ROCKY VIEW COUNTY

# BYLAW C-8193-2021

**A bylaw of Rocky View County, to amend the South Conrich Conceptual Scheme Bylaw C-6401-2006.**

The Council of Rocky View County enacts as follows:

**Title**

1 This bylaw may be cited as *Bylaw C-8193-2021*.

**Definitions**

2 Words in this Bylaw have the same meaning as those set out in the *Land Use Bylaw* and *Municipal Government Act* except for the definitions provided below:

(1) **"Council"** *means* the duly elected Council of Rocky View County;

(2) **"*Land Use Bylaw"*** means Rocky View County Bylaw C-8000-2020, being the *Land Use Bylaw*, as amended or replaced from time to time*;*

(3) **"*Municipal Government Act*"** means the *Municipal Government Act,* RSA 2000, c M-26, as amended or replaced from time to time; and

(4) **"Rocky View County"** means Rocky View County as a municipal corporation and the geographical area within its jurisdictional boundaries, as the context requires.

**Effect**

3 THAT Bylaw C-6401-2006, the "South Conrich Conceptual Scheme" is hereby amended, in addition to revising Appendix D, in order to allow for residential development in a portion of NW-29-24-28-W4M, c as defined in Schedule 'A' attached to and forming part of this Bylaw.

**Effective Date**

4 Bylaw C-8193-2021 is passed and comes into full force and effect when it receives third reading and is signed in accordance with the *Municipal Government Act*.

ROCKY VIEW COUNTY

READ A FIRST TIME this __20th__ day of ___July___, 2021

PUBLIC HEARING HELD this _____ day of _____, 20__

READ A SECOND TIME this _____ day of _____, 20__

READ A THIRD AND FINAL TIME this _____ day of _____, 20__

_____
Mayor

_____
Chief Administrative Officer

_____
Date Bylaw Signed

ROCKY VIEW COUNTY

**SCHEDULE 'A'**

**FORMING PART OF BYLAW C-6401-2006**

Schedule of Amendments to Bylaw C-6401-2006 as shown by red text in the attached document.

# 7.0 PROPOSED LAND USE POLICIES AND GUIDELINES

It is the intent of this Conceptual Scheme to provide a framework for future development to ensure

- land use and development patterns consistent with adjacent country residential development
- lot size and density consistent with the goals and policies of the M.D. of Rocky View Municipal Development Plan
- the provision of transportation, utility infrastructure, and open space connections across shared property lines
- future development that is sensitive to the natural environment
- a future integrated and compatible land use pattern that meets the goals and objectives of the M.D. of Rocky View Municipal Development Plan.

## 7.1 Land Use

The predominant land use within the SCCS will be comprehensive residential development on lots ranging from 0.~~25~~25 acre to 1.0 acre in area, with associated open space, with the exception of Cell D, which shall be ~~highway business use in accordance with the Conrich Area Structure Plan~~a minimum of ~~0.05 acre for rowhouse, 0.06 acre for Duplex/Semi Detached, and~~ 0.111 acre for Single Detached, unless otherwise specified in the South Conrich Conceptual Scheme. Development within Cell A will include a community recreational facility and local neighbourhood retail uses. Minor variations in land use will be subject to Council approval and, where necessary, will be addressed throughamendments to this Conceptual Scheme, the CCCASP, the Municipal Development Plan, and the Land Use Bylaw.

## 7.2 Density and Lot Size

**Policy**

7.2.1 **The maximum overall density for comprehensive residential development within the South Conrich Conceptual Scheme shall be 1.6 units per gross acre.**

7.2.2 **The minimum residential lot size within the South Conrich Conceptual Scheme shall be 0.~~0525 acres/0.02 hectare for rowhouse, 0.06 acre/0.025 hectare for duplexe/semi detached, and~~ 0.111 acre for single detached deveelopment.**

Figure 7 – Proposed Land Use shows the proposed land use designations, a comprehensive system of open spaces, and lands to be set aside for a private school and a community facility within Cell A.

# South Conrich Conceptual Scheme

# Appendix: Cell D

Submitted

to

Rocky View County
Planning Services

by

Amar Developments Ltd.
and
Duhra Financial Ltd.

11 April~~11 April21 June~~ ~~2021~~2022

BYLAW No._____

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## *1.0 Introduction*

The South Conrich Conceptual Scheme Appendix: Cell D has been prepared for Rocky View County in conformity with the provisions of the South Conrich Conceptual Scheme (SCCS) Bylaw C-6401-2006 (adopted July 31, 2007) and the Conrich Area Structure Plan (CASP), Bylaw C-7478-2015 (approved December 08, 2015 and amended by ~~MGB~~ Municipal Government ~~Order~~Board Order 020/17).

The South Conrich Conceptual Scheme Appendix: Cell D is prepared for Council consideration and upon approval, this Appendix should be amended to the SCCS in accordance with conceptual scheme policies.

## *2.0 Interpretation*

In this Appendix, the following interpretation shall apply:

1. ***SCCS*** means the South Conrich Conceptual Scheme, Bylaw C-6401-2006 (adopted July 31, 2007).
2. ***SCCS Plan Area*** means the area shown on Figure 3 of the South Conrich Conceptual Scheme.
3. ***CASP*** means the Conrich Area Structure Plan, Bylaw C-7468-1015 (approved December 08, ~~2018~~2018, and amended by ~~MGB~~ Municipal Government Board Order 020/17).
4. ***Council*** means the Council of Rocky View County.
5. ***County*** means the Administration and Council of Rocky View County.
6. ***County Plan*** means the Rocky View County ~~County~~ Plan as amended and as approved by Council.
7. ***County or RVC*** means Rocky View County.
8. ***Developer*** means the registered landowner or any future landowner.
9. ***Land Use Redesignation, Tentative Plan, Subdivision Stage*** means the stage of the land development process that follows Council approval of the Conceptual Scheme. This stage is followed by a “Development Agreement” between the developer and the County.
10. ***Qualified Professional*** means a professional engineer, geologist, geophysicist, or environmental consultant licensed to practice in the Province of Alberta.

11. ***Should*** is an operative verb which means that ~~in order to~~to achieve certain goals and objectives it is strongly advised that the action be taken.

## *3.0 Purpose and Objectives*

### *3.1 Purpose*

The purpose of the South Conrich Conceptual Scheme Appendix: Cell D is to:

1. Provide supporting land use ~~rationale~~~~rationae~~rationae and policy framework for the redesignation, subdivision and development of Cell D;
2. Conform to the policy framework of the Conrich Area Structure Plan (CASP), Bylaw C-7478-2015 (amended by MGB Order 020/17).
3. Conform to the policy framework of the South Conrich Conceptual Scheme (SCCS) Bylaw C-6401-2006 (adopted July 31, 2007);

### *3.2 Objectives*

The objective of South Conrich Conceptual Scheme Appendix: Cell D is:

1. To direct the orderly and sustainable development of Cell D within the policy context of the County Plan, the Conrich Area Structure Plan (CASP), and the South Conrich Conceptual Scheme (SCCS).

### *3.3 Policy Objectives*

The policy objectives of South Conrich Conceptual Scheme Appendix: Cell D are:

1. To establish and guide the development of complimentary and compatible future land uses within Cell D;
2. To establish planning and development guidelines for the orderly and sustainable future development of Cell D;
3. To mitigate and minimize potential impacts ~~of~~ from the development of Cell D on water quality, stormwater flows, and development potential of properties adjacent to Cell D;
4. To guide the dedication of public roadways and municipal reserve parcels within Cell D;

5. To guide the provision of integrated parks and pathways within Cell D and to facilitate pathway linkages with adjacent lands;
6. To ensure policy alignment with the County Plan, the Conrich Area Structure Plan (CASP), and the South Conrich Conceptual Scheme (SCCS) policy frameworks;
7. To establish requirements for amendments to the SCCS.

*Policy - Purpose and Objectives*

*3.0.1 Cell D shall be developed in an orderly and sustainable manner consistent with the policies of the the County Plan, the Conrich Area Structure Plan (CASP), the South Conrich Conceptual Scheme (SCCS) and this Appendix.*

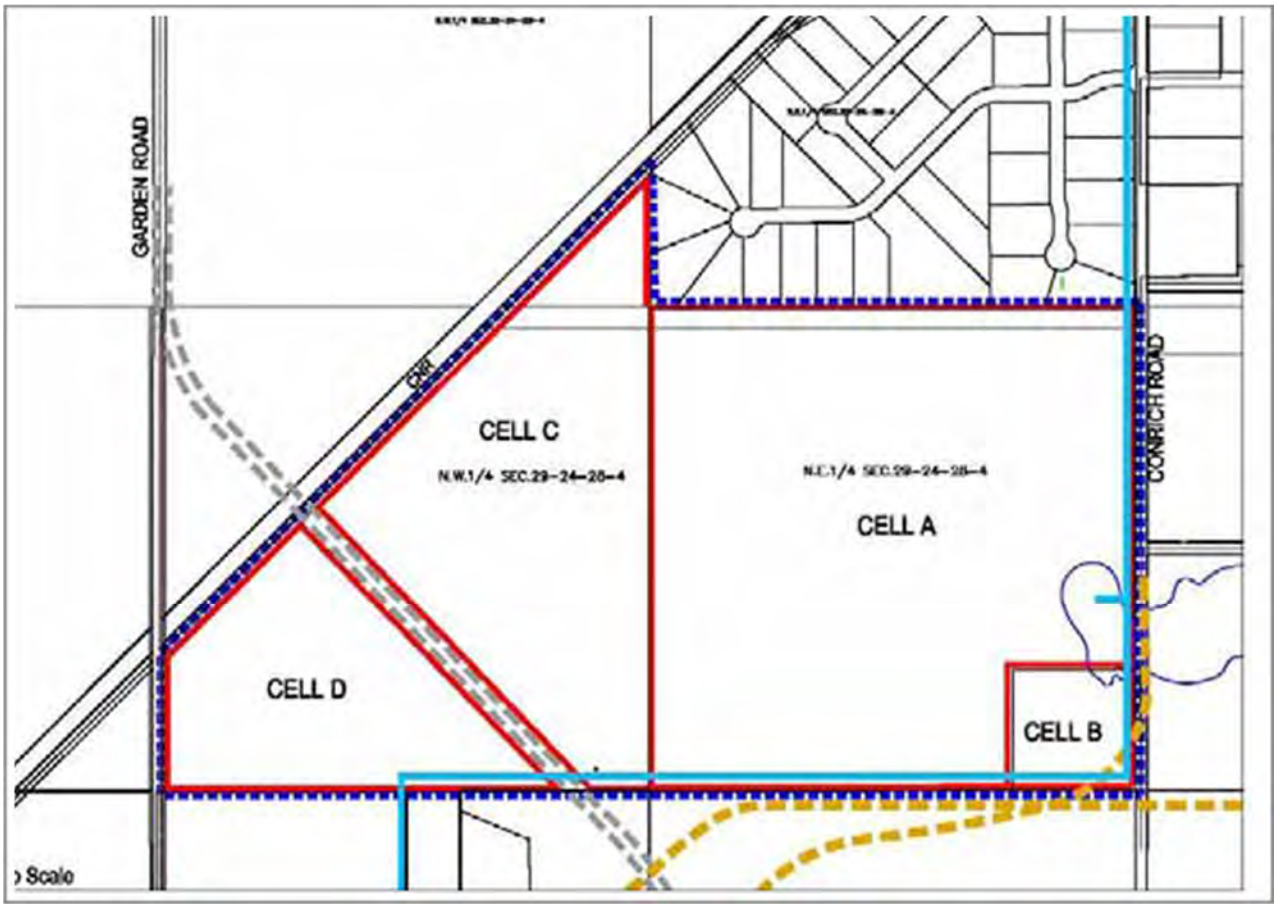
*3.0.2 Notwithstanding the policies contained within the SCCS, where policies conflict or require interpretation, the policies of the Conrich Area Structure Plan (CASP) shall prevail.*

## *4.0 Planning Area - Cell D*

This Appendix and its policies apply to lands identified in the SCCS as Cell D.

*Figure 1 - Development Cells of the South Conrich Conceptual Scheme* identifies SCCS development cells and community context of Cell D.

***Figure 1 - Development Cells of the South Conrich Conceptual Scheme***




Cell D comprises the entire planning area discussed in this Appendix and is legally described as the remainder of the NW 1/4 Sec. 29-24-28-W4M.

Cell D comprises 68.1 Acres / 27.505 Hectares and is contained under Title No. 171 069 813 +119.

Cell D is located within Division 5 of Rocky View County, approximately one half (1/2) mile north of Highway #1 and one (1) mile east of the City of Calgary.

Cell D is bounded by the residential community of Cambridge Park Estates to the east, Garden Road (Range Road 285) to the west, country residential development to the south and the CNR right of way and future industrial lands to the north.

*Figure 2 – Cell D Area Context* identifies the regional context of Cell D.

***Figure 2 - Planning Area Context***

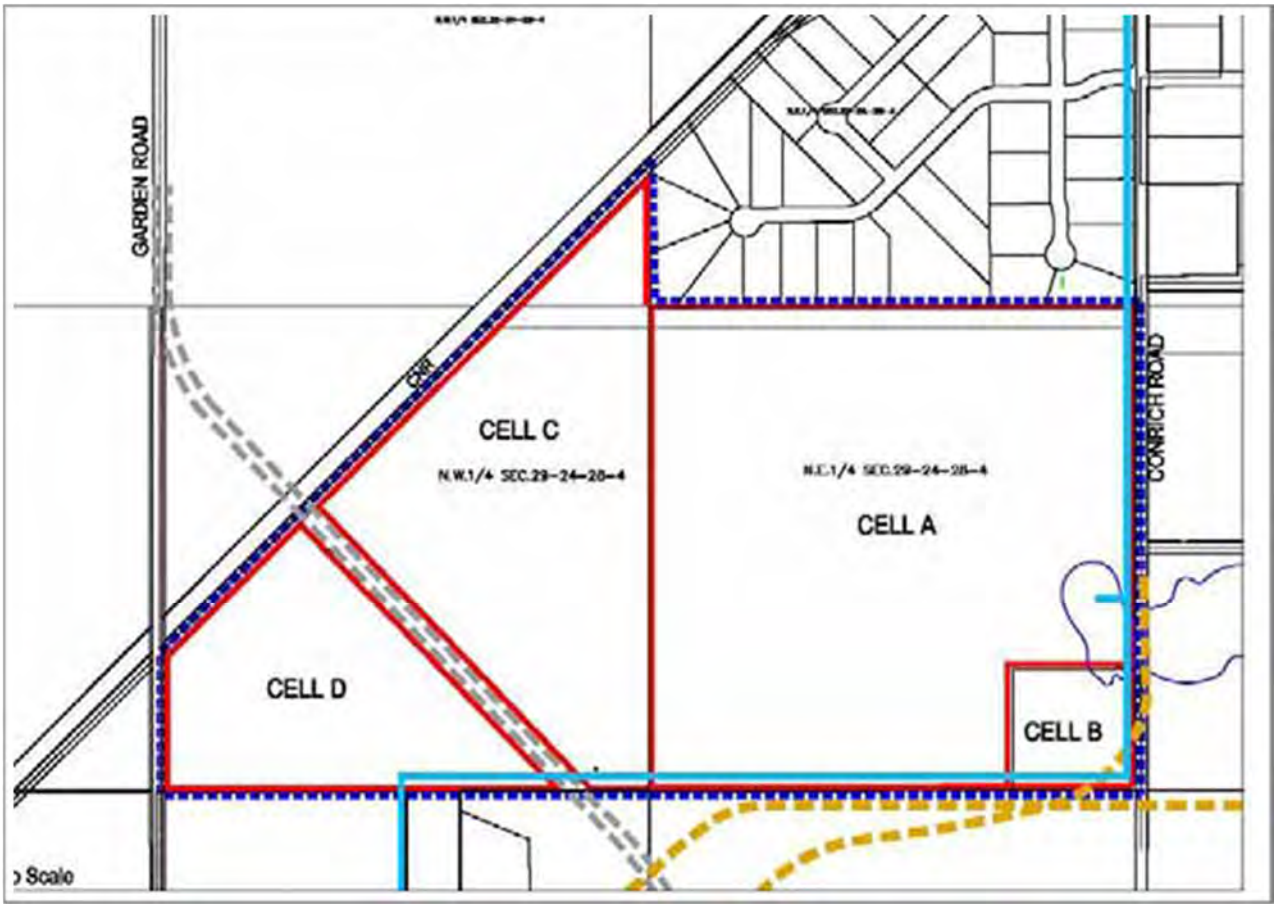
*Policy - Planning Area - Cell D*

*4.0.1 The South Conrich Conceptual Scheme Appendix: Cell D shall apply to:*

- *Lands identified as Cell D within the SCCS, and*
- *Described in this Appendix amendment as Cell D and shown in Figures 1 and 2 of this Appendix.*

*4.0.2 Cell D shall comprise the entire planning area discussed in this Appendix.*

~~*Figure 1 - Development Cells of the South Conrich Conceptual Scheme*~~




~~Source: South Conrich Conceptual Scheme~~

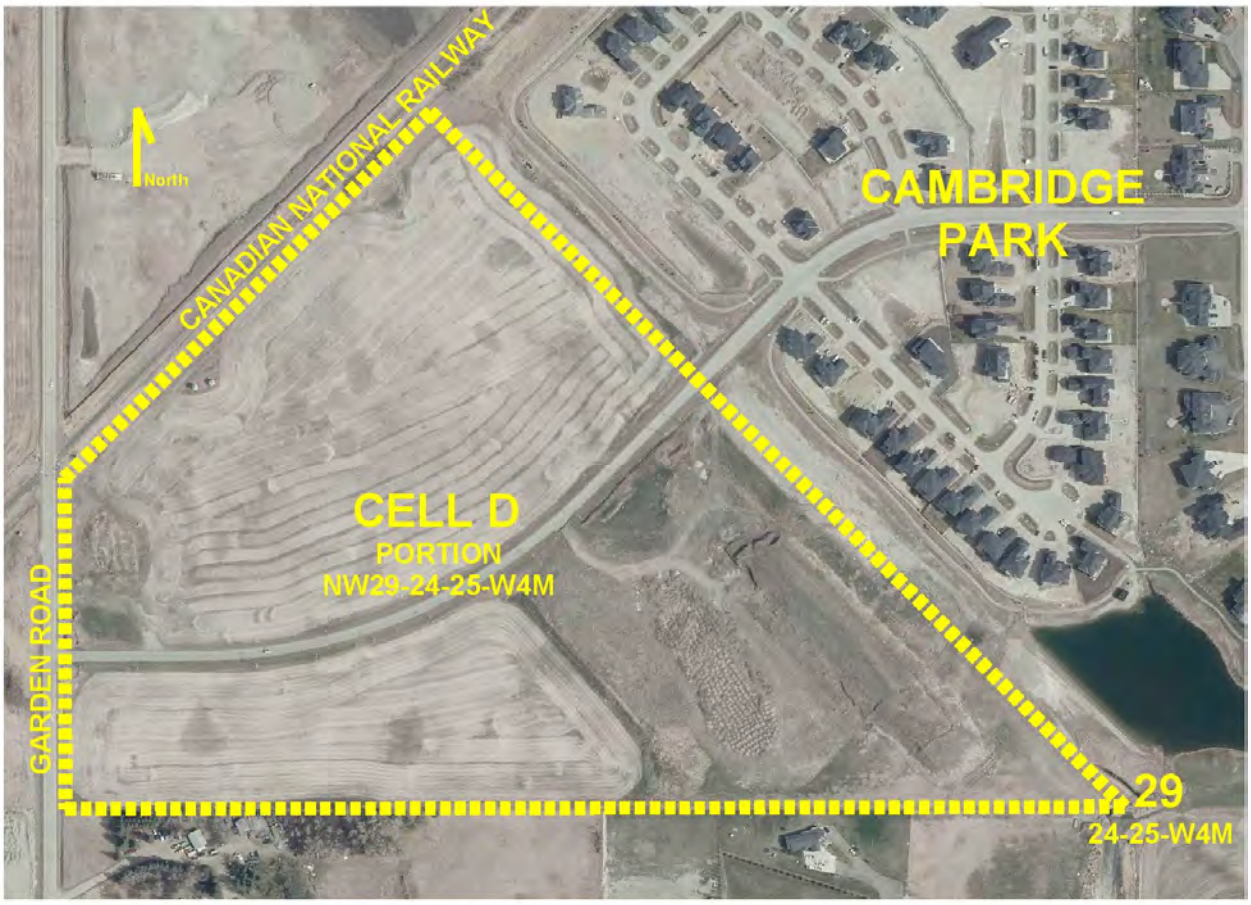
~~*Figure 2 - Planning Area Context*~~

~~Source: Bunt and Associates TIA~~

## *5.0 Cell D - Planning Area Assessment*

*Figure 3 - Cell D Air Photo* provides an aerial perspective of Cell D.

***Figure 3 - Cell D Air Photo***




### *5.1 Soils*

The Canada Land Inventory (CLI) rates ~~the majority of~~most of the lands within Cell D as Soil Capability for Agriculture CLI Class 1, with no significant limitations in use for crops.

It is expected that soil quality may vary within Cell D in areas affected by water inundation, adverse soil salinity, and seasonal soil moisture levels.

