# Highway 64 Realignment
# Clear River Valley
# Functional Planning Study

## Information Session
## November 23, 2022 – 4:30 to 8:00 pm
## Menno Simons Community School

# WELCOME

*Highway 64 Clear River Bridge Looking North*

Alberta

November 2022

CIMA+

# Welcome

## Highway 64 Realignment
## Clear River Valley
## Functional Planning Study

# Information Session #1

This information session is an informal drop-in format, there will be no presentation.

**The purpose of this information session is to:**

- **Introduce the study process**
- **Outline the study objectives and organization**
- **Present the constraints and factors affecting development of a realignment plan**
- **Share the alignments explored for Highway 64**
- **Gather your feedback and input**

Please take a few minutes to review the display panels and discuss the study with project staff.

# Study Background

- Highway 64 is a major two-lane, intra-provincial highway facility
- First paved in 1983, the highway is the primary transportation corridor through Clear Hills County, connecting Highway 2 near Fairview with British Columbia and linking most of the County's hamlets.
- With 8 active slide locations, the existing Clear River crossing is increasingly at risk of slide activity.
- The existing bridge will soon need a major rehabilitation or replacement and river stabilization.


*Existing Highway 64 Looking East Across the Clear River*

# Study Purpose

Identify and review technically feasible alternatives for a potential new Highway 64 alignment crossing of the Clear River Valley.

# Study Objectives

To develop a technically feasible realignment plan that:

- Provides the most appropriate design given site constraints
- Addresses stability and safety, community interests, environmental and historical resources, drainage and other impacts
- Identifies access management needs
- Identifies land requirements

# Study Outcomes

The outcome of this study will:

- Help the province understand if a technically feasible new alignment crossing of the Clear River Valley exists

# Working Together

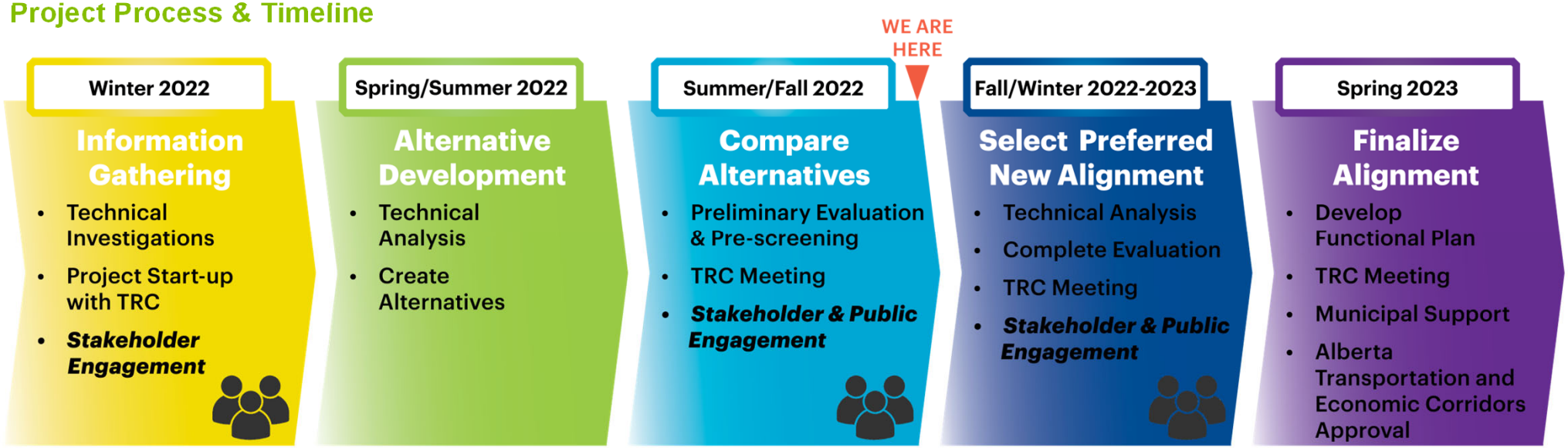
## Technical Review Committee (TRC)

+ Clear Hills County is a member of the Technical Review Committee
+ The Technical Review Committee guides the study process at key points

