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# Conceptual Scheme Pt. NW 34-51-22-W4

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July 2005

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# Conceptual Scheme

## NW 34-51-22-W4

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### 1. Purpose

The Conceptual Scheme (CS) has been prepared in support of a rural subdivision development located within the NW ¼ Section 34-51-22-W4M in Strathcona County. The purpose of the conceptual scheme is to provide supporting rationale for the rezoning and subdivision of the lands to accommodate large rural residential development. The CS, as stated in Council Policy statement SER-008-019, is required:

- a) To provide a framework for the subsequent subdivision and/or development of land within the Country Residential Policy Area and the Agricultural/Large Rural Residential Policy Area of the Municipal Development Plan;
- b) To establish a potential plan of future subdivision or development that applies to a specific parcel of land;
- c) To ensure that the subdivision under review does not prohibit the ability of remnant parcels, or adjacent parcels, to be further subdivided in the future. This can be achieved through improved subdivision design and the protection of land for future road dedication to provide access to remnant lands owned by the applicant or adjoining lands.

This Conceptual Scheme supports a plan for a six (6) lot subdivision that includes Municipal Reserve dedication and Conservation Easements for the protection and preservation of significant ecological and environmental features.

Legal Description: NW 34-51-22-W4  
Existing Parcel Sizes: Total Area: 37.8 ha (93.3 ac)

### 2. Current Site Uses

- The subject property is bounded on the west by Range Road 223, on the south and east by private property, and on the north by Township Road 520.
- Three parcels have previously been subdivided out of the quarter section. Portions of the remaining parcel have been subjected to tree clearing and grazing by bison and horses. Eight foot wildlife fencing encompasses the southern portion of the parcel.
- No permanent structures are present on the subject property.

### 3. Subdivision and Development Concept

- The proposed conceptual scheme consists of 6 large rural residential parcels ranging in size from approximately 4.1 ha to 7.7 ha. Access is proposed via an internal roadway from Range Road 223.
- Approximately 5.5 ha of Municipal Reserve (MR) land is proposed, along with approximately 8.2 ha of Conservation Easement (CE). The intent of the MR and CE lands is to protect the Priority 1 habitat, as outlined in the Strathcona County Prioritized Landscape Ecology Assessment (PLEA).
- A Conceptual Scheme Plan is included as Figure 1.

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### 4. Density

- The Municipal Development Plan (MDP), Section 10.18, allows for a maximum parcel density of eight (8) parcels per quarter section. An additional two (2) parcels per quarter section, for a parcel density of up to a maximum of ten (10) parcels per quarter section, may be allowed subject to the following:
  - a) Council has adopted a Conceptual Scheme that has been prepared in accordance with County policy.
  - b) Where, in the opinion of the County, the land includes priority upland habitat (forest and grassland) that is of significant ecological value to the community; and one of the following methods is used to conserve that habitat:
    - i) One additional lot for each 8.0 hectares (20 acres) of land that is conserved under a voluntary conservation easement for the purpose of habitat protection.
  - c) The related subdivision or development is designed in such a way so as to minimize the amount of tree removal; and,
  - d) Internal road access is provided to each of the existing and proposed lots that are part of the subject lands.
- Currently, this quarter section contains 4 lots; consisting of 3-20 acre parcels and the subject parcel. The proposal is to create a total of six new parcels, to increase the density to 9 parcels for the quarter section.
- This CS proposes a total MR dedication of 5.5 ha, or 14.5% of the gross developable area. In addition, it is proposed that approximately 8.2 ha of land be conserved under a voluntary conservation easement, as per the policy statement above. This would allow one additional lot, for a total of six parcels within the development area and nine on the quarter section.