The wetland assessment prepared for Cell D by Ecotone Environmental Ltd. provides additional information respecting soil characteristics of the planning area:

> *"The Soil survey of the Calgary urban perimeter (MacMillan 1987) was reviewed. The property is covered by two soil types: Delacour (27.5-ha or 99.5% of the property) and Balzac (0.2-ha or 0.5% of the property) (Figure 6). Delacour soils on the property are represented by DEL1/c, DEL2/c and DEL6/c units. These soils are well drained Black Chernozems with different amounts of poorly drained saline patches of Humic Gleysols. Parent material is fine loamy till and the landform varies from level to hummocky.*
>
> *Balzac soils are represented by BZC1/c unit. These soils are poorly drained saline Humic Gleysols on depressional to undulating landforms. Parental material is fine clayey recent lacustrine overlying till."* [1]

[1] Ecotone Environmental Ltd. *Wetland Assessment and Impact Report, Cambridge Park Phase 4 Property* (Calgary, AB, Author, September 2019), Page 7.

*Figure 4 – Cell D Soils* shows the distribution of soil types within Cell D.

## *Figure 4 - Cell D Soil Types*

| SOIL UNIT | SOIL NAME | Area (Ha) |
|---|---|---|
| BZC1/c | Balzac | 0.1419 |
| DEL1/c | Delacour | 9.4881 |
| DEL2/c | Delacour | 2.435 |
| DEL6/c | Delacour | 15.617 |

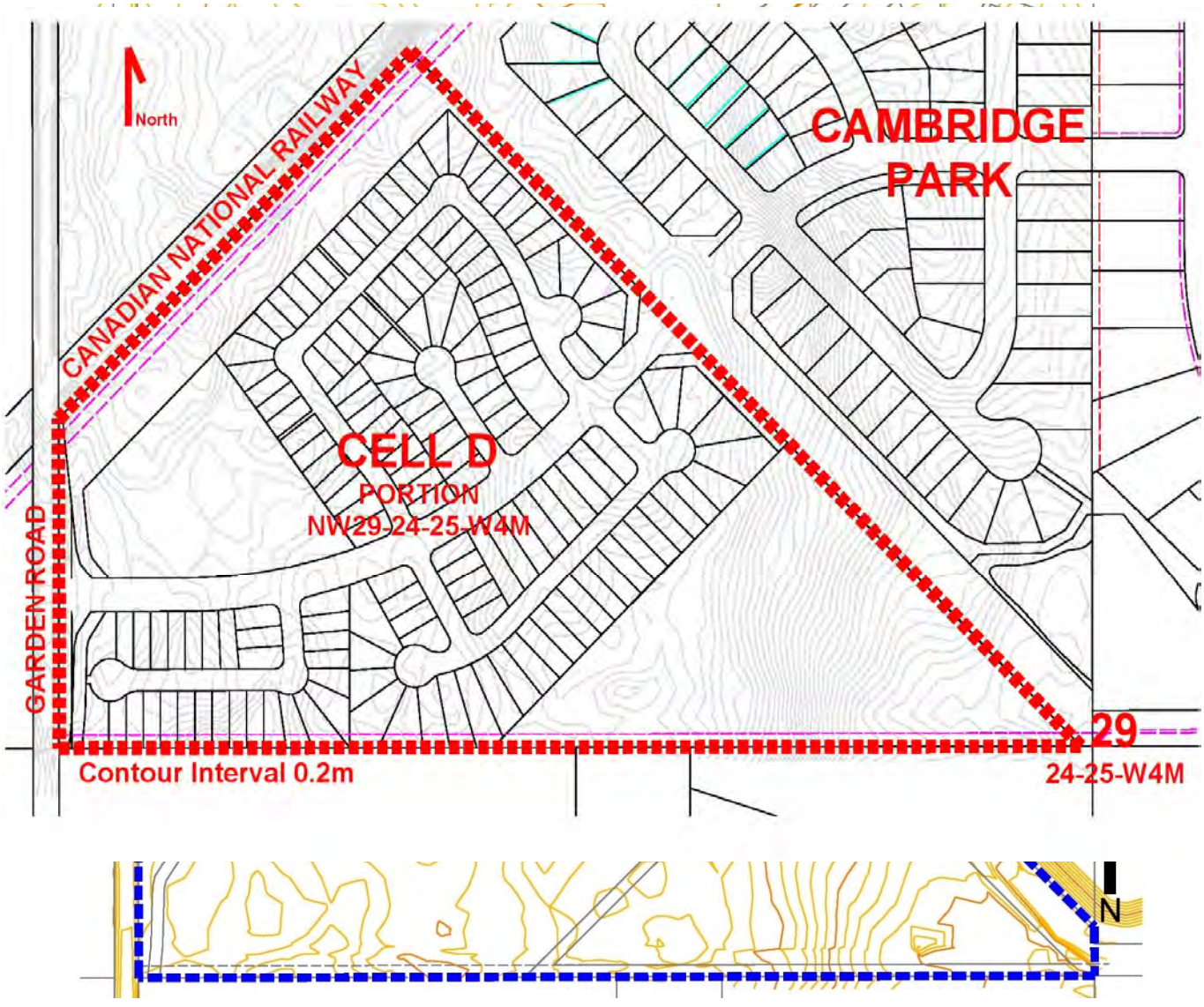
### *5.2 Terrain*

Cell D has a ~~south east~~southeast aspect with approximately a six (6) metre variance in elevation from its highest point within the northwest corner of the cell to its lowest in the southeast corner. Accordingly, Cell D surface drainage ~~is~~ generally flowing to the southeast corner of the cell.

With minor elevation variance within Cell D, development of the planning area is not expected to be impaired by hazardous terrain.

*Figure 5 – Terrain* shows the relief within Cell D in 0.2~~one~~-metre contour intervals.

***Figure 5 – Cell D Terrain***



~~*Figure 3 - Cell D Air Photo*~~

~~*Figure 4 - Cell D Soil Types*~~

~~*Source:*~~
~~*Ecotone Environmental Ltd., Wetland Assessment and Impact Report, Cambridge Park Phase 4 Property. (Calgary, Alberta: Author, September 2019), Page 27.*~~

~~*Figure 5 – Cell D Terrain*~~

~~*Figure Note: Contour interval shown is in one-half (0.5) metre intervals.*~~

*5.3 Archaeological and Historical Resources*

The Heritage Resource Management Branch at Alberta Community Development has indicated that *"there is little reason to expect the presence of intact archaeological sites"* within the SCCS. Following this reasoning, preparation of a Historical Resources Impact Assessment (HIA) is not considered necessary prior to development of Cell D.

Notwithstanding the above reasoning and pursuant to Section 31 of the *Historical Resources Act of Alberta*, the discovery of any archaeological, historic period, or paleontological resources during the development of Cell D shall be reported immediately to Alberta Community Development.

## *5.4 Biophysical Impact Assessment*

A Biophysical Impact Assessment (BIA) was completed in March 2012 by HAB-TECH Environmental for the Cambridge Park Lands – Cells C and D.[2]

The March 2012 BIA was updated in March 2014 to provide an assessment of current ecological attributes found in Cell C and its access road.[3]

## *5.5 Wetland Assessment*

in September 2019, a wetland assessment and impact report ~~was~~were completed for Cell D by Ecotone Environmental Ltd..[4]

The findings of the September 2019 Ecotone Environmental Ltd. report are summarized as follows:

- *This report provides a Wetland Assessment and Impact Report for nine wetlands located within the Cambridge Park Phase 4 property.*
- *Six wetlands are Temporary Marshes, (~~i.e.~~i.e., wetlands #1, #2, #6, #7, #8, and #9) and occupy a total of 0.70-ha, while three wetlands are Seasonal Marshes, (i.e. wetlands #3, #4, and #5) and occupy a total of 0.72-ha. All nine wetlands will be totally lost as a result of the proposed development.*

[2] ~~Hab-Tech Environmental, *Biophysical Impact Assessment (BIA) Cambridge Park - Cells C and D*, Calgary, Alberta: Author, March 2012.~~
[3] ~~Hab-Tech Environmental, *2014 Update to the Biophysical Impact Assessment (BIA) Cambridge Park (Cell C and Access Road)* , Calgary, Alberta: Author, December, 2014.~~
[4] ~~Ecotone Environmental Ltd., *Wetland Assessment and Impact Report, Cambridge Park Phase 4 Property.* Calgary, Alberta: Author, September 2019.~~

- *No rare plants, rare plant communities, bird, amphibian, reptile, or mammal species at risk were found on the property during intensive field surveys. It is recommended that no further mitigation is required to offset construction effects on these ecological components. At a regional scale, the property is not considered to be a potential wildlife corridor/route. Local and sub-regional fragmentation of corridor areas, specifically those linking the property to adjacent waterways and semi-native pastures has already significantly taken place due to historical land development.*

- *The Alberta Wetland Rapid Evaluation Tool-Actual (ABWRET-A) was used to evaluate the existing functionality of the nine wetlands. The Final Score for wetlands #1, #3, #4, and #5 was C. Final Score for wetlands #2, #6, #7, #8, and #9 was D.*

- *All nine wetlands were assessed and will be totally lost ~~as a result of~~because of this development. A total of 1.4205-ha of wetland area will be removed (Figure 1 and Table 2).*

- *Impacts on the hydrological, biological/ecological, water quality, and socio-economic functions of those wetlands will be of high magnitude, 100% spatial extent (~~i.e.~~i.e., all wetland area will be lost), permanent and irreversible.*

- *During construction water will be managed according to the Erosion and Sediment Control Report and Plan, which will be submitted to the Rocky View County for approval prior to construction.*

- *Alienation of seasonally important bird habitat and direct mortality resulting from construction will be mitigated by limiting stripping activities to times outside of the peak breeding and nesting season (April 1-August 20 inside of the wetlands and April 15-August 20 within upland habitats). If stripping is required to be completed within these time periods, then a nest search will be completed prior to stripping. Nests will be avoided as per Fish and Wildlife Division iv requirements. These measures will fulfill protection regulations under the Migratory Bird Convention Act. The active nest of Red-tailed Hawk found near the southern boundary of the property (outside the property) will be surveyed before stripping and grading. If that nest or any other raptor nest is active, then an adequate buffer will be set until the nest (s) are vacant to avoid any impact on this particular species.*

### *5.6 Wetland Mitigation*

Ecotone Environmental Ltd. in its September 2019 report, examined wetland mitigation having regard to the *Alberta Wetland Mitigation Directive (Government of Alberta 2017b)* and three levels of mitigation:

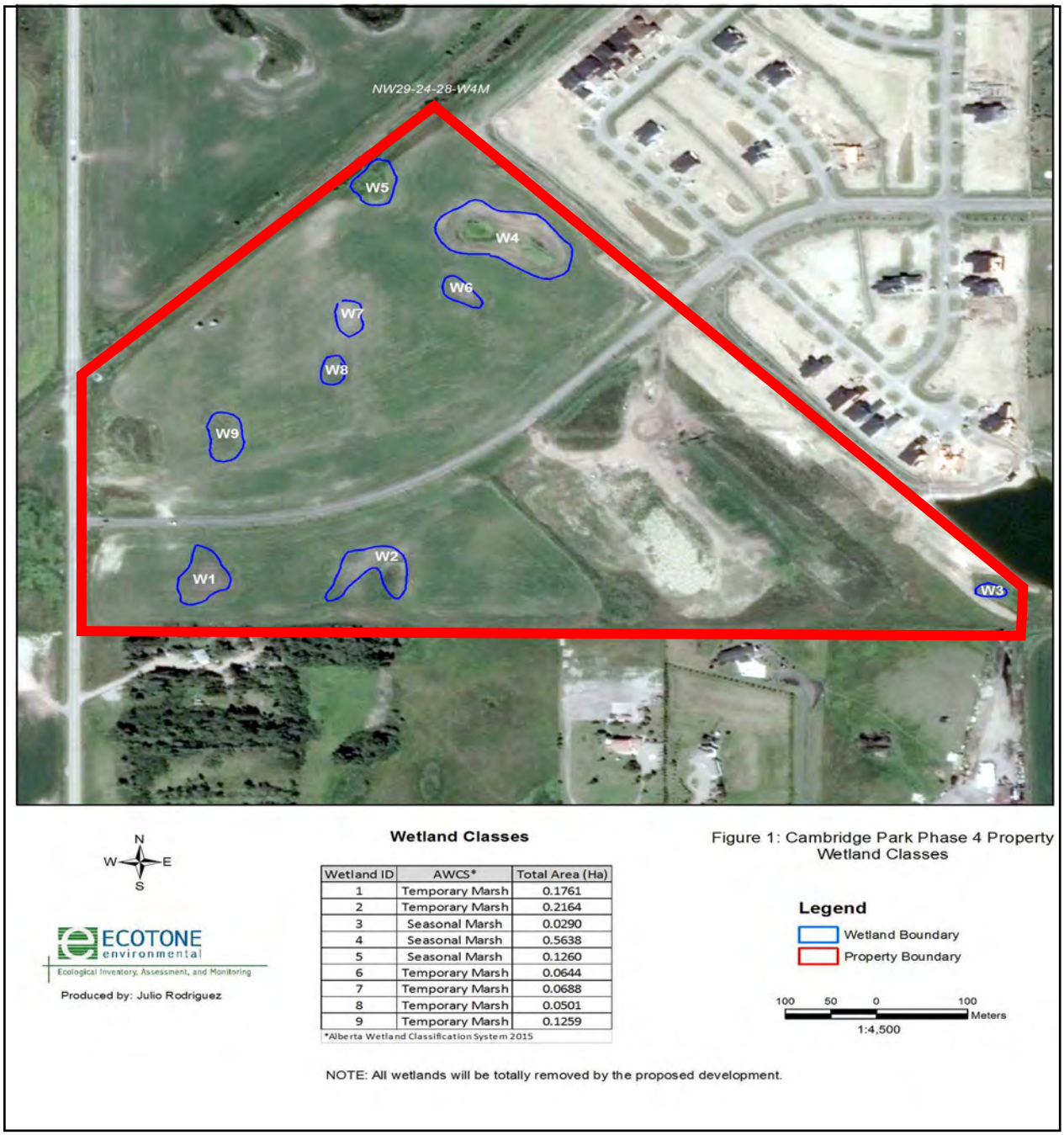
1. Avoidance;
2. Minimization; and
3. Replacement.[5]

Ecotone found nine (9) wetlands within Cell D comprising 1.4205 hectares and that all wetlands will be totally lost ~~as a result of~~because of the proposed development of Cell D.[6]

*Figure 6 - Cell D Wetland* identifies Cell D wetlands as identified by Ecotone Environmental Ltd.

[5] ~~Ibid, Page 15.~~
[6] ~~Ibid, Page 15.~~

## *Figure 6 - Cell D Wetlands*




Having regard to its findings, Ecotone Environmental Ltd. concluded:

- *The proponent will make a payment to the in-lieu program. Replacement fees are included in section 8.0 (Replacement Proposal).*

- *Table 11 shows the replacement fees following the Alberta Wetland Mitigation Directive (Government of Alberta 2017b). The proponent will make a payment to the in-lieu program for the direct loss of nine wetlands for a total of 1.4205-ha. The proponent will enter into a financial replacement agreement with Alberta Environment and Parks and pay a replacement cost of $40,982.60.*[7]

*~~Policy -~~Policy - Planning Area Assessment*

*5.0.1 All development within Cell D shall be supported by site assessments as required the County.*

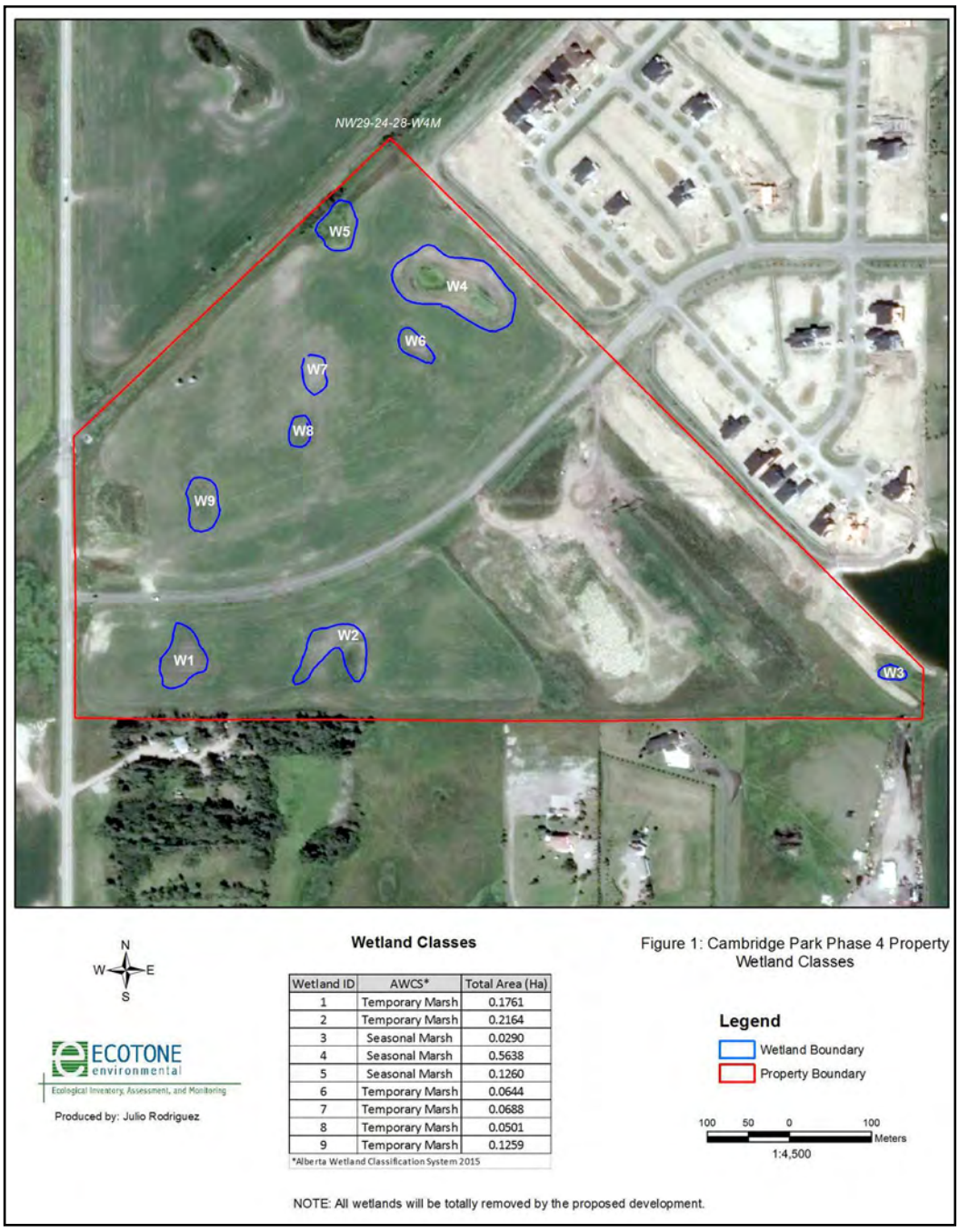
*5.0.2 All development within Cell D shall be developed in accordance with the recommendations of the site assessments prepared in support of this Appendix.*

*5.0.3 The developer will be required to make a payment to the in-lieu program for the loss of the nine (9) wetlands identified by Ecotone Environmental Ltd. in its September 2019 Wetland assessment report. The developer will enter into a financial replacement agreement with Alberta Environment and Parks and pay a replacement cost of $40,982.60.*

*5.0.4 During development of Cell D, it is the responsibility of the developer to report the discovery of any archaeological, historic period, or paleontological resources directly to Alberta Culture and Community Spirit.*

[7] ~~Ibid, Page 18.~~

## ~~*Figure 6 - Cell D Wetlands*~~



~~*Source:*~~

~~*Ecotone Environmental Ltd., Wetland Assessment and Impact Report, Cambridge Park Phase 4 Property. (Calgary, Alberta: Author, September 2019), Page 22.*~~

## *6.0 Current Land Use*

The *Rocky View Land Use Bylaw* currently designates Cell D as ~~*Ranch and Farm (2)*~~*Business, Local Campus District* that allows for a ~~range of permitted and discretionary agricultural~~mix of office and light industrial uses in a comprehensively planned campus setting~~.~~, and Special, Public

Service District that allows for the development of Institutional, Educational and Recreational uses, in this case, for a stormwater management facility.