## Stakeholders & Members of the Public

+ The study team will obtain feedback on alternatives and outcomes

## Project Process & Timeline



# Public Input

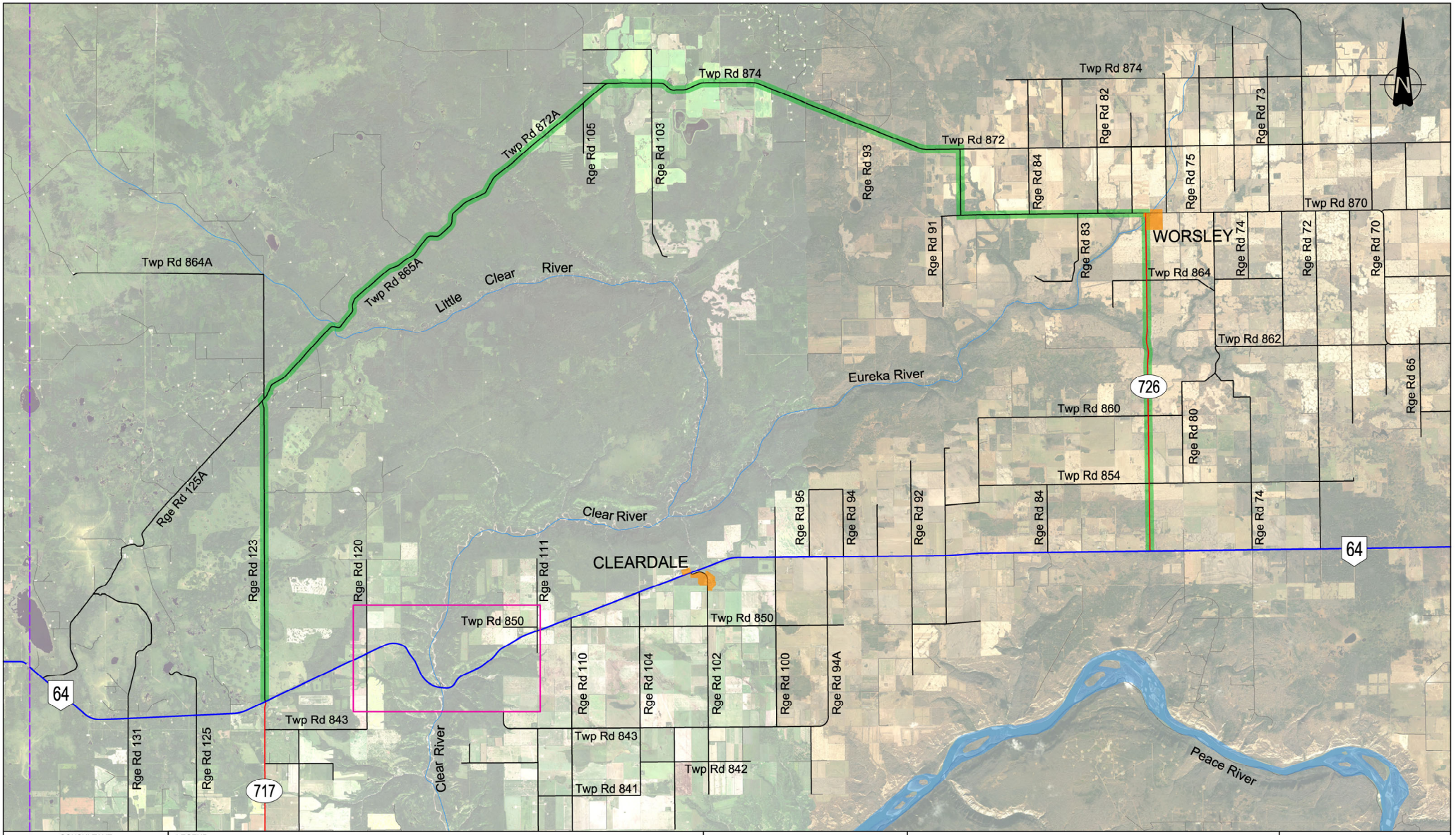
## What We Heard – Project Appraisal Phase

The study team spoke with 10 landowners or leaseholders representing 33 of the 45 properties within the study area.

### Common themes from the discussions included:

- A general understanding of the needs for the project and project purpose
- The Clear River campground, rodeo grounds and the river valley are of great importance to the community
- The long detour when slides close the highway is a concern
- Safety concerns along the existing alignment include intersections and the long steep grades
- Climbing lanes are an important consideration
- It is desirable to have pullouts at the top of the grades

# Study Location & Regional Roadway Network

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PROJECT NO. E00791A

LEGEND

- LEVEL 2 HWY CLASSIFICATION
- LEVEL 4 HWY CLASSIFICATION
- MUNICIPAL ROADWAY
- ALBERTA / BC BORDER
- STUDY AREA
- DETOUR ROUTE

Preliminary for Discussion Purposes Only

SCALE 0 1.0 2.5 5.0 km

**STUDY LOCATION**

HIGHWAY 64 REALIGNMENT (CLEAR RIVER VALLEY)
FUNCTIONAL PLANNING STUDY

| PHOTOGRAPHY DATE | LOCATION | DATE | FIGURE | DRAWING |
|---|---|---|---|---|
| 16-08-2021 | HIGHWAY 64:02 | 10/28/2022 | 1.2 | R-1270-PL002 |