### 5. Site Considerations

- The subject property has an undulating topography with a series of southwest to northeast oriented ridges alternating with low swales and wetland pockets. It appears the general drainage direction is east where it accumulates in the permanent freshwater marsh wetlands along the east boundary of the subject property.
- Overall, the terrain is rolling with scattered shallow depressions supporting isolated permanent and ephemeral wetlands. There are at least eight permanent wetlands, two located on the northwest portion and the remainder in the south portion. No streams were observed on the site however, a number of drainage swales were defined.
- Several wetlands, both intermittent and permanent, exist across the subject property and are classified as freshwater marshes. These pothole wetlands are characteristic of the moraine knob-and-kettle terrain. Standing open water was observed in all the permanent wetlands. The vegetation and soils indicated that the pothole wetlands are periodically inundated with water and function as seasonal localized wetlands.
- The surrounding upland effectively isolated these wetlands on the landscape. Drainage inputs or outputs were not obvious. Livestock access to the wetlands along the east boundary has resulted in shoreline disturbance.
- Other low lying areas on the subject property are relatively small isolated shallow depressions that support wetland grasses and function as ephemeral wetlands, specifically wet meadows. Due to the characteristic moraine knob-and-kettle

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topography, these systems likely function as surface water storage and groundwater recharge during periods of high precipitation and spring runoff. Evidence of open water for extended periods of time was not observed. The vegetation and soils indicated that the drainage swales associated with the poplar forest are periodically inundated with water and function as seasonal localized wetlands.

- The soils are Class 4 and 5 according to the Canada Land Inventory (CLI), with a farmland assessment rating of 17%. Accordingly, the lands have severely limited agriculture capability.

### 6. Environment

- A Biophysical Assessment (BA) was conducted by Strathcona County in accordance with Policy SER-008-019 “Conceptual Schemes”. The BA discusses the following items:
  - The Prioritized Landscape Ecology Assessment identifies the NW 34-51-22 W4M site to have priority upland forest with small wetlands wildlife units.
  - The value of the habitat is in the complex of wetlands and upland habitats as well as the contribution to a larger contiguous habitat and drainage features that exist on the subject and surrounding properties.
  - Fragmentation and disassociation with other habitat units is the greatest risk to maintaining the habitat value and the wildlife populations it supports.
  - The agricultural use of this quarter section, primarily through grazing, has resulted in decreased vegetative cover and some wetland disturbance.
  - Recommended that Municipal Reserve (MR) be dedicated to the full extent owing for the maintenance of upland habitat, based on 10% of the land area less that area owing as Environmental Reserve and claimed by the Province and based on the bonus lot clause within the Conceptual Scheme Policy. Based on the BA, the habitat block in the northwest corner of the subject property would be an ideal location for MR.
  - Environmental Reserve (ER) is typically dedicated for permanent wetland areas and watercourses to the full extent described under the Municipal Government Act. Based on the landscape of the subject property, specifically the upland/wetland complex, dedicating each wetland as ER is not practical. This is largely due to the access issue and boundary surveying. Therefore, the most practical method of conserving the natural landscape features would be through a comprehensive Conservation Easement. Once lot layouts are confirmed, Conservation Easement locations can be discussed based on the results of this report. Basically, a blanket Conservation Easement encompassing the majority of natural habitat would be beneficial.
  - The mosaic of forest upland and wetland habitats, the hydrology, the connectivity, natural vegetation, and previously cleared pasture areas, all result in diverse, well connected, currently sustainable vegetation and wildlife communities. The presence of pasture on the site has slightly decreased the overall use for wildlife and has resulted in increased non-native (weedy) plant species. Therefore, the most valuable natural areas are the undisturbed poplar forest uplands and associated wetlands.
- The BA report recommends the following for the proposed conceptual scheme:
  1. remove livestock as soon as possible in order to allow natural regeneration of wetland and upland vegetation, specifically in the southeast portion of the subject property

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2. retain the northwest block of upland and wetland habitat through MR designation, to maintain the hydrological functions and provide habitat diversity and connectivity
3. retain the upland and wetland habitat in the southeast portion of the subject property through the use of a Conservation Easement, to maintain the hydrological functions and provide habitat diversity and connectivity
4. work with the existing topography to the maximum extent as a means of conserving the existing drainage features and landscape character
5. consult with Alberta Environment and Strathcona County regarding any changes to topography which may influence drainage

### 7. Servicing

**Water:** To be determined at the time of residential construction.

**Sewer:** Sewage management for the development will be provided through the use of private sewage disposal systems located within each lot in accordance with guidelines established by Alberta Labour and Alberta Environmental Protection.