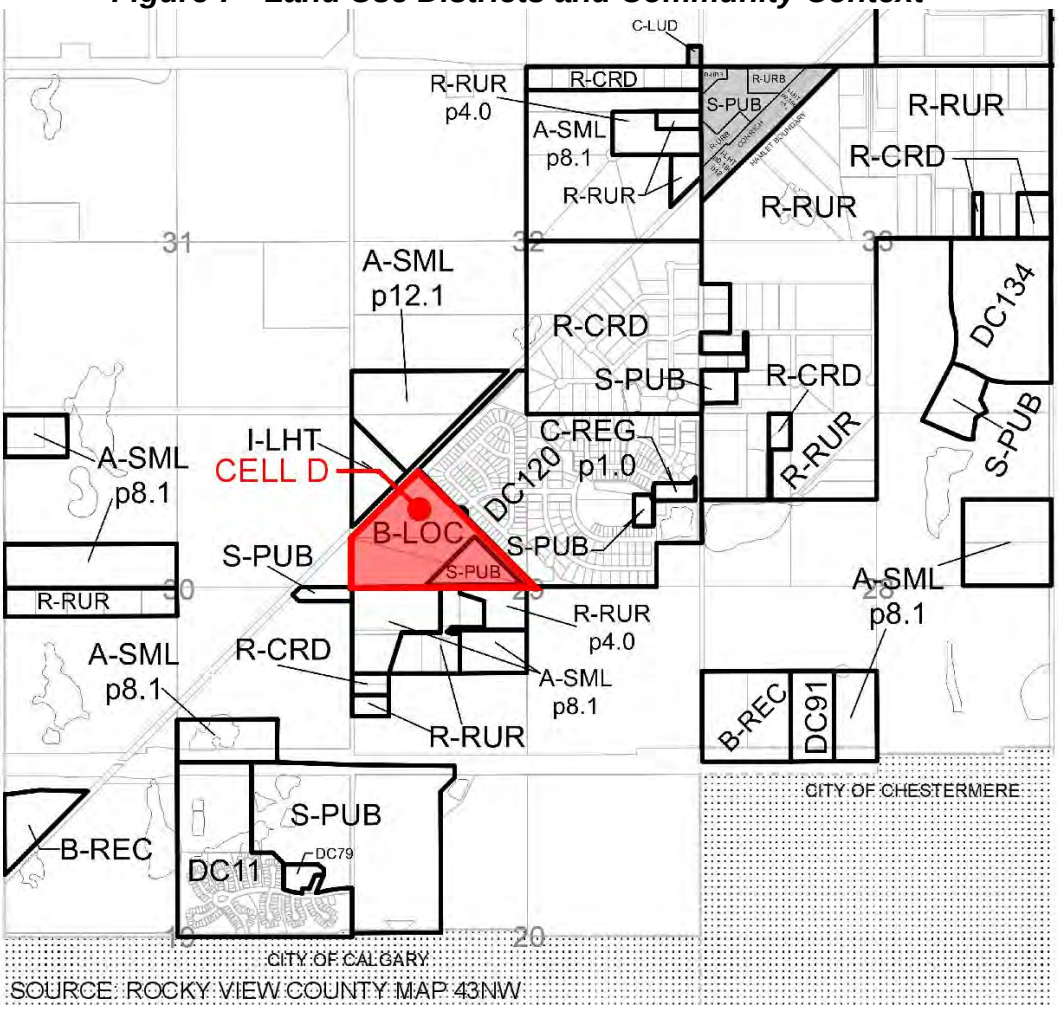
Cell D contains no permanent buildings.

Cell D is not under cultivation and does not contain active agricultural activities.

The lands surrounding Cell D comprise a mix of residential, country residential, ~~and~~ agricultural and industrial land uses.

*Figure 7 – Land Use Districts and Community Context* illustrates the context surrounding Cell D and the land use districts in place at the time this Appendix was prepared.

***Figure 7 - Land Use Districts and Community Context***



# 7.0 Conceptual Land Use Plan

## 7.1 Conrich Area Structure Plan - Land Use Strategy

The Conrich Area Structure Plan (CASP), Bylaw C-7478-2015 (approved December 08, 2015 and amended by MGB Order 020/17) is the current adopted statutory plan applicable to Cell D.

The land use strategy (Map 5) of the CASP, has identified Cell D ~~for~~ for ~~highway~~ Highway B~~b~~usiness use, and described as follows:~~.~~

> *"Highway business developments are moderate to large in size and primarily serve the needs of the:*
>
> - *traveling public and tourists;*
> - *regional population; and*
> - *industrial and commercial employees from the region.*
>
> *Uses may include a combination of grocery and retail stores, large format stores, shops, services to the public, offices, office parks, entertainment, and accommodation. Light industry may be considered if there are no nuisance factors outside of the enclosed building. Institutional uses are also appropriate in this area and may include schools, religious assemblies, campgrounds, medical treatment centres, and recreational uses. Highway business areas are to be comprehensively planned, attractively designed, landscaped, and include pedestrian-friendly parking areas. Where they are adjacent to existing or future residential areas, they must follow the non-residential/residential interface area policies (Section 14)."*

## 7.2 South Conrich Conceptual Scheme - Preferred Land Use

The South Conrich Conceptual Scheme (~~SCCP~~SCCS) was adopted by the County in 2007 and ~~.~~

~~In 2007, the SCCP~~ anticipated *"higher residential densities, smaller dwelling units and more varied forms of housing"* ~~–~~however, development details and attendant policy framework expanding this comment ~~are~~ were not provided. Future land use and an attendant policy framework was deferred to a future conceptual scheme amendment ~~(to be attached as an amendment to the 2007 conceptual scheme). ,~~ at the time of ~~its~~ the adoption of the CASP as a statutory plan (2015), the older ~~SCCP~~ SCCS (2007) non-statutory document inconsistencies were never corrected.

In the ~~twelve~~ fourteen years from the SCCS adoption to consideration of the current Appendix amendment, ~~a number of~~some factors have changed the land use direction: ~~n (~~adoption of a statutory plan with a business land use strategy for Cell D;~~,~~ evolving servicing options; ~~–~~and changing land use patterns in the area~~)~~.

Accordingly, this Appendix establishes a land use framework for Cell D that will facilitate its redesignation, subdivision and development aligned with the land use strategy identified in the CASP land use strategy for the commercial component, with ~~a~~ an amendment to include a residential ~~area~~component. ~~for transitional purposes~~

### *7.3 Conceptual Land Use Plan*

*Figure 8 - Conceptual Land Use Plan* provides a conceptual land use and subdivision design for Cell D. *Table 1 - Land Use Areas (Conceptual Land Use Plan)* provides attendant areas of~~of for~~ this concept.

***Figure 8: Conceptual Land Use Plan***

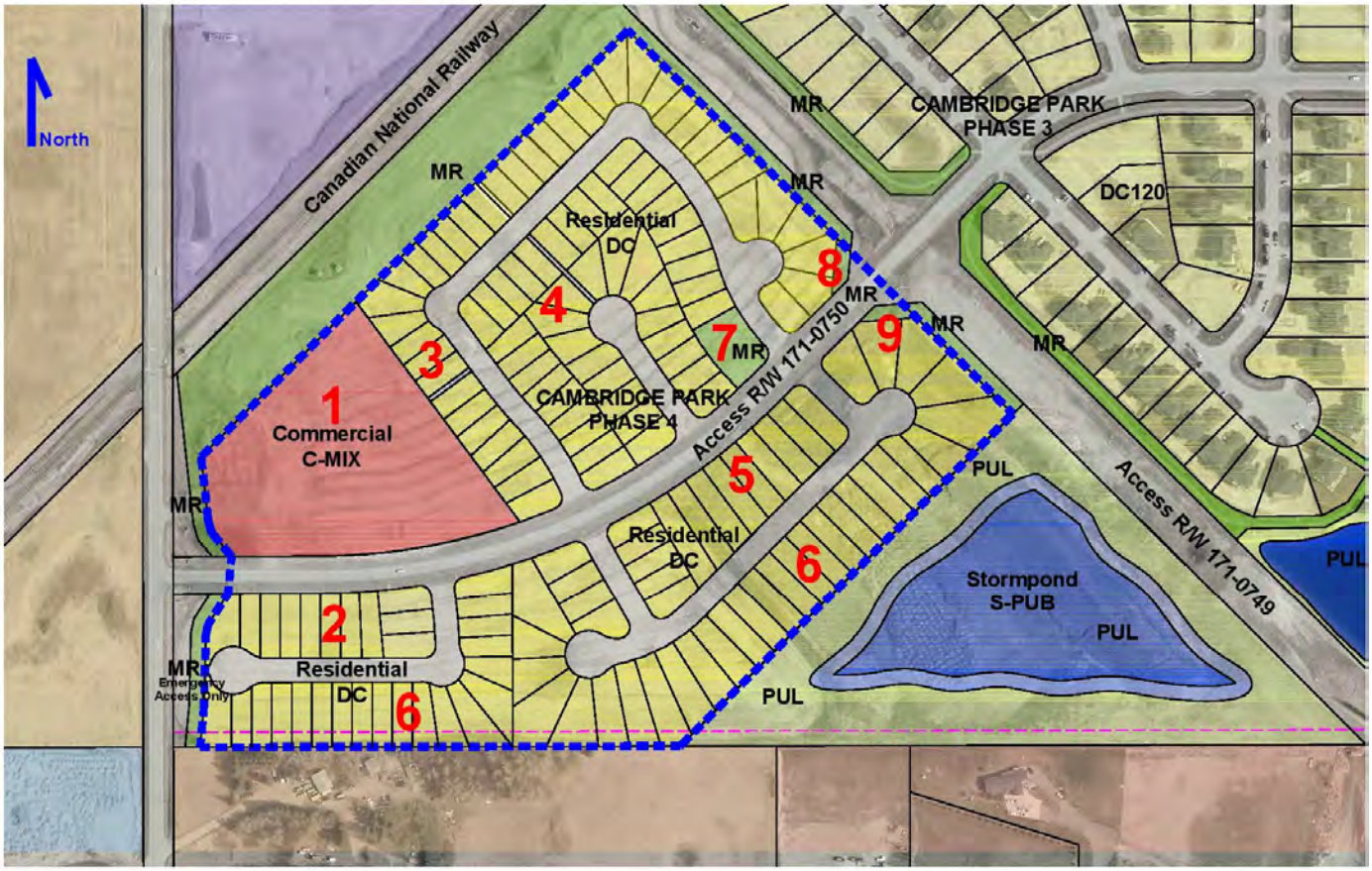



*Figure 8 - Conceptual Land Use Plan* contains the entire area of Cell D and is intended to facilitate the future development of comprehensive, ~~and~~ local commercial ~~with a transitional~~and residential uses~~.~~. The ~~***commercial***~~commercial area is intended to cater to the local community for its weekly

goods and services' needs. The residential area is intended to offer a ~~medium-sized lots for the~~ single detached ~~dwelling housing form~~housing form. The open space is intended to offer passive and active recreational uses.

### *7.4 Conceptual Land Use Plan - Future Land Use Designation*

Redesignation of Cell D is required to accommodate commercial, ~~and residential land~~residential, and open space ~~-~~land uses, subdivision, and development.

This Appendix (through its conceptual land use plan and attendant policies) supports a redesignation of ~~a portion of~~ Cell D from its current designation of *Business, Local Campus (B-LOC)* to *Commercial, Mixed Urban (C-MIX)* *and* ~~*Residential, Mid-Density Urban Use (R-MID)*~~*Direct Control (DC)*.

Under the Direct Control (DC) land use district, the Residential, Small Lot District (R-SML) guidelines are intended, with exceptions (no semi-detached residential and minimum and maximum lot area and width). The stated purpose and intent of the Residential, Small Lot District (R-SML) is:

*"To provide for single and semi-detached residential dwellings on small parcels in Hamlets and comprehensively planned areas."*~~The stated purpose and intent of the Residential, Mid-Density Urban (R-MID) land use district is:~~

> ~~*"To accommodate a diverse range of low to medium density fee simple residential housing types in an urban setting, such as Hamlets and comprehensively planned area."*~~

The stated purpose and intent of the Commercial, Mixed Urban (C-MIX) land use district is:

> *"To provide for small scale business needs in support of comprehensive communities, where mixed use building may accommodate a variety of business types and scale. Development is intended to serve small to moderate sized residential communities and provide opportunities for local employment. The district included high quality urban design standards. Vehicle oriented uses should be located so as to preserve and enhance the integrity of a pedestrian network."*

The Permitted and Discretionary Uses of the Commercial, Mixed Urban (C-MIX), and the ~~Residential, Mid-Density Urban~~Direct Control (~~R-MID~~DC with a Residential, Small Lot District (R-SML base)) land use districts, their attendant district regulations, Land Use Bylaw regulations, the policy framework of this appendix, and market expectations are expected to establish the final development form within Cell D.

Refer to the Rocky View County Land Use Bylaw 8000-2020 for a complete, up-to-date list of Permitted and Discretionary uses under each of the respective land use districts. ~~The stated purpose and intent of the *Business, Local Campus (B-LOC)* land use district is:~~

> ~~*"To accommodate a mix of office and light industrial uses within a comprehensively-planned campus setting. Development is intended to serve local clientele and must be compatible with adjacent uses, including a high quality of visual design."*[8]~~

~~The permitted and discretionary uses of the *Business, Local Campus (B-LOC)* land use district, its attendant district regulations and Land Use Bylaw regulations, the policy framework of this appendix and market requirements are expected to establish the final development form within Cell D.~~

~~Permitted uses in the *Business, Local Campus (B-LOC)* land use district include[9]:~~

~~*Accessory Building ≤ 190m² (2045.14 ft²)*~~

~~*Animal Health (Small Animal)*~~

~~*Communications Facility (Type A)*~~

~~*Communications Facility (Type B)*~~

~~*School (Commercial)*~~

~~Discretionary uses in the *Business, Local Campus (B-LOC)* land use district include[10]:~~

~~*Accessory Building ≥ 190m² (2045.14 ft²)*~~

~~*Alcohol Production*~~

~~*Car Wash*~~

~~*Care Facility (Child)*~~

~~*Care Facility (Clinic)*~~

~~*Communications Facility (Type C)*~~

~~*Establishment (Drinking)*~~

~~*Establishment (Eating)Film Production*~~

~~*Industrial (Light)*~~

~~[8] Rocky View County, *Land Use Bylaw C-8000-2020, Office Consolidation*, January 26, 2021, Page 73.~~
~~[9] Ibid.~~
~~[10] Ibid.~~

~~*Office*~~

~~*Post-Secondary*~~

~~*Recreation (Private)*~~

~~*Recycling/Compost Facility*~~

~~*Religious Assembly*~~

~~*Retail (Small)*~~

~~*Special Function Business*~~

~~*Those uses which are not otherwise defined in the Bylaw, which in the opinion of the Development Authority are similar to the above and conform to the purpose of this District may be Discretionary Uses.*~~

~~The stated purpose and intent of the *Commercial, Mixed Urban District (C-MIX)* land use district is:~~

> ~~*"To provide for small scale business needs in support of comprehensive communities, where mixed use building may accommodate a variety of business types and scale. Development is intended to serve small to moderate sixed residential communities and provide opportunities for local employment. The district includes high quality urban design standards. Vehicle oriented uses should be located so as to preserve and enhance the integrity of a pedestrian network."*~~

~~The permitted and discretionary uses of the *Commercial, Mixed Urban District (C-MIX)* land use district, its attendant district regulations and Land Use Bylaw regulations, the policy framework of this appendix and market requirements are expected to establish the final development form within Cell D.~~

~~Permitted uses in the *Commercial, Mixed Urban District (C-MIX)* land use district include:~~

~~*Accessory Buildings ≤ 75m$^2$ (807.29ft$^2$)*~~

~~*Animal Health (Small Animal)*~~

~~*Care Facility (Child)*~~

~~*Care Facility (Clinic)*~~

~~*Communications Facility (Type A)*~~

~~Discretionary uses in the *Residential, Mid-Density Urban District (R-MID)* land use district include:~~

~~*Accessory Building > 75m$^2$ (807.29ft$^2$)*~~

~~*Alcohol Production*~~

~~*Cannabis Retail Store*~~

~~*Car Wash*~~

~~*Care Facility (Group)*~~

~~*Care Facility (Seniors)*~~

~~*Conference Centre*~~

~~*Dwelling Unit accessory to principle use*~~

~~*Dwelling, Multiple Unit*~~

~~*Establishment (Drinking)*~~

~~*Establishment (Eating)*~~

~~*Farmers Market*~~

~~*Hotel/Motel*~~

~~*Office*~~

~~*Post-Secondary*~~

~~*Recreation (Culture and Tourism)*~~

~~*Recreation (Public)*~~

~~*Recreation (Private)*~~

~~*Retail (Garden Centre)*~~

~~*Retail (General)*~~

~~*Retail (Grocery)*~~

~~*Retail (Restricted)*~~

~~*Retail (Small)*~~

~~*School, Commercial*~~

~~*Special Function Business*~~

~~*Station (Gas/Electric)*~~

~~*Vacation Rental*~~

~~Those uses which are not otherwise defined in the Bylaw, which in the opinion of the Development Authority are similar to the above and conform to the purpose of this District may be Discretionary Uses.~~

~~The Land Use Bylaw directs that Development Permit applications for discretionary uses of *Business, Business Campus (B-LOC)*, *Residential, Mid-Density Urban District (R-MID), and Commercial, Mixed Urban (C-MIX)* land use districts shall be evaluated in accordance with Part 3 Permits and Conditions of the bylaw.~~

Further and in accordance with the provisions of the *Commercial, Mixed Urban (C-MIX) and* *Direct Contril (DC* *Residential, ~~Mid-Density Urban~~Small Lot (R-~~MID~~SML))* land use districts, development proposals within Cell D should address the visual design consideration of the proposed development.

~~All proposals for business development should provide architectural guidelines and site development standards that implement proposal design elements that consider development scale, architectural finishing, site lighting, land use context and impact mitigation (that may include site works such as screening and fencing, berming, landscaping and building and parking orientation).~~

~~All proposals for development shall address development compatibility and transitional issues with adjacent land uses (particularly those residential in nature).~~

Stormwater management facilities will be designated *Special, Public Service (S-PUB).*

### *7.5 Conceptual Land Use Plan - Conceptual Design*

It is important to note that the subdivision design, lot sizes, and land use areas in *Figure 8 - Conceptual Land Use Plan* are conceptual only and will be refined at the subdivision approval stage. *Figure 8 - Conceptual Land Use Plan* comprises the following subdivision design elements:

- ***Future Public Road***

  Two (2) access right-of-way plans affect ~~the subject land~~ Cell D:

  - Access R/W Plan 171-0749 is intended to accommodate future improvements to Highway #1~~–~~which is located adjacent and to the northeast.~~which is located adjacent and to the northeast~~.
  - Access R/W Plan 171-0750 is intended to accommodate the future extension of Cambridge Park Boulevard and its intersection with Garden Road (Range Road 285).

  The total area of Cell D proposed for development as public road comprises ~~20.25~~23.0 percent (~~7.68 Acres / 3.11 Hectares~~15.22 Hectares / 6.16 Hectares).

- ~~***Future Highway 1 Improvements - Right of Way***~~

  ~~That portion of Access R/W Plan 171-0749 not proposed for public road development should remain undeveloped and protected under an access right of way for the purpose of accommodating future improvements to Highway 1.~~

~~This right-of-way area comprises 9.54 percent of Cell D (6.50 Acres / 2.63 Hectares).~~

- ***Future Public Utility Lot***

  *Figure 8 - Conceptual Land Use Plan* provides for the dedication of a future Public Utility Lot (PUL). The future PUL is planned to contain required stormwater management facilities. The size and location of the future PUL was determined by stormwater management modelling and engineering requirements determined by Jubilee Engineering ~~consultants~~ Consultants Ltd.

  T~~A pedestrian pathway is proposed for development surrounding the 12.53-acre public utility parcel. T~~he area of the public utility parcel not supporting active stormwater management facilities will be landscaped at the time its development. This parcel with attendant landscaping is anticipated to address the requirements of the CASP with respect to its Non-Residential / Residential Interface provisions.

  Total area of Cell D proposed for dedication and development of a future Public Utility Lot (PUL) comprising ~~18.39~~19.53 percent (~~12.53 Acres / 5.07 Hectares~~12.92 Acres / 5.23 Hectares) of Cell D.

- ***Future Connective Open Space System***

  The SCCS requires that a connective open space system be established within each Development Cell.

  The SCCS requirement for the establishment of an open space system within Cell D will occur at the subdivision approval stage and provided through the dedication of Municipal Reserve and walkways.

- ***Future Municipal Reserve (MR) Dedication***

  Registration of a plan of subdivision for Cell C created a remainder parcel that comprises the titled land within Cell D (the remainder of the NW 1/4 Sec. 29-24-28-W4M under Title No. 171 069 813 +119).

  At the time of subdivision approval for Cell C, it was determined that consideration of municipal reserve disposition for the remainder parcel should be deferred to a future subdivision approval. Accordingly, a deferred reserve caveat (Instrument 171 069 816) expressing an interest in 6.6318 acres (2.6838 ha) was registered by the County against the remainder parcel.

*Figure 8 - Conceptual Land Use Plan* provides a concept design for the future dedication of ~~three (3) MR lots~~three (3) Municipal Reserve (MR) lots comprising ~~0.57 Acres / 0.23 Hectares~~0.57 Acre / 0.23 Hectare and referenced 7,8, and 9 on *Figure 8 – Conceptual Land Use Plan*. An additional 6.25 Acres / 2.53 Hectares of land is provided outside the concept plan area and within Cell D, as shown on *Figure 8 - Conceptual Land Use Plan*. A total of 6.82 Acres / 2.76 Hectares or 10.31% of Cell D is proposed to be dedicated as MR.