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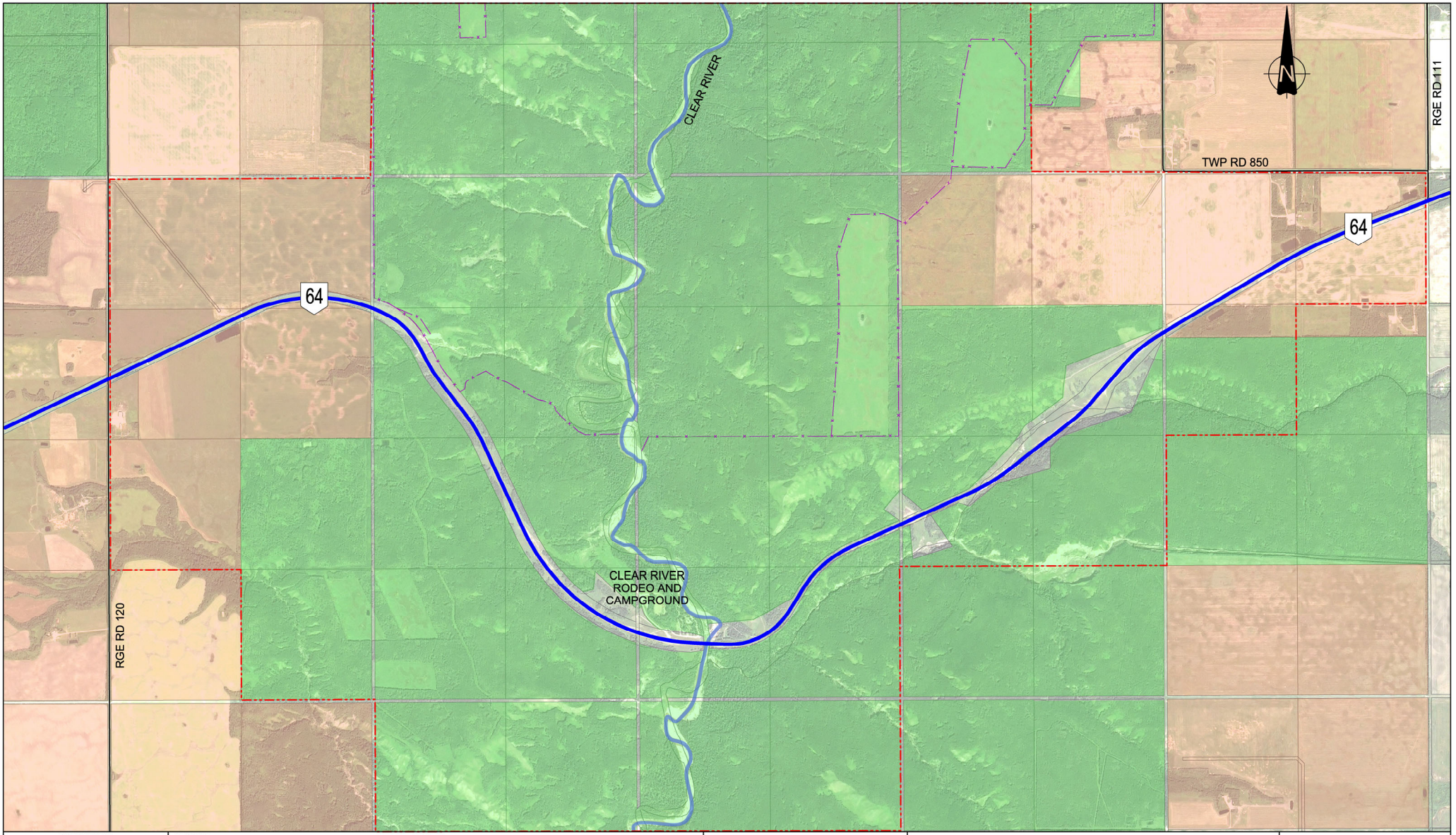
# Land Use

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LEGEND

- LEVEL 2 HWY CLASSIFICATION
- MUNICIPAL ROADWAY
- CROWN LAND PARCEL
- FREEHOLD LAND PARCEL
- POTENTIALLY IMPACTED STAKEHOLDER BOUNDARY
- WOLF CREEK GRAZING ASSOCIATION FENCE

