



The revised detailed site plan for the proposed GEID improvements show that clearwell structures will be located entirely on the subject property, and will not impact the proposed SROW. The proposed use of the SROW area for utility purposes is not expected to have an impact on the agricultural capability of the property, given that the area is sloped and rated at class 4, and has only been used for grazing purposes.

#### 4.0 Proposal

##### 4.1 Background / Project Description

GEID proposes to develop and upgrade the site located at 2230 McKinley Road with new water treatment infrastructure over the next 10 - 15 years. The improvements proposed for the GEID site are focused on improving water quality, and have been identified as part of the new water intake and pumphouse facility on Okanagan Lake.

Associated with this new intake and pumphouse project are also the following improvements to the McKinley Reservoir site:

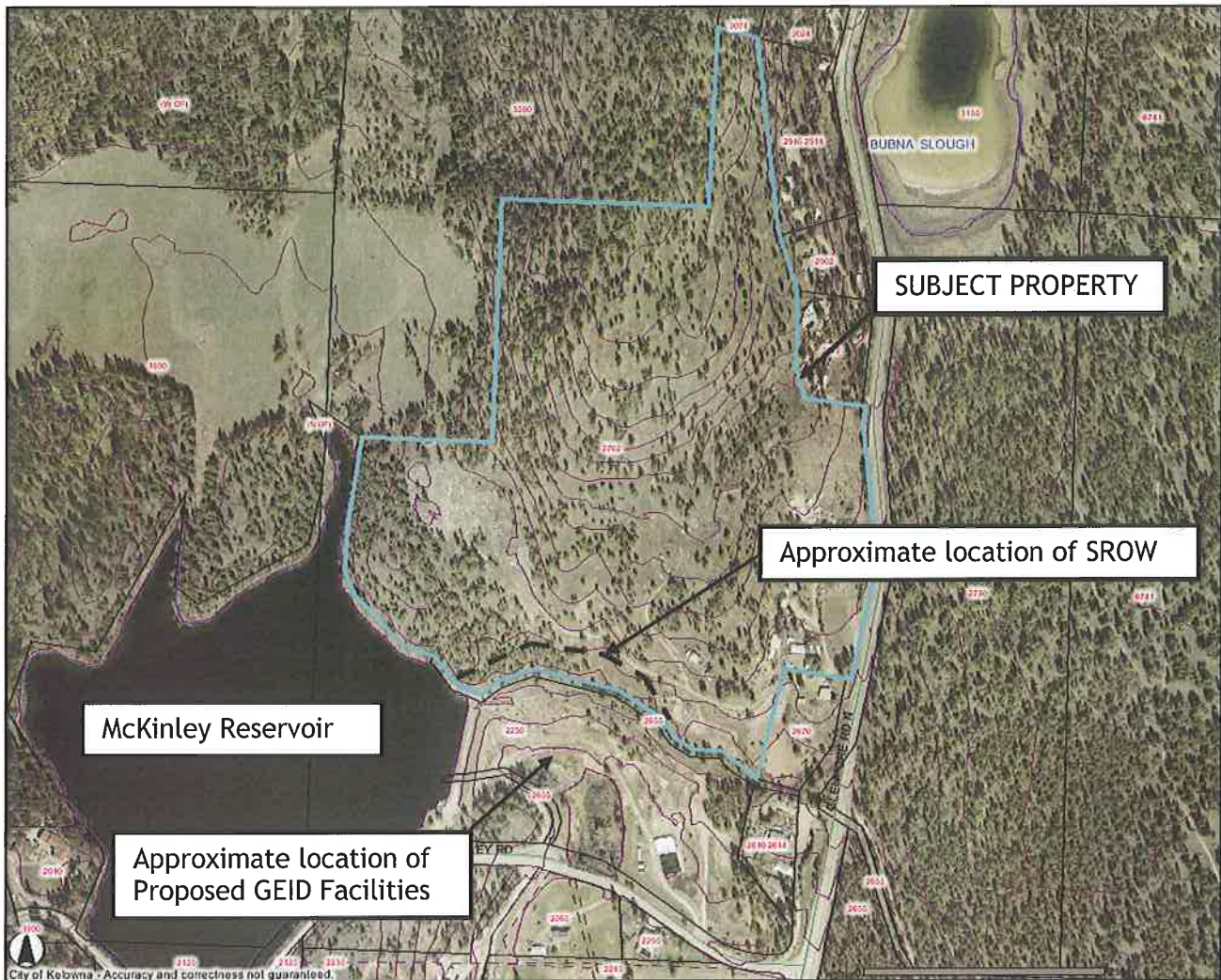
- “Travelling Screens” Installation (filter system designed to reduce the entry of large waterborne organisms or debris);
- Bypass Main Installation (bypass system designed to allow McKinley Reservoir to be bypassed completely if and when required);
- Improved Security (fencing around the McKinley Reservoir to control public and animal access to reduce risks to drinking water);
- UV Disinfection System Installation (disinfection system designed to provide another barrier in the protection of drinking water);
- McKinley Reservoir Upgrades (infill of shallow areas at the north and south ends of the reservoir, reducing waterfowl “dabbling areas” and thereby improving raw water quality within the reservoir);
- Chlorination System Upgrades (upgrading the system which is currently used for disinfection);
- Clear Well Construction (to provide higher capacity to the distribution system); and
- Water Treatment Plant Construction (disinfection to improve the quality of water for distribution).