Proposed MR dedication for all of South Conrich Conceptual Scheme is 11.95% of the gross developable area (272.73 Acres / 110.37 Hectares).~~An additional 8.30 Acres / 3.36 Hectares of land is provided outside the concept plan area and within Cell D, as shown on *Figure 8 - Conceptual Land Use Plan*. A total of 8.87 Acres / 3.59 Hectares or 21.15% of Cell D is proposed to be dedicated as MR.~~

~~Proposed MR dedication for all of South Conrich Conceptual Scheme is 12.41% of the gross developable area (13.46 Hectares / 108.45 Hectares).~~

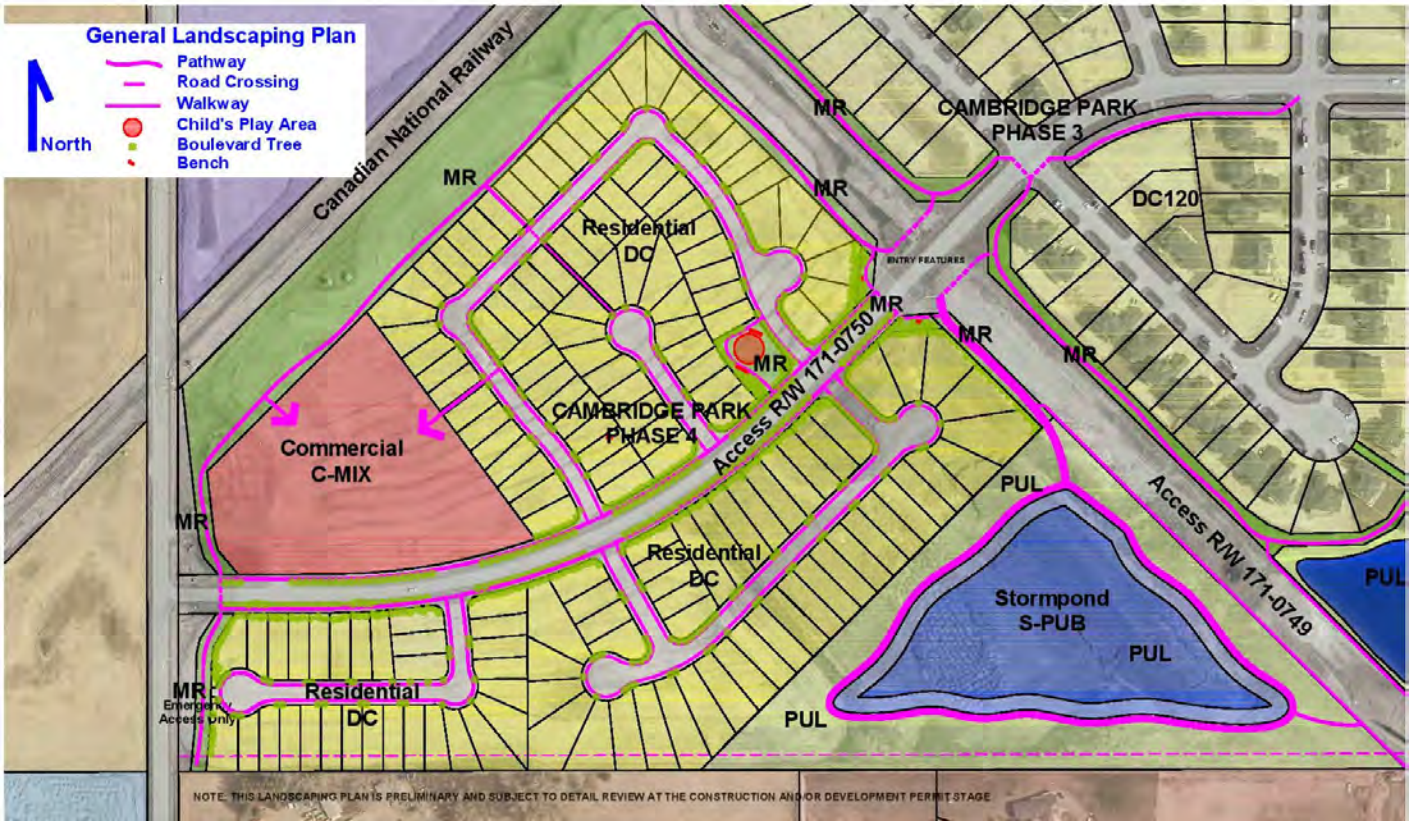
Future MR lots are intended to be used for recreation, to contain children's play area, benches, pedestrian pathways, or as buffers between land uses. All future MR parcels are proposed to be irrigated with stormwater from the stormwater management system implemented for Cell D.

Fencing shall be required where MR and private lots intersect. All fencing shall be constructed on private lots regarding the design/style as deemed acceptable by architectural controls.

- ***Future Pedestrian Pathway System***

  A pedestrian pathway system is proposed within MR lots ensuring that all public lands will be accessible to all residents of the County. Refer to *Figure 9: —Proposed General Landscape* ~~*Proposed General Landscape*~~ *Plan* for details.

## *Figure 9: Proposed General Landscape Plan*




The proposed pedestrian pathway system within Cell D should expand and strengthen regional recreational opportunities by connecting to existing pedestrian networks on surrounding lands.

The design of the pedestrian pathway system within MR lots shall be considered at the subdivision approval stage and constructed in accordance with County standards.

Walks and street trees ~~and street trees~~ on both sides of the pavement of all public residential and industrial / commercial ~~pavement of all public residential and industrial / commercial~~ roads will be provided as part of revised road cross-sections (see ~~*Section 8.0 Transportation*~~*Figure 10: Proposed Modified Road Cross-Sections*).

Maintenance of MR lots within Cell D including implementation of a weed management plan should be the responsibility of a Landowner's Association to be established as a requirement of subdivision approval.

- ***Future Commercial Lots***

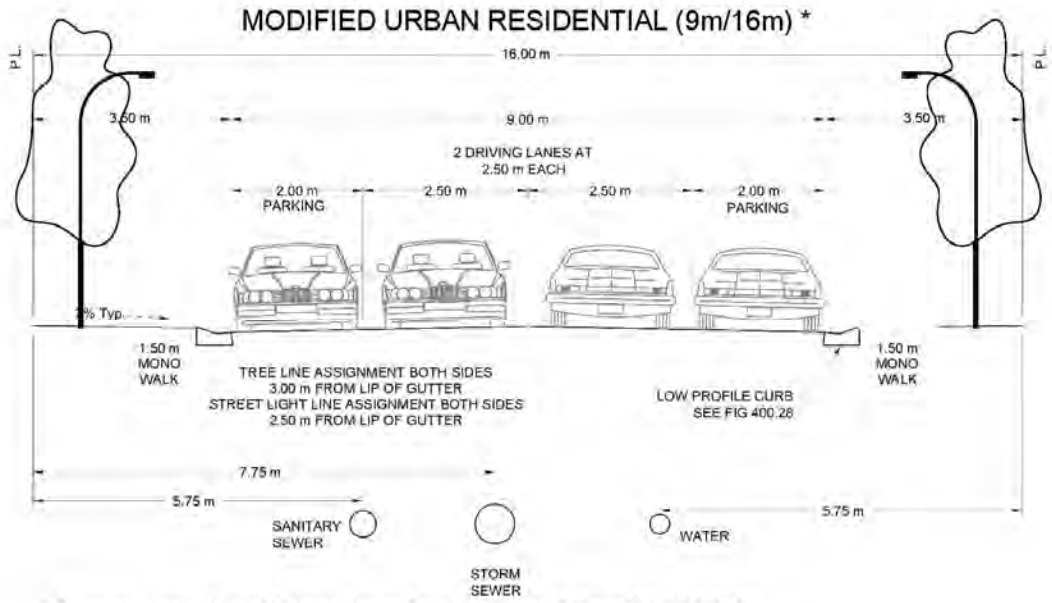
*Figure 8 Conceptual Land Plan* provides for the creation of one parcel referenced as 1 and comprising 2.14 Hectares 5.29 Acres) or 9.0% of Cell D. This parcel will form part of a comprehensively designed local commercial precinct. ~~***Figure 8 Conceptual Land Plan* provides***

~~for the creation of two separate parcels, comprising approximately 4.31 Hectares (10.65 Acres) or 11.35% of Cell D. The parcels are separated by Cambridge Park Boulevard, running east-west, with the northerly one containing 2.14 Hectares (5.29 Acres) and the southerly one containing 2.17 Hectares (5.36 Acres). The northerly parcel will form part of a comprehensively designed local commercial precinct, , containing approximately 920 square metres (9,900 square feet) of retail. Uses will include a Gas Station/Car Wash/C-Store, Medical Clinic/Pharmacy, and general retail uses. The southerly parcel is intended to accommodate both assisted and independent living accommodations for seniors' housing. There are spaces available for gardens and pathways, and a possible community garden, providing seniors the opportunity to connect with the general population. Overall, pedestrian connectivity will be provided with strategic linkages to the adjacent Municipal Reserve. *Figure 9 A Concept Plan* illustrates a possible concept for the C-MIX land uses. All areas are approximate and will require verification by a legal survey.~~

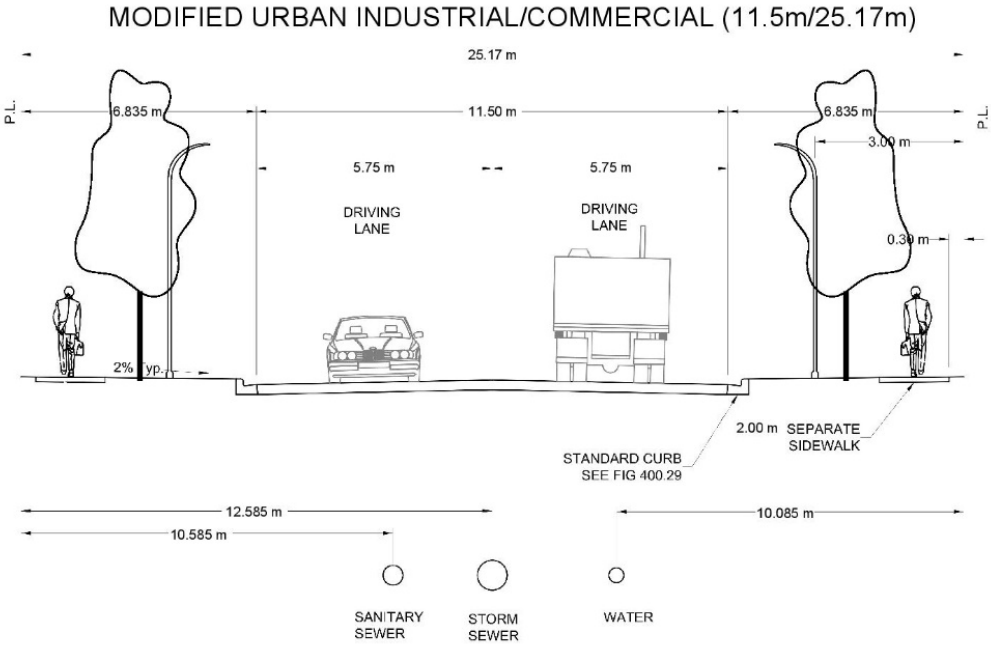
- ***Future Residential Lots***

The overarching intent of this land use in Cell D is to offer another housing form within the general Conrich area, that of a smaller single detached form. References 2, 3, 4, 5, and 6 on *Figure 8 – Conceptual Land Use Plan* are intended for the creation of approximately 160 single detached, fee simple residential lots, with a minimum parcel width of 13.41 metres (44 feet), a minimum lot area of 0.045 Hectare (0.11 Acre), and a maximum lot area of 0.076 Hectare (0.018 Acre), except for irregularly shaped parcels, then the maximum lot area shall be 0.15 Hectare (0.37 Acre), all comprising 10.09 Hectares (24.93 Acres) or 37.7% of Cell D.~~*Figure 8 Conceptual Land Plan* provides for the creation of approximately 140 single detached residential lots, comprising 7.50 Hectares (18.53 Acres) or 63.50% of Cell D. The proposed minimum lot widths range fromis 13,41 Metres (44.0 Feet) to 16.74 Metres (54.9 Feet), with a minimum site area of 0.0450 Hectare (0.111 Acre) and a maximum site area of 0.150 Hectare (0.37 Acre) and a maximum lot width of 22.86 Metres (75.0 Feet). The overall average lot width is 15.24 Metres (50.0 Feet), with variances to occur per subdivision phase. The intent of this redesignation is to offer another single detached housing form within the general Conrich area. All areas are approximate and will require verification by a legal survey.Figure 10: Proposed Modified Road Cross-Sections.~~

***Figure 10: Modified Road Cross-Sections***




* Cross-section is City of Calgary Cross Section Figure 39, File 454.1008.070, City of Calgary Design Guidelines for Subdivision Servicing (2020)




## *7.6 Conceptual Land Use Plan - Design and Site Development Requirements*

A comprehensive development design scenario is required by the proposed land use district to be implemented at the development approval stage.

A comprehensive development design scenario should comprise a framework of architectural design and site development requirements intended to:

1. Facilitate comprehensive development of Cell D and ensure contextual land use compatibility.
2. Provide design guidelines and principles that will result in an attractive, cohesive and recognizable built form for commercial landscapes in Cell D;
3. Conform to the design principles established by Commercial, Office and Industrial Design Guidelines in Rocky View County.

~~All residential areas in Cell D should be considered as transitional lands between the existing Cambridge Park residential to the east and the future business campus uses to the north. Residential lots are proposed to be smaller than in the existing, adjacent development of Cambridge Park. In addition, horizontal distances, including open space and road rights-of-way, act as a buffer between uses. While transitional lands are not generally used between residential areas, it may serve a purpose here. when the area is adjacent to non-residential uses again. Therefore, transitioning from larger lot residential to medium lot residential, to business campus, is a logical gradation.~~

~~A portion of the residential area lies adjacent to Cambridge Park Boulevard. There is an opportunity here to provide some additional landscaping (native trees and shrubs), to serve as a buffer between these residential lots and the future business campus lands to the north. *Figure 10 – Landscaped Area Plan* identifies this augmentation.~~

~~All commercial areas in Cell D with a retail (goods and services) intent, should be designed in a way to be aesthetically pleasing on the perimeter as well as within the areas. Uses should be logically placed to complement each other, and to avoid potential traffic congestion. For example, a gas station or car wash is not necessarily ideal adjacent to a parkette.~~

### *7.7 Conceptual Land Use Plan - Adjacent Development Compatibility*

During the development of Cell D, it is important to consider development compatibility and transitional issues with adjacent land uses (particularly those residential in nature).

The following provides additional direction respecting development compatibility:

~~• Development proposals for general Industrial uses as defined by the Land Use Bylaw and considered appropriate under a General industry Type I permitted use should be evaluated for compatibility with residential land use and directed to proposed Lots 3 and 4 adjacent to Garden Road.~~

- Business activities that support on-site storage or generate negative impacts off-site are restricted from development in Cell D.

- ~~Permitted and discretionary uses for proposed lots 2 and 4 that include business uses in a campus setting pursuant definitions of same in the Land Use Bylaw; and~~

- Business and commercial uses that include high traffic uses such as car washes, service stations and convenience stores ~~shall be restricted~~should be directed to ~~Lots 3 and 4~~parcels adjacent to Garden Road.

*7.8 Conceptual Land Use Plan - Adjacent Development Connectivity*

Currently, a private roadway bisects Cell D and connects Cambridge Park Boulevard within Cambridge Park Estates to Garden Road. The private roadway was constructed as a condition of subdivision approval for Cell C and is located within an existing right of way (Access R/W Plan 171-0750). The private roadway was intended to facilitate emergency ingress and egress to Cambridge Park Estates.

It is anticipated that the subdivision of Cell D in accordance with *Figure 8 - Conceptual Land Use Plan* will require that the private road be replaced with a public road ~~is~~ to be developed within the existing utility right-of-way. This public road identified in *Figure 8 - Conceptual Land Use Plan* is proposed to be modified to include a curb and gutter (urban) format to accommodate a more attractive environment with boulevard trees and separate walks on both sides of the pavement. See *Figure 10 – Road Cross-Sections*. ~~This public road identified in *Figure 8 - Conceptual Land Use Plan* is proposed to be modified to include a curb and gutter (urban) format to accommodate a more attractive environment with boulevard trees and separate walks on both sides of the pavement. See *Figure 10 – Road Cross-Sections*.~~ This proposed public road will enhance the County's transportation system by establishing road connectivity between developments and facilitating inter-community traffic movements and emergency access.

At such time as this public road is constructed, traffic calming measures intended to manage vehicular speeds should be considered. Traffic calming measures may include a stop sign at the intersection of Access R/W Plan 171-0749 and Access R/W Plan 171-0750.

Additional public roads to serve the residential area will be generally configured in accordance with *Figure 8 – Conceptual Land Use Plan*.

The pedestrian pathway system proposed for Cell D shall integrate with the existing Cambridge Park Estates pedestrian pathway systems promoting walkability within Cell D and to the greater

community. Refer to *Figure 9 – General Landscape Plan*. ~~Refer to *Figure 9 – General Landscape Plan*. AS part of the mandate for the C-MIX land use district, pedestrian enhancement within the parcels shall be considered a priority at the development permit stage.~~

*Policy - Conceptual Land Use Plan*

*Land Use Designation*

7.0.1 *All lands within Cell D should be designated: Special Public Service (S-PUB) to accommodate a stormwater facility; ~~All lands within Cell D should be designated: Special, Public Service (S-PUB) to accommodate a stormwater facility;~~ Direct Control (DC) with Residential, Small Lot District guidelines and exceptions ~~Residential, Mid-~~*

*Future Subdivision*

7.0.2~~7.0.2~~ *Subdivision of land within Cell D should generally be in accordance with ~~the conceptual design provisions of~~ Figure 8 - Conceptual Land Use Plan ~~herein~~.*

7.0.3 *The following items shall apply for all residential parcels ~~shown~~ referenced as 2, 3, 4, 5, and 6 on Figure 8 - Conceptual Land Use Plan:*

- *All residential lots shall be single detached in nature.*
- *The~~A~~ minimum residential lot width shall be 13.41 Metres (44 Feet).*
- *The~~A~~ minimum residential lot area shall be 0.0450 Hectare (0.1111 Acre).*
- *The~~A~~ maximum residential lot area shall be ~~603.9 m² (6,500 ft²)~~0.076 Hectare (0.18 Acre), ~~unless~~ except ~~the lot is non-rectangular~~for irregular shaped lots, then it shall be ~~1,500 m² (16,146 ft²).~~0.15 Hectare (0.37 Acre).*

7.0.4 *All open spaces shall be developed within Cell D in general conformity with the provisions of Figure 8 - Conceptual Land Use Plan.*

7.0.5 *All open spaces and pathways within Cell D shall be constructed by the Developer in accordance with a landscaping plan to be submitted at the subdivision approval stage.~~A minimum residential lot area shall be 0.0490 Hectare (0.121 Acre).~~*

7.0.~~7~~6 *All open spaces and pathways within Cell D shall be maintained by a Landowners' Association or Associations (LOA). Maintenance and operational obligations are committed to be undertaken by the LOA via a license agreement with the County inclusive of maintenance and operations of the grounds and all site improvements located there within, ~~–~~including pathways.~~All open spaces and pathways within Cell D~~*

7.0.~~8~~7 *Preparation and implementation of a weed management plan shall be the responsibility of a Landowner's Association or Associations to be established at the time of subdivision registration. All noxious weeds are to be controlled in accordance ~~to~~with the terms identified in the Provincial Weed Act. Weed control occurring on Municipal Reserves is inclusive of a comprehensive grounds~~-~~keeping maintenance and operations program as specified in the terms of a formal license of occupation for Municipal Reserve (MR)~~Preparation and implementation of a weed management plan~~*

7.0.8 *Within Cell D, MR will be provided by full dedication of land.*

7.0.~~10~~9 *Dedication of Municipal Reserve shall be in accordance with the terms and conditions established by the Municipal Government Act.~~Within Cell D, a minimum of ten (10)~~*

7.0.~~11~~10 *Fencing shall be required where MR and private lots intersect. All fencing shall be constructed on private lots regarding the design/style as deemed acceptable by architectural controls.~~Dedication of Municipal Reserve shall be in accordance with the~~*

7.0.11 *In addition to construction, the Developer shall be responsible for all maintenance and operations of MR lands and improvements located there within until issuance of Final Acceptance Certificates - in accordance ~~to~~with the terms of the applicable Development Agreement.*

*Residential Land Use and Development*

7.0.12 *All proposals for residential development shall provide architectural guidelines that will implement design elements to consider site planning, architectural styles, design details, and landscaping.*

*Commercial Land Use and Development*

7.0.~~14~~13 *All future development permit proposals for Commercial development shall address development compatibility and transitional issues with adjacent land uses in accordance with Section 14 Residential/Non-Residential Interface* of the CASP.

7.0.~~15~~14 All proposals for commercial development shall provide architectural guidelines and site development standards that will implement design elements ~~that to~~will consider the following: development scale;~~,~~ architectural finishing; site lighting; land use context; berming; landscaping; and building and parking orientation impact mitigation (that may include site works such as screening and fencing)~~finish, and context~~.