Preliminary for Discussion Purposes Only

SCALE
0 100 250 750 m

## LAND USE

HIGHWAY 64 REALIGNMENT (CLEAR RIVER VALLEY)
FUNCTIONAL PLANNING STUDY

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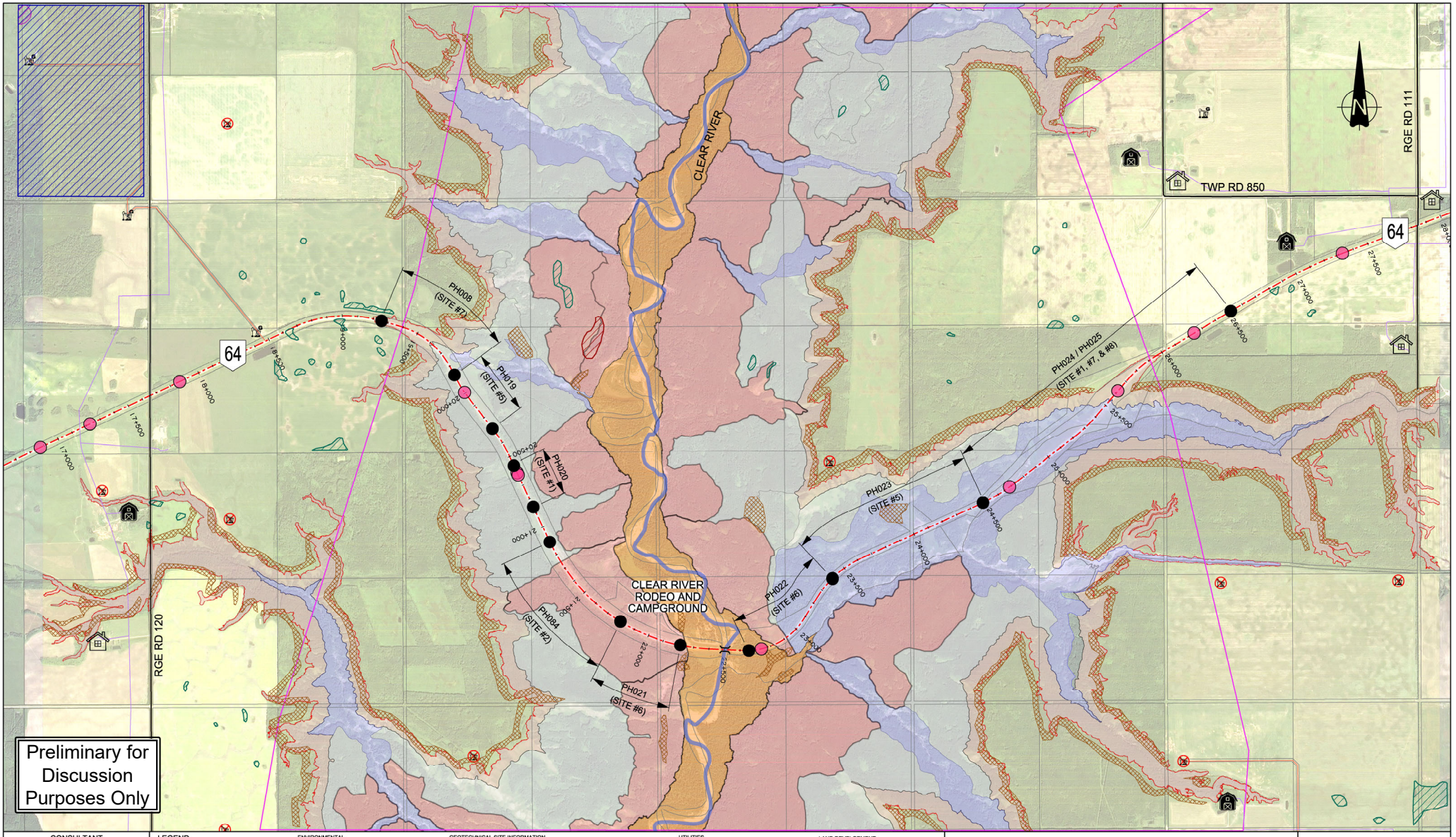
| PHOTOGRAPHY DATE | LOCATION | DATE | FIGURE | DRAWING |
|---|---|---|---|---|
| 16-08-2021 | HIGHWAY 64:02 | 10/28/2022 | 1.4 | R-1270-PL004 |

# Existing Conditions & Constraints

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LEGEND

ROADWAY
- EXISTING HIGHWAY 64 CENTRELINE
- MUNICIPAL ROADWAY
- BRIDGE

ENVIRONMENTAL
- MARSH
- SHALLOW OPEN WATER
- PEATLAND
- SHARP TAILED GROUSE SURVEY AREA
- KEY WILDLIFE AND BIODIVERSITY ZONE
- WATERCOURSE
- ANIMAL-VEHICLE COLLISIONS

HISTORICAL
- POTENTIAL HRIA TARGET AREAS

GEOTECHNICAL SITE INFORMATION
- PH021 — PEACE RIVER/HIGH LEVEL DISTRICT, SITE NUMBER
- (SITE #1) — SUBSITE NUMBERS
- TOP OF VALLEY
- TOE OF SLOPE
- SURFACE WATER EROSION-MOSTLY SURFICIAL DEPOSITS
- ACTIVE TRIBUTARY CREEKS EROSION AND LANDSLIDES
- ACTIVE LANDSLIDES
- SEMI-ACTIVE LANDSLIDES
- ALUVIUM
- GLACIOLACUSTRINE

UTILITIES
- ACTIVE WELLHEAD (GAS)
- ABANDONED WELLHEAD
- GAS PIPELINE
- LOW PRESSURE GAS PIPELINE

LAND DEVELOPMENT
- ACREAGE
- FARMSTEAD

SCALE
0 100 250 500 m

## CONDITIONS & CONSTRAINTS PLAN

HIGHWAY 64 REALIGNMENT (CLEAR RIVER VALLEY)
FUNCTIONAL PLANNING STUDY

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| PHOTOGRAPHY DATE | LOCATION | DATE | FIGURE | DRAWING |
|---|---|---|---|---|
| 16-08-2021 | HIGHWAY 64:02 | 10/28/2022 | 1.5 | R-1270-PL005 |