The improvements to the GEID McKinley Reservoir site are shown on the attached site plan (Figure #1). The site plan indicates the construction of a dissolved air floatation (DAF) water treatment plant in two phases, with additional room for future phases if required. Also shown on the site plan is the construction of a two 6,050m<sup>2</sup> (55m x 20m x 5.5m) clearwells in two phases to the north side of the GEID property. The proposed SROW located on the subject property is to provide construction access to the proposed clearwells, and to provide access to the clearwells for servicing. The proposed SROW will also control access to the sloped areas above the clearwells.

The owner of the subject property (2702 Glenmore Rd. N.) has provided a letter of authorization to allow GEID to act as his agent.

## 4.2 Subject property Map

2702 Glenmore Road N.



## 4.3 Site Context

The subject property is located on the west side of Glenmore Road North, north of McKinley Landing Road. The property has a knoll located near the northern property line with a steeply sloped area facing the west, and less steeply slopes facing the south and east. There is a level area located in the south west corner of the property, adjacent to the McKinley reservoir. There is also a smaller level area in the south east corner of the property adjacent to Glenmore Road. The area located along the southern property line adjacent to the GEID property slopes down at between 20% and 40%. The proposed GEID SROW is proposed to be located in this area. It appears that this sloped area has not been used for agriculture uses beyond grazing and foraging, owing to the slope of the land.

This property is designated as a Hazardous Condition Development Permit Area for both steep slopes and wildfire hazards. The site area is 24.08 hectares (59.51 acres) and the elevation varies between 480-550 metres above sea level, representing a change of 70 metres (223 feet) across the site.



#### 4.4 Zoning and Land Use of Adjacent Properties

Direction	Zoning Designation	In ALR?	Land Use
North	A1 - Agriculture 1	Yes	Unknown (residence, outbuildings)
South	P4 - Utilities	No	GEID yard
East	A1 - Agriculture 1	Yes	Forest - vacant
West	A1 - Agriculture 1	Yes	Proposed golf course

### 5.0 Current Development Policies

#### 5.1 Kelowna Official Community Plan (OCP)

##### Agriculture Policies:

Sustained Agriculture<sup>1</sup>. Encourage the retention of diverse agricultural uses through limits on urban development and non-farm use on lands of sustainable production capability.

Buffers<sup>2</sup>. Provide for distinct boundaries that separate urban and rural uses by utilizing, where appropriate, roads, topographic features, watercourses, ditching, fencing, or small lot rural transition areas, as buffers to preserve larger farm units and areas.

Buffering<sup>3</sup>. Require that new developments adjacent to or abutting agricultural areas provide sufficient setbacks, on-site fencing and vegetative buffering to mitigate potential conflicts.

##### Environment Policies

Non-Point Source Pollution<sup>4</sup>. Work with senior government and the community to reduce effects of non-point source pollution on source drinking water and recreational water quality, and establish strategies to limit livestock access to domestic and recreational source water.

##### Services & Utilities Policies:

Water Availability<sup>5</sup>. Encourage decisions about water availability and quality to be made with the interests of the agricultural community as a priority.

#### 5.2 City of Kelowna Agriculture Plan (1998)

The utilities section of the Agriculture Plan under the heading of water supply issues contains the following statements:

##### Continued Access to Water Supply

<sup>1</sup> Official Community Plan, Policy 11.1.12

<sup>2</sup> Official Community Plan, Policy 11.1.19

<sup>3</sup> Official Community Plan, Policy 11.1.20

<sup>4</sup> Official Community Plan, Policy 7.3.4

<sup>5</sup> Official Community Plan, Policy 13.3.8

The availability of an adequate water supply is fundamental to the survival of agriculture in the City. Since most of the water used for agricultural purposes comes from watersheds with limited storage, the amount of water available for distribution by water purveyors depends on climatic conditions and is highly variable from year to year. The amount available in drought years is significantly less than in normal runoff years. The Ministry of Environment (MOE) established criteria in the early '70's for the design of large irrigation systems. The design criteria used are essentially that the water systems must be capable of supplying peak demands at least 29 years out of thirty. This drought year definition was established for tree fruit crops which are considered to be the highest water use crop and the most susceptible to injury due to water shortage. The criteria has resulted in a conservative design of the major water systems and no Water District has come close to running out of water in the past 20 years, in contrast to earlier years when water shortages were common.