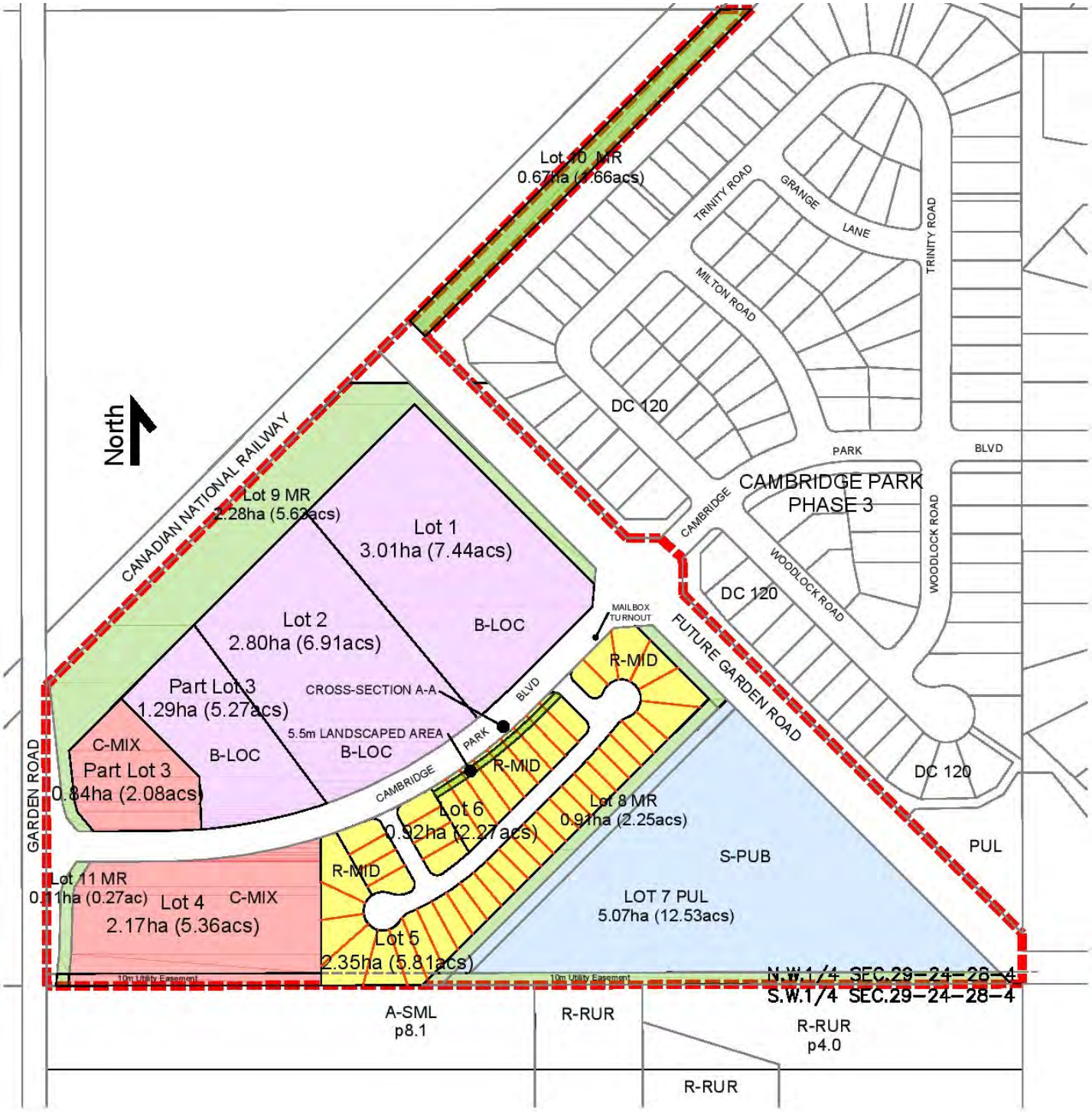
7.0.15 ~~Business~~Any activities that support on-site storage or generate negative impacts off-site shall not be permitted in Cell D.

7.0.16 ~~Business and~~Any commercial uses that include high traffic ~~uses~~movements such as car washes, service stations and convenience stores shall be directed to the parcel referenced as 1 in Figure 8 – Conceptual Land Use Plan.~~ parcels adjacent to Garden Road~~

~~7.0.16 The provision of business lot sizes below the minimum parcel size requirements of the Business - Business Campus (B-LOC) land use district should be supported by a comprehensive development design scenario considered at the subdivision approval stage.~~

~~The minimum residential lot area shall be 0.0490 Hectare (0.121 Acre).~~
~~7.0.3 The minimum residential lot width shall be 14.02 Metres (46 Feet).~~
~~7.0.4 A landscaped area of a minimum 5.5 Metres (18 Feet) shall be provided on lots as identified in Figure 9 - Landscaped Area Plan. The vegetation shall contain mainly large caliper trees but may also contain shrubs. Native species are preferred~~

~~Figure 8 - Conceptual Land Use Plan~~

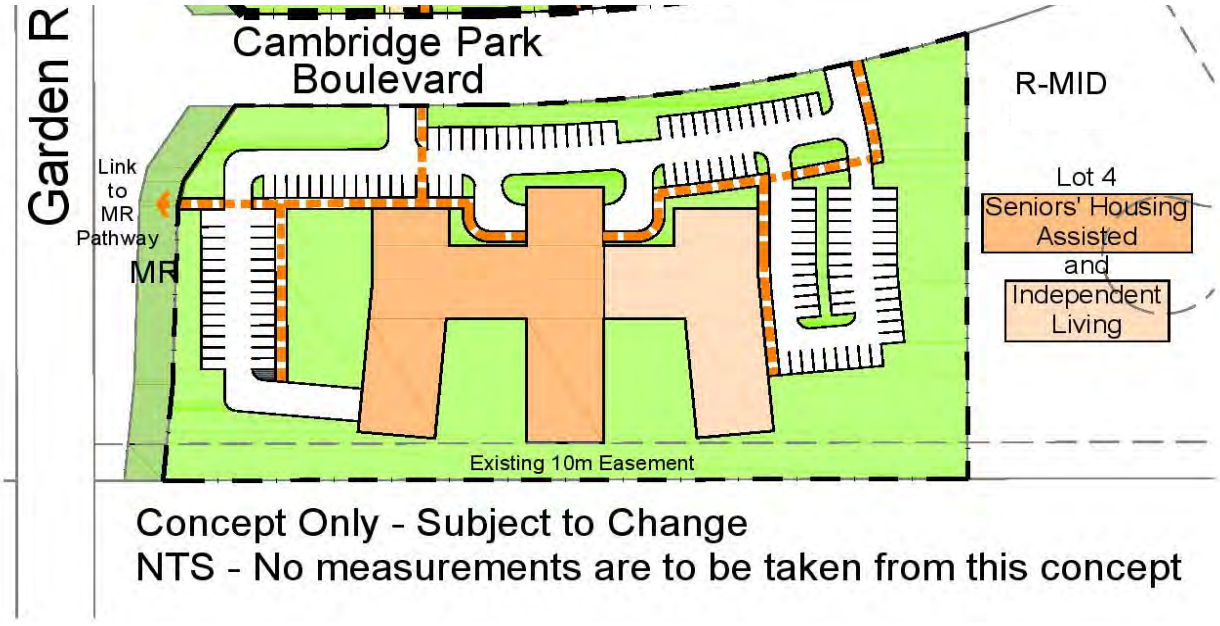

North
Lot 10 MR
0.67ha (1.66acs)
TRINITY ROAD
GRANGE
LANE
TRINITY ROAD
MILTON ROAD
DC 120
PARK
BLVD
CAMBRIDGE PARK
PHASE 3
CAMBRIDGE
WOODLOCK ROAD
WOODLOCK ROAD
DC 120
DC 120
CANADIAN NATIONAL RAILWAY
Lot 9 MR
2.28ha (5.63acs)
Lot 1
3.01ha (7.44acs)
Lot 2
2.80ha (6.91acs)
B-LOC
MAILBOX
TURNOUT
FUTURE GARDEN ROAD
R-MID
Part Lot 3
1.29ha (5.27acs)
CROSS-SECTION A-A
BLVD
5.5m LANDSCAPED AREA
PARK
C-MIX
B-LOC
B-LOC
Part Lot 3
0.84ha (2.08acs)
R-MID
CAMBRIDGE
GARDEN ROAD
Lot 6
0.92ha (2.27acs)
Lot 8 MR
0.91ha (2.25acs)
PUL
S-PUB
R-MID
Lot 11 MR
0.11ha (0.27ac)
Lot 4
2.17ha (5.36acs)
C-MIX
LOT 7 PUL
5.07ha (12.53acs)
Lot 5
2.35ha (5.81acs)
10m Utility Easement
10m Utility Easement
N.W.1/4 SEC.29-24-28-4
S.W.1/4 SEC.29-24-28-4
A-SML
p8.1
R-RUR
R-RUR
p4.0
R-RUR

## ~~*Figure 9 – A Concept Plan*~~

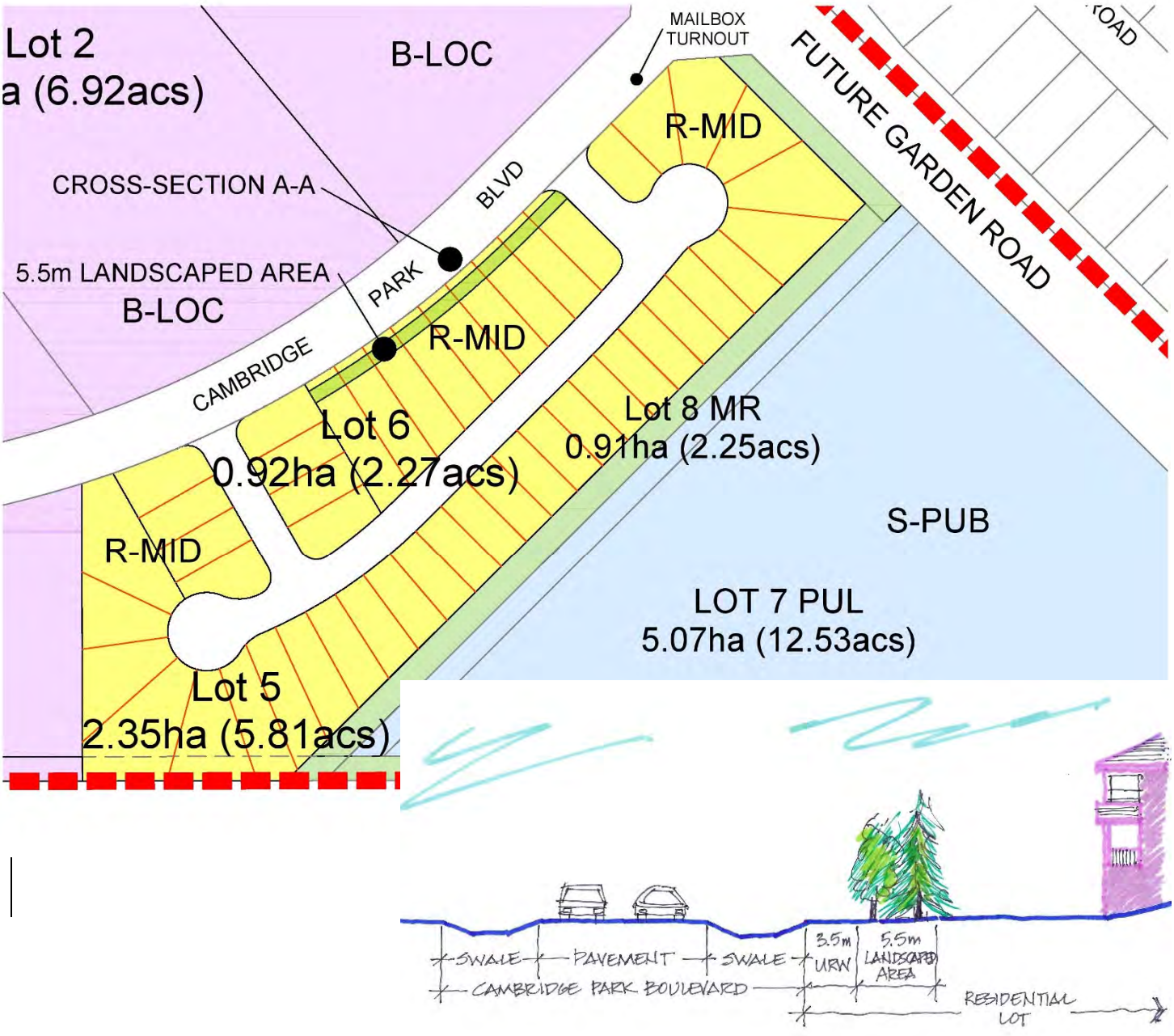
| Proposed Use | Parcel Ref | Hectares | Area Subtotal | Acres | Subtotal | Percent |
|---|---|---|---|---|---|---|
| Commercial | 1 | 2.14 | | 5.29 | | |
| Residential | 2 | 2.17 | | 5.36 | | |
| Residential | 3 | 2.14 | | 5.29 | | |
| Residential | 4 | 2.33 | | 5.76 | | |
| Residential | 5 | 0.90 | | 2.22 | | |
| Residential | 6 | 2.34 | | 5.78 | | |
| ***Commercial/Residential Sub-Total*** | | | ***12.02*** | | ***29.70*** | ***78.26%*** |
| Municipal Reserve (MR) | 7 | 0.15 | | 0.37 | | |
| Municipal Reserve (MR) | 8 | 0.04 | | 0.10 | | |
| Municipal Reserve (MR) | 9 | 0.04 | | 0.10 | | |
| ***MR Sub-Total*** | | | ***0.23*** | | ***0.57*** | ***1.50%*** |
| Public Roads | | 3.11 | 3.11 | 7.68 | ***7.68*** | 20.25% |
| **TOTAL** | | | **15.36** | | ***37.96*** | **100.00%** |

*Table Notes*

1. *all areas are approximate and based on a conceptual plan (Figure 8 - Conceptual Land Use Plan in this document)*
2. *all areas will require verification by legal survey through subdivision*
3. *tabulations may vary due to rounding and area conversions*



***~~Figure 10 - Landscaped Area Plan~~***



## *Table 1 - Land Use Areas by Future Land Use*

| Proposed Use | Parcel Ref | Area Hectares | Area Subtotal | Area Acres | Area Subtotal | Percent Amended Area | Percent Cell D |
|---|---|---|---|---|---|---|---|
| Commercial | 1 | 2.14 | | 5.29 | | | |
| Residential | 2 | 0.64 | | 1.58 | | | |
| Residential | 3 | 2.14 | | 5.29 | | | |
| Residential | 4 | 2.33 | | 5.76 | | | |
| Residential | 5 | 1.00 | | 2.47 | | | |
| Residential | 6 | 3.98 | | 9.83 | | | |
| ***Commercial/Residential Sub-Total*** | | | ***12.23*** | | ***30.22*** | ***76.44%*** | 45.67% |
| Municipal Reserve (MR) | 7 | 0.15 | | 0.37 | | | |
| Municipal Reserve (MR) | 8 | 0.04 | | 0.10 | | | |
| Municipal Reserve (MR) | 9 | 0.04 | | 0.10 | | | |
| ***MR Sub-Total*** | | | ***0.23*** | | ***0.57*** | ***1.44%*** | 0.86% |
| Public Roads | | 3.54 | 3.54 | 8.75 | ***8.75*** | 22.13% | 13.22% |
| **TOTAL AMENDED AREA** | | | **16.00** | | ***39.54*** | **100.00%** | |
| Access Right-of-Way Plan 171-0749 | | 2.62 | | 6.47 | | | 9.78% |
| Access Right-of-Way Plan 171-0750 | | 0.15 | | 0.37 | | | 0.56% |
| Garden Road Widening | | 0.25 | | 0.62 | | | 0.93% |
| Storm Pond (PUL) | | 5.23 | | 12.92 | | | 19.53% |
| Municipal Reserve Parcels (MR) | | 2.53 | | 6.25 | | | 9.45% |
| | | | 10.78 | | 26.64 | | |
| **TOTAL CELL D** | | | **26.78** | | **66.17** | | **100.00%** |

*Table Notes*

1. *all areas are approximate and based on a conceptual plan (Figure 8 - Conceptual Land Use Plan in this document)*
2. *all areas will require verification by legal survey through subdivision*
3. *tabulations may vary due to rounding and area conversions*

| ~~Proposed Use~~ | ~~Lot No.~~ | ~~Area (Acres)~~ | ~~Subtotal (Acres)~~ | ~~Area (Hectares)~~ | ~~Subtotal (Hectares)~~ | ~~Percent~~ |
|---|---|---|---|---|---|---|
| ~~Business~~ | ~~1~~ | ~~7.44~~ | | ~~3.01~~ | | |
| ~~Business~~<br>~~Business~~ | ~~2~~<br>~~Part of 3~~ | ~~6.91~~<br>~~0.77~~ | | ~~2.80~~<br>~~0.31~~ | | |
| ~~Commercial~~ | ~~Part of 3~~ | ~~4.50~~ | | ~~1.82~~ | | |
| ~~Commercial~~ | ~~4~~ | ~~5.36~~ | | ~~2.17~~ | | |
| ~~Residential~~ | ~~5~~ | ~~5.81~~ | | ~~2.35~~ | | |
| ~~Residential~~ | ~~6~~ | ~~2.27~~ | | ~~0.92~~ | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Subtotal | | | 33.06 | | 13.38 | 48.53 |
| Public Utility Lot | 7 PUL | 12.53 | 12.53 | 5.07 | 5.07 | 18.39 |
| Municipal Reserve | 8 MR | 2.25 | | 0.91 | | |
| | 9 MR | 5.63 | | 2.28 | | |
| | 10 MR | 1.66 | | 0.67 | | |
| | 11 MR | 0.27 | | 0.11 | | |
| Subtotal MR | | | 9.81 | | 3.97 | 14.40 |
| Future Public Road | | 6.23 | 6.23 | 2.52 | 2.52 | 9.14 |
| Future Road R/W | | 6.50 | 6.50 | 2.63 | 2.63 | 9.54 |
| **Total** | | | **68.13** | | **27.57** | **100.00** |

~~*Table Notes:*~~

~~1. All table areas are approximate and based upon a conceptual plan (Figure 8 - Conceptual land Use Plan in this document).~~
~~1. All areas will require verification by legal survey.~~
~~2. Table columns may vary due to rounding and area conversions.~~

## *8.0 Transportation and Roadways*

### *8.1 Regional Transportation Network*

The City of Calgary, with involvement of City of Airdrie, City of Chestermere, Town of Cochrane, and Rocky View County have conducted The North Calgary Regional Transportation Study, which identifies the need for an interchange at the Highway #1 and Range Road 285 Intersection by 2030. This interchange is in Alberta Transportations long-term plans but is not planned in the near or intermediate future. The Transportation Off-site Levy Special Area 2 is currently capturing funding for this interchange.

### *8.2 Traffic Impact Assessment*

A Traffic Impact Assessment (TIA) was completed by Bunt and Associates[11].

The Bunt and Associates TIA considers the full build-out of lands contained within Cell D in accordance with the preferred future land use established by the SCCS and *Figure 8 - Conceptual Land Use Plan.* The TIA focused on intersections and roads directly affected by development in Cell D with consideration of background traffic conditions.

Alberta Transportation (AT) has proposed construction of an interchange to the south of the SCCS, on the Trans-Canada Highway at the Garden Road / Highway 1 intersection. This Appendix maintains future transportation road right-of way requirements associated with the long-term planning of that interchange. The Bunt and Associates TIA provides comment and an update on the timeline for this improvement:

> *"It is noted that AT plans to develop a grade separated interchange at the Garden Road/Highway 1 intersection at some point in the future, but this*

[11] ~~Bunt and Associates, *Cambridge Park Phase 4, Traffic Impact Assessment, Final.* Calgary, Alberta: Author, June 2019.~~

> *improvement is not currently funded nor is there an AT timeline identified for implementation. The North Calgary Regional Transportation Study that was recently completed in draft form by ISL Consulting for the City of Calgary, City of Airdrie, City of Chestermere, Town of Cochrane and Rocky View County identifies a need for this interchange prior to 2030, and Bunt & Associates concurs with that preliminary finding. However, in the absence of a confirmed and committed timeline for this improvement it is recommended that consideration be given by AT to allowing signalized side street delays to increase ~~as a result of~~because of growth in both background traffic and development traffic so as to protect and maximize capacity for critical east/west through volumes on Highway 1."*[~~12~~]

*Figure 8 - Conceptual Land Use Plan* provides for primary public road access to Cell D and Garden Road (Range Road 285) via an internal public road connecting Garden Road and Cambridge Park Boulevard constructed within Access R/W Plan 171-0750 and a portion of Access R/W Plan 171-0749. All public roads located within the residential area are proposed with curb and gutter to offer walks and street trees on both sides of the pavement, thus providing greater pedestrian mobility and an attractive landscaping environment. A curb and gutter design with medium-sized residential lots provides a better landscape than with swales and culverts. The number of culverts along a streetscape with the size of lots proposed, would be less attractive and therefore, undesirable. Walks on both sides of the pavement are proposed to link to the future and existing pathways within the adjacent Municipal Reserve parcels. *Figure ~~10~~ 10 – Modified Cross-Sections* provides a typical cross-section for this road type.

The Bunt and Associates TIA provides comment and a ~~recommendation respecting upgrades~~recommendation respecting an upgrade at the intersection of Garden Road & Cambridge Park Boulevard that will be required as a result of Cell D development contemplated in this Appendix:

> *"The intersection of Garden Road & Cambridge Park Boulevard is currently a Type I intersection. AT Turning Warrants were evaluated for each of the future horizons to determine any necessary intersection treatments.*
>
> *The intersection will require a Type IV treatment by the 2040 After Development horizon with a northbound right turn lane. However, based on the Conrich ASP[3], Garden Road will be terminated before the CN rail tracks and before Highway 1 to the south. This will reduce most of the through traffic and intersection improvements will not be necessary in the future. As the*

[~~12~~] ~~Bunt and Associates, *Cambridge Park Phase 4, Transportation Impact Assessment, Final.* Calgary, Alberta: Author, June 2019, Page 3.~~

*intersection is expected to operate with an LOS A and low delays, a Type IIIa intersection treatment is recommended."*

*Policy - Transportation and Roadways*

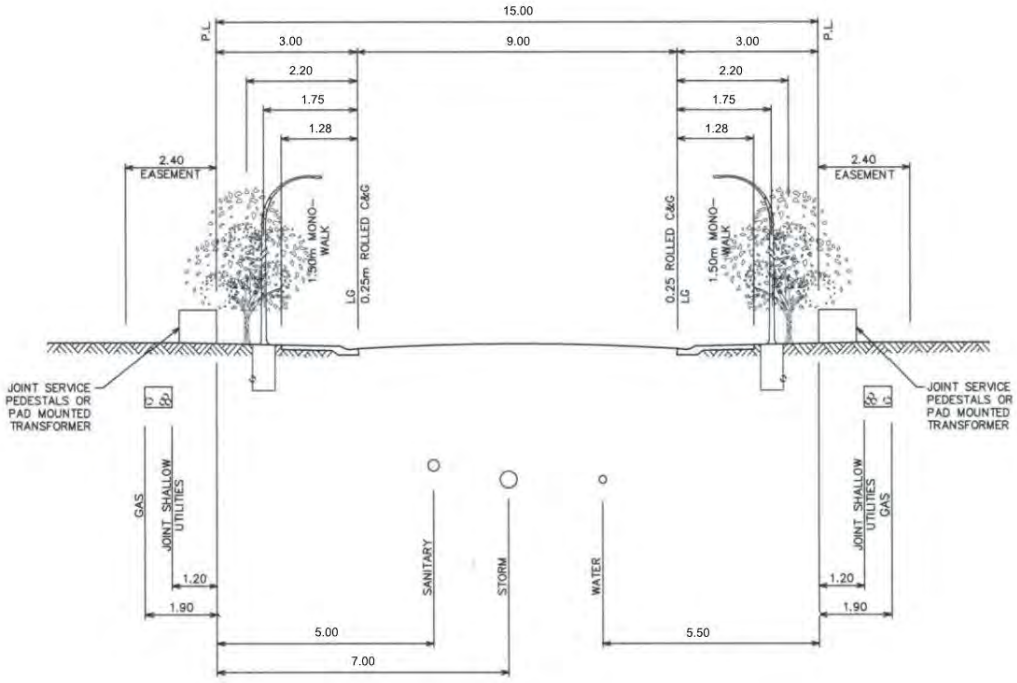
*8.0.1* *Vehicular access to all development within Cell D shall be provided from a public road linking Garden Road (Range Road 285) and Cambridge Park Blvd.* *Refer to Figure 8: Conceptual Land Use Plan.*

*8.0.2* *All public roads within Cell D shall be developed in accordance with professional engineering practices and County Servicing Standards.*

*8.0.3* *Intersection upgrades required because of the development of Cell D shall be considered at the subdivision approval stage and regarding the findings and recommendations of the Bunt and Associates TIA dated* ~~———~~*.June 7th, 2021.*

*8.0.4* ~~*Notwithstanding 8.0.2, any modifications proposed to public roads such as those shown in Figure 10: Modified Road Cross-Sections, shall be considered by the County.*~~*Notwithstanding 8.0.2, any modifications proposed to public roads such as those shown in Figure 10 – Modified Road Cross-Sections, shall be considered by the County.*

## *9.0 Servicing Infrastructure*




| | | | | | | |
|---|---|---|---|---|---|---|
| | | Drawn | Date | MODIFIED URBAN RESIDENTIAL<br>15.00m R/W 9.00m ROAD<br>MONO-WALK, NO REAR LANE | Figure<br>1 |
| | | Designed | | | |
| | | Checked | | | File Number<br>21-059 |
| | | Scale: | NTS | | |
| | No. Date Revision App'd | | | | |

### *9.1 Sanitary Sewer*

Cell D is within the service area of the East Rocky View Regional Wastewater service system. Accordingly, all development within Cell D shall be serviced by connection to the East Rocky View Regional Wastewater service system.

### *9.2 Potable Water*

In accordance with Policies 23.9 and 23.15 of the CASP, all development within Cell D shall connect to the County's potable water system.

At the subdivision approval stage, a developer shall be required to enter into a Development Agreement for the connection of Cell D lots to the County's potable water system.

### *9.3 Stormwater Management*

Jubilee Engineering Consultants Ltd. has prepared a conceptual stormwater management study for Cell D. The Jubilee Engineering study describes the stormwater management system for Cell D as follows:

- *The analysis concludes that the ponds designed have sufficient capacity to manage the runoff generated by the Cambridge Estates Phase 3 and Cambridge Park Phase 4. The existing pond from Cambridge Estates Phase 3 and Cambridge Park Phase 4 will be connected and will act as one pond. The combined pond will be an evaporation with irrigating the municipal reserve areas on both phases.*
- *The combined evaporation/irrigation pond will be a zero-discharge facility to handle runoff from a 1:100-year storm event. The pump house on the existing Cambridge Estates Phase 3 will be utilized for both phases.*
- *The evaporation pond was designed for a 1:100-year storm event and has no minor system outlet. Through Water Balance the 1:100-year storm elevation in the pond is 56.25m which gives a freeboard of 0.95m. The SWMHYMO results for a 1:100 single event will give a freeboard of 1.45m.*
- *All details conform to the ~~City of Calgary~~Rocky View County County Servicing Standards (2013) manual~~Standard Specifications and Stormwater Management Design Manual~~."*

*Figure 11 – Stormwater Management* illustrates the overall concept for stormwater management within Cell D.

The County will require that requisite Maintenance Vehicle Access Road (Section 706.5.3 Servicing Standards) surrounding the proposed evaporation/irrigation pond be incorporated directly into the pedestrian network (sidewalk and pathways). Design and configuration shall be undertaken by the Developer to the County's satisfaction within an applicable Development Agreement.

### *9.4 Solid Waste Management*

Solid waste containment and disposal within Cell D will be the responsibility of individual landowners or collectively managed by a Landowner's Association. Recycling opportunities are encouraged to be implemented throughout the community.

*Policy - Servicing Infrastructure*

*Geotechnical*

*9.0.1 Geotechnical evaluations prepared by a qualified geotechnical professional shall be required at the subdivision approval stage ~~in order to~~to establish geotechnical considerations and establish design and construction requirements.*

*Sanitary Sewer and Potable Water*

*9.0.2 As per Policies 23.9 and 23.15 of the Conrich ASP, sanitary sewer and potable water servicing within Cell D shall be provided by connection to the County's potable water and wastewater system.*

*9.0.3 It will be the responsibility of the developer to provide sanitary sewer and potable water servicing plans for all lands within Cell D at the subdivision approval stage and to the satisfaction of the County.*

*9.0.4 Development of Cell D shall implement water conservation measures ~~as required by the County~~such as native species vegetation.*

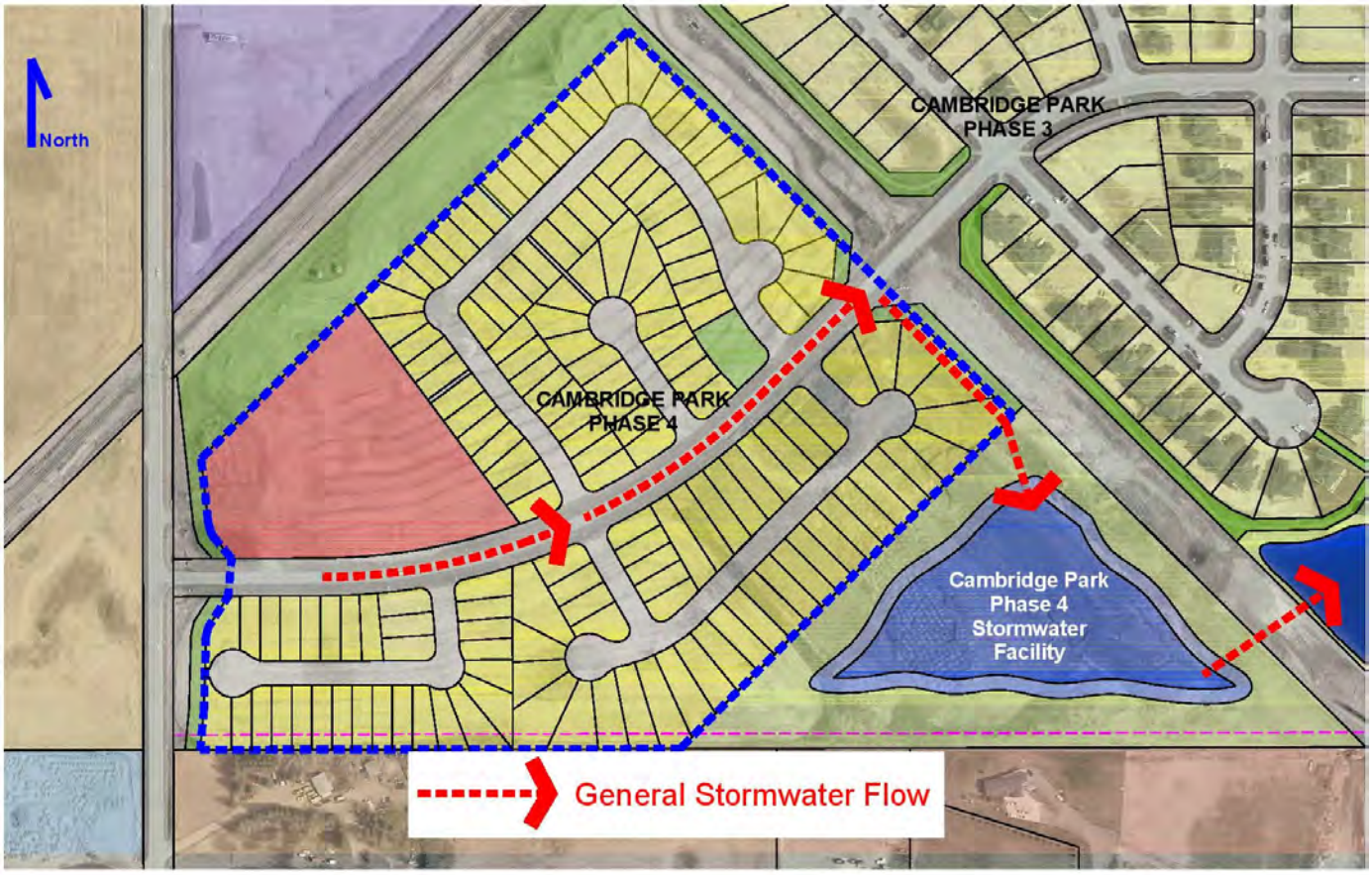
*Stormwater Management*

9.0.5 *Stormwater Management within Cell D shall be in accordance with the preliminary stormwater management concepts in this Appendix and finalized at the subdivision approval stage.*

*Solid Waste Management*

9.0.6 *Solid waste containment and disposal within Cell D shall be the responsibility of individual landowners or collectively managed by a Landowner's and/or Homeowner's Association. Recycling opportunities shall be encouraged.*

***Figure 12 - Stormwater Management***



## *10.0 Public Consultation*

As required by Policy 9.1.3 of the SCCS, a public consultation process was implemented as follows:

- A public open house was held at Prince of Peace on November 28, 2019, to discuss the proposed conceptual land use plan, proposed Conceptual Scheme amendment and the proposed redesignation for Cell D.

  The open house was advertised by direct mail to over three hundred (300) affected Conrich area residents.

  Approximately ten (10) people recorded attendance at the November 28, 2019 open house.

  Key issues raised included:

  - Future development of the private road within Cell D to a public road.
  - Potential for business traffic impacting adjacent residential area.
  - Range of land uses permitted and the potential for impact on adjacent residential areas.

- A second open house was held at Prince of Peace on January 29, 2020, to discuss the proposed conceptual land use plan, proposed Conceptual Scheme amendment and the proposed redesignation for Cell D.

  The second open house notification was provided directly to Cambridge Park Estates residents.

  It is estimated that approximately fifty (50) people attended the second open house representing approximately twenty-five (25) to thirty five (35) residents of the two hundred and ten (210) Cambridge Park Estates residences notified. (Sign in sheets were removed by unknown parties impairing actual attendance recording).

  Parties in attendance were opposed to business development of Cell D.

- On a number of occasions following the public open houses, the developer met individually and collectively with five (5) Cambridge Park Estates residents to discuss land use and development issues.

- Notwithstanding, there was no resolution to the five (5) Cambridge Park Estates residents in opposition to business land use within Cell D.
- In May 2021, since there were gathering restrictions imposed by the Alberta government due to the Covid pandemic, a newsletter was mailed to all Cambridge Park residents, seeking input for the proposed residential component of Cell D.~~In May 2021, since there were gathering restrictions imposed by the Alberta government due to the Covid pandemic, a newsletter was mailed to all Cambridge Park residents, seeking input for the proposed residential component of Cell D. [to complete after responses received]~~
- When Covid restrictions were lifted i~~I~~n July 2021, an open house was held to solicit further comments from the residential (R-MID) and commercial (C-MIX), land use amendments to Cell D. Approximately 50 residents attended with ~~some~~the following general concerns:
    - Traffic generation and short-cutting
    - Larger residential lots
    - No non-single detached dwelling
    - Lower building height
    - Architectural guidelines for the commercial area
    - Regardless of the above verbal concerns, ~~general consensus~~consensus of the plan was provided via email from the Cambridge Park Estates Homeowners' Association in July 2021.~~[add number of attendees, comments received and resolutions to any issues]~~
- In September 2021, a follow-up newsletter was mailed to all Cambridge Park residents, to inform them of any changes made during the circulation period, with th~~In September[month] 2021, a follow-up newsletter was mailed to all Cambridge Park residents, to inform them of any changes made during the circulation period. [list changes if any and any further comments received]~~The following, general issues ~~were~~ addressed:
    - Architectural guidelines, included in policy, to be implemented for business and/or commercial developments
    - Minimum lot width and lot area and restricted to single detached housing form, included into policy
- ~~In February 2022, and Open House was held to present a proposed plan for all of Cell D, which intended to eliminate all B-LOC (Business, Local Campus District) land use designations and replace with R-MID (Residential, Mid-Density Urban District), and C-MIX~~

~~(Commercial, Mixed Urban District) land uses. [report outcome after meeting]~~In February 2022, an open house was held to present a proposed plan for all of Cell D, which intended to eliminate all B-LOC (Business, Local Campus District) land use designations and replace with R-MID (Residential, Mid-Density Urban District) land uses. Over 50 community members attended. Comments were received and generally supportive. Subsequent meetings were held later in February and March to address the Cambridge Park Estates Homeowners' Association (HOA) concerns. These were addressed through changes made to the planning documents, namely the addition of a Direct Control (DC) district land use and the open space relocation.

- On several occasions following the public open house, through February, March, and April of 2022, the developer met individually and collectively with the HOA representatives to discuss land use and development issues.

## *11.0 Implementation*

This Appendix was prepared for adoption by the Council of Rocky View County as an amendment to the SCCS in conformance with SCCS policies.

The policy provisions of this Appendix are to be implemented through the approval by Council of conforming land use amendments and applications for subdivision approval.

*Policy - Implementation*

*11.0.1 The policy provisions of this Appendix shall be implemented through the approval by Council of land use amendments and applications for subdivision approval conforming to the CASP.*

*11.0.2 Where SCCS content does not align with the land use strategy provisions of the CASP and this Appendix, the SCCS should be concurrently amended with adoption of the Appendix amendment to bring it into alignment with the CASP.*

## *12.0 Policy Summary*

This Appendix section provides a summary of the appendix policies guiding the redesignation and subdivision of Cell D:

### *12.1 Policy Summary: Section 3.0 Purpose and Objectives*

*3.0.1 Cell D shall be developed in an orderly and sustainable manner consistent with the policies of the County Plan, the Conrich Area Structure Plan (CASP), the South Conrich Conceptual Scheme (SCCS) and this Appendix.*

*3.0.2 Notwithstanding the policies contained within the SCCS, where policies conflict or require interpretation, the policies of the Conrich Area Structure Plan (CASP) shall prevail.*

### *12.2 Policy Summary: Section 4.0 Planning Area - Cell D*

*4.0.1 The South Conrich Conceptual Scheme Appendix: Cell D shall apply to:*

- *Lands identified as Cell D within the SCCS, and*
- *Described in this Appendix amendment as Cell D and shown in Figures 1 and 2 of this Appendix.*

*4.0.2 Cell D shall comprise the entire planning area discussed in this Appendix.*

### *12.3 Policy Summary: Section 5.0 Planning Area Assessment*

*5.0.1 All development within Cell D shall be supported by site assessments as required the County.*

*5.0.2 All development within Cell D shall be developed in accordance with the recommendations of the site assessments prepared in support of this Appendix.*

5.0.3 *The developer will be required to make a payment to the in-lieu program for the loss of the nine (9) wetlands identified by Ecotone Environmental Ltd. in its September 2019 Wetland assessment report. The developer will enter into a financial replacement agreement with Alberta Environment and Parks and pay a replacement cost of $40,982.60.*

5.0.4 *During development of Cell D, it is the responsibility of the developer to report the discovery of any archaeological, historic period, or paleontological resources directly to Alberta Culture and Community Spirit.*

## *12.4 Policy Summary: Section 7.0 Conceptual Land Use Plan*

*Land Use Designation*

7.0.1 *All lands within Cell D should be designated: Special Public Service (S-PUB) to accommodate a stormwater facility; Direct Control (DC) with Residential, Small Lot District guidelines and exceptions to facilitate a residential area; or Commercial, Mixed Urban (C-MIX) to facilitate local goods and services uses.~~All lands within Cell D should be designated: Business, Local Campus (B-LOC) to facilitate the comprehensively Future Subdivision~~~~Future Subdivision~~*

7.0.2 *Subdivision of land within Cell D should generally be in accordance with Figure 8 - Conceptual Land Use Plan herein.*

*7.0.3 The following items shall apply for all residential parcels referenced as 2, 3, 4, 5, and 6 on Figure 8 - Conceptual Land Use Plan:*

- *All residential lots shall be single detached in nature.*
- *The minimum residential lot width shall be 13.41 Metres (44 Feet).*
- *The minimum residential lot area shall be 0.045 Hectare (0.11 Acre).*
- *The maximum residential lot area shall be 0.076 Hectare (0.18 Acre), except for irregular shaped lots, then it shall be 0.15 Hectare (0.37 Acre).*

*7.0.4 ~~The following items shall apply for all residential parcels shown as 3, 4, 5, and 6 on Figure 8 - Conceptual Land Use Plan, with the exception of Parcel 2:~~*

*7.0.5~~7.0.~~ All open spaces and pathways within Cell D shall be constructed by the Developer in accordance with a landscaping plan to be submitted at the subdivision approval stage.~~All~~*

7.0.6~~7.0.7~~ All open spaces and pathways within Cell D shall be maintained by a Landowners' Association or Associations (LOA). Maintenance and operational obligations are committed to be undertaken by the LOA via a license agreement with the County inclusive of maintenance and operations of the grounds and all site improvements located there within, including pathways.~~All open spaces and pathways within Cell D shall be maintained by a Landowners' Association or Associations (LOA). Maintenance and operational obligations are committed to be undertaken by the LOA via a license agreement with the County inclusive of maintenance and operations of the grounds and all site improvements located therein – including pathways.~~

7.0.7 Preparation and implementation of a weed management plan shall be the responsibility of a Landowner's Association or Associations to be established at the time of subdivision

Municipal Reserve (MR)

7.0.~~8~~8 Within Cell D, MR will be provided by full dedication of land.

7.0.9 Dedication of Municipal Reserve shall be in accordance with the terms and conditions established by the Municipal Government Act.~~All open space and pathways within Cell~~

~~7.0.9 Preparation and implementation of a weed management plan should be the responsibility of a Landowner's Association or Associations to be established at the time of subdivision registration. All noxious weeds are to be controlled in accordance to the terms identified in the Provincial Weed Act. Weed control occurring on Municipal Reserves is inclusive of a comprehensive ground keeping maintenance and operation program as specified in the terms of a formal license of occupation for County lands.~~

7.0.10 Fencing shall be required where MR and private lots intersect. All fencing shall be constructed on private lots regarding the design/style as deemed acceptable by architectural controls.~~Municipal Reserve (MR)~~

7.0.11~~7.0.10~~ In addition to construction, the Developer shall be responsible for all maintenance and operations of MR lands and improvements located there within until issuance of Final Acceptance Certificates - in accordance to the terms of the applicable Development Agreement.~~Within Cell D, a minimum of ten (10) percent Municipal Reserve will be~~

~~7.0.11~~ Residential Land Use and Development

7.0.12 All proposals for residential development shall provide architectural guidelines that will implement design elements to consider site planning, architectural styles, design details, and landscaping.

Commercial Land Use and Development

7.0.13~~7.0.12~~ All future development permit proposals shall address development compatibility and transitional issues with adjacent land uses in accordance with Section 14. Residential/Non-Residential Interface of the CASP.

7.0.14~~3~~ All proposals for commercial development shall provide architectural guidelines and site development standards that will implement design elements to consider the following: development scale; architectural finishing; site lighting; land use context; berming; landscaping; and building and parking orientation impact mitigation (that may include site works such as screening and fencing).

7.0.15 Any activities that support on-site storage or generate negative impacts off-site shall not be permitted in Cell D.