**Transportation:** The development will be served by an internal roadway. Access to the internal road would be provided via Range Road 223 and would be constructed in accordance with the current Strathcona County Rural Engineering Servicing Standards.

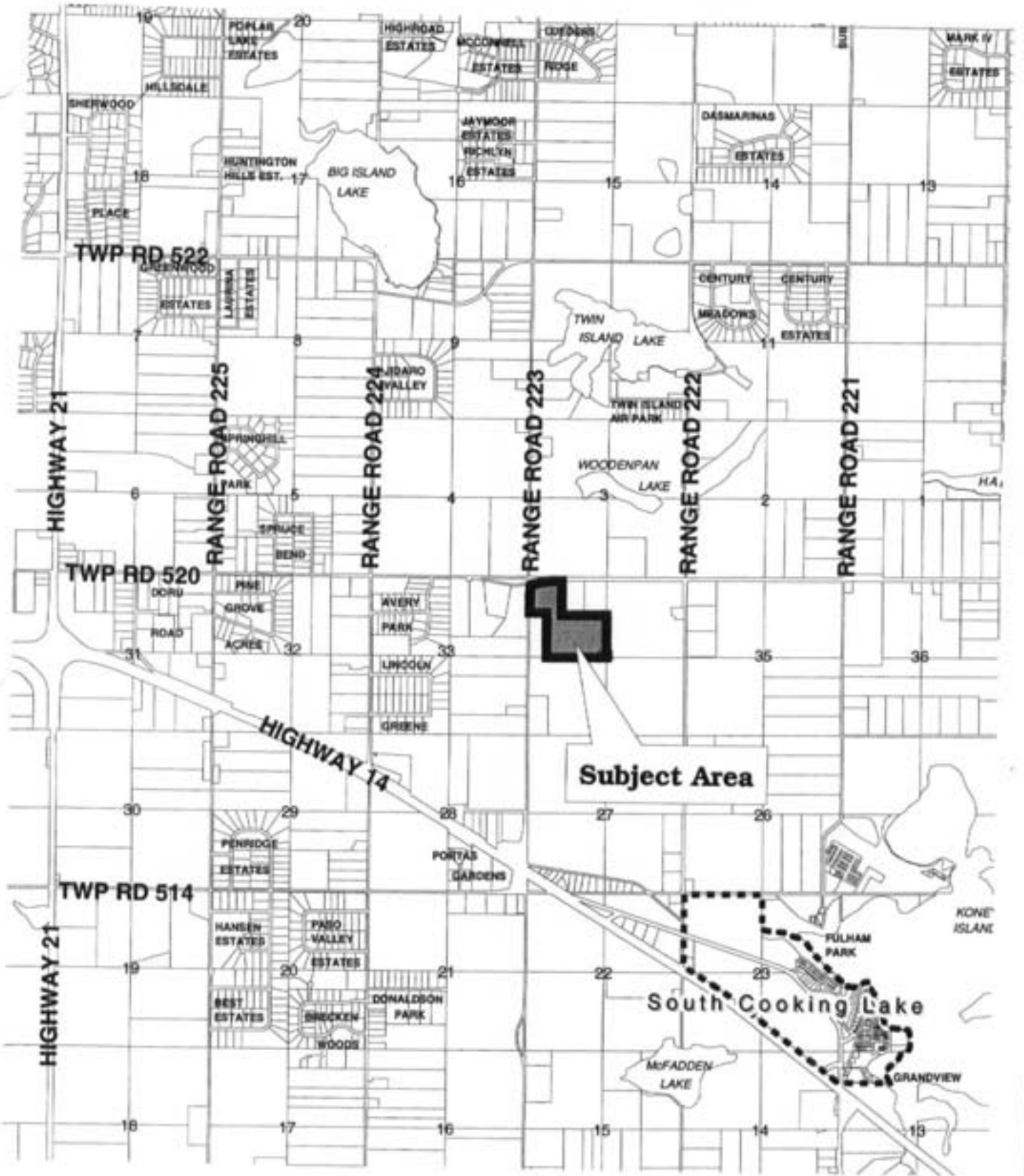
### 8. Subdivision Approval

Notwithstanding any other issues that may arise through the subdivision review process, the following will be addressed as conditions of subdivision:

- Municipal reserves and conservation Easement will be provided to the satisfaction of the County. In this regard, the municipal reserve shall not be less than 10% of the gross developable area and the Conservation Easement area(s) shall not be less than 8.0 ha.
- Final location of property lines and parcel areas may be adjusted at the time of subdivision, however, shall comply with the maximum density and minimum lot areas of the land use bylaw district for the lands.
- Further confirmation of developable areas, potential buildings locations, etc may be required at the time of subdivision and may affect the number of parcels proposed.
- Corner cuts, acceleration and deceleration lanes may be required at the proposed intersection of the internal road with Range Road 223. If required, the landowner may need to negotiate with the adjacent landowner to obtain required road dedications.
- Any other conditions deemed necessary by the Subdivision Authority.

### LAND USE STATISTICS

Area	Hectares (ha)	Acres (ac)	Percent of Total
Gross Area	37.8	93.3	100%
Municipal Reserve (MR)	5.5	13.6	14.5%
Residential	30.5	75.4	80.7%
Roads	1.8	4.3	4.8%
Total	37.8	93.3	100%
Conservation Easement (CE)	8.2	20.3	14.3 %



**KEY PLAN**  
**Pt. NW 34-51-22-W4**



**PLANNING & DEVELOPMENT SERVICES**

Drawn By: C. Pullishy, C.P.T. File No.: 4070-2005A007

Date Drawn: 10/02/05

Dwg No.: N:\ArcView Projects\  
 2005 LUB Amendment\  
 2005a007\2005A007 - Key Plan.mxd