The three large Districts have added water supply facilities in conjunction with increased irrigated areas and residential development so that the amount of water available for each user is at least as much as was the case before the developments were added. The three Irrigation Districts all have some surplus water available at the present time but not enough to supply all the potentially irrigable land in their future service areas. The Districts do, however, have long range plans to augment the amount of water supply available should it become necessary to do so. A summary of these potential projects with the amount of water that each would provide is indicated in **Table 7 - Future Water Supply Projects**.

Excerpt Table 7 - Future Water Supply Projects		
District	Project	Additional Water Supply
GEID	Okanagan Lake Pump Station	2200 da-m3

Note: da-m3 means cubic decametre (1 cubic decametre equals 1000 cubic metres)

The utilities section of the Agriculture Plan under the heading of water supply issues also contains the following policy statements

**Water Supply Policies**

The City of Kelowna will:

**Irrigation Priority.** Encourage Irrigation Districts to protect the needs of the agricultural users so that they are not compromised by service extensions to nonagricultural or development lands;

**Water Quality.** Encourage water purveyors to provide water consistent with all applicable guidelines and regulations while remaining sensitive to irrigation customer needs;

**Clean Water Program.** Continue to participate in and support programs directed towards watershed management and best management toward, protection and maintenance of clean water sources; and

**Servicing Plans.** Support Irrigation District long term servicing plans to supply agricultural lands should the owners want water for agricultural purposes, in accord with the Water Servicing Plan prepared for the Kelowna Joint Water Committee.

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## 6.0 Technical Comments

### 6.1 Development Engineering Department

This application does not trigger any Development Engineering Services at this point in time with regard to this application. However, a comprehensive report will be provided as the time of development application if and when the Agricultural Land Commission agrees to the proposed exclusion.

### 6.2 Subdivision Approving Officer

Lot consolidation of 2 GEID lots required. Ensure building does not encroach on neighbouring lands.

## 7.0 Application Chronology

Date of Application Received: July 14, 2010

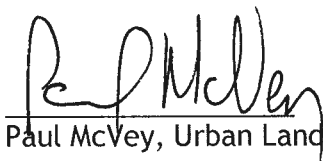
Agricultural Advisory Committee September 9, 2010 (item deferred)

Agricultural Advisory Committee October 14, 2010

The above noted application was reviewed by the Agricultural Advisory Committee at the meeting on October 14, 2010, and the following recommendations were passed:

**THAT** the Agricultural Advisory Committee support Application No. A10-0006 for 2702 Glenmore Road North, by Site 360 Consulting Inc., to obtain approval from the Agricultural Land Commission for a non-farm use within the Agricultural Land Reserve for a portion of the subject property adjacent to the proposed water treatment facility located on the neighbouring property to the south.

### Report prepared by:



Paul McVey, Urban Land Use Planner

Reviewed by:  Todd Cashin Manager, Environmental Land Use Management

Approved for Inclusion:  Shelley Gambacort, Director, Land Use Management

**Attachments:**

Location map of subject property

ALR map

Soil Class map/Land Capability map

Site detail drawing (Figure #1)

ALC Application by landowner (2 pages)

Letter of rationale and photos (3 pages)

**Soil Classification (Map 82E 093)**

The soil classification for the subject property is broken into three sections with soil types as defined below.

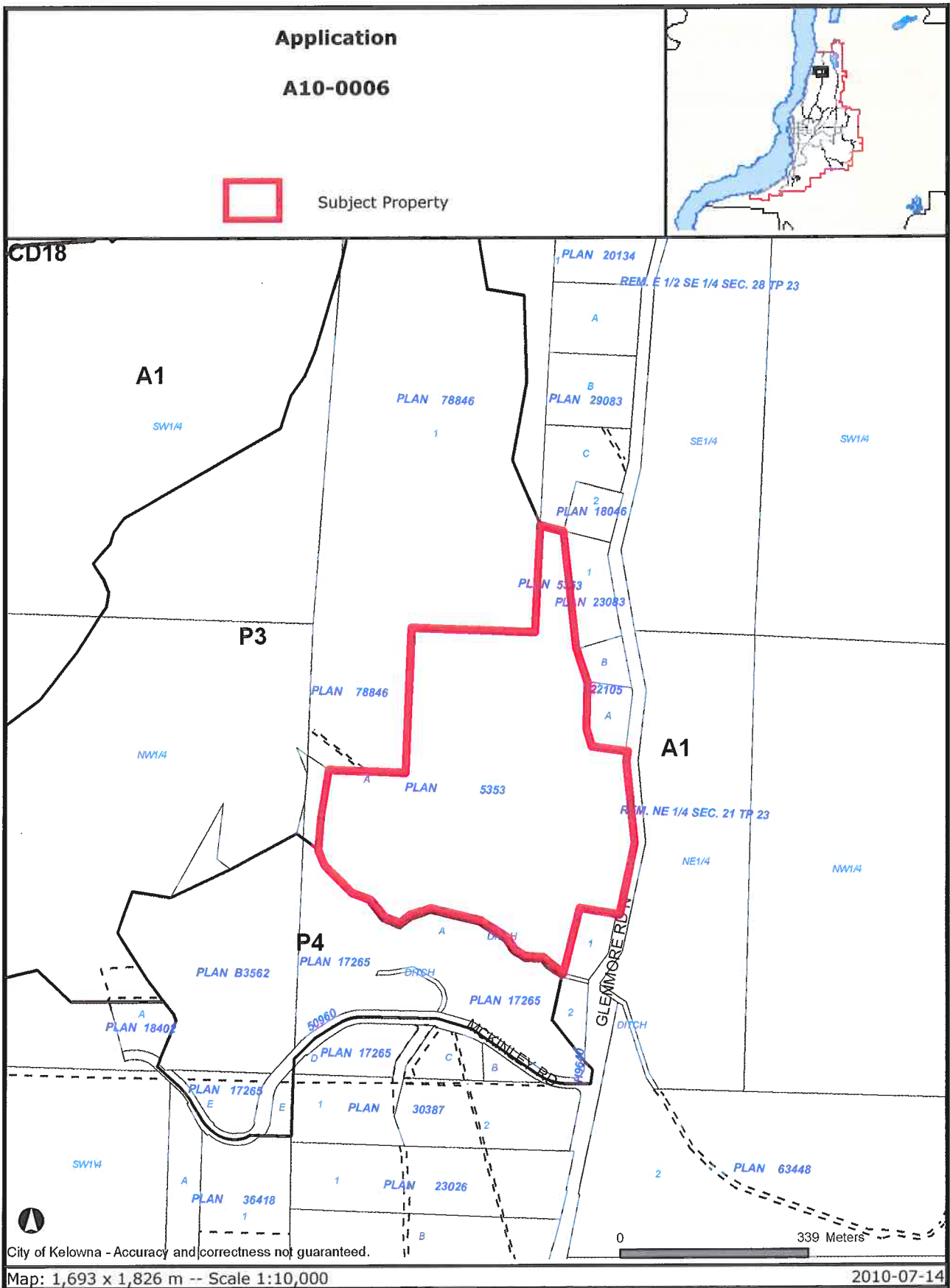
Portion of Site / %	Soil Type	Description
Northern Portion 80%	HD - Harrland	<u>Land:</u> Eolian veneer over gently to very steeply sloping glacial till . <u>Texture:</u> 10 to 30 cm of sandy loam or loamy sand over gravelly sandy loam or gravelly loamy sand . <u>Drainage:</u> well. <u>Classification:</u> eluviated eutric brunisol
Northern Portion 20%	PL - Postill	<u>Land:</u> colluvial veneer over moderately to extremely sloping bedrock . <u>Texture:</u> 10 to 100 cm of stony, gravelly loamy sand over bedrock . <u>Drainage:</u> well to rapid. <u>Classification:</u> Eluviated Eutric Brunisol: lithic phase
Central Portion 100%	GM - Gammil	<u>Land:</u> very gently to extremely sloping fluvioglacial deposits. <u>Texture:</u> 10 to 25 cm of sandy loam or loamy sand over very gravelly loamy sand or very gravelly sand. <u>Drainage:</u> rapid. <u>Classification:</u> Eluviated Eutric Brunisol
Western Portion 100%	WK - Westbank	<u>Land:</u> nearly level to strongly sloping stratified glaciolacustrine sediments . <u>Texture:</u> 100 cm or more of clay, clay loam or silty clay . <u>Drainage:</u> moderately well . <u>Classification:</u> Orthic Gray Luvisol
Southern Portion 60%	HD - Harrland	<u>Land:</u> Eolian veneer over gently to very steeply sloping glacial till . <u>Texture:</u> 10 to 30 cm of sandy loam or loamy sand over gravelly sandy loam or gravelly loamy sand . <u>Drainage:</u> well. <u>Classification:</u> eluviated eutric brunisol
Southern Portion 40%	TC - Trout Creek	<u>Land:</u> nearly level to extremely sloping fluvioglacial deposits <u>Texture:</u> 60 to 100 cm of sandy loam or loamy sand over gravelly loamy sand. <u>Drainage:</u> well to rapid <u>Classification:</u> Eluviated Eutric Brunisol



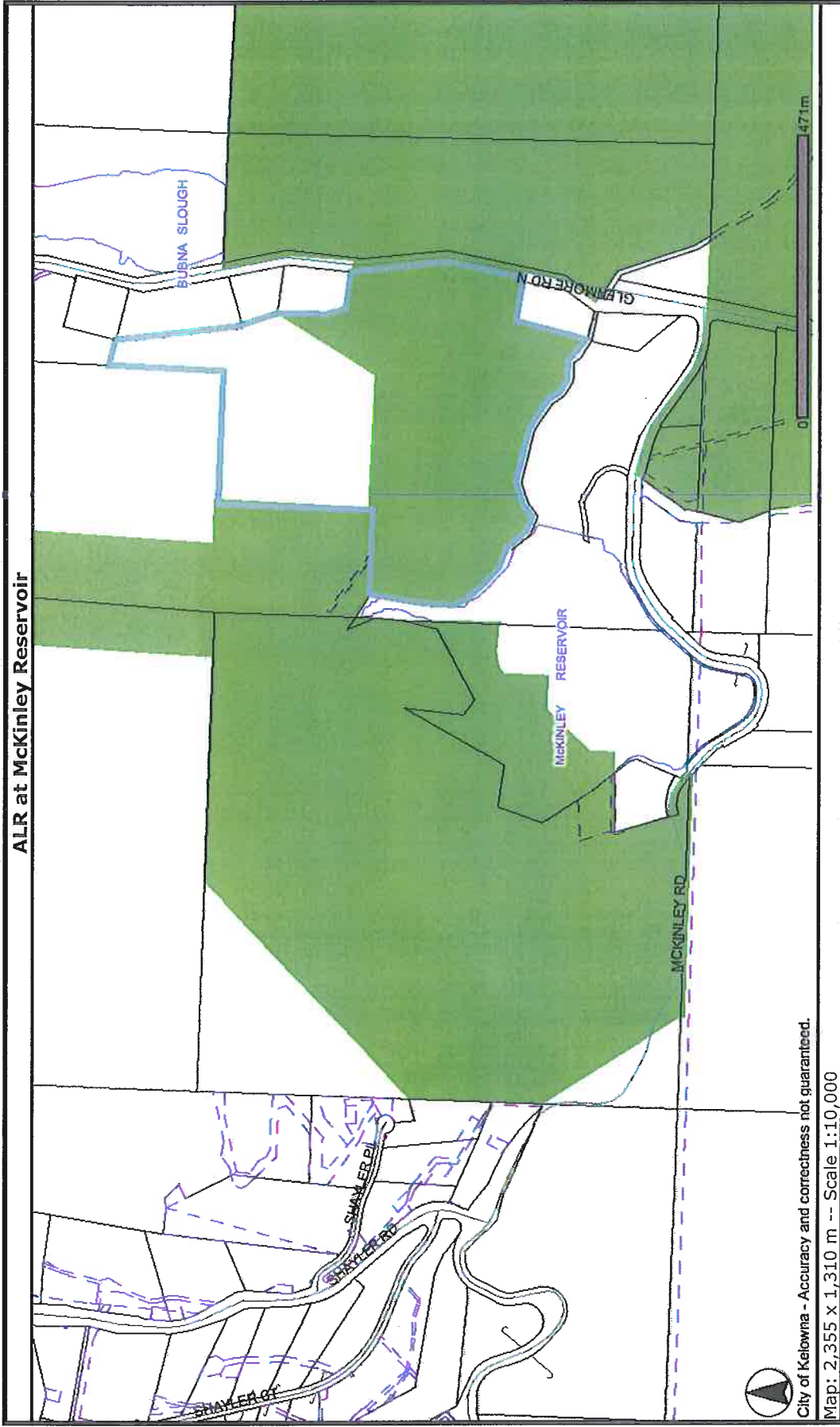
## BCLI Land Capability (Map 82E 093)

Portion of Site	Land Capability Rating, Unimproved	Land Capability Rating, With Improvements
Northern	<p>60% <b>Class 4</b> with Soil Moisture Deficiency (Adversely affected by droughtiness caused low soil water holding capacity or insufficient precipitation).</p> <p>20% <b>Class 5</b> Topography (limited by steepness or pattern of slopes which hinders the use of farm machinery, decreases uniformity of growth and maturity or crops, and/or increases the potential for water erosion.) and Soil Moisture Deficiency</p>	<p>60% <b>Class 2</b> with Soil Moisture Deficiency (Adversely affected by droughtiness caused low soil water holding capacity or insufficient precipitation).</p> <p>20% <b>Class 3</b> Topography (limited by steepness or pattern of slopes which hinders the use of farm machinery, decreases uniformity of growth and maturity or crops, and/or increases the potential for water erosion.) and Soil Moisture Deficiency</p>
Central	<p>100% <b>Class 5</b> with Soil Moisture Deficiency (Adversely affected by droughtiness caused low soil water holding capacity or insufficient precipitation)</p>	<p>100% <b>Class 3</b> with Topography (limited by steepness or pattern of slopes which hinders the use of farm machinery, decreases uniformity of growth and maturity or crops, and/or increases the potential for water erosion.) and Soil Moisture Deficiency (Adversely affected by droughtiness caused low soil water holding capacity or insufficient precipitation)</p>
Western	<p>100% <b>Class 5</b> with soil moisture deficiency and adverse topography (Soils are limited by steepness or pattern of slopes which hinders the use of farm machinery, decreases the uniformity of growth and maturity of crops, and/or increases the potential for water erosion) and Undesirable Soil Structure and/or Low Perviousness.</p>	<p>70% <b>Class 3</b> with Undesirable Soil Structure and/or Low Perviousness (Difficult to till, require special management for seedbed preparation, pose trafficability problems, have insufficient aeration, absorb and distribute water slowly, and/or have rooting zone depth restricted by conditions other than high water table, bedrock, or permafrost).</p> <p>30% <b>Class 3</b> with Undesirable Soil Structure and/or Low Perviousness (Difficult to till, require special management for seedbed preparation, pose trafficability problems, have insufficient aeration, absorb and distribute water slowly, and/or have rooting zone depth restricted by conditions other than high water table, bedrock, or permafrost) and Topography (limited by steepness or pattern of slopes which hinders the use of farm machinery, decreases uniformity of</p>

		<p>growth and maturity of crops, and/or increases the potential for water erosion.) and Soil Moisture Deficiency</p>
<p>Southern</p>	<p>100% <b>Class 4</b> with soil moisture deficiency and adverse topography (Soils are limited by steepness or pattern of slopes which hinders the use of farm machinery, decreases the uniformity of growth and maturity of crops, and/or increases the potential for water erosion).</p>	<p>80% <b>Class 2</b> with soil moisture deficiency and adverse topography (Soils are limited by steepness or pattern of slopes which hinders the use of farm machinery, decreases the uniformity of growth and maturity of crops, and/or increases the potential for water erosion)</p> <p>20% <b>Class 2</b> with Soil Moisture Deficiency (Adversely affected by droughtiness caused low soil water holding capacity or insufficient precipitation) and adverse topography (Soils are limited by steepness or pattern of slopes which hinders the use of farm machinery, decreases the uniformity of growth and maturity of crops, and/or increases the potential for water erosion).</p>



Certain layers such as lots, zoning and dp areas are updated bi-weekly. This map is for general information only. The City of Kelowna does not guarantee its accuracy. All information should be verified.



City of Kelowna - Accuracy and correctness not guaranteed.

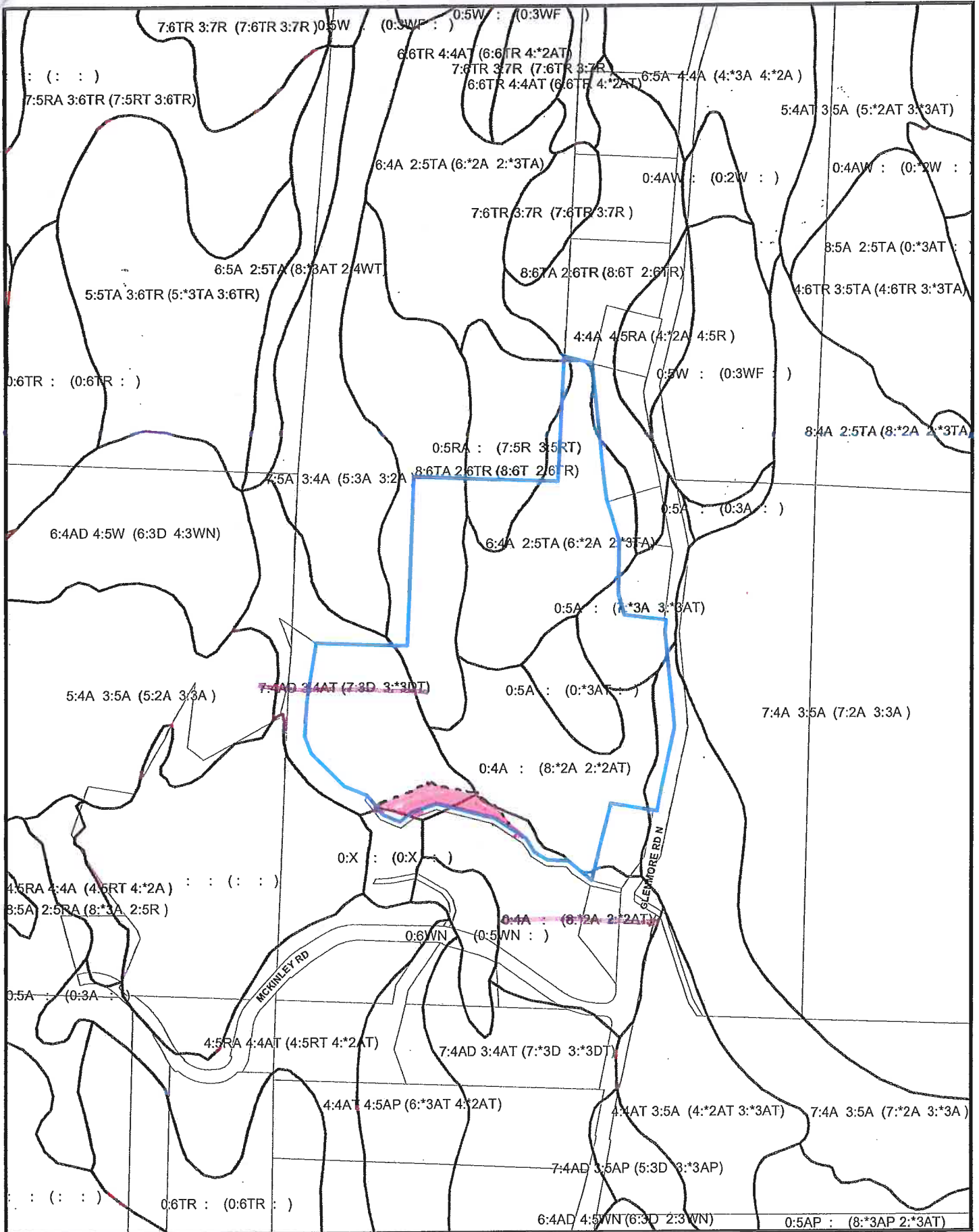
Map: 2,355 x 1,310 m -- Scale 1:10,000

*This map is for general information only. The City of Kelowna does not guarantee its accuracy. All information should be verified.*

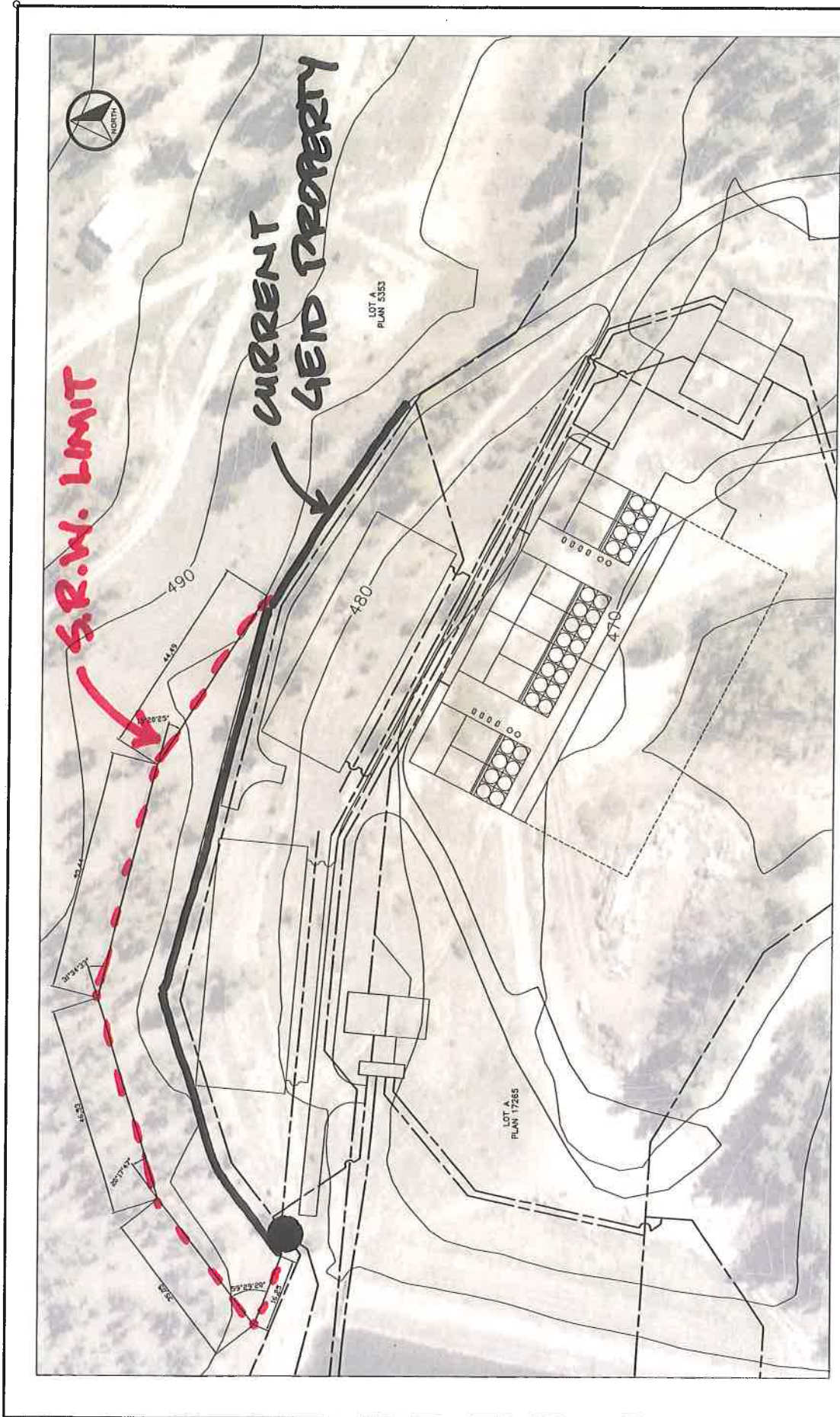




# Land Capability = Brown/ Soil Class = Green



1:7,500



designed	scale	date
AF	1:400	AUG 2009
drawn	project no.	0521
checked	drawing no.	FIGURE 2
approved	rev.	0

MCKINLEY WTP  
PROPOSED RIGHT OF WAY  
OPTION B

Agua Consulting Inc.  
GLENMORE-ELLISON  
IMPROVEMENT DISTRICT

no.	by	date	revision

no.	by	date	revision

FIGURE 1

REVISED

## Introduction

The Glenmore-Ellison Improvement District (GEID) has retained Site360 Consulting Inc. to act as their agent to apply for approval to secure a Statutory Right of Way (SRW) over private property adjacent to their McKinley Reservoir site. The SRW will be necessary to accommodate future improvements to the infrastructure at the site including treatment, pumping and storage facilities. GEID has permission from the private land owner to make the necessary applications to facilitate the registration of the SRW.

## Subject Property

GEID has received permission from Robert Arthur Johnson of 2702 Glenmore Road North to apply for a SRW over approximately 3475 square metres (0.86 acres) of his land which is adjacent to the north of the GEID McKinley reservoir. The legal description of Mr. Johnson's land is;

Lot A, Sections 21 and 28, Township 23 ODYD, Plan 5353, Except Plans B7114, 17921, 18046, 19773, 22105, 23083, 29083 and KAP78846

The portion of land that is required for the future construction area is a relatively long and narrow strip along the hillside situated generally in an east-west orientation. The land does not appear to have been used for agriculture other than possibly for range land for cattle. The portion of land is generally sloped down from north to south with slopes ranging between 20% and 25%. The land is typical of many Central Okanagan landscapes with sporadic pine forest and natural grass lands.

The size of the proposed SRW encompasses approximately 1.4% of the area of the subject property.

## Rationale for the SRW

GEID has prepared preliminary site design layout for the anticipated infrastructure improvements required over the next 5 to 10 years. They anticipate constructing two concrete drinking water reservoirs along the base of the slope that are mostly within their existing property (main site and "ditch lot"). The SRW is required to allow for construction activity, access to the future facilities for maintenance and the required final grading of the slope. Once the construction of the two reservoirs is complete, there would be no activities within the SRW area that would pose any impact on the remainder of the subject property. Although the GEID site is relatively large, the topography and the necessary accommodation for major water main pipes limits the available land for structures such as the proposed reservoirs.



### Impact to Agriculture

The proposed SRW would have no impact on any current agricultural activities and imperceptible impacts on any future agricultural activities. The portion of the land is sloped such that cattle grazing is probably the highest potential agricultural use. The portion of the subject property proposed for the SRW would not have a significant impact on cattle grazing opportunities for the balance of the property.

CLI mapping indicates that the land capability for agriculture on this portion of the subject property is predominantly Class 4 soils with approximately 70% improvable to Class 3 and 30% improvable to Class 2.

### Conclusion

The proposed SRW will allow GEID to continue their future infrastructure planning for the proposed upgrades to their domestic water supply system. It should be noted that GEID serves both domestic and irrigation users within its service area. The ability to improve their system and capacity helps to ensure long term, viable water supply to all users within their service area. The request for a portion of the subject property to be used for non-farm use for the future infrastructure expansion has a negligible impact on agricultural potential and no impact on any current activities.

Site Photos



Looking north across the reservoir toward the subject property



Looking east along north boundary of proposed SRW from near the west end



Looking east along north boundary of proposed SRW from about mid point



Looking west along proposed SRW from eastern terminus with existing property line (reservoir in distance)



Looking west along current north property boundary



Looking south east from north end of dam across GEID property



