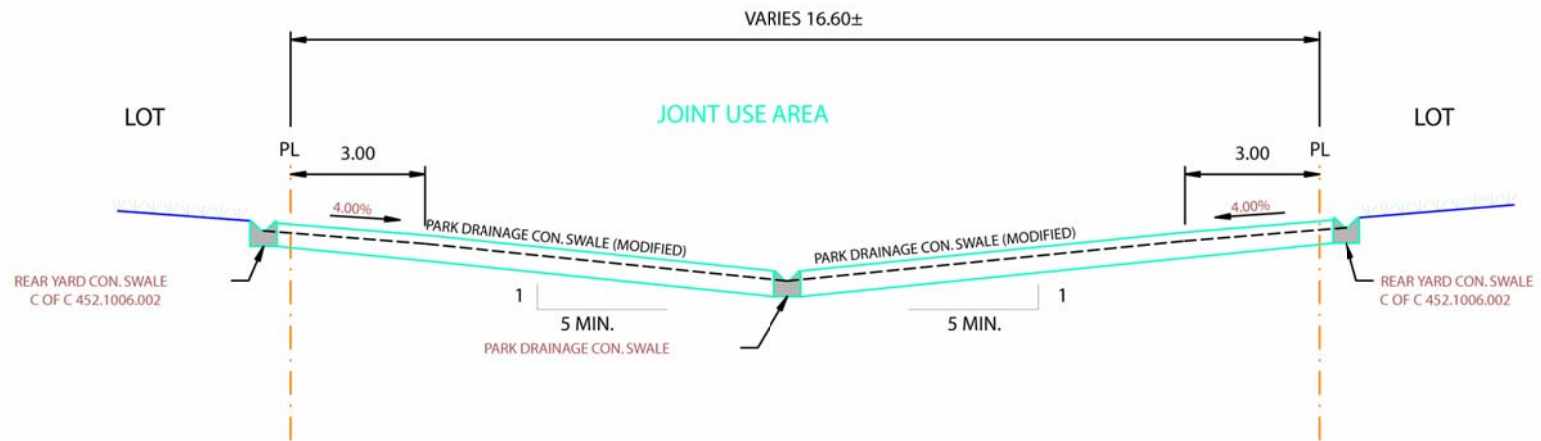
FIG.5

## LOT AND JOINT USE AREA SWALE SECTIONS



### PLAN VIEW

TYPICAL \_\_\_\_\_ N.T.S.

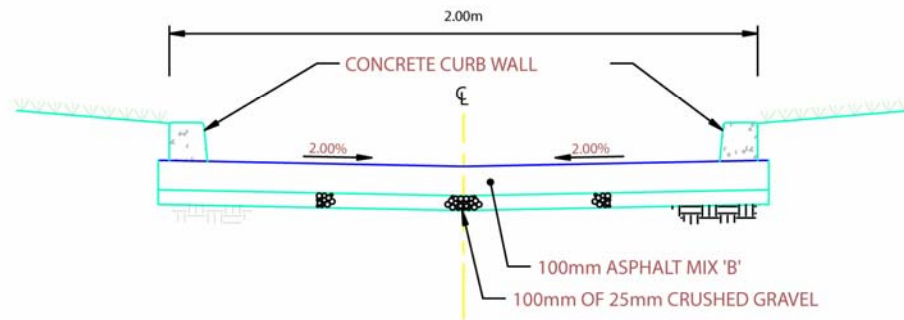


SECTION A-A

TYPICAL \_\_\_\_\_ N.T.S.

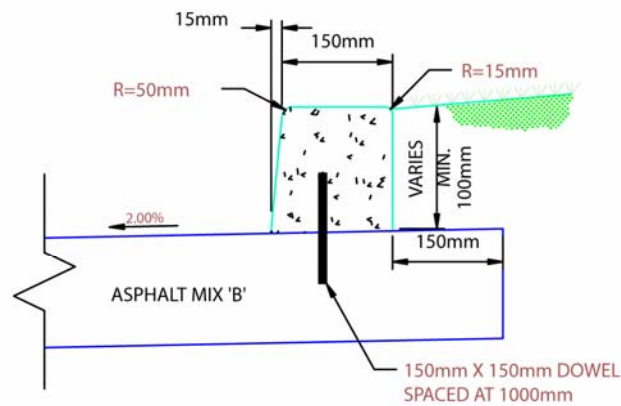


# LANGDON CROSSING WEST CONCEPTUAL SCHEME



## DISHED ASPHALT WALKWAY

TYPICAL N.T.S.



## STANDARD CONCRETE CURB WALL

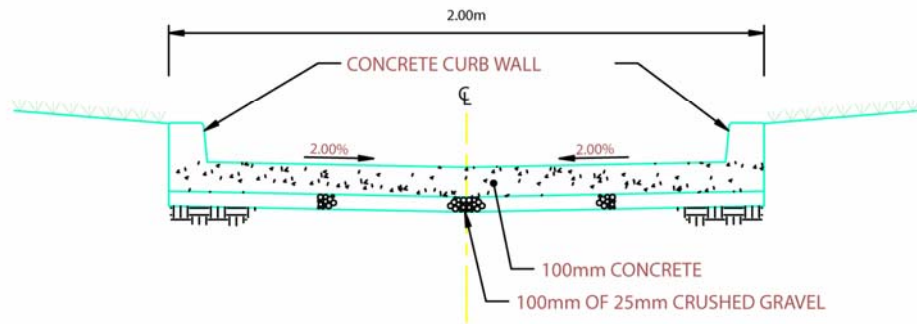
TYPICAL N.T.S.

LANGDON CROSSINGS WEST

ASPHALT WALKWAY WITH CURB WALLS

FIG.6

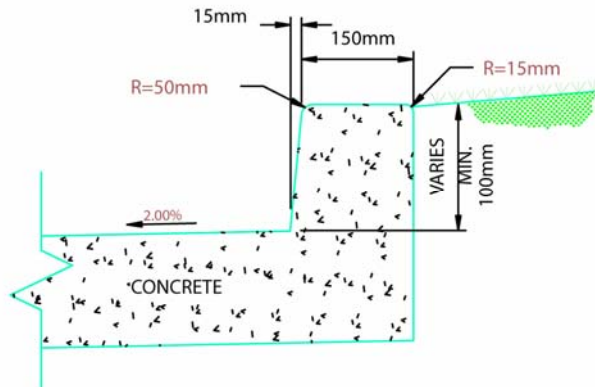
# LANGDON CROSSING WEST CONCEPTUAL SCHEME



## DISHED CONCRETE WALKWAY

TYPICAL

N.T.S.



## STANDARD CONCRETE CURB WALL

TYPICAL

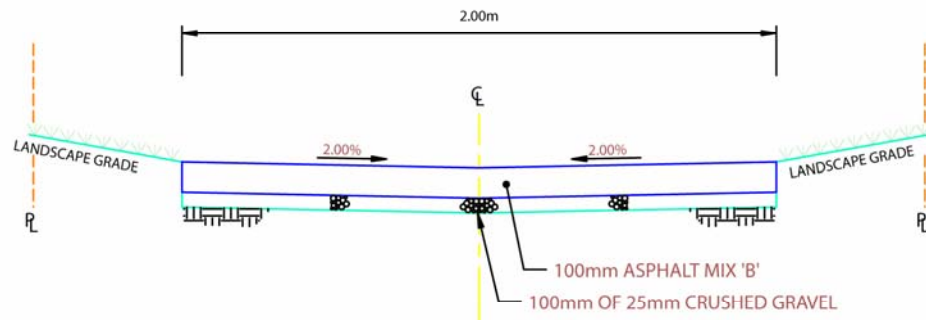
N.T.S.

LANGDON CROSSINGS WEST

CONCRETE WALKWAY WITH CURB WALLS

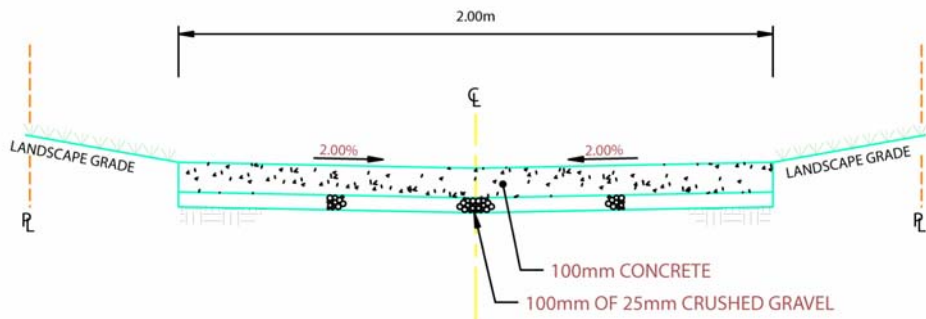
FIG. 7

## LANGDON CROSSING WEST CONCEPTUAL SCHEME



### DISHED ASPHALT WALKWAY

TYPICAL ————— N.T.S.



### DISHED CONCRETE WALKWAY

TYPICAL ————— N.T.S.

LANGDON CROSSINGS WEST

DISHED WALKWAYS

FIG. 8

# LANGDON CROSSING WEST CONCEPTUAL SCHEME

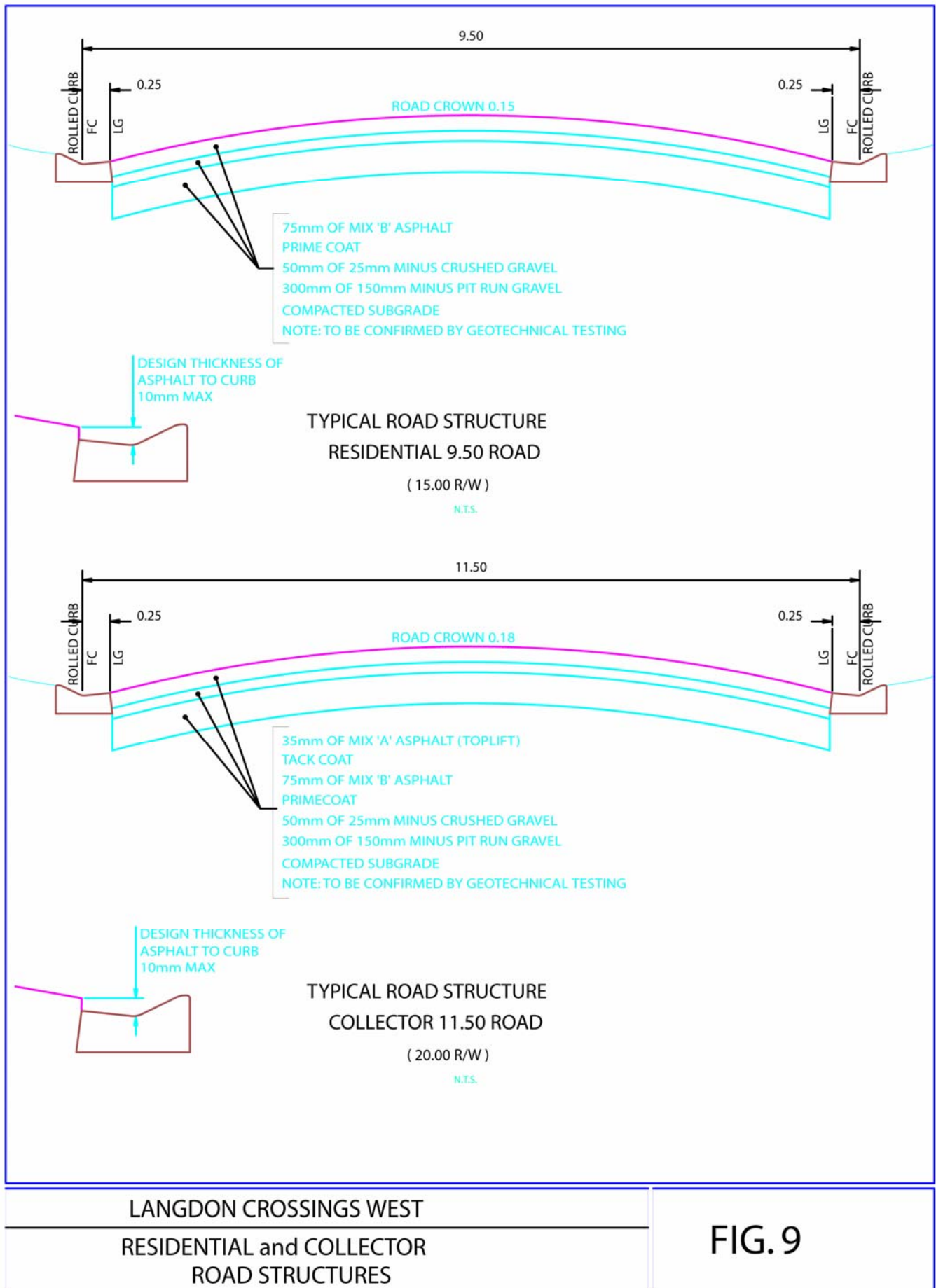


FIG. 9