Scale: NOT TO SCALE

# CONCEPTUAL SCHEME NW 34-51-22-W4



SE4 52-22-4

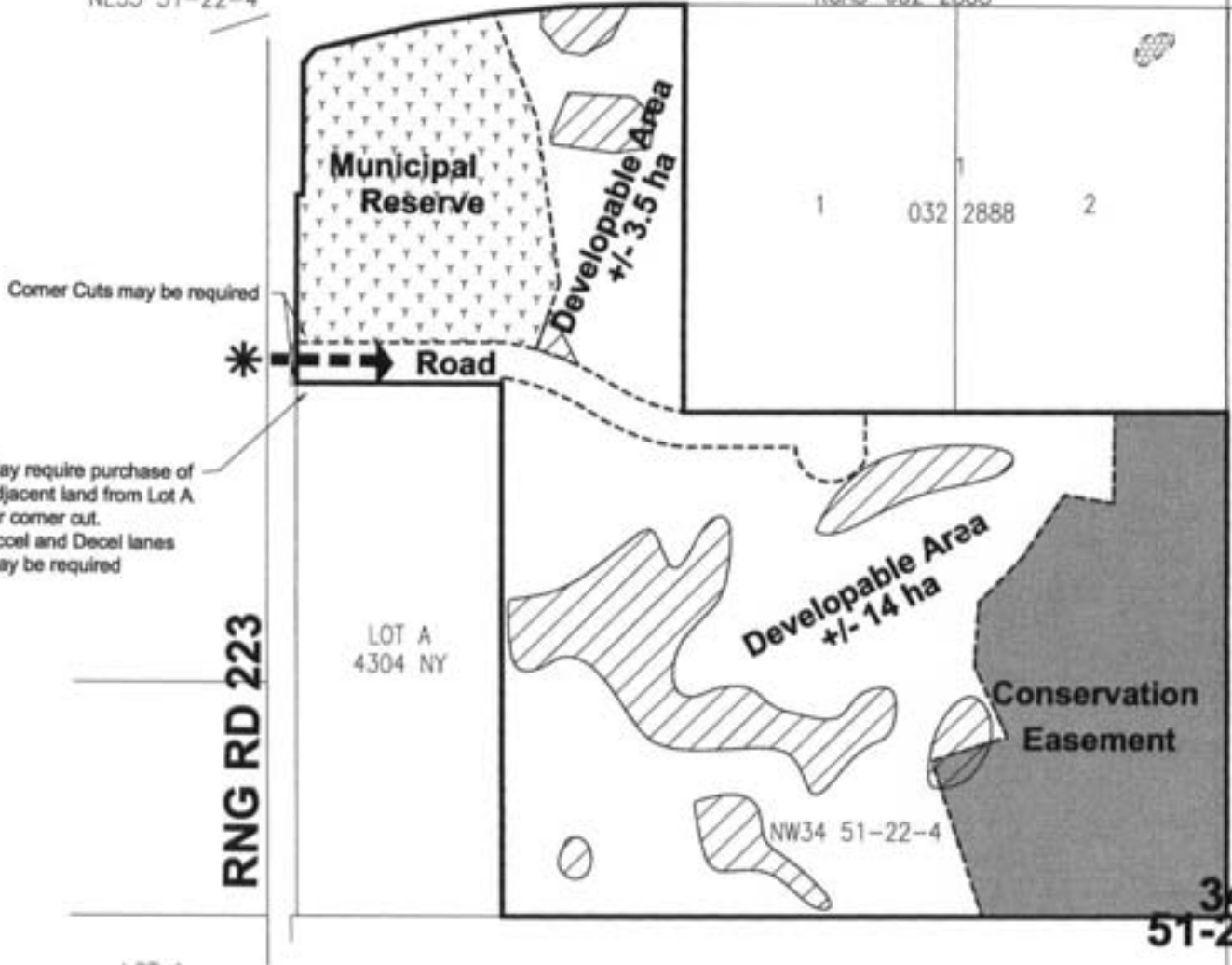
SW3 52-22-4

SW3 52-22-4

**TWP RD 520**

NE33 51-22-4

ROAD 032 2888



Corner Cuts may be required

- May require purchase of adjacent land from Lot A for corner cut.
- Accel and Decel lanes may be required

**RNG RD 223**

LOT A  
4304 NY

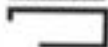
**Developable Area  
+/- 14 ha**

**Conservation  
Easement**

NW34 51-22-4

**34  
51-22**

**Legend**



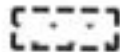
Total Titled Area =  
Approx. 37.8 ha (93.4 ac) +/-



Developable Areas



High Water Table or  
Surface Water Conditions



Proposed Municipal Reserve  
= Approx. 5.5 ha (13.6 ac) +/-



Proposed Conservation Easement  
Area = Approx. 8.2 ha (20.3 ac) +/-

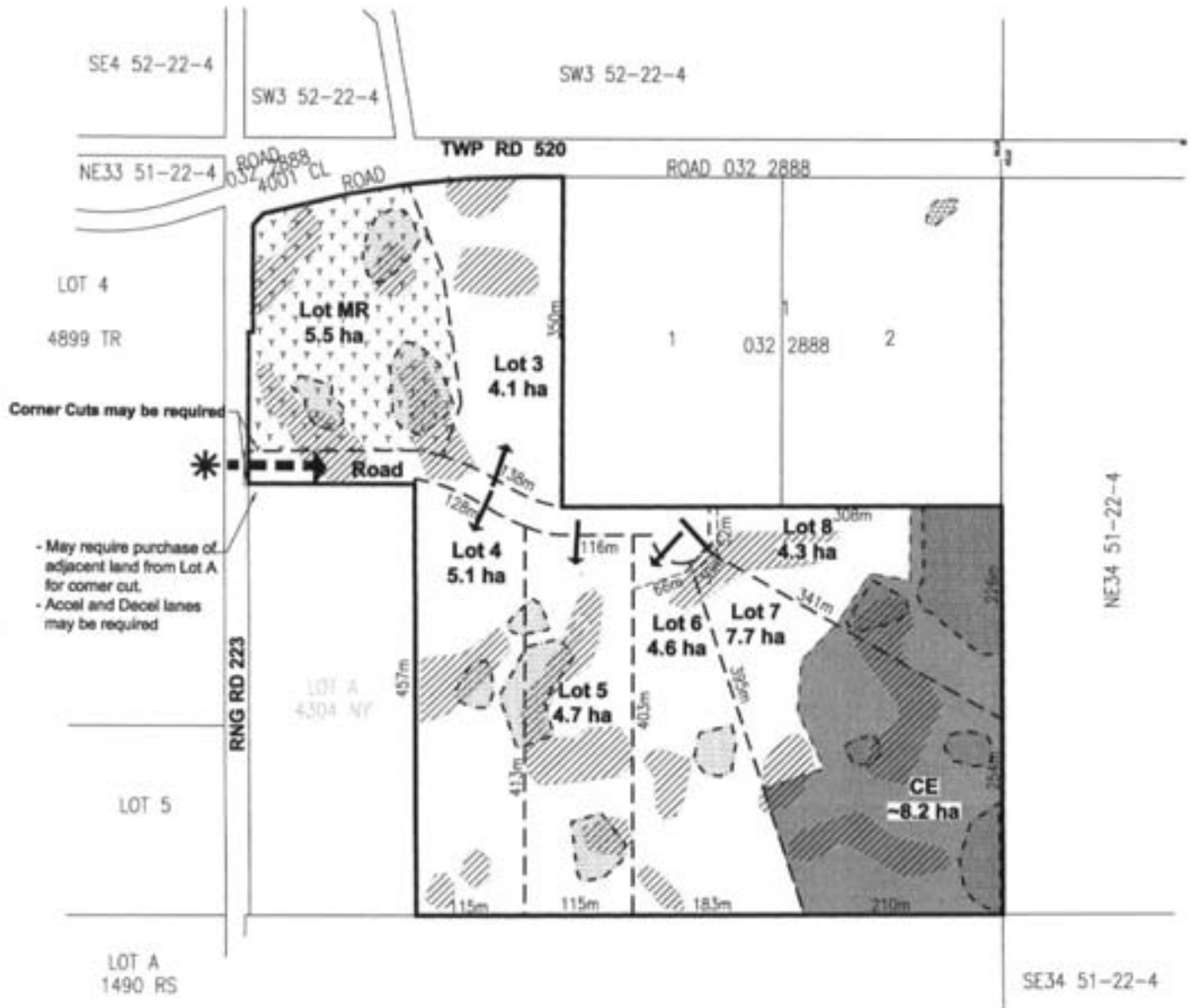


Proposed Internal Road location



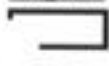
Existing Access Locations

# CONCEPTUAL SCHEME NW 34-51-22-W4



## Potential Development Concept

**Legend**



Total Titled Area =  
Approx. 37.8 ha (93.4 ac) +/-



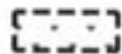
Proposed Parcels



Un-Developable Areas  
High Water Table Conditions



Un-Developable Areas  
Low, Wet Areas



Proposed Municipal Reserve  
= Approx. 5.5 ha (13.6 ac) +/-



Proposed Conservation Easement  
Area = Approx. 8.2 ha (20.3 ac) +/-



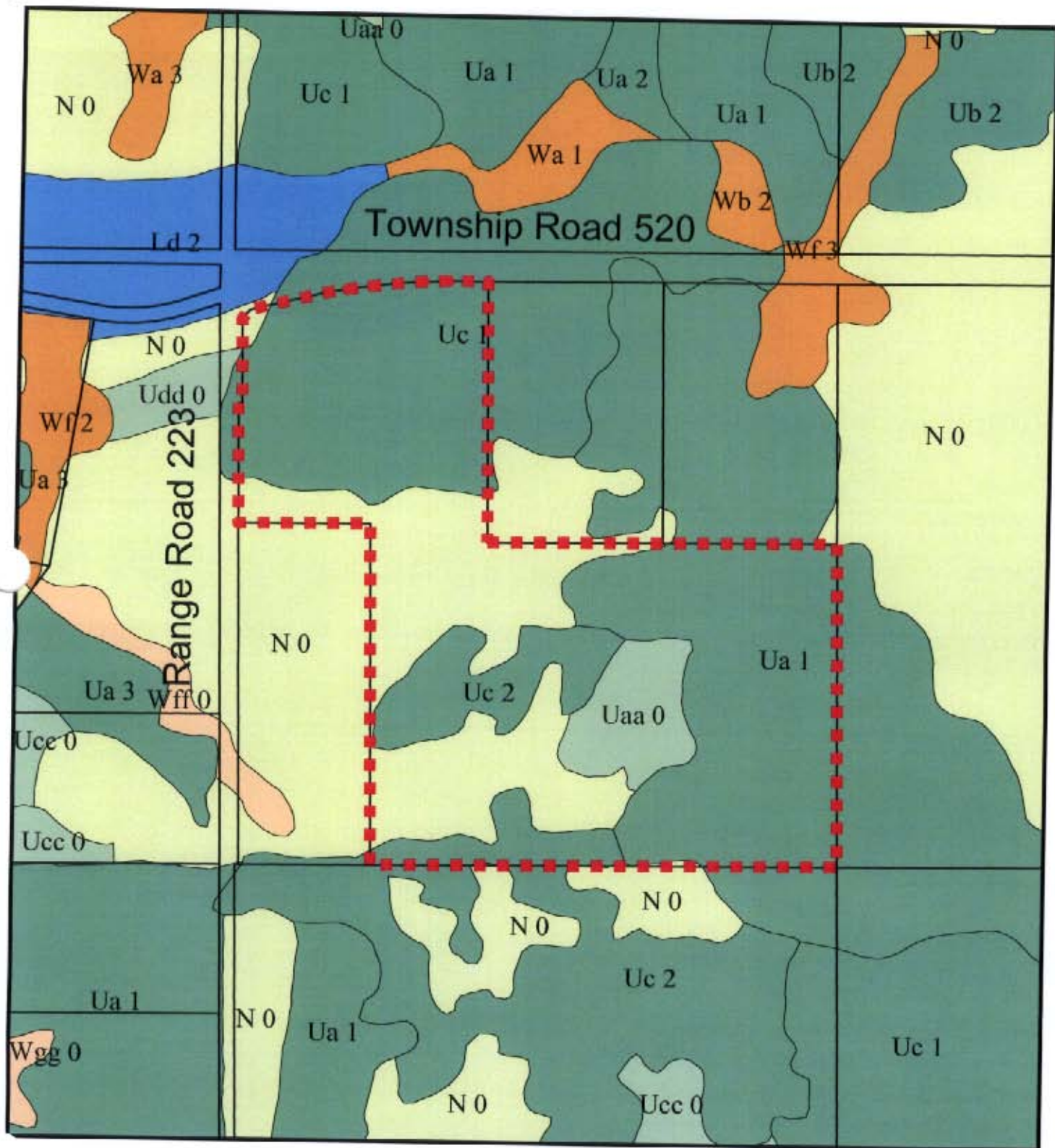
Proposed Internal Road location



Existing Access Locations



# Prioritized Landscape Ecology Assessment NW 34-51-22-W4



100 50 0 100 200 300 Meters

4070-2005A007