7.0.16 Any commercial uses that include high traffic movements such as car washes, service stations and convenience stores shall be directed to the parcel referenced as 1 in Figure 8 – Conceptual Land Use Plan.~~Business activities that support on-site storage or~~

~~7.0.14 In accordance with the provisions of the Business, Local Campus (B-LOC) and Commercial, Mixed Urban (C-MIX) land use districts, development proposals within Cell D shall be of a high quality standard of visual design, and address compatibility and transitional issues with adjacent land uses (particularly those residential in nature).~~

~~7.0.15 All proposals for development should provide architectural guidelines and site development standards that will implement design elements that will consider development scale, finish and context.~~

~~*7.0.16 The provision of business lot sizes below the minimum parcel size requirements of the Business - Business Campus (B-LOC) land use district should be supported by a comprehensive development design scenario considered at the subdivision approval stage.*~~

## *12.5 Policy Summary: Section 8.0 Transportation and Roadways*

*8.0.1 Vehicular access to all development within Cell D shall be provided from a public road linking Garden Road (Range Road 285) and Cambridge Park Blvd.*

*8.0.2 All public roads within Cell D shall be developed in accordance with sound professional engineering practices and County Servicing Standards.*

*8.0.3 Intersection upgrades required because of the development of Cell D shall be considered at the subdivision approval stage and regarding the findings and recommendations of the Bunt and Associates TIA dated June 7th, 2021.~~Intersection~~*

*8.0.4 Notwithstanding 8.0.2, any modifications proposed to public roads such as those shown in Figure 10 – Modified Road Cross-Sections, shall be considered by the County.~~A Modified Urban Residential Road with 9.0 metres pavement in a 15~~16~~ metre right-of-way with monolithic walks on both one sides shall be provided for all public roads in the residential area. Figure 10 11 - Modified Urban Residential Road illustrates this road type.~~*

## *12.6 Policy Summary: Section 9.0 Servicing Infrastructure*

*Geotechnical*

*9.0.1 Geotechnical evaluations prepared by a qualified geotechnical professional shall be required at the subdivision approval stage ~~in order~~ to establish geotechnical considerations and establish design and ~~construction requirements~~construction requirements.*

*Sanitary Sewer and Potable Water*

*9.0.2 As per Policies 23.9 and 23.15 of the Conrich ASP, sanitary sewer and potable water servicing within Cell D shall be provided by connection to the County's potable water and waste water system.*

*9.0.3 It will be the responsibility of the developer to provide sanitary sewer and potable water servicing plans for all lands within Cell D at the subdivision approval stage and to the satisfaction of the County.*

*9.0.4 Development of Cell D shall implement water conservation measures as required by the County.*

*Stormwater Management*

*9.0.5 Stormwater Management within Cell D shall be in accordance with the preliminary stormwater management concepts in this Appendix and finalized at the subdivision approval stage.*

*Solid Waste Management*

*9.0.6 Solid waste containment and disposal within Cell D shall be the responsibility of individual landowners or collectively managed by a Landowner~~'~~s' Association. Recycling opportunities will be encouraged.*

*12.7 Policy Summary: Section 11.0 Implementation*

*11.0.1 The policy provisions of this Appendix shall be implemented through the approval by Council of land use amendments and applications for subdivision approval conforming to the CASP.*

*11.0.2 Where SCCS content does not align with the land use strategy provisions of the CASP and this Appendix, the SCCS should be concurrently amended with adoption of the Appendix amendment to bring it into alignment with the CASP.*

~~12.7 Policy Summary: Section 11.0 Implementation~~

## *13.0 Supporting Information*

The following studies and assessments are referenced herein and were submitted to Rocky View County In support of a South Conrich Conceptual Scheme Appendix: Cell D amendment:

1. Bunt and Associates, *Cambridge Park Phase 4, Traffic Impact Assessment, Final*. Calgary, Alberta: Author, June 2019.
2. Ecotone Environmental Ltd., *Wetland Assessment and Impact Report, Cambridge Park Phase 4 Property*. Calgary, Alberta: Author, September 2019.
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5. ~~Bunt and Associates, *Cambridge Park Phase 4, Traffic Impact Assessment, Cell D Update.* Calgary, Alberta: Author, May 2021~~
7. ~~Bunt and Associates, *Cambridge Park Phase 4, Traffic Impact Assessment, Cell D Update.* Calgary, Alberta: Author, June 2021~~Bunt and Associates, *Cambridge Park Phase 4, Traffic Impact Assessment, Cell D Update.* Calgary, Alberta: Author, January 2022
6. ~~Bunt and Associates, *Cambridge Park Phase 4, Traffic Impact Assessment, Cell D Update.* Calgary, Alberta: Author, April 2022~~
8. 
9. Jubilee Engineering Consultants Ltd., *Cambridge Park Phase 4 Redesign of B-LOC to C-MIX*. Calgary, Alberta: Author, June 2021
10. Jubilee Engineering Consultants Ltd., *Cambridge Park Phase 4 Redesign of B-LOC to C-MIX*. Calgary, Alberta: Author, January 2022
7. ~~11.~~ Jubilee Engineering Consultants Ltd., *Cambridge Park Phase 4 Redesign of B-LOC to C-MIX*. Calgary, Alberta: Author, April 2022

~~*Appendix 1*~~

~~*Bunt and Associates, Cambridge Park Phase 4*~~

~~*Traffic Impact Assessment Cell D Update May 2021*~~

TRANSPORTATION PLANNERS AND ENGINEERS

May 20, 2021
02-19-0080

Rani Duhra
Amar Developments Ltd.
2 Park Drive
Rocky View County, AB T2M 4L5

Dear Rani,

**Re: Cambridge Park Phase 4 Transportation Impact Assessment**
**Cell D Update**

The *Cambridge Park Phase 4 Transportation Impact Assessment* (TIA), dated June 12, 2019, was prepared by Bunt & Associates in support of a land use redesignation in Rocky View County. At the time of the TIA, the proposed land use for the subject lands was entirely General Light Industrial. There is now an update in the density from General Light Industrial business to single-family residential. The purpose of this letter is to review the difference in trip rates and affirm the results and findings of the 2019 TIA.

## 1.1 Site Context

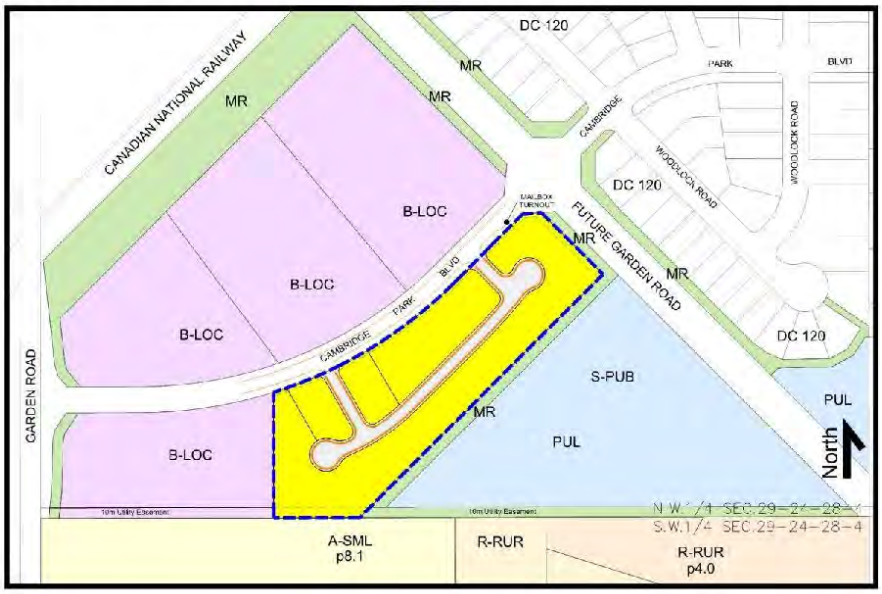
The site is located in Cell D of Cambridge Park in the NW 29-24-28-W4 quarter section in Rocky View County. The site context for the subject lands, where the density and land use change is proposed, is illustrated in **Figure 1.1**. The site plan for Cell D-1 is illustrated in **Figure 1.2**.

**Bunt & Associates** Engineering Ltd.
Suite 113 - 334 11th Avenue SE, Calgary, AB T2G 0Y2 **Tel** 403 252 3343 **Fax** 403 252 3323
Calgary Edmonton Vancouver Victoria **www.bunteng.com**

*Figure 1.1: Site Context*

Base Map Source: Google Maps

*Figure 1.2: Site Plan*




## 1.2 Trip Generation

In the 2019 TIA, the entirety of Cell D had a proposed density and use of 463,261 ft² of general light industrial. In the subject lands specifically, the TIA had assumed 128,460 ft² of the general light industrial business from a FAR of 0.3. However, this 128,460 ft² of the general light industrial business is now proposed to be 47 single-family dwelling units. The proposed development generated vehicle trips, based on ITE standard trip rates, are summarized in **Table 1.1** for the 2019 TIA density and **Table 1.2** for the new single-family use. **Table 1.3** provides a comparison of the two trip generation tables.

*Table 1.1: 2019 TIA Proposed Area Trip Generation*

| USE | DENSITY | TRIP RATE | | AM PEAK HOUR TRIPS | | | PM PEAK HOUR TRIPS | | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM | PM | Total | In | Out | Total | In | Out |
| General Light Industrial (Business) | 128,460 ft² | 0.70 trips per 1,000 ft² *(88% in,12% out)* | 0.63 trips per 1,000 ft² *(13% in,87% out)* | 90 | 79 | 11 | 81 | 11 | 70 |
| | | | TOTAL | 90 | 79 | 11 | 81 | 11 | 70 |

***Table 1.2: 2021 Letter Proposed Area Trip Generation***

| USE | DENSITY | TRIP RATE | | AM PEAK HOUR TRIPS | | | PM PEAK HOUR TRIPS | | |
|---|---|---|---|---|---|---|---|---|---|
| | | AM | PM | Total | In | Out | Total | In | Out |
| Single-Family Residential | 47 dwelling units | 0.74 trips per unit *(25% in, 75% out)* | 0.99 trips per unit *(63% in, 37% out)* | 35 | 9 | 26 | 47 | 30 | 17 |
| | | | TOTAL | 35 | 9 | 26 | 47 | 30 | 17 |

***Table 1.3: Trip Generation Comparison***

| USE | AM PEAK HOUR TRIPS | | | PM PEAK HOUR TRIPS | | |
|---|---|---|---|---|---|---|
| | Total | In | Out | Total | In | Out |
| General Light Industrial (Business) | 90 | 79 | 11 | 81 | 11 | 70 |
| Single-Family Residential | 35 | 9 | 26 | 47 | 30 | 17 |
| Difference | -55 | -70 | +15 | -34 | +19 | -53 |

From the above tables, it is noted that overall, the single-family residential will generate less traffic than the original use of light industrial for proposed area.

However, due to the different in/out distributions for the single-family use, the outbound trips in the morning and the inbound trips in the afternoon will actually be higher for the single-family use compared to the industrial use. While the single-family use will now have 15 more AM peak hour outbound trips and 19 more PM peak hour inbound trips, this is a negligible volume increase when compared to the site traffic as a whole and the background volumes. The new trip generation for proposed area will not appreciably change the study intersection operations.

## 1.3 Conclusion

This trip generation review confirms that converting the area to single-family residential units will reduce the overall number of trips to the site and therefore, the findings and results of the 2019 TIA are upheld.

Yours truly,
**Bunt & Associates**

Jason Dunn, P.Eng.
Associate

APEGA Permit #: P13898

## ~~*Appendix 2*~~

## ~~*Bunt and Associates, Cambridge Park Phase 4*~~

## ~~*Traffic Impact Assessment Cell D Update* June 2021~~

TRANSPORTATION PLANNERS AND ENGINEERS

June 7, 2021
02-19-0080

Rani Duhra
Amar Developments Ltd.
2 Park Drive
Rocky View County, AB T2M 4L5

Dear Rani,

**Re: Cambridge Park Phase 4 Transportation Impact Assessment**
**Cell D Update**

The *Cambridge Park Phase 4 Transportation Impact Assessment* (TIA), dated June 12, 2019, was prepared by Bunt & Associates in support of a land use redesignation in Rocky View County. At the time of the TIA, the proposed land use for the subject lands was entirely General Light Industrial (B-LOC). There is a now an update in the density as some different residential and commercial uses will replace some of the General Light Industrial. This is a land use redesignation application from B-LOC to C-MIX. The purpose of this letter is to review the difference in trip rates with the new densities and affirm the results and findings of the 2019 TIA.

### 1.1 Site Context

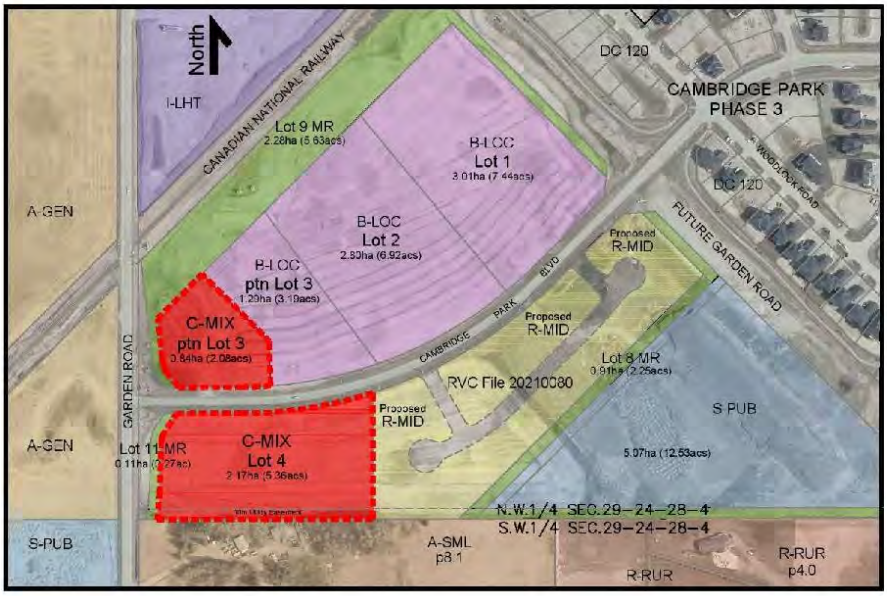
The site is located in Cambridge Park in the NW 29-24-28-W4 quarter section in Rocky View County. The site context for the subject lands, where the density and land use change are proposed, is illustrated in **Figure 1.1**. The site plan for Cell D is illustrated in **Figure 1.2**.

**Bunt & Associates** Engineering Ltd.
Suite 113 - 334 11th Avenue SE, Calgary, AB T2G 0Y2 **Tel** 403 252 3343 **Fax** 403 252 3323
Calgary Edmonton Vancouver Victoria **www.bunteng.com**

*Figure 1.1: Site Context*

Base Map Source: Google Maps

*Figure 1.2: Site Plan*




## 1.2 Densities

The updated development uses and densities are summarized in **Table 1.1**. In the 2019 TIA, the entirety of Cell D had a proposed density and use of 463,261 ft² of general light industrial, using an FAR of 0.3.

*Table 1.1: Proposed Land Uses*

| LAND USE | DENSITY |
|---|---|
| General Light Industrial (B-LOC) | 229,343 ft² (21,307 m²) |
| Single Family Residential | 47 dwelling units |
| Assisted Living | 200 rooms |
| Senior Adult Housing - Attached | 50 dwelling units |
| Gas Bar | 6 pumps |
| Car Wash | 3,000 ft² (279 m²) |
| Medical Clinic | 5,000 ft² (465 m²) |
| General Retail | 9,900 ft² (920 m²) |

## 1.3 Trip Generation

The trip generation rates used in this analysis are summarized in **Table 1.2** and the passby and diverted trip rates are summarized in **Table 1.3**. The trip generation rates are based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual (10th Edition)*.

***Table 1.2: Trip Generation Rates***

| USE | AM PEAK HOUR | | | PM PEAK HOUR | | | DATA SOURCE |
|---|---|---|---|---|---|---|---|
| | Trip Rate | In | Out | Trip Rate | In | Out | |
| General Light Industrial | 0.70 per 1,000 ft² | 88% | 12% | 0.63 per 1,000 ft² | 13% | 87% | ITE 110 |
| Single Family Residential | 0.74 per unit | 25% | 75% | 0.99 per unit | 63% | 37% | ITE 210 |
| Assisted Living | 0.19 per unit | 63% | 37% | 0.26 per unit | 38% | 62% | ITE 254 |
| Senior Adult - Attached | 0.20 per unit | 35% | 65% | 0.26 per unit | 55% | 45% | ITE 252 |
| Gas Bar | 10.28 per pump | 50% | 50% | 14.03 per pump | 50% | 50% | ITE 944 |
| Car Wash | 11.66 per 1,000 ft² | 50% | 50% | 11.66 per 1,000 ft² | 50% | 50% | ITE 948 |
| Clinic | 3.69 per 1,000 ft² | 78% | 22% | 3.28 per 1,000 ft² | 29% | 71% | ITE 630 |
| Retail | 0.94 per 1,000 ft² | 62% | 38% | 3.81 per 1,000 ft² | 48% | 52% | ITE 820 |

***Table 1.3: Passby and Diverted Trip Rates***

| USE | AM PEAK HOUR | PM PEAK HOUR |
|---|---|---|
| Gas Bar and Car Wash Passby from Cambridge Park | 20% | 30% |
| Retail Passby from Cambridge Park | 0% | 25% |
| Gas Bar and Car Wash Diverted from Hwy 1 and RR 285 | 45% | 55% |
| Retail Diverted from Hwy 1 and RR 285 | 0% | 30% |

The updated expected development generated vehicle trips are summarized in **Table 1.4**.

*Table 1.4: 2021 Updated Vehicle Trip Generation*

| USE | DENSITY | AM PEAK HOUR | | | PM PEAK HOUR | | |
|---|---|---|---|---|---|---|---|
| | | Total | In | Out | Total | In | Out |
| General Light Industrial | 229,343 ft² (21,307 m²) | 161 | 142 | 19 | 144 | 19 | 125 |
| Single Family Residential | 47 units | 35 | 9 | 26 | 47 | 30 | 17 |
| Assisted Living | 200 rooms | 38 | 24 | 14 | 52 | 20 | 32 |
| Senior Adult - Attached | 50 units | 10 | 4 | 6 | 13 | 7 | 6 |
| Gas Bar | 6 pumps | 62 | 31 | 31 | 84 | 42 | 42 |
| Car Wash | 3,000 ft² (279 m²) | 35 | 18 | 17 | 35 | 18 | 17 |
| Clinic | 5,000 ft² (465 m²) | 18 | 14 | 4 | 16 | 5 | 11 |
| Retail | 9,900 ft² (920 m²) | 9 | 6 | 3 | 38 | 18 | 20 |
| Total Single Use Trips | | 368 | 248 | 120 | 429 | 159 | 270 |
| *Car Bar and Car Wash Passby* | | *-20* | *-10* | *-10* | *-36* | *-18* | *-18* |
| *Retail Passby* | | *0* | *0* | *0* | *-10* | *-5* | *-5* |
| *Car Bar and Car Wash Diverted Trips* | | *-44* | *-22* | *-22* | *-66* | *-33* | *-33* |
| *Retail Diverted Trips* | | *0* | *0* | *0* | *-12* | *-6* | *-6* |
| TOTAL NEW EXTERNAL TRIPS | | 304 | 216 | 88 | 305 | 97 | 208 |

A comparison of the 2019 TIA trips and the 2021 updated trips is summarized in **Table 1.5**.

*Table 1.5: Trip Generation Comparison*

| TRIP GENERATION | AM PEAK HOUR TRIPS | | | PM PEAK HOUR TRIPS | | |
|---|---|---|---|---|---|---|
| | Total | In | Out | Total | In | Out |
| 2019 TIA | 324 | 285 | 39 | 292 | 38 | 254 |
| 2021 New External Trips | 304 | 216 | 88 | 305 | 97 | 208 |
| Difference | -20 | -69 | +49 | +13 | +59 | -46 |

From the above tables, it is noted that overall traffic to the development will increase, especially when looking at the single use trips. However, the in/out distribution of the site traffic has changed, which allows for the key movements at the Highway 1 intersection to operate more efficiently. By decreasing the inbound trips in the AM peak hour and decreasing the outbound trips in the PM peak hour, the site traffic blends much better with the background traffic. This creates less overall delay at the intersection in both peak hours.

## 1.4 Synchro Results

Synchro analysis was performed at the same 2020 After Development horizon using the new site traffic volumes with the same process detailed in the 2019 TIA. The Synchro results for the updated densities are included in **Table 1.6**. As a comparison, the Synchro results sourced directly from the 2019 TIA for the same horizon are included in **Table 1.7**. The Synchro reports are attached to the letter.

***Table 1.6: Updated Densities - 2020 After Development Intersection Analysis***

| INTERSECTION | MOVEMENT & LANES | | AM PEAK HOUR v/c | AM PEAK HOUR LOS | AM PEAK HOUR Delay | AM PEAK HOUR Queue | PM PEAK HOUR v/c | PM PEAK HOUR LOS | PM PEAK HOUR Delay | PM PEAK HOUR Queue |
|---|---|---|---|---|---|---|---|---|---|---|
| Garden Road & Highway 1 *(Signal)* | EBL | 1 | 0.99 | F | 137 | 94 | 0.66 | E | 76 | 54 |
| | EBT | 2 | 0.31 | B | 15 | 63 | 1.03 | E | 64 | 334 |
| | EBR | 1 | 0.13 | A | 3 | 9 | 0.23 | A | 3 | 13 |
| | WBL | 1 | 0.23 | E | 75 | 14 | 0.19 | E | 69 | 12 |
| | WBT | 2 | 1.04 | E | 68 | 367 | 0.58 | C | 34 | 116 |
| | WBR | 1 | <0.02 | A | 4 | 8 | 0.08 | A | 1 | <5 |
| | NBTL | 1 | 1.02 | F | 110 | 162 | 1.00 | F | 84 | 222 |
| | NBR | 1 | <0.02 | A | 0 | <5 | 0.10 | A | 3 | 5 |
| | SBTL | 1 | 0.58 | E | 66 | 44 | 1.11 | F | 155 | 90 |
| | SBR | 1 | 0.37 | B | 14 | 28 | 0.31 | A | 6 | 16 |
| | *Overall* | | - | *E* | *58.9* | - | - | *E* | *56.0* | - |

***Table 1.7: 2019 TIA - 2020 After Development Intersection Analysis***

| INTERSECTION | MOVEMENT & LANES | | AM PEAK HOUR v/c | AM PEAK HOUR LOS | AM PEAK HOUR Delay | AM PEAK HOUR Queue | PM PEAK HOUR v/c | PM PEAK HOUR LOS | PM PEAK HOUR Delay | PM PEAK HOUR Queue |
|---|---|---|---|---|---|---|---|---|---|---|
| Garden Road & Highway 1 *(Signal)* | EBL | 1 | 1.07 | F | 147 | 103 | 0.59 | F | 82 | 39 |
| | EBT | 2 | 0.31 | B | 14 | 61 | 1.06 | E | 73 | 351 |
| | EBR | 1 | 0.13 | A | 3 | 9 | 0.23 | A | 3 | 14 |
| | WBL | 1 | 0.22 | E | 69 | 13 | 0.19 | E | 71 | 12 |
| | WBT | 2 | 1.07 | E | 76 | 354 | 0.55 | C | 32 | 111 |
| | WBR | 1 | 0.09 | A | 4 | 8 | 0.04 | A | 1 | <5 |
| | NBTL | 1 | 1.03 | F | 109 | 157 | 0.96 | E | 74 | 219 |
| | NBR | 1 | <0.02 | A | 0 | <5 | 0.10 | A | 9 | 11 |
| | SBTL | 1 | 0.36 | D | 50 | 31 | 0.86 | F | 88 | 80 |
| | SBR | 1 | 0.30 | A | 9 | 16 | 0.31 | A | 6 | 17 |
| | *Overall* | | - | *E* | *64.2* | - | - | *E* | *56.1* | - |

The change in densities towards a more diverse development alleviates some of the strain on the Highway 1 intersection. While it is noted in the TIA the intersection requires improvement at the existing horizon, the new trip generation for proposed area will not appreciably change the study intersection operations. The shift in densities is beneficial for through volume on the highway.

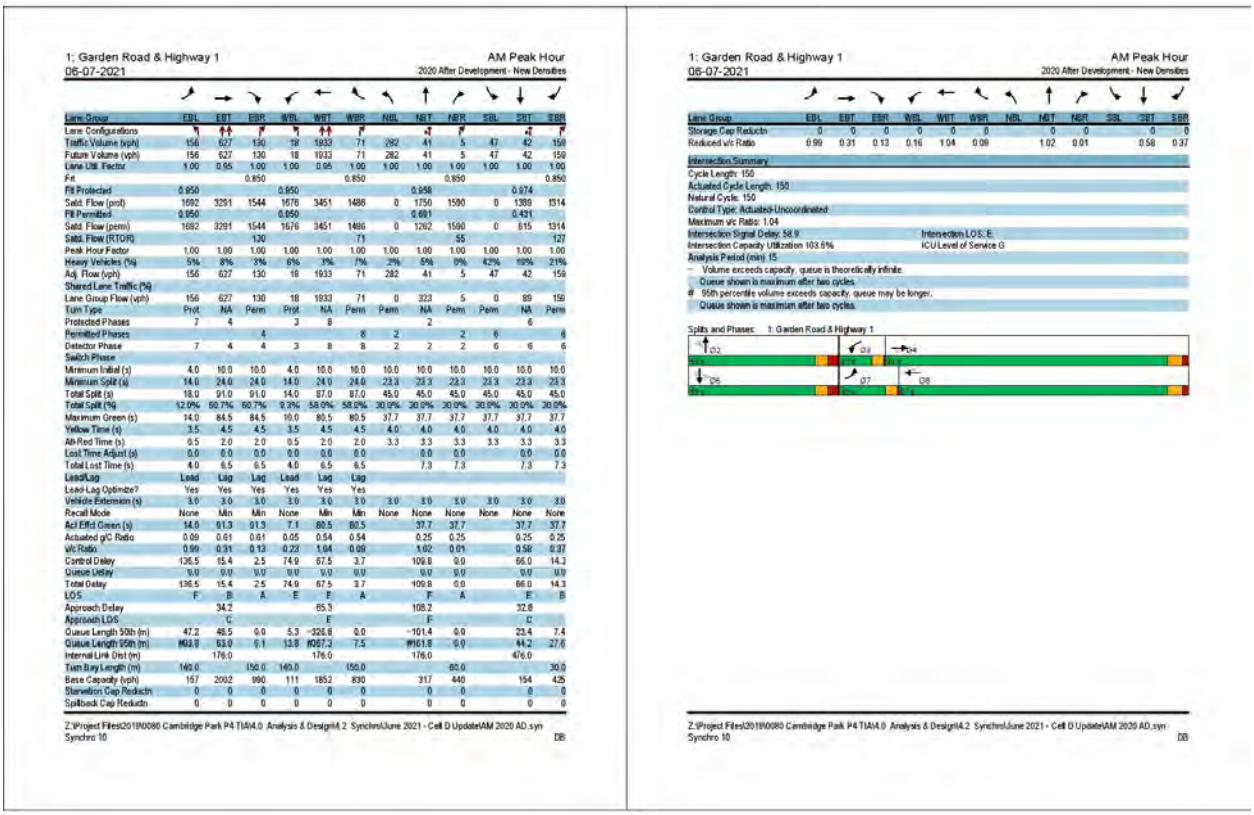
## 1.5 Conclusion

This trip generation review confirms that converting some of the light industrial to residential and commercial uses will improve the operations of the Highway 1 intersection. While the overall number of trips are increased, the diversity of the land uses allows for a shift in the inbound and outbound distribution, alleviating some of the strain on the highway. Therefore, the findings and recommendations of the 2019 TIA are considered valid.

Yours truly,
**Bunt & Associates**

Jason Dunn, P.Eng.
Associate

APEGA Permit #: P13898



1: Garden Road & Highway 1 AM Peak Hour
06-07-2021 2020 After Development - New Densities

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 156 | 627 | 130 | 18 | 1933 | 71 | 282 | 41 | 5 | 47 | 42 | 159 |
| Future Volume (vph) | 156 | 627 | 130 | 18 | 1933 | 71 | 282 | 41 | 5 | 47 | 42 | 159 |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.958 | | | 0.974 | |
| Satd. Flow (prot) | 1692 | 3291 | 1544 | 1676 | 3451 | 1486 | 0 | 1750 | 1590 | 0 | 1389 | 1514 |
| Flt Permitted | 0.950 | | | 0.950 | | | | 0.691 | | | 0.431 | |
| Satd. Flow (perm) | 1692 | 3291 | 1544 | 1676 | 3451 | 1486 | 0 | 1262 | 1590 | 0 | 815 | 1314 |
| Satd. Flow (RTOR) | | | 130 | | | 71 | | | 55 | | | 127 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 5% | 8% | 3% | 6% | 3% | 7% | 3% | 5% | 0% | 42% | 19% | 21% |
| Adj. Flow (vph) | 156 | 627 | 130 | 18 | 1933 | 71 | 282 | 41 | 5 | 47 | 42 | 159 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 156 | 627 | 130 | 18 | 1933 | 71 | 0 | 323 | 5 | 0 | 89 | 159 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 10.0 | 10.0 | 4.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 14.0 | 24.0 | 24.0 | 14.0 | 24.0 | 24.0 | 23.3 | 23.3 | 23.3 | 23.3 | 23.3 | 23.3 |
| Total Split (s) | 18.0 | 91.0 | 91.0 | 14.0 | 87.0 | 87.0 | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 |
| Total Split (%) | 12.0% | 60.7% | 60.7% | 9.3% | 58.0% | 58.0% | 30.0% | 30.0% | 30.0% | 30.0% | 30.0% | 30.0% |
| Maximum Green (s) | 14.0 | 84.5 | 84.5 | 10.0 | 80.5 | 80.5 | 37.7 | 37.7 | 37.7 | 37.7 | 37.7 | 37.7 |
| Yellow Time (s) | 3.5 | 4.5 | 4.5 | 3.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 0.5 | 2.0 | 2.0 | 0.5 | 2.0 | 2.0 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 6.5 | 6.5 | 4.0 | 6.5 | 6.5 | | 7.3 | 7.3 | | 7.3 | 7.3 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | Min | Min | None | Min | Min | None | None | None | None | None | None |
| Act Effct Green (s) | 14.0 | 91.3 | 91.3 | 7.1 | 80.5 | 80.5 | | 37.7 | 37.7 | | 37.7 | 37.7 |
| Actuated g/C Ratio | 0.09 | 0.61 | 0.61 | 0.05 | 0.54 | 0.54 | | 0.25 | 0.25 | | 0.25 | 0.25 |
| v/c Ratio | 0.99 | 0.31 | 0.13 | 0.22 | 1.04 | 0.09 | | 1.02 | 0.01 | | 0.58 | 0.37 |
| Control Delay | 136.5 | 15.4 | 2.5 | 74.9 | 67.5 | 3.7 | | 109.8 | 0.0 | | 66.0 | 14.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 136.5 | 15.4 | 2.5 | 74.9 | 67.5 | 3.7 | | 109.8 | 0.0 | | 66.0 | 14.3 |
| LOS | F | B | A | E | E | A | | F | A | | E | B |
| Approach Delay | | 34.2 | | | 65.3 | | | 108.2 | | | 32.8 | |
| Approach LOS | | C | | | E | | | F | | | C | |
| Queue Length 50th (m) | 47.2 | 48.5 | 0.0 | 5.3 | ~326.8 | 0.0 | | ~101.4 | 0.0 | | 23.4 | 7.4 |
| Queue Length 95th (m) | #63.0 | 63.0 | 0.1 | 13.8 | #367.2 | 7.5 | | #161.8 | 0.0 | | 44.2 | 27.6 |
| Internal Link Dist (m) | | 176.0 | | | 176.0 | | | 176.0 | | | 476.0 | |
| Turn Bay Length (m) | 140.0 | | 150.0 | 140.0 | | 150.0 | | | 60.0 | | | 30.0 |
| Base Capacity (vph) | 157 | 2002 | 990 | 111 | 1852 | 830 | | 317 | 440 | | 154 | 425 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 |

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Synchro 10 DB

1: Garden Road & Highway 1 AM Peak Hour
06-07-2021 2020 After Development - New Densities

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Reduced v/c Ratio | 0.99 | 0.31 | 0.13 | 0.16 | 1.04 | 0.09 | | 1.02 | 0.01 | | 0.58 | 0.37 |

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 58.9 Intersection LOS: E
Intersection Capacity Utilization 103.6% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Garden Road & Highway 1




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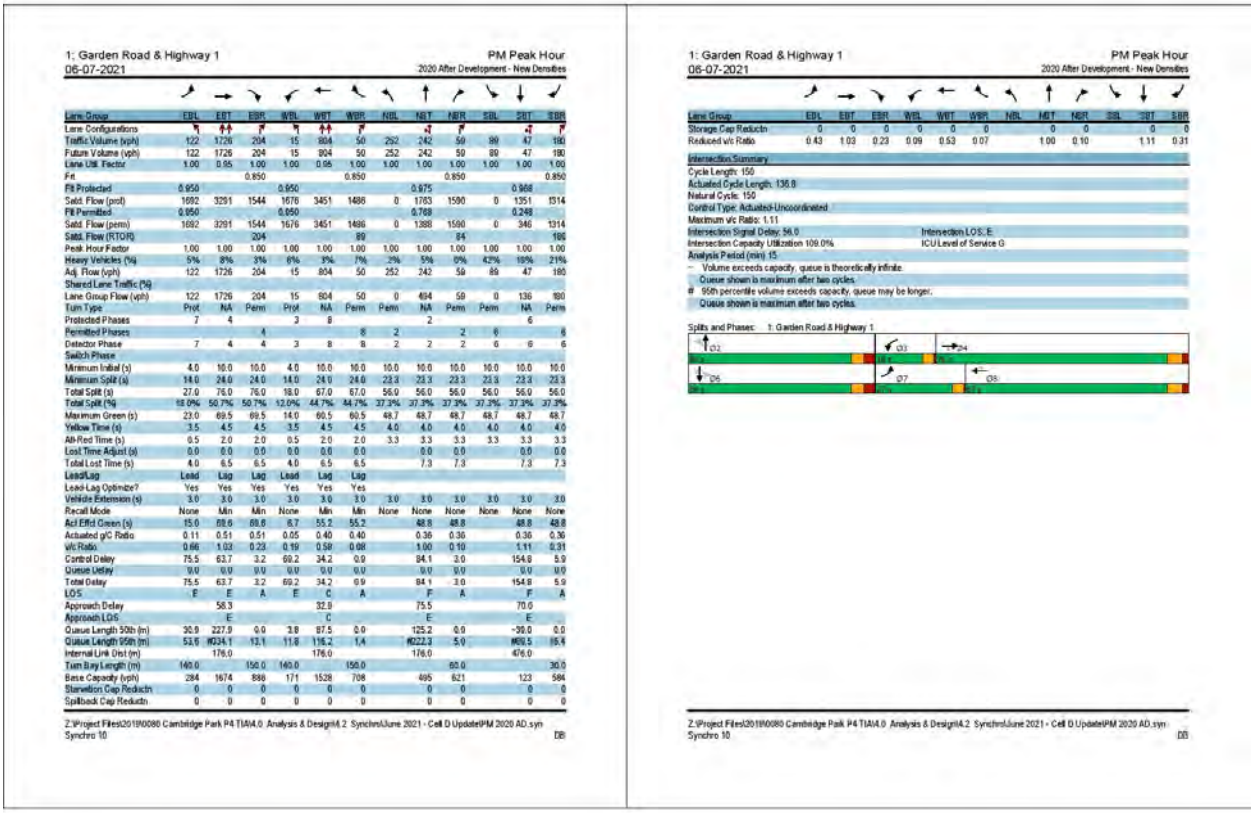
Synchro 10 DB



1: Garden Road & Highway 1 — PM Peak Hour
06-07-2021 — 2020 After Development - New Densities

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 122 | 1726 | 204 | 15 | 804 | 50 | 252 | 242 | 59 | 89 | 47 | 180 |
| Future Volume (vph) | 122 | 1726 | 204 | 15 | 804 | 50 | 252 | 242 | 59 | 89 | 47 | 180 |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.975 | | | 0.968 | |
| Satd. Flow (prot) | 1692 | 3291 | 1544 | 1676 | 3451 | 1486 | 0 | 1763 | 1590 | 0 | 1351 | 1514 |
| Flt Permitted | 0.950 | | | 0.950 | | | | 0.768 | | | 0.248 | |
| Satd. Flow (perm) | 1692 | 3291 | 1544 | 1676 | 3451 | 1486 | 0 | 1388 | 1590 | 0 | 346 | 1314 |
| Satd. Flow (RTOR) | | | 204 | | | 89 | | | 84 | | | 186 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 5% | 8% | 3% | 6% | 3% | 7% | 3% | 5% | 0% | 42% | 19% | 21% |
| Adj. Flow (vph) | 122 | 1726 | 204 | 15 | 804 | 50 | 252 | 242 | 59 | 89 | 47 | 180 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 122 | 1726 | 204 | 15 | 804 | 50 | 0 | 494 | 59 | 0 | 136 | 180 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | | | 8 | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 2 | 2 | 2 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 10.0 | 10.0 | 4.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 14.0 | 24.0 | 24.0 | 14.0 | 24.0 | 24.0 | 23.3 | 23.3 | 23.3 | 23.3 | 23.3 | 23.3 |
| Total Split (s) | 27.0 | 76.0 | 76.0 | 18.0 | 67.0 | 67.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 |
| Total Split (%) | 18.0% | 50.7% | 50.7% | 12.0% | 44.7% | 44.7% | 37.3% | 37.3% | 37.3% | 37.3% | 37.3% | 37.3% |
| Maximum Green (s) | 23.0 | 69.5 | 69.5 | 14.0 | 60.5 | 60.5 | 48.7 | 48.7 | 48.7 | 48.7 | 48.7 | 48.7 |
| Yellow Time (s) | 3.5 | 4.5 | 4.5 | 3.5 | 4.5 | 4.5 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 0.5 | 2.0 | 2.0 | 0.5 | 2.0 | 2.0 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 6.5 | 6.5 | 4.0 | 6.5 | 6.5 | | 7.3 | 7.3 | | 7.3 | 7.3 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | Min | Min | None | Min | Min | None | None | None | None | None | None |
| Act Effct Green (s) | 15.0 | 69.6 | 69.6 | 8.7 | 55.2 | 55.2 | | 48.8 | 48.8 | | 48.8 | 48.8 |
| Actuated g/C Ratio | 0.11 | 0.51 | 0.51 | 0.05 | 0.40 | 0.40 | | 0.36 | 0.36 | | 0.36 | 0.36 |
| v/c Ratio | 0.66 | 1.03 | 0.23 | 0.19 | 0.58 | 0.08 | | 1.00 | 0.10 | | 1.11 | 0.31 |
| Control Delay | 75.5 | 63.7 | 3.2 | 69.2 | 34.2 | 0.9 | | 84.1 | 3.0 | | 154.8 | 5.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 |
| Total Delay | 75.5 | 63.7 | 3.2 | 69.2 | 34.2 | 0.9 | | 84.1 | 3.0 | | 154.8 | 5.9 |
| LOS | E | E | A | E | C | A | | F | A | | F | A |
| Approach Delay | | 58.3 | | | 32.8 | | | 75.5 | | | 70.6 | |
| Approach LOS | | E | | | C | | | E | | | E | |
| Queue Length 50th (m) | 30.9 | 227.9 | 0.0 | 3.8 | 97.5 | 0.0 | | 125.2 | 0.0 | | ~30.0 | 0.0 |
| Queue Length 95th (m) | 53.6 | #234.1 | 12.1 | 11.8 | 116.2 | 1.4 | | #222.3 | 5.0 | | #69.5 | 19.4 |
| Internal Link Dist (m) | | 176.0 | | | 176.0 | | | 176.0 | | | 476.0 | |
| Turn Bay Length (m) | 140.0 | | 150.0 | 140.0 | | 150.0 | | | 60.0 | | | 30.0 |
| Base Capacity (vph) | 284 | 1674 | 888 | 171 | 1528 | 708 | | 495 | 621 | | 123 | 584 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 |

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Synchro 10 — DB

1: Garden Road & Highway 1 — PM Peak Hour
06-07-2021 — 2020 After Development - New Densities

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Reduced v/c Ratio | 0.43 | 1.03 | 0.23 | 0.09 | 0.53 | 0.07 | | 1.00 | 0.10 | | 1.11 | 0.31 |

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 136.8
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 56.0 — Intersection LOS: E
Intersection Capacity Utilization 109.0% — ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Garden Road & Highway 1




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Synchro 10 — DB

~~*Appendix 3*~~

~~Jubilee Engineering Consultants Ltd.~~

Jubilee
Engineering Consultants Ltd.

MUNICIPAL ENGINEERING · INDUSTRIAL, COMMERCIAL & RESIDENTIAL LAND DEVELOPMENT · PLANNING · ENGINEERING SURVEYS
3702 Edmonton Trail N. E., Calgary, Alberta, T2E 3P4 T (403) 276-1001 F (403) 276-1012

June 7, 2021

File 20-167

Amar Developments Ltd.
Site 6, Box 37, RR 6
Calgary, Alberta T2M 4L5

**Attention:** **Mrs. Rani Duhra**

Dear Madam:

**Subject:** **Cambridge Park Phase 4**
**Redesign of B-LOC to C-Mix**

We have reviewed the water, sanitary, and storm infrastructure with respect to redesigning Lot 3 Block 9 and Lot 4 Block 10 from B-LOC to C-Mix.

The water distribution system is designed for fire flows that protect both B-LOC or C-Mix.

The sanitary sewer system is designed for commercial lots and has spare capacity to accommodate flow increase, if any, for this redesign.

The storm sewer system is not impacted by the redesign as the flows are controlled at 70 l/s/ha for either B-LOC or C-Mix.

The storm pond was remodelled with C-Mix (10% landscaping) and was found to have adequate capacity with no change to the size or depth. The free board reduced to 0.5m. (minimum required is 0.3m.).

The redesign of Lot 3 Block 9 and Lot 4 Block 10 from B-LOC to C-Mix will be accommodated by the designed infrastructure.

Yours truly,

Shiraz Remtulla, P. Eng.
Manager of Engineering Services

sr/cs

cc Darrell Grant

~~Cambridge Park Phase 4 Redesign of B-LOC to C-MIX. June 2021~~