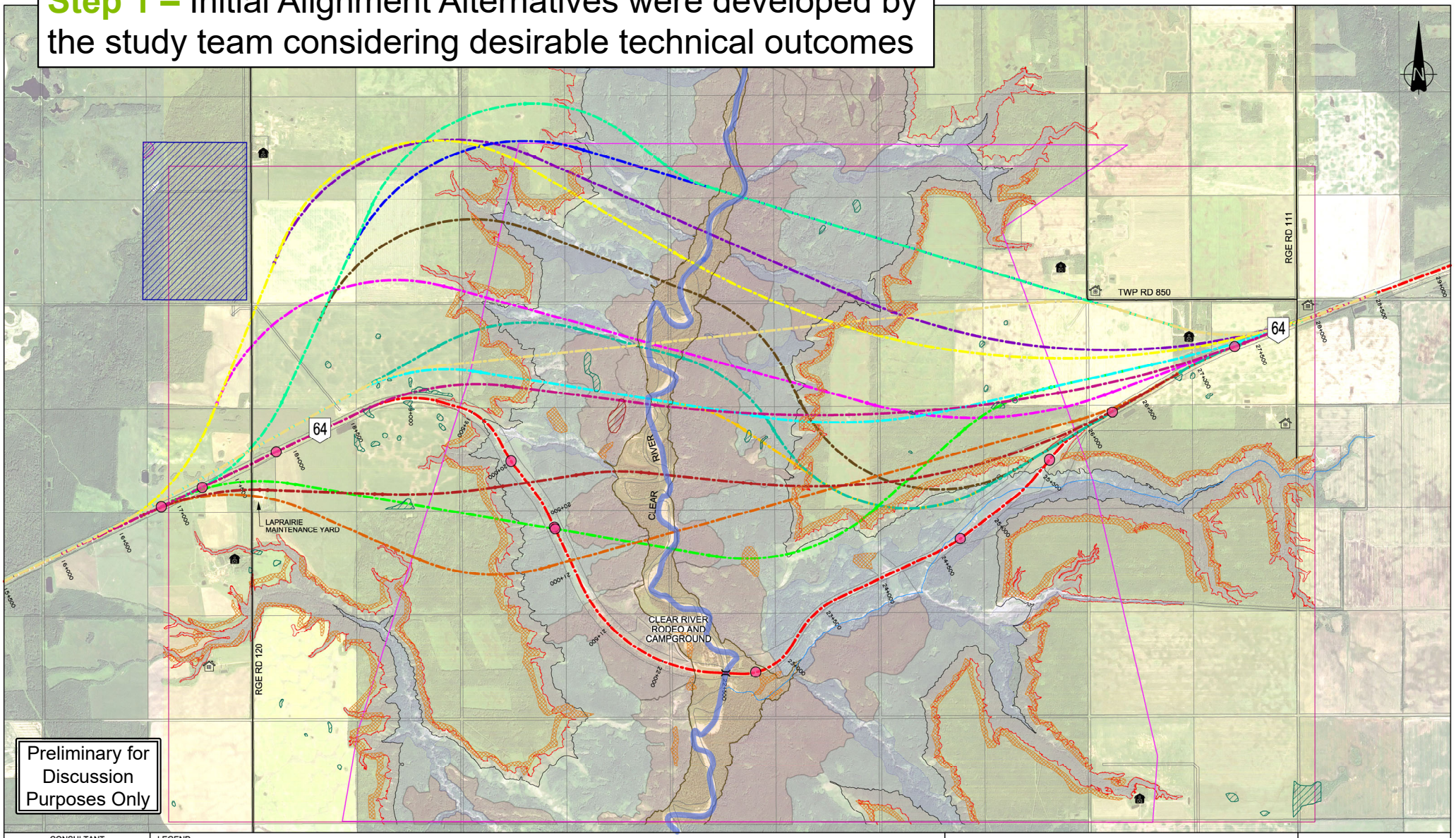
# Alternative Development

+ Key technical factors in the development of alternatives were:
  - Geotechnical stability
  - River stability
  - Roadway design standards and constructability
  - Environmental and historical resources

*Highway 64, Looking West Across the Clear River Valley*

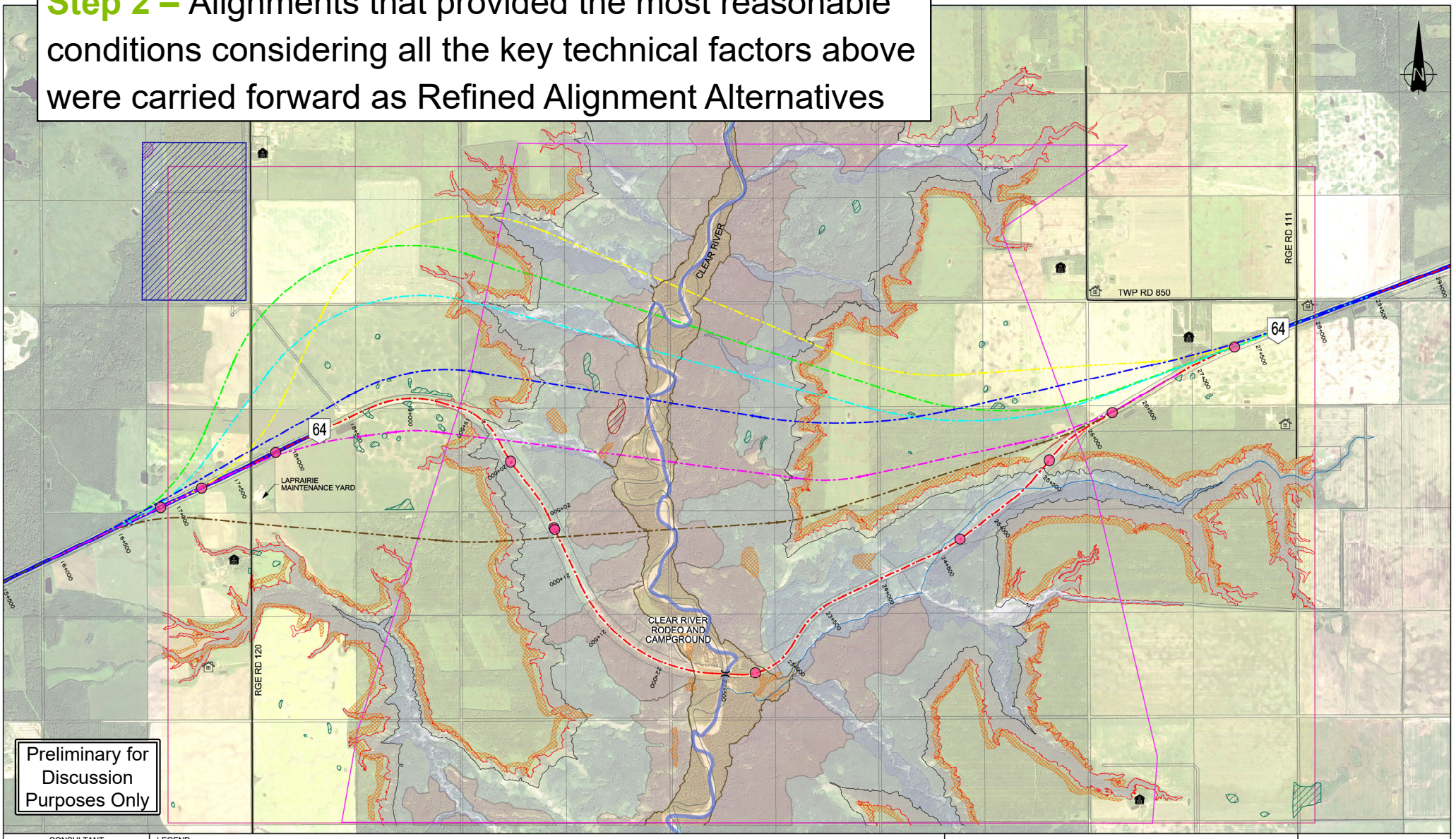
# Initial Alignment Alternatives

**Step 1 –** Initial Alignment Alternatives were developed by the study team considering desirable technical outcomes



# Refined Alignment Alternatives

**Step 2 –** Alignments that provided the most reasonable conditions considering all the key technical factors above were carried forward as Refined Alignment Alternatives

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**REFINED ALINGNMENT ALTERNTIVES**

HIGHWAY 64 REALIGNMENT (CLEAR RIVER VALLEY) FUNCTIONAL PLANNING STUDY

| PHOTOGRAPHY DATE | LOCATION | DATE | FIGURE | DRAWING |
|---|---|---|---|---|
| 16-08-2021 | HIGHWAY 64:02 | 10/28/2022 | 1.7 | R-1270-PL007 |

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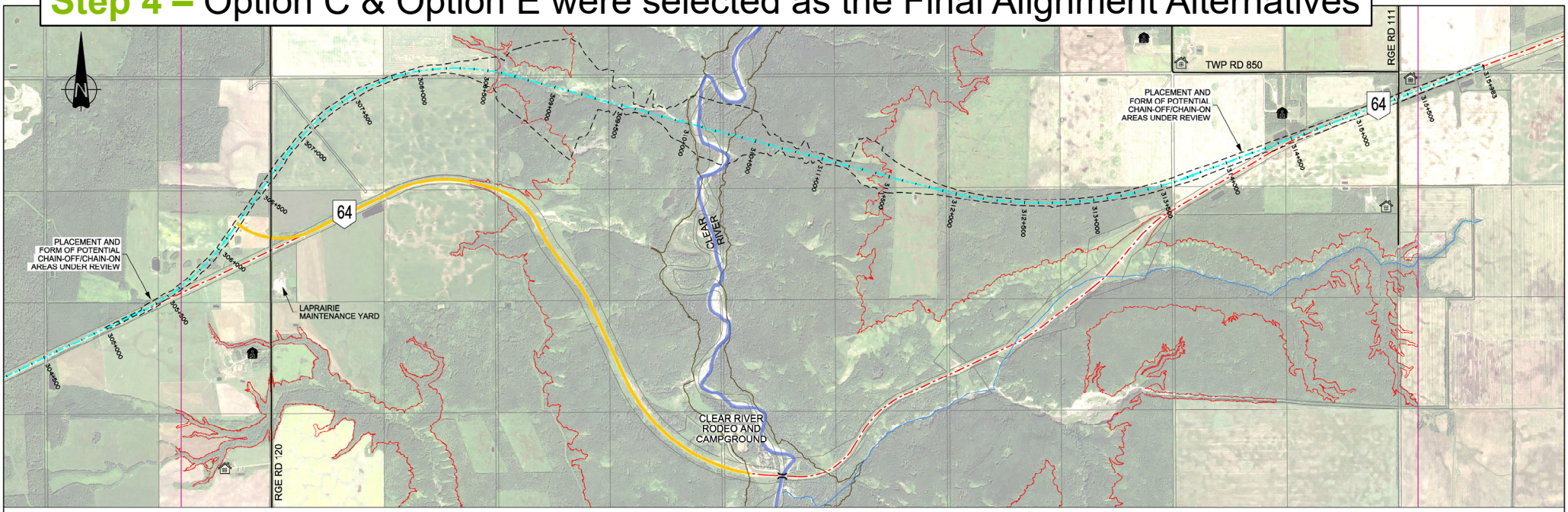
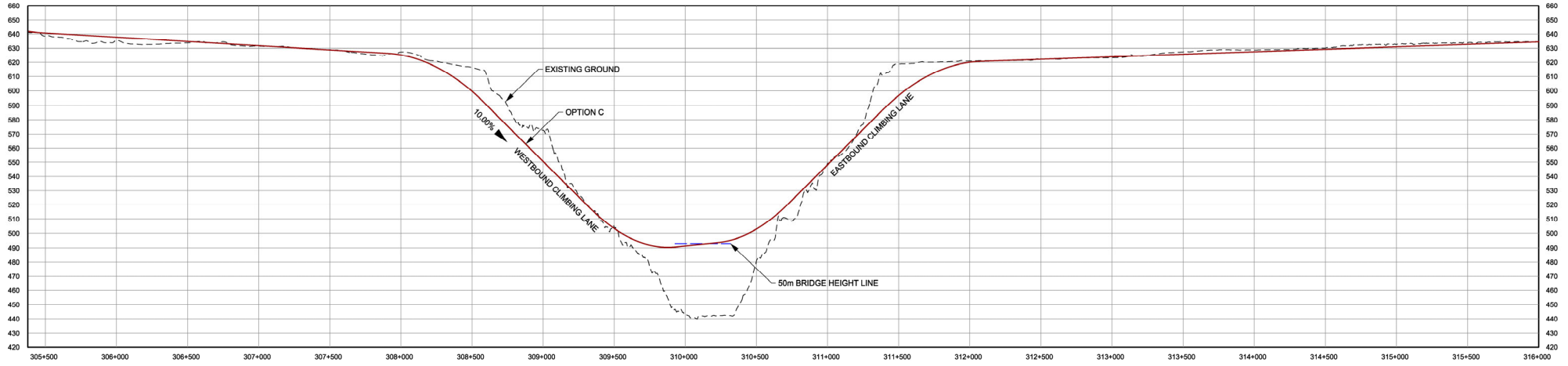
# Alternative Development

- **Step 3 –** Bridge heights varying between 30m and 50m as well as, roadway grades between 8% –10% were investigated for each of the **Refined Alignment Alternatives**
- This allowed for further review of geotechnical suitability, provided preliminary estimates of right-of-way needs, earth moving and disposal quantities, and roadway and bridge costs.
- **Step 4 –** Option C & Option E were selected as the Final Alignment Alternatives.
- These options:
  - Provide a wide enough valley base to allow for a 50m bridge height
  - Are located along ravines
- Both of which help to reduce earth moving and disposal quantities and costs

# Final Alignment Alternatives – Option C

**Step 4 –** Option C & Option E were selected as the Final Alignment Alternatives

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PROJECT NO. E00791A

LEGEND

ROADWAY
- EXISTING HIGHWAY 64 CENTRELINE
- MUNICIPAL ROADWAY
- BRIDGE
- STUDY AREA BOUNDARY
- OPTION C
- CAMPGROUND ACCESS CONNECTION
- CUT / FILL LINES

ENVIRONMENTAL
- WATERCOURSE

GEOTECHNICAL
- TOP OF VALLEY
- TOE OF SLOPE

LAND DEVELOPMENT
- ACREAGE
- FARMSTEAD

Preliminary for Discussion Purposes Only

SCALE 0 100 250 500 m

## OPTION C

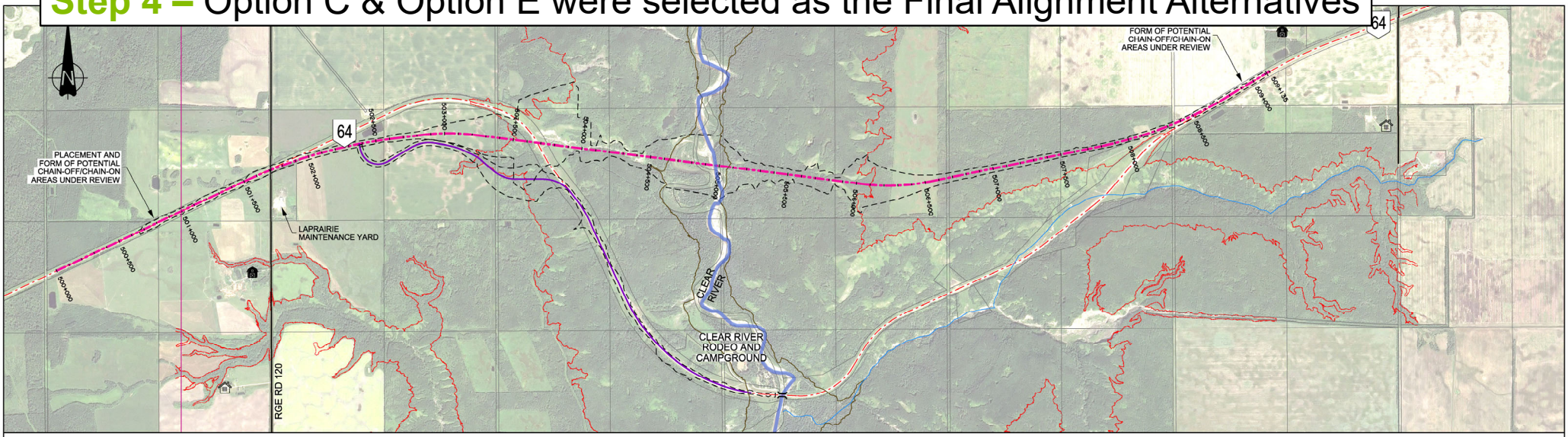
HIGHWAY 64 REALIGNMENT (CLEAR RIVER VALLEY)
FUNCTIONAL PLANNING STUDY

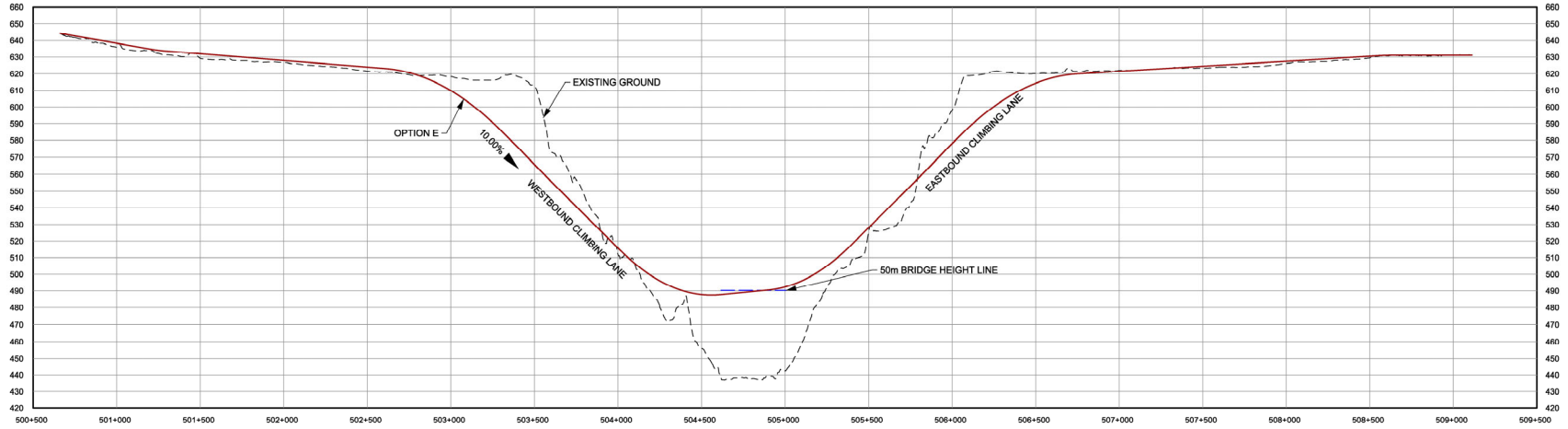
Alberta

| PHOTOGRAPHY DATE | LOCATION | DATE | FIGURE | DRAWING |
|---|---|---|---|---|
| 16-08-2021 | HIGHWAY 64:02 | 10/28/2022 | 1.8 | R-1270-PL008 |

# Final Alignment Alternatives – Option E

**Step 4 –** Option C & Option E were selected as the Final Alignment Alternatives

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LEGEND

ROADWAY
- EXISTING HIGHWAