



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 to revise Appendix D, in order to allow for residential development in a portion of NW-29-24-28-W4M, consisting of an area of approximately 9.82 acres 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 _____ day of _____, 20__

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__

Reeve_____
Chief Administrative Officer or Designate_____
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.

South Conrich Conceptual Scheme

Appendix: Cell D

Submitted

to

Rocky View County
Planning Services

by

Amar Developments Ltd.

21 June 2021~~June 07, 2020~~

BYLAW No. _____

Table of Contents

1.0 Introduction	6
2.0 Interpretation	6
3.0 Purpose and Objectives	7
3.1 Purpose	7
3.2 Objective	7
3.3 Policy Objectives	7
4.0 Planning Area - Cell D	9
5.0 Cell D - Planning Area Assessment	12
5.1 Soils	12
5.2 Terrain	12
5.3 Archaeological and Historical Resources	18
5.4 Biophysical Impact Assessment	18
5.5 Wetland Assessment	18
5.6 Wetland Mitigation	19
6.0 Current Land Use	23
7.0 Conceptual Land Use Plan	25
7.1 Conrich Area Structure Plan - Land Use Strategy	25
7.2 South Conrich Conceptual Scheme - Preferred Land Use	25
7.3 Conceptual Land Use Plan	25
7.4 Conceptual Land Use Plan - Future Land Use Designation	26
7.5 Conceptual Land Use Plan - Conceptual Design	30
• Future Public Road	30
• Future Highway #1 Improvements - Right of Way	30
• Future Public Utility Lot	31
• Future Connective Open Space System	31
• Future Municipal Reserve (MR) Dedication	31
• Future Pedestrian Pathway System	32
• Future Business Lots	33
• <u>Future Commercial Lots</u>	29
• <u>Future Residential Lots</u>	29
7.6 Conceptual Land Use Plan - Design and Site Development Requirements	34
7.7 Conceptual Land Use Plan - Adjacent Development Compatibility	35

7.8 Conceptual Land Use Plan - Adjacent Development Connectivity	35
8.0 Transportation and Roadways	43
8.1 Regional Transportation Network	43
8.2 Traffic Impact Assessment	43
9.0 Servicing Infrastructure	48
9.1 Sanitary Sewer	48
9.2 Potable Water	48
9.3 Stormwater Management	48
9.4 Solid Waste Management	49
10.0 Public Consultation	54
11.0 Implementation	56
12.0 Policy Summary	57
12.1 Policy Summary: Section 3.0 Purpose and Objective	57
12.2 Policy Summary: Section 4.0 Planning Area - Cell D	57
12.3 Policy Summary: Section 5.0 Planning Area Assessment	57
12.4 Policy Summary: Section 7.0 Conceptual Land Use Plan	49
12.5 Policy Summary: Section 8.0 Transportation and Roadways	51
12.6 Policy Summary: Section 9.0 Servicing Infrastructure	51
12.7 Policy Summary: Section 11.0 Implementation	64
13.0 Supporting Information	65

Figures, Table, and Appendix

Figure	Description	Page
1	Development Cells of the South Conrich Conceptual Scheme	10
2	Planning Area Context	11
3	Cell D Air Photo	13
4	Cell D Soil Types	14
5	Cell D Terrain	15
6	Cell D Wetlands	20
7	Land Use Districts and Community Context	21
8	Conceptual Land Use Plan	34
9	A Concept Plan	35
10	Landscaped Area Plan	36
11	Modified Urban Residential Road	41
12	Stormwater Management	44

Table	Description	Page
1	Land Use Areas by Future Land Use	37

Appendix	Description	Page
1	Bunt and Associates, Cambridge Park Phase 4, Traffic Impact Assessment, Cell D Update, May 2021	55
2	Bunt and Associates, Cambridge Park Phase 4, Traffic Impact Assessment, Cell D Update, June 2021	59
3	Jubilee Engineering Consultants Ltd., <i>Cambridge Park Phase 4 Redesign of B-LOC to C-MIX</i> . Calgary, Alberta: Author, June 2021	68

~~Figures and Tables~~

Figure	Description	Page
1	Development Cells of the South Conrich Conceptual Scheme	9
2	Cell D Context	10
3	Air Photo Cell D / Planning Area	12
4	Cell D Soil Types	13
5	Terrain	14
6	Wetlands	19
7	Land Use Districts and Community Context	20
8	Conceptual Land Use Plan	31
9	Stormwater Management	38
Table		
4	Land Use Areas by Future Land Use	32

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 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 and amended by MGB 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 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 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 Objective

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 ~~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.

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~~industrial lands to the north.

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

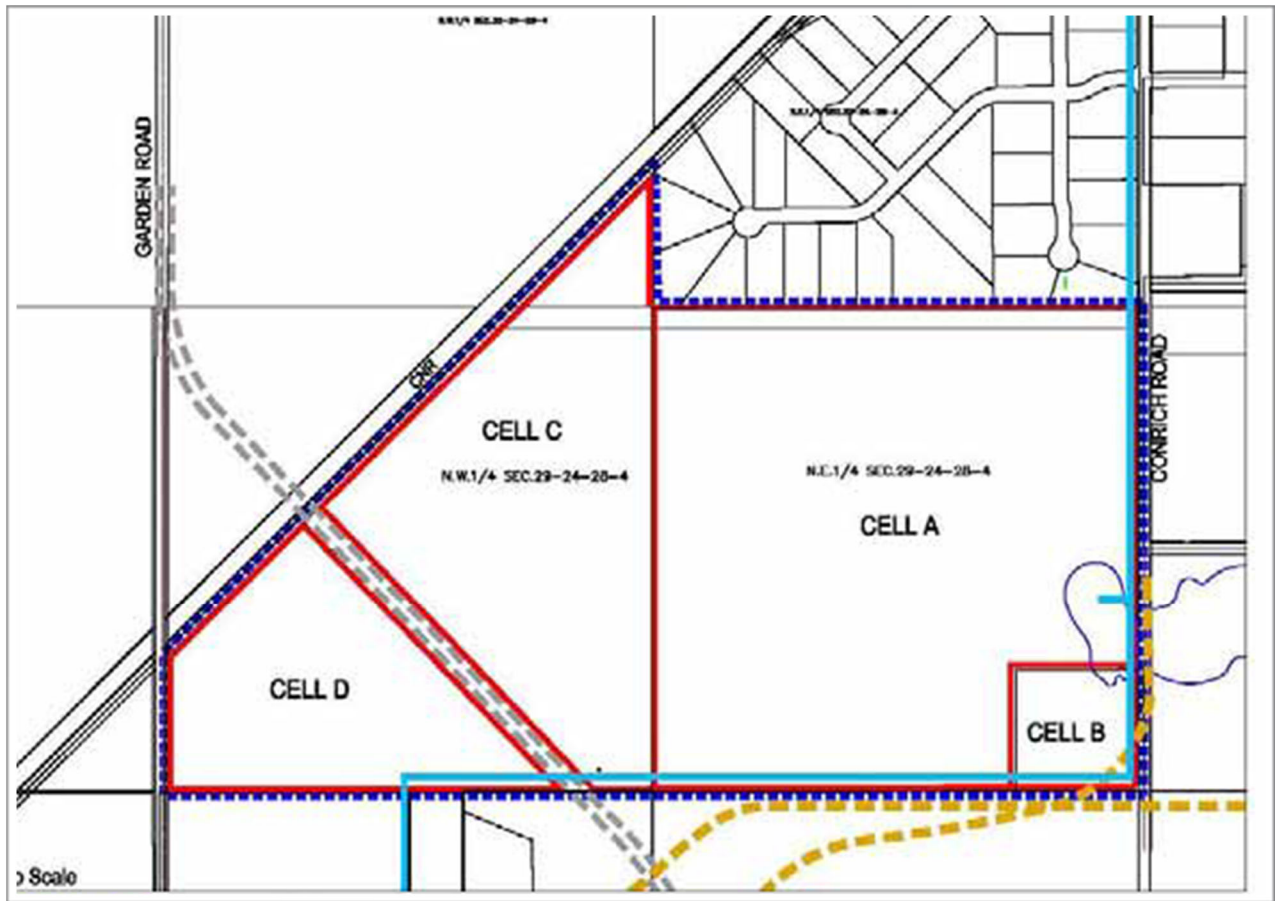
Policy - Planning Area - Cell D

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.

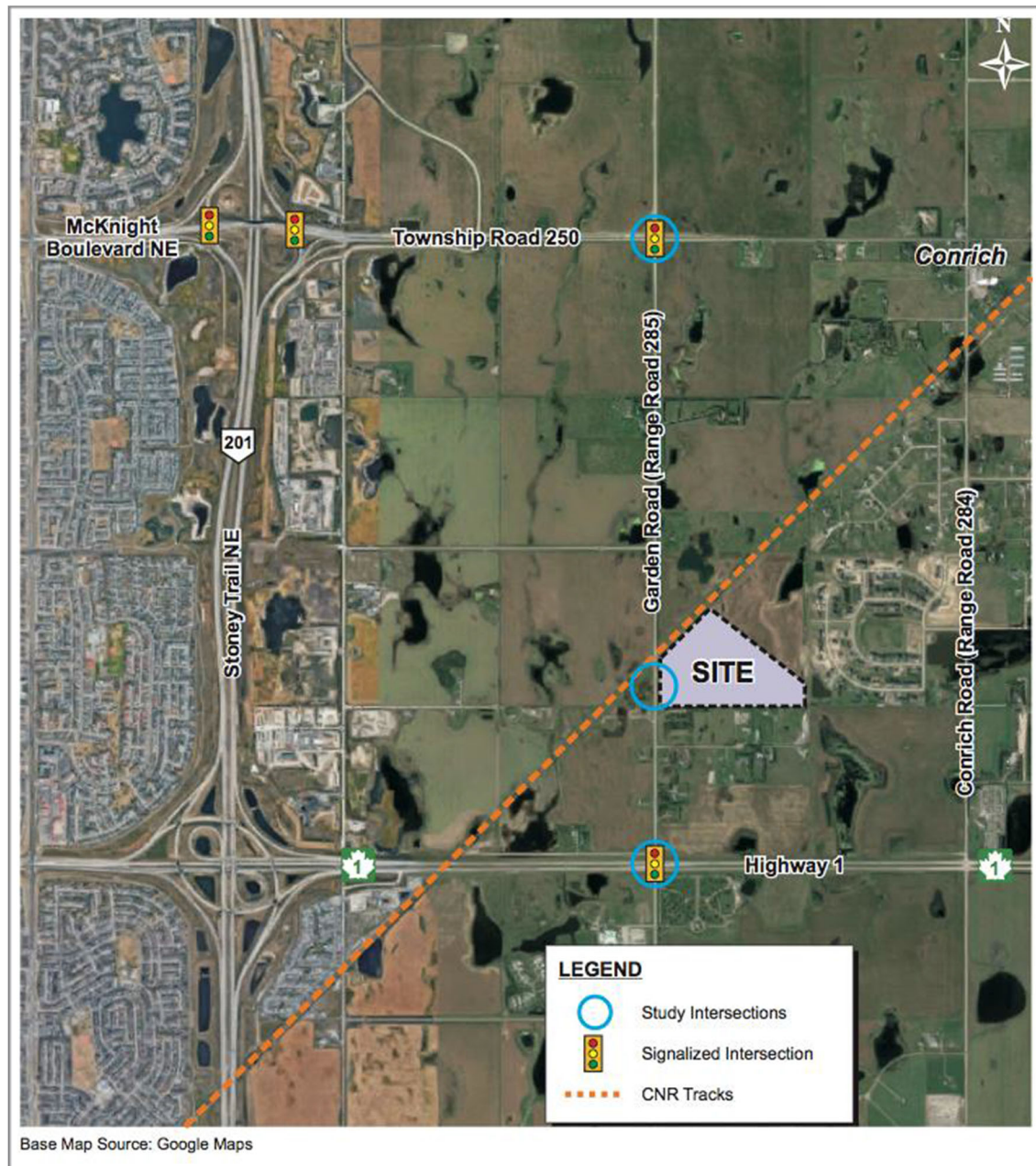
4.0.2 Cell D shall comprise the entire planning area discussed in this Appendix.

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.

5.1 Soils

The Canada Land Inventory (CLI) rates the majority 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

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

5.2 Terrain

Cell D has a south east 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 flows 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 one-metre contour intervals.

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

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.

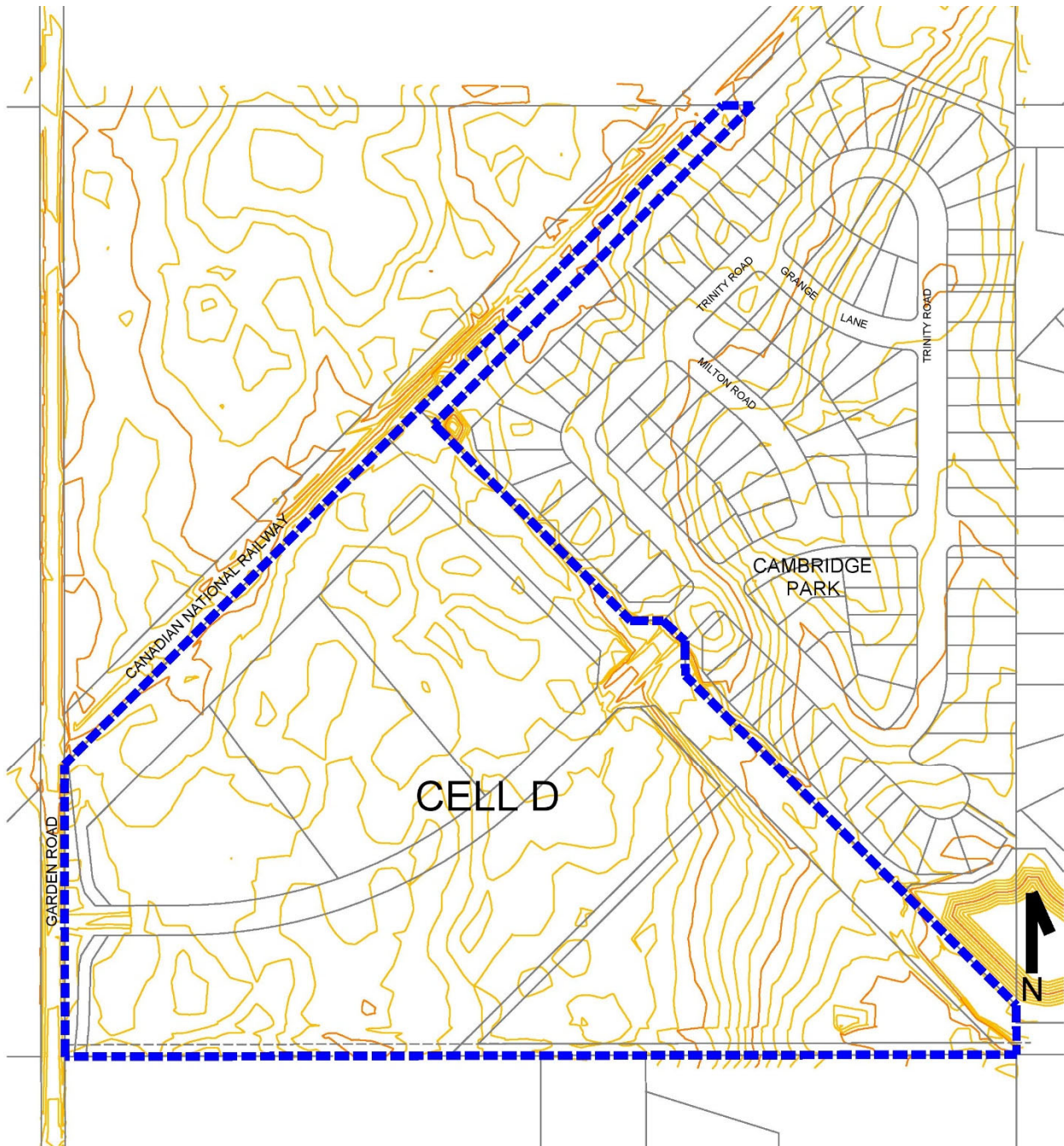
Figure 5 – Cell D Terrain

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

Figure Notes: Contour interval shown is in one (1) 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 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. 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 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. 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 the proposed development of Cell D.⁶

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

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 - 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.*

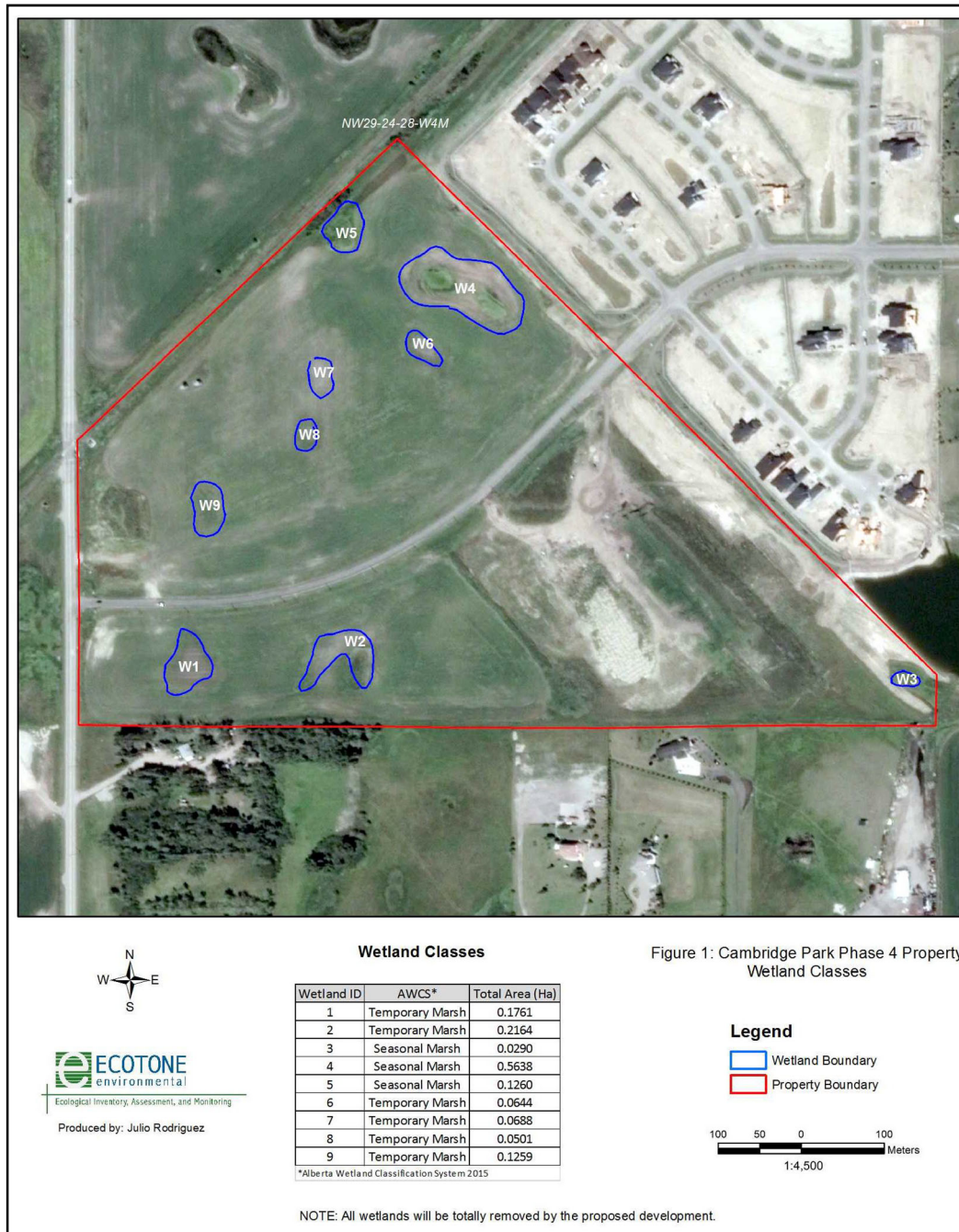
⁵ Ibid, Page 15.

⁶ Ibid, Page 15.

⁷ Ibid, Page 18.

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 ~~palaeontological~~paleontological resources directly to Alberta Culture and Community Spirit.

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)* that allows for a range of permitted and discretionary agricultural uses.

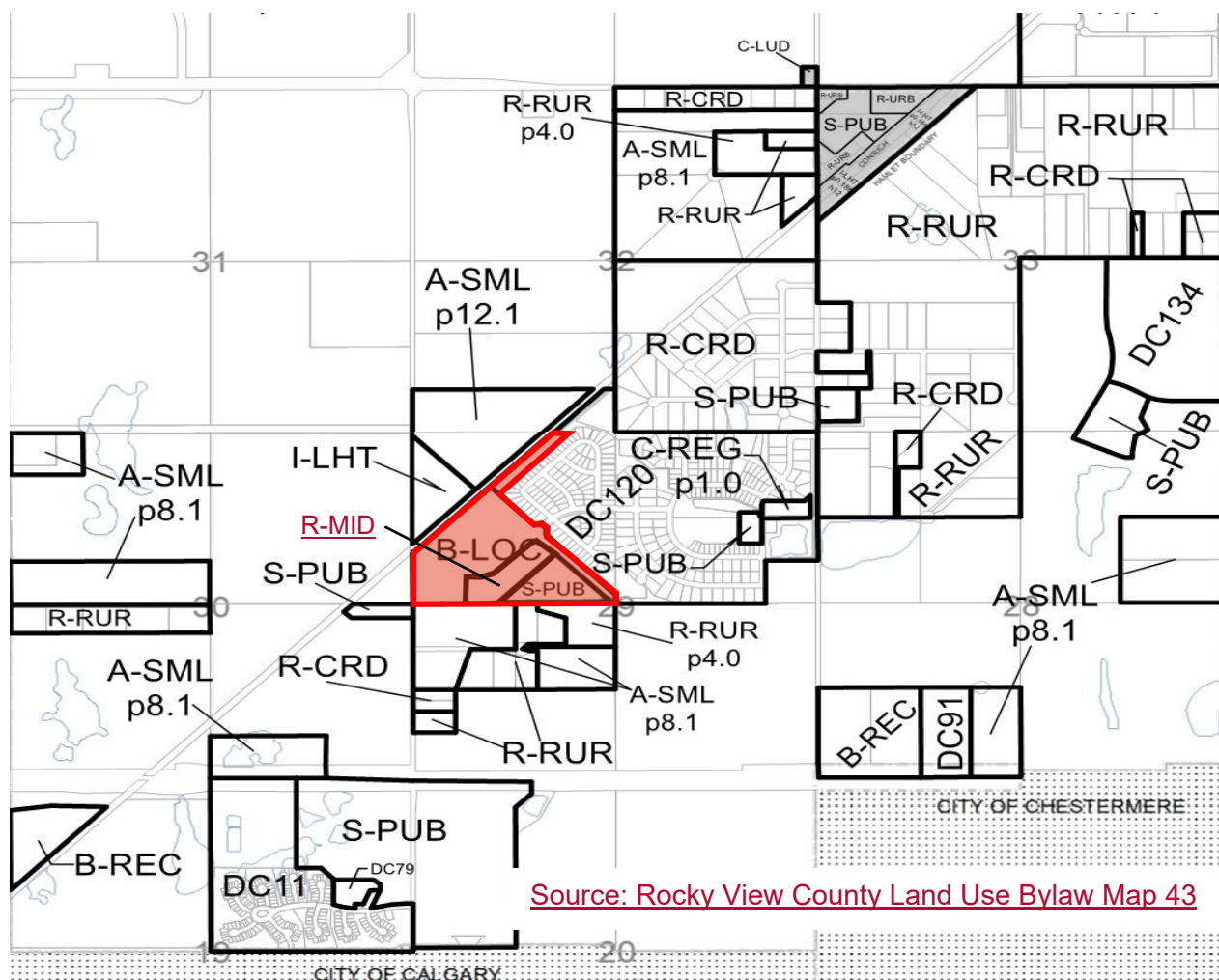
Cell D contains no permanent buildings.

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

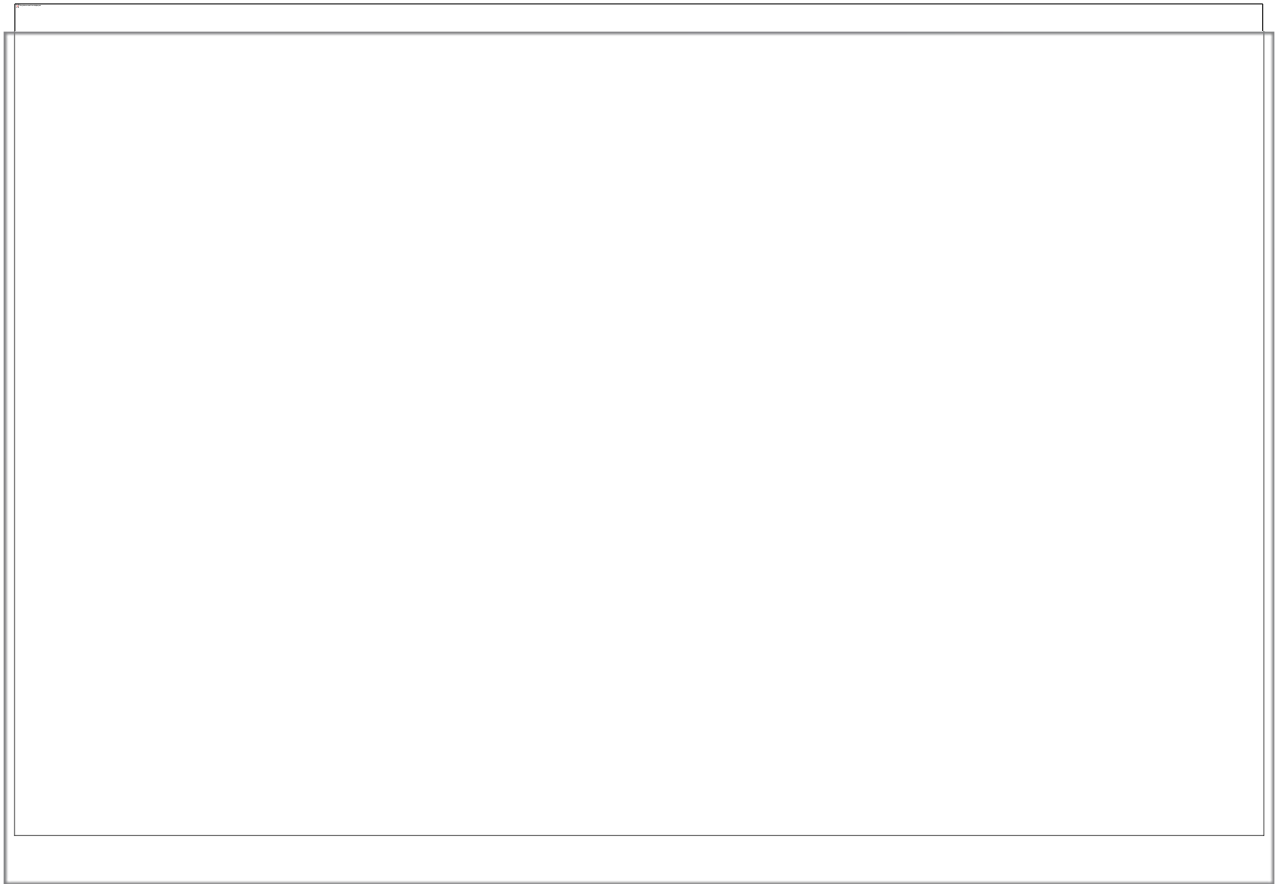
The lands surrounding Cell D comprise a mix of residential, country residential, and agricultural and industrial land uses.

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



Source: Rocky View County Land Use Bylaw Map 43



~~Source: Rocky View County Land Use Bylaw Map 43~~

7.0 Conceptual Land Use Plan

7.1 Conrich Area Structure Plan ~~—Land- 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 highway business use.

7.2 South Conrich Conceptual Scheme ~~—Preferred- Preferred~~ Land Use

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

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 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). ~~Unfortunately~~ Unfortunately, at the time of its adoption CASP as a statutory plan (2015), the older SCCP (2007) non-statutory document inconsistencies were never corrected.

In the twelve years from SCCS adoption to consideration of the current Appendix amendment, a number of factors have changed the land use direction (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, with a minor amendment to include a residential area 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-foref~~ for this concept.

Figure 8 - Conceptual Land Use Plan contains the entire area of Cell D and is intended to facilitate the future development of a comprehensive and sustainable business park and local commercial uses, kwith a transitional residential area. The proposed business park is intended to focus on a

market comprising the provision of services to on-site employees and the surrounding local clientele. The commercial area is intended to cater to the local community for its weekly goods and services needs. The residential area is intended to offer medium-sized lots for the single dwelling housing form.

7.4 Conceptual Land Use Plan - Future Land Use Designation

Redesignation of Cell D is required to accommodate the preferred business commercial and residential s land uses, subdivision, and development.

This Appendix (through its conceptual land use plan and attendant policies) supports a redesignation of Cell D from its current designation of Ranch and Farm Two District (RF-2) Business, Local Campus (B-LOC) to Business—Business Campus (B-BG) Commercial, Mixed Urban (C-MIX), and Public Service District (PS).

The stated purpose and intent of the Business, Local Campus (B-LOC)—Business Campus (B-BG) land use district is:

“To accommodate a mix of office and light industrial activity-uses within a comprehensively-planned campus-like setting. Development is intended to serve local clientele and must be compatible with adjacent uses, including a high quality of visual design. ~~Uses secondary to office and light industrial activity may provide personal services primarily to the on-site employees and secondarily to the surrounding local clientele, but does not include regional commercial uses serving a regional clientele. Development should have no off-site impacts, and must be compatible with adjacent land use. Development will be of a high quality standard of visual design, and address compatibility and transitional issues with adjacent land uses, particularly those residential in nature.~~”⁸

The permitted and discretionary uses of the Business, Local Campus (B-LOC)—Business Campus (B-BG) 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)—Business Campus (B-BG) land use district include⁹:

Accessory Buildings ≤ 190m² (2045.14 ft²)

⁸ Rocky View County, Land Use Bylaw C-8000-2020C-4841-97, Office Consolidation, January 26, 2021 ~~September 1998~~, Page 73 ~~189~~.

⁹ Ibid, Page 193.

21 June 2021 ~~June 07, 2020~~

~~Amenity Spaces for Pedestrian Use~~
~~Animal Hhealth care services, (S-small Aanimal)~~
~~Business Park~~
~~Commercial Communications Facilityies (Types A, B, C)~~
~~Communications Facility (Type B)~~
~~General industry Type-I~~
~~Government services~~
~~Laboratories~~
~~Office parks~~
~~Offices~~
~~Patio, accessory to the principal business use~~
~~Research Park~~
~~Restaurant~~
~~School (or College, Commercial)~~
~~Signs~~

Discretionary uses in the ~~Business, Local Campus (B-LOC)—Business Campus (B-BG)~~ land use district include¹⁰:

~~Accessory Building ≥ 190m² (2045.14 ft²)~~
~~Alcohol Production~~
~~Banks or Financial Institutions~~
~~Car Wwash (with internal bays only)~~
~~Care Facility (Child)~~
~~Care Facility (Clinic)~~
~~Communications Facility (Type C)~~
~~Colleges and Post-Secondary Education Institutions~~
~~Contractor, limited~~
~~Establishment (Drinking)~~
~~Establishment (Eating)Drinking establishment~~
~~Film Production~~
~~Industrial (Light)~~
~~Health care services~~
~~Office~~
~~Post-Secondary~~
~~Personal Service Business~~
~~Private Clubs and Organizations~~
~~Public buildings~~
~~Recreation (Private)~~
~~Recycling/Compost Facility~~
~~Religious Assembly~~
~~Retail (Small)~~
~~Special Function Business~~

¹⁰ ~~Ibid, Page 194.~~

~~Recycling collection point~~

~~Religious Assemblies~~

~~Retail store, local (Floor Area up to 600 m² (6,458.35 ft²))~~

~~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. Any use that is similar, in the opinion of the Development Authority, to the permitted or discretionary uses described above that also meets the purpose and intent of this district.~~

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 sized 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 ≤ 75m² (807.29ft²)

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 > 75m² (807.29ft²)

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)

21 June 2021 ~~June 07, 2020~~

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.

~~The Land Use Bylaw directs that Development Permit applications for both permitted and discretionary uses Business – Business Campus (B-BC) land use district shall be evaluated in accordance with Section 12 of the bylaw¹⁴.~~

Further and in accordance with the provisions of the Business, Local – ~~Business~~ Campus (B-LOCBC) land use district, 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).

¹⁴ ~~Ibid, Page 194.~~

21 June 2021 ~~June 07, 2020~~

~~SMunicipal Reserve parcels and stormwater management facilities will be designated Special, Public Service (S-PUB)Public Service District (PS).~~

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~~ Conceptual Land Use Plan* comprises the following subdivision design elements:

- **Future Public Road**

Two (2) right of way plans (RW Plan 171-0749 and RW Plan 171-0750) affect the subject land and Cell D:

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

Figure 8 - Conceptual Land Use Plan provides for vehicular access to Cell D by proposing development as public road, all of the lands currently contained under Access R/W Plan 171-0750 (3.21 Acres / 1.30 Hectares).

A portion of the lands currently contained under Access R/W Plan 171-0749 are also proposed development as public road comprising (0.50 Acres / 0.20 Hectares).

A portion of lands is proposed as future public road to serve the residential area, comprising 2.52 Acres / 1.01 Hectares.

~~The~~ total area of Cell D proposed for development as public road comprises 9.105-43 percent (6.233-74 Acres / 2.514-50 Hectares).¹²

- **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.

¹² Areas are conceptual and approximate and will require verification by legal survey.

This right of way area comprises 9.5~~43~~ percent of Cell D (6.50 Acres / 2.63 Hectares).¹³

- ***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 Ltd.

A pedestrian pathway is proposed for development surrounding the 12.53~~---~~acre public utility parcel. The area of the public utility parcel not supporting active stormwater management facilities will be landscaped at the time its development. The 12.53~~---~~acre 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 18.3~~96~~ percent (12.53 Acres / 5.07 Hectares) of Cell D.¹⁴

- ***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.

- ***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)

¹³ Ibid.

¹⁴ Areas are conceptual and approximate and will require verification by legal survey.

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 four (4) municipal reserve (MR) lots comprising 14.460 percent (9.8197 Acres / 3.974.03 Hectares) of Cell D.¹⁵

Future MR ~~lots~~ are lots are intended to be used for recreation, to contain 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.

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 should be considered at the subdivision approval stage and constructed in accordance with County standards.

Walks on both sides of residential roads will be provided as part of a revised road cross-section (see Section 8.0 Transportation).

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.

¹⁵ Ibid.

- **Future Business Lots**

Figure 8 - Conceptual Land Use Plan provides for the creation of ~~six-two~~ (26) business lots comprising ~~51.94~~21.07 percent (~~35.45~~14.35 Acres / ~~14.34~~5.81 Hectares) of Cell D.¹⁶

The ~~sizes of the two lots are proposed lots range in size from 6.92~~4.21 Acres / ~~2.80~~1.70 Hectares ~~to and~~ 7.44 Acres / 3.01 Hectares.¹⁷

The provision of business lot sizes below the minimum parcel size requirements of the Business, Local Campus (B-LOC) ~~Business Campus (B-BG)~~ land use district is accommodated by the land use district where parcel size is supported by a comprehensive development design scenario the sizes proposed is intended to favour the development requirements of local business and services. It was considered that larger parcel sizes would attract businesses of an considered at the subdivision approval stage. The provision of serviced business lots in ~~the sizes proposed is intended to favour the development requirements of local business and services. It was considered that larger parcel sizes would attract businesses of an~~ industrial character with extensive outside storage requirements which is not aligned with the intended character of the Cell D business campus.

- **Future Commercial Lots**

Figure 8 Conceptual Land Plan provides for the creation of two separate parcels, comprising 3.01 Hectares (7.44 Acres) or 27% Cell D. The parcels are separated by Cambridge Park Boulevard, running east-west, with the northerly one containing 0.84 Hectare (2.08 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. 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**

Figure 8 Conceptual Land Plan provides for the creation of forty-seven (47) single detached residential lots, comprising 3.27 Hectares (8.08 Acres) or 11.86% of Cell D. The proposed lot widths range from 14.02 Metres (46.0 Feet) to 16.74 Metres (54.9 Feet), with a minimum site area of 0.0490 Hectare (0.121 Acre) and a maximum site area of 0.150 Hectare (0.37 Acre). The intent of this redesignation is to offer another housing form within

¹⁶ Areas are conceptual and approximate and will require verification by legal survey.

¹⁷ Ibid.

the general Conrich area. Areas are approximate and will require verification by a legal survey.

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~~architectural design and site development requirements intended to:

1. Facilitate comprehensive development of Cell D and ensure contextual land use ~~compatibly;~~compatibility.
2. Provide design guidelines and principles that will result in an attractive, cohesive and recognizable built form for business landscapes in Cell D;
3. Conform to the design principles established by Commercial, Office and Industrial Design Guidelines¹⁸ 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 9 – Landscaped Area Plan identifies this augmentation.

3. 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.

¹⁸ Rocky View County, Commercial, Office and Industrial Design Guidelines, Resolution 182-10, July 6, 2010.

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).

Alberta Health Services recommends that any development proposed within Cell D which might have the potential to adversely impact surrounding receptors (~~e.g.e.g.~~, noise, odours, emissions etc.) not ~~be located in~~ be in close proximity to residential or sensitive land use areas such as daycares, schools, hospitals, adult care facilities or food establishments. Appropriate setback distances and/or buffers should be developed to ensure that existing and future residential or sensitive land receptors are adequately protected.

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 ~~View Road;~~ Road.
- Business activities that support on-site storage or generate negative impacts off-site are restricted from development in Cell ~~D;~~ D.
- Permitted and discretionary uses for proposed lots 2 and, 4 ~~, and 5~~ that include business uses in a campus setting pursuant definitions of same in the Land Use Bylaw; and
- Business uses that include high traffic uses such as car washes, service stations and ~~convenience~~ venience stores should be restricted to Lots 3 and 4 adjacent to Garden ~~View~~ 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~~ 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 roadway be removed and replaced with a public road ~~is~~ to be developed within the existing utility right ~~of~~ of way. ~~This~~ the public road identified in *Figure 8 - Conceptual Land Use Plan* shall be developed in accordance with RVC standards. ~~The proposed~~

~~public road within Cell D~~ and its intersection with Garden Road will serve as the primary roadway access to Cell D.

This proposed public road will enhance the County transportation system by establishing road connectivity between developments and facilitating inter-community traffic movements and emergency access.

At ~~at~~ such time as this public road is ~~considered~~constructed to County standards, 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 should integrate with the existing Cambridge Park Estates pedestrian pathway systems promoting walkability within Cell D and to the greater community. AS part of the mandate for the C-MIX land use district, pedestrian enhancement within the parcels will 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: ~~Business, Local Campus (B-LOC)– Business Campus (B-BC)~~ in order to facilitate the comprehensively planned business development of the Cell D; Special, Public Service (S-PUB) to accommodate a stormwater facility; Residential, Mid-Density Urban (R-MID) to facilitate a transitional residential area, or Commercial, Mixed Urban (C-MIX) to facilitate local goods and

Future Subdivision

- 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 *A minimum residential lot area shall be 0.0490 Hectare (0.121 Acre).*
- 7.0.4 *A minimum residential lot width shall be 14.02 Metres (46 Feet).*
- 7.0.5 *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.*
- 7.0.6 *An open space system shall be developed within Cell D in general conformity with the provisions of Figure 8 - Conceptual Land Use Plan.*
- 7.0.~~7~~4 *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.*
- 7.0.~~8~~5 *All open space and pathways within Cell D shall be maintained by a Landowner's Association or Associations. Maintenance and operational obligations is 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 pathway.*
- 7.0.~~6~~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 grounds~~comprehensive ground keeping maintenance and operation program as specified in the terms of a formal license of occupation for County lands.*
Municipal Reserve (MR)
- 7.0.~~10~~7 *Within Cell D, a minimum of ten (10) percent Municipal Reserve will be provided by full dedication of land.*
- 7.0.~~11~~8 *Dedication of Municipal Reserve shall be in accordance with the terms and conditions established by the Municipal Government Act.*
- 7.0.~~12~~9 *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.*

7.0.1~~39~~ In addition to construction, the Developer is 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.

Business and Commercial Land Use and Development

7.0.1~~44~~ In accordance with the provisions of the Business - Business Campus (B-~~LOCBC~~) and Commercial, Mixed Urban (C-MIX) land use districts, development proposals within Cell D shall be of a ~~high-quality~~high-quality standard of visual design, and address compatibility and transitional issues with adjacent land uses (particularly those

7.0.1~~52~~ All proposals for development should provide architectural guidelines and site development standards that will implement design elements that will consider development scale, ~~finish~~finish, and context.

7.0.1~~63~~ The provision of business lot sizes below the minimum parcel size requirements of the Business - Business Campus (B-~~LOCBC~~) land use district should be supported by a comprehensive development design scenario considered at the subdivision approval stage.

Figure 8 - Conceptual Land Use Plan

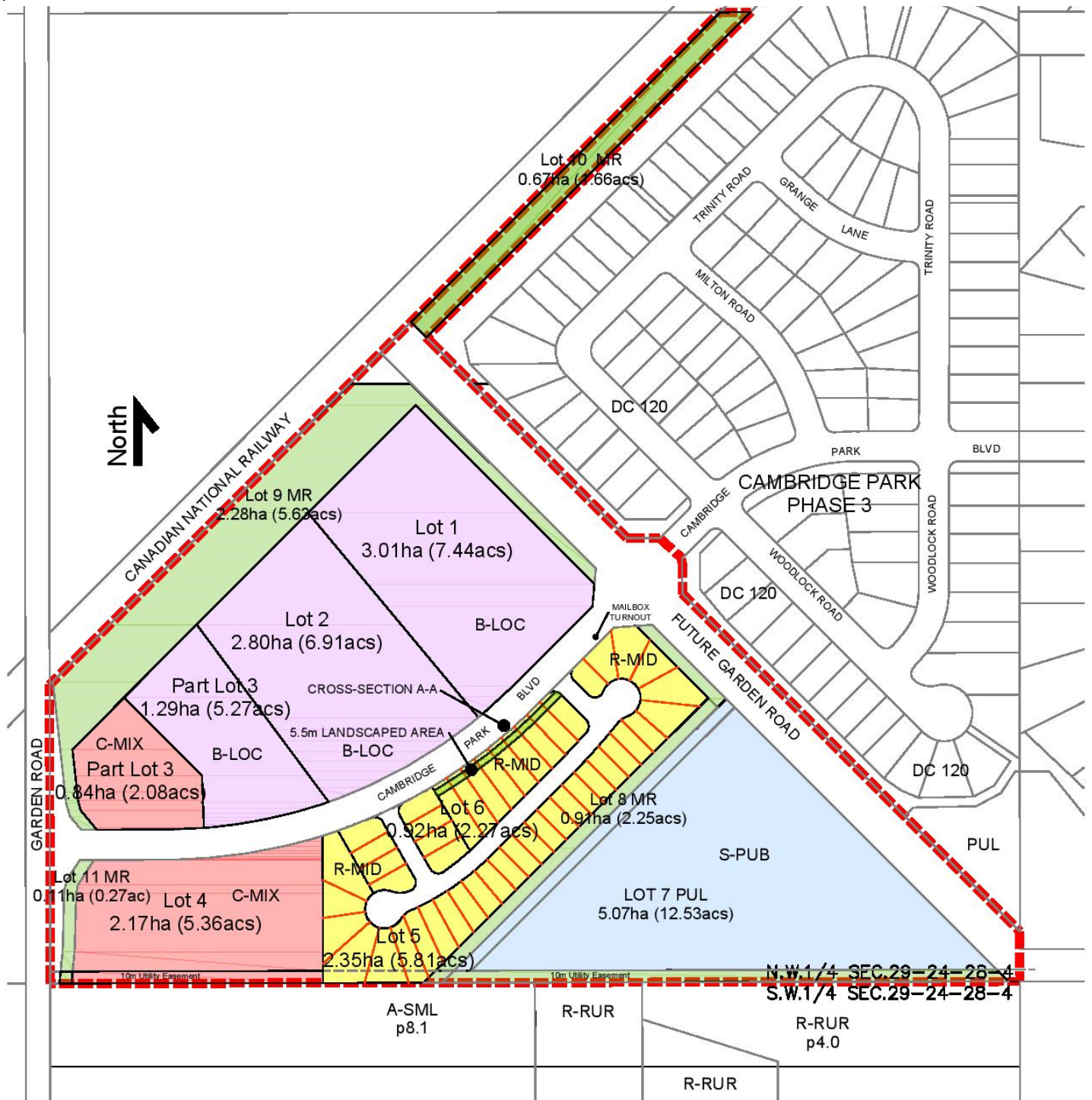
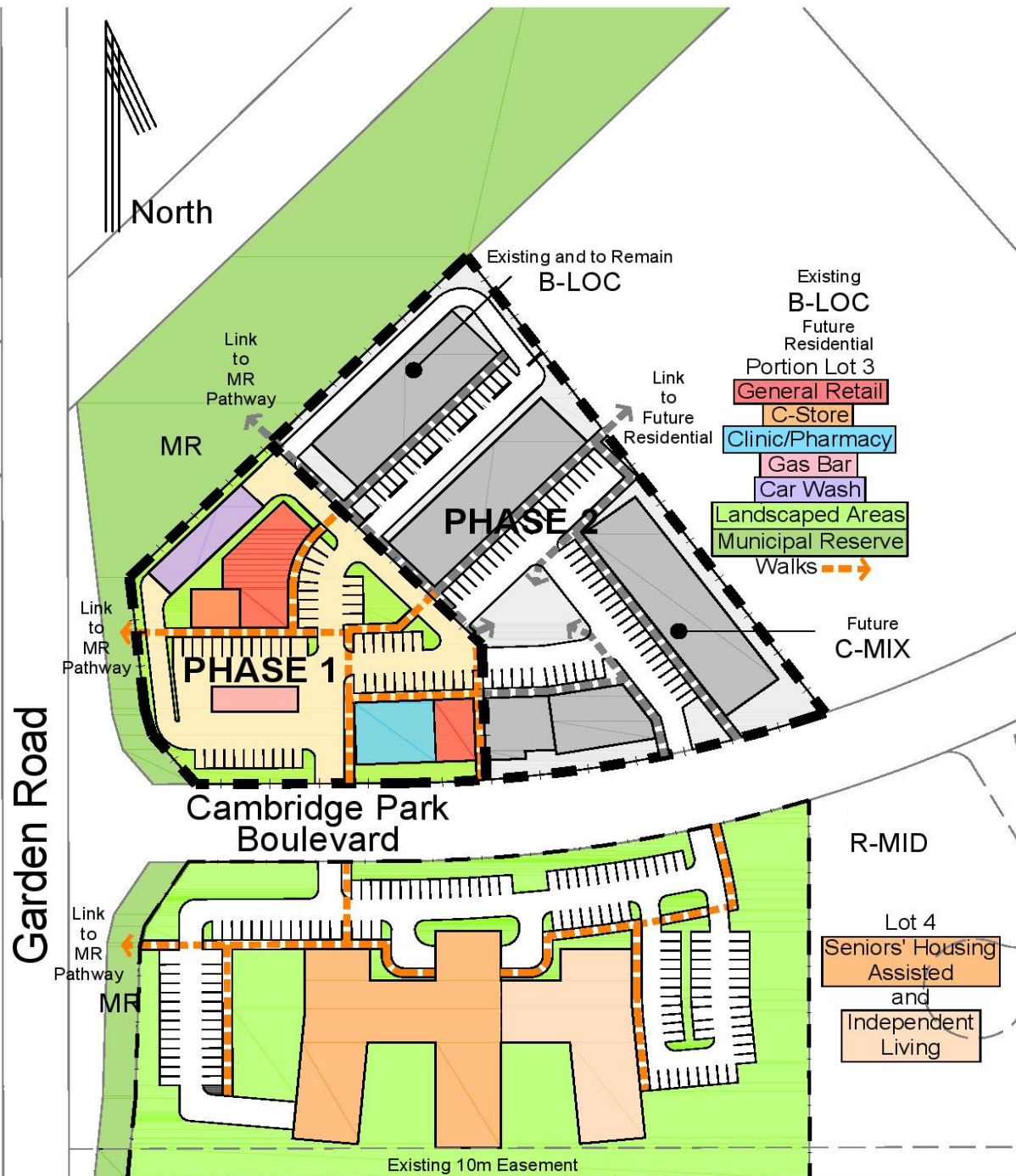


Figure 9 – A Concept Plan

Concept Only - Subject to Change

NTS - No measurements are to be taken from this concept

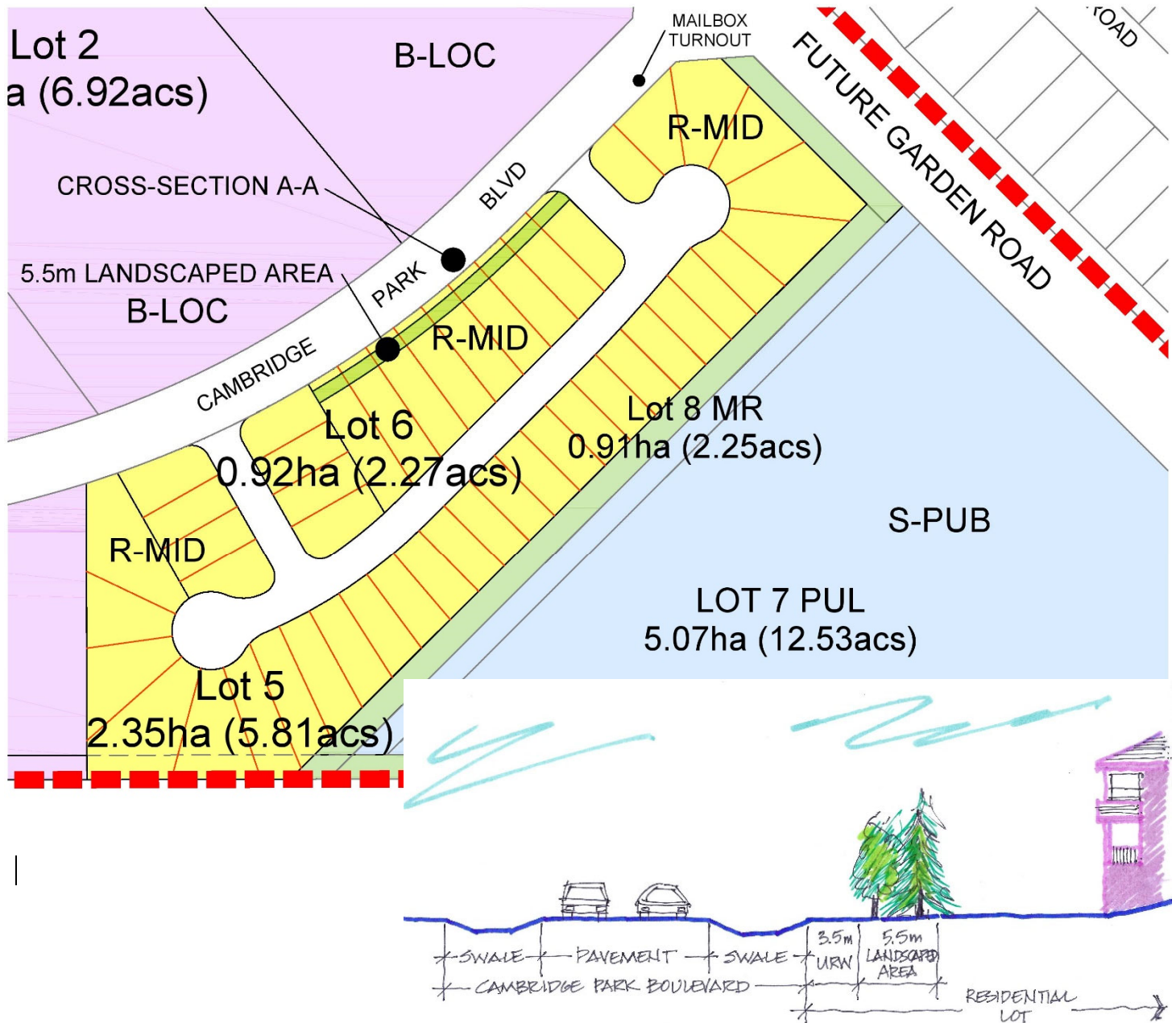
Figure 10 - Landscaped Area Plan

Table 1 - Land Use Areas by Future Land Use

Proposed Use	Lot No.	Area (Acres)	Subtotal (Acres)	Area (Hectares)	Subtotal (Hectares)	Percent
Business	1	7.4 46		3.0 12		
<u>Business</u> <u>Business</u>	2 <u>Part of 3</u>	6.9 15 0.77		2.8 04 0.31		
<u>Commercial</u>	<u>Part of 3</u>	4.5 05 .54		1.8 22 .24		
<u>Commercial</u>	4	5.3 66 9		2.1 73 0		
<u>Residential</u>	5	5.8 16 0		2.3 52 7		
<u>Residential</u>	6	2.2 74 .24		0.9 21 .70		
Subtotal <u>Business Subtotal</u>			33.0 635 . 45		14.34 13.3 8	51.94 48 .53
Public Utility <u>Lot</u>	7 PUL	12.53	12.53	5.07	5.07	18.3 96
Municipal Reserve	8 MR	2.25		0.91		
	9 MR	5.6 38 4		2.2 83 5		
	10 MR	1.66		0.67		
	11 MR	0.2 75		0.1 10		
Subtotal MR			9.8 19 .97		3.9 74 .03	14.4 60
Future Public Road		3.7 16 .23	6.2 33 .74	2.5 21 .50	2.5 21 .50	9.14 5.4 3
Future Road R/W		6.5 06 .50	6.5 06 .50	2.63	2.6 32 .63	9.53 9.5 4
Total			68.1668. 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 dated June 2019).
2. All areas will require verification by legal survey.

21 June 2021 ~~June 07, 2020~~

Page 42 of 79

3. 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 Associates¹⁹.

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~~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 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 growth in both background traffic and development

¹⁹ Bunt and Associates, *Cambridge Park Phase 4, Traffic Impact Assessment, Final*. Calgary, Alberta: Author, June 2019.

traffic so as to protect and maximize capacity for critical east/west through volumes on Highway 1.”²⁰

Figure 8 - Conceptual Land Use ~~Plan provides~~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 a Modified Urban Residential road cross-section. 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 – Modified Urban Residential Road provides a typical cross-section for this road type.

The Bunt and Associates TIA provides comment and a recommendation respecting upgrades 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 ASP₃, 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 intersection is expected to operate with an LOS A and low delays, a Type IIIa intersection treatment is recommended.”²¹

In May 2021, a residential component was introduced to Cell D, requiring an update to the traffic generation based on less light industrial and more single detached residential. The findings concluded that the residential use traffic would generate less traffic than the light industrial use. A letter report by Bunt and Associates providing these details can be found in Appendix 1.

In June 2021, a commercial component was introduced to Cell D, requiring an update to the traffic generation based on less light industrial and more retail (good and services) and seniors' care. The findings concluded that the overall land use diversity will result in improved operations of the

²⁰ Bunt and Associates, *Cambridge Park Phase 4, Transportation Impact Assessment, Final*. Calgary, Alberta: ~~Author, June~~Author, June 2019, Page 3.

²¹ Bunt and Associates, *Cambridge Park Phase 4, Transportation Impact Assessment, Final*. (Calgary, Alberta: Author), Page 32.

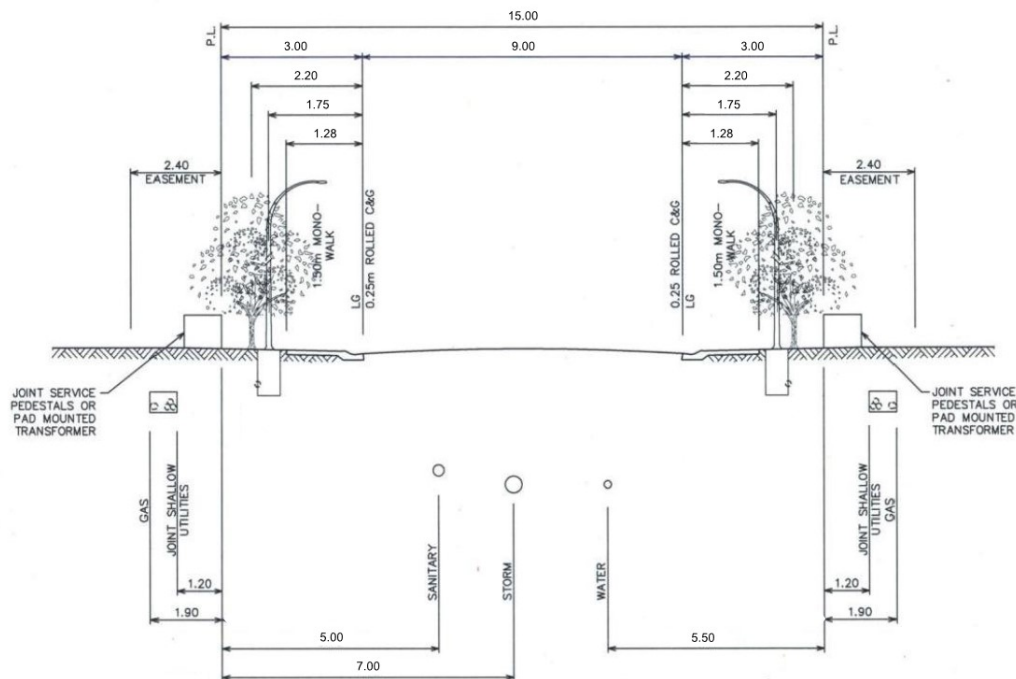
21 June 2021~~June 07, 2020~~

Highway 1/Garden Road intersection. A letter report by Bunt and Associates providing these details can be found in Appendix 2.

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.*
- 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 ~~as a result of~~because of the development of Cell D shall be considered at the subdivision approval stage and ~~with regard to~~regarding the findings and recommendations of the Bunt and Associates TIA referenced in this Appendix.*

8.0.4 A Modified Urban Residential Road with 9.0 metres pavement in a 15-metre right-of-way with monolithic walks on both sides shall be provided for all public roads in the residential area. Figure 10 – Modified Urban Residential Road illustrates this road type.

Figure 11 – Modified Urban Residential Road

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9.0 Servicing Infrastructure

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 ~~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.²² 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~~zero-discharge facility to handle runoff from a 1:~~100-year~~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~~100-year storm event and has no minor system outlet. Through Water Balance the 1:~~100-year~~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.*

²²Jubilee Engineering Consultants Ltd., *Stormwater Management Report*. Calgary, Alberta: Author, April 2019.

- All details conform to the City of Calgary Standard Specifications and Stormwater Management Design Manual.²³

Figure 9-11 – 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 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.

²³ Jubilee Engineering Consultants Ltd., *Stormwater Management Report*. (Calgary, Alberta: Author, April 2019), Page 13.

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

~~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 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 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.*

Figure 129 - Stormwater Management

Source: Jubilee Engineering Consultants Ltd., *Stormwater Management Report*. Calgary, Alberta: Author, April 2019, revised May 2021.

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~~;road.
 - Potential for business traffic impacting adjacent residential ~~area~~;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~~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~~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. [to complete after responses received]
- In 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. [add number of attendees, comments received and resolutions to any issues]
- In [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]

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 Objective

- 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.

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 ~~palaeontological~~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: Business, Local Campus (B-LOC) in order to facilitate the comprehensively planned business development of the Cell D; Special, Public Service (S-PUB) to accommodate a stormwater facility; or Residential, Mid-Density Urban (R-MID) to facilitate a transitional residential area facilitate with the exception of Municipal Reserve parcels which shall be designated Public Service District Future Subdivision
- 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 A minimum residential lot area shall be 0.0490 Hectare (0.121 Acre).
- 7.0.4 A minimum residential lot width shall be 14.02 Metres (46 Feet).
- 7.0.7 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.

7.0.8 All open space and pathways within Cell D shall be maintained by a Landowner's Association or Associations. Maintenance and operational obligations is 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 pathway.

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.

Municipal Reserve (MR)

7.0.10 Within Cell D, a minimum of ten (10) percent Municipal Reserve will be provided by full dedication of land.

7.0.11 Dedication of Municipal Reserve shall be in accordance with the terms and conditions established by the Municipal Government Act.

7.0.12 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.

7.0.13 In addition to construction, the Developer is 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.

Business and Commercial Land Uses and Development

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 as a result of the development of Cell D shall be considered at the subdivision approval stage and with regard to the findings and recommendations of the Bunt and Associates TIA referenced in this Appendix.

8.0.4 A Modified Urban Residential Road with 9.0 metres pavement in a 15-metre right-of-way with monolithic walks on both sides shall be provided for all public roads in the residential area. Figure 10 – 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.

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.

~~Land Use Designation~~

- ~~7.0.1 All lands within Cell D should be designated Business – Business Campus (B-BC) in order to facilitate the comprehensively planned business development of the Cell D with the exception of Municipal Reserve parcels which shall be designated Public Service District (PS).~~

~~Future Subdivision~~

- ~~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 An open space system shall be developed within Cell D in general conformity with the provisions of Figure 8 – Conceptual Land Use Plan.~~
- ~~7.0.4 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.~~
- ~~7.0.5 All open space and pathways within Cell D shall be maintained by a Landowner's Association or Associations. Maintenance and operational obligations is 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 pathway.~~
- ~~7.0.6 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 grounds keeping maintenance and operation program as specified in the terms of a formal license of occupation for County lands.~~

Municipal Reserve (MR)

- ~~7.0.7 Within Cell D, a minimum of ten (10) percent Municipal Reserve will be provided by full dedication of land.~~
- ~~7.0.8 Dedication of Municipal Reserve shall be in accordance with the terms and conditions established by the Municipal Government Act.~~
- ~~7.0.9 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.~~
- ~~7.0.10 In addition to construction, the Developer is 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.~~

Business Land Use and Development

- ~~7.0.11 In accordance with the provisions of the Business – Business Campus (B-BC) land use district, 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).~~
- ~~7.0.12 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.~~
- ~~7.0.13 The provision of business lot sizes below the minimum parcel size requirements of the Business – Business Campus (B-BC) land use district should be supported by a comprehensive development design scenario considered at the subdivision approval stage.~~

~~12.4 Policy Summary: Section 7.0 Conceptual Land Use Plan~~

~~12.5 Policy Summary: Section 8.0 Transportation and Roadways~~

~~8.0.1~~

~~12.6 Policy Summary: Section 9.0 Servicing Infrastructure~~

~~8.0.2~~

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.*

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.
3. Hab-Tech Environmental, 2014 Update to Biophysical Impact Assessment (BIA) Cambridge Park. Calgary, Alberta: Author, December 2014.
4. Jubilee Engineering Consultants Ltd., Stormwater Management Report. Calgary, Alberta: Author, April 2019.
5. Bunt and Associates, Cambridge Park Phase 4, Traffic Impact Assessment, Cell D Update. Calgary, Alberta: Author, May 2021
6. Bunt and Associates, Cambridge Park Phase 4, Traffic Impact Assessment, Cell D Update. Calgary, Alberta: Author, June 2021
- 4-7. Jubilee Engineering Consultants Ltd., Cambridge Park Phase 4 Redesign of B-LOC to C-MIX. Calgary, Alberta: Author, June 2021

Appendix 1Bunt 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**.

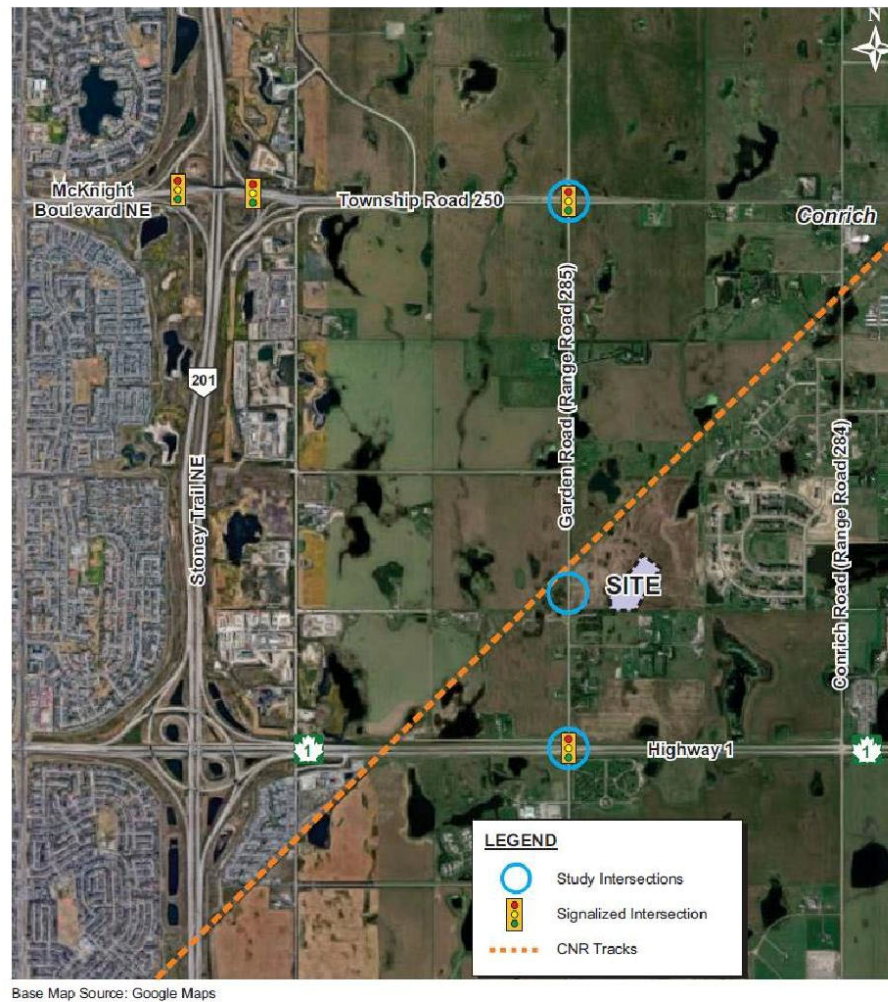
Bunt & Associates Engineering Ltd.

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

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bunt & associates

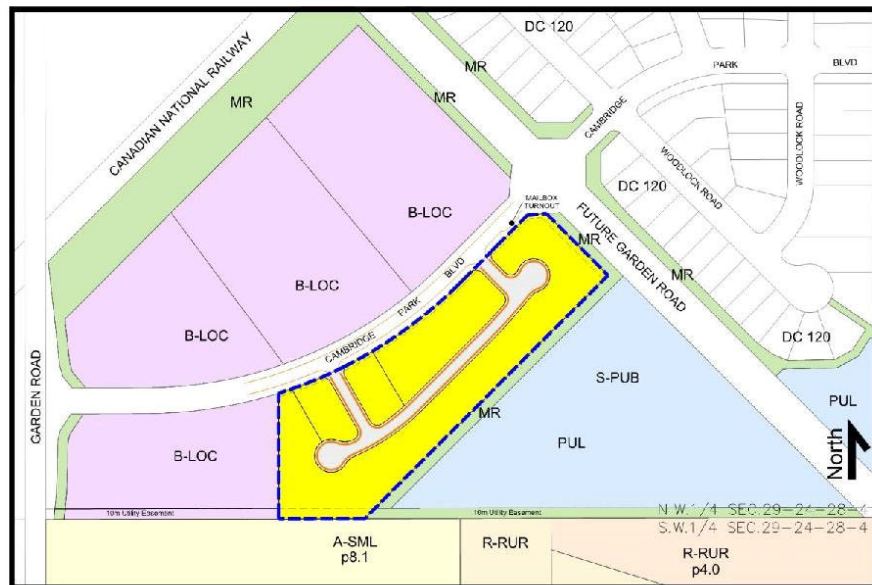
Figure 1.1: Site Context



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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 ft ²	0.70 trips per 1,000 ft ² (88% in, 12% out)	0.63 trips per 1,000 ft ² (13% in, 87% out)	90	79	11	81	11	70
TOTAL				90	79	11	81	11	70

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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



202-05-00

Appendix 2Bunt 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 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

21 June 2021 ~~June 07, 2020~~

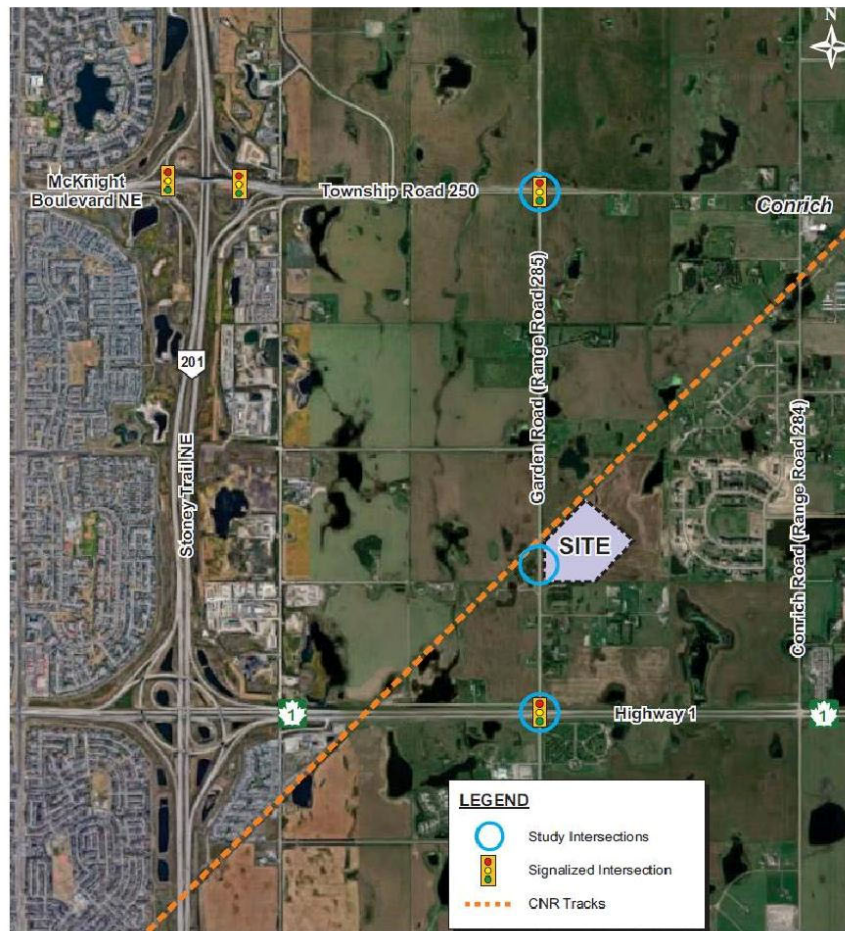
South Conrich Conceptual Scheme
Appendix: Cell D (~~Final~~ Draft)

Page 70 of 79

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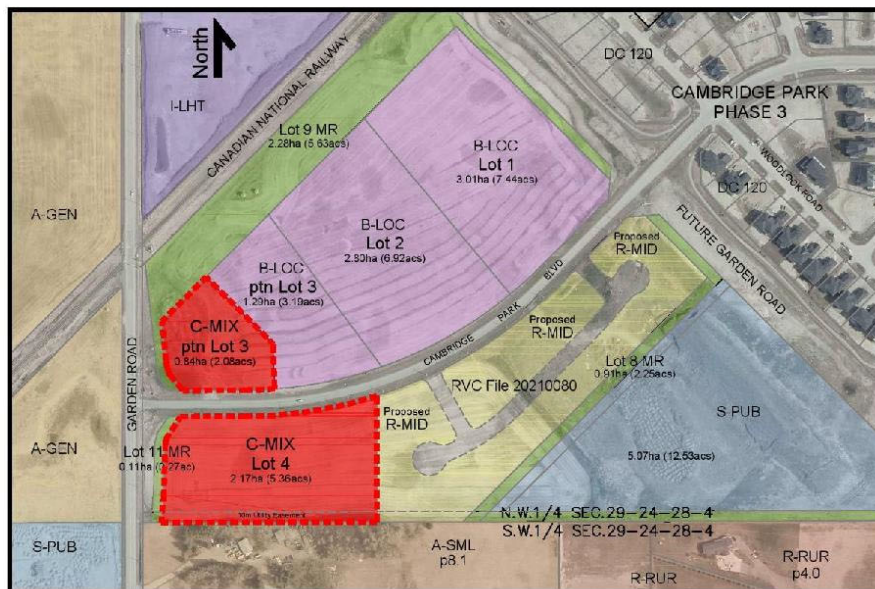
Figure 1.1: Site Context



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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 ft ² (21,307 m ²)
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 ft ² (279 m ²)
Medical Clinic	5,000 ft ² (465 m ²)
General Retail	9,900 ft ² (920 m ²)

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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 ft ²	88%	12%	0.63 per 1,000 ft ²	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 ft ²	50%	50%	11.66 per 1,000 ft ²	50%	50%	ITE 948
Clinic	3.69 per 1,000 ft ²	78%	22%	3.28 per 1,000 ft ²	29%	71%	ITE 630
Retail	0.94 per 1,000 ft ²	62%	38%	3.81 per 1,000 ft ²	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**.

TRANSPORTATION PLANNERS AND ENGINEERS

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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 ft ² (21,307 m ²)	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 ft ² (279 m ²)	35	18	17	35	18	17
Clinic	5,000 ft ² (465 m ²)	18	14	4	16	5	11
Retail	9,900 ft ² (920 m ²)	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				PM PEAK HOUR			
			v/c	LOS	Delay	Queue	v/c	LOS	Delay	Queue
Garden Road & Highway 1 <i>(Signal)</i>	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				PM PEAK HOUR			
			v/c	LOS	Delay	Queue	v/c	LOS	Delay	Queue
Garden Road & Highway 1 <i>(Signal)</i>	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.

TRANSPORTATION PLANNERS AND ENGINEERS

bunt & associates

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



26013898

1: Garden Road & Highway 1

AM Peak Hour

06-07-2021

2020 After Development - New Densities

	EFL	EST	ETR	WFL	WRT	WTR	NFL	NET	NRR	SFL	SET	SBR	SBR
Lane Group													
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	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ft		0.850		0.850		0.850		0.850		0.850		0.850	
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950		
Satd. Flow (prot)	1682	3291	1544	1676	3451	1486	0	1750	1590	0	1389	1314	
Flt Permitted	0.950		0.950		0.950		0.950		0.950		0.950		
Satd. Flow (perm)	1682	3291	1544	1676	3451	1486	0	1282	1590	0	615	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%	2%	5%	0%	42%	19%	21%	
Aq. Adj. (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		2		6		
Permitted Phases													
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%	
Lost Time 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	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	7.3	7.3	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag							
Lead-Lag Optimizer?	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 Effd Green (s)	14.0	91.3	91.3	7.1	80.5	80.5	37.7	37.7	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	0.25	0.25	
g/C Ratio	0.99	0.31	0.13	0.23	1.04	0.96	1.02	0.01	0.98	0.97	0.98	0.97	
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	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		106.2		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)	#63.8	63.0	0.1	13.8	#697.3	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			
Stationing Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0	

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DB

1: Garden Road & Highway 1

AM Peak Hour

06-07-2021

2020 After Development - New Densities

	EFL	EST	ETR	WFL	WRT	WTR	NFL	NET	NRR	SFL	SET	SBR	SBR
Lane Group													
Storage Cap Reductn	0	0	0	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													
Actualized 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: 103.5%													
ICU Level of Service: G													
Analysis Period (min): 15													
- Volume exceeds capacity, queue is theoretically infinite.													
- Queue shown is maximum after two cycles.													
# 50th percentile volume exceeds capacity, queue may be longer.													
- Queue shown is maximum after two cycles.													

Splits and Phases: 1: Garden Road & Highway 1

↑ G2	↑ G3	↑ G4	↑ G5	↑ G6	↑ G7	↑ G8	↑ G9
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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DB

1: Garden Road & Highway 1 06-07-2021														PM Peak Hour 2020 After Development - New Denotes													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations														Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0	
Traffic Volume (vph)	122	1726	204	15	804	50	252	242	59	89	47	180		Reduced v/c Ratio	0.43	1.03	0.23	0.09	0.53	0.07	1.00	0.10	1.11	0.31	1.11	0.31	
Future Volume (vph)	122	1726	204	15	804	50	252	242	59	89	47	180		Intersection Summary													
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		Cycle Length: 150													
Fit			0.850			0.850			0.850					Actuated Cycle Length: 136.8													
Flt Protected	0.950			0.950			0.975			0.968				Natural Cycle: 150													
Satd. Flow (prot)	1692	3291	1544	1676	3451	1486	0	1763	1590	0	1351	1314		Control Type: Actuated-Uncoordinated													
Flt Permitted	0.950			0.950			0.768			0.248				Maximum v/c Ratio: 1.11													
Satd. Flow (perm)	1692	3291	1544	1676	3451	1486	0	1388	1590	0	346	1314		Intersection Signal Delay: 56.0													
Satd. Flow (RTOR)			204			89			84			180		Intersection Capacity Utilization: 109.0%													
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		ICU Level of Service: G													
Heavy Vehicles (Eq)	5%	8%	3%	6%	3%	7%	2%	5%	6%	42%	19%	21%		Analysis Period (min): 15													
Adj. Flow (vph)	122	1726	204	15	804	50	252	242	59	89	47	180		- Volume exceeds capacity, queue is theoretically infinite.													
Shared Lane Traffic (Eq)														Queue shown is maximum after two cycles.													
Lane Group Flow (vph)	122	1726	204	15	804	50	0	404	59	0	136	180		# 55th percentile volume exceeds capacity, queue may be longer.													
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm		Queue shown is maximum after two cycles.													
Protected Phases	7	4		3	8		2		2	6		6		Spills and Phases: 1: Garden Road & Highway 1													
Permitted Phases	7	4	4	3	8	8	2	2	2	6	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	70.0	70.0	18.0	67.0	67.0	56.0	56.0	56.0	56.0	56.0	56.0															
Total Split (%)	16.0%	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	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	7.3	7.3															
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag																					
Lead-Lag Optimized?	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	6.7	55.2	55.2	48.8	48.8	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	0.36	0.36															
v/c Ratio	0.96	1.03	0.23	0.19	0.58	0.08	1.00	0.10	1.11	0.31	0.31	0.31															
Control Delay	75.5	63.7	3.2	69.2	34.2	0.9	84.1	3.0	154.8	5.9	5.9	5.9															
Queue Delay	0.0	0.0	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	5.9	5.9															
LOS	E	E	A	E	C	A	F	A	F	A	F	A															
Approach Delay	58.3			32.9			75.5			70.0																	
Approach LOS	E			C			E			E																	
Queue Length 50th (m)	30.9	227.9	0.0	3.8	87.5	0.0	125.2	0.0		-38.0	0.0																
Queue Length 95th (m)	53.6	#5364.1	13.1	11.8	116.2	1.4	#222.3	5.0		#60.5	16.4																
Internal Link Dist (m)				176.0			176.0			476.0																	
Turn Bay Length (m)	140.0		150.0	140.0		150.0		60.0		123	584	30.0															
Base Capacity (vph)	284	1674	886	171	1528	708	495	621		0	0	0															
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0															
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0															
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Synchro 10														Synchro 10													

Appendix 3Jubilee Engineering Consultants Ltd.Cambridge Park Phase 4 Redesign of B-LOC to C-MIX. June 2021

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

21 June 2021 ~~June 07, 2020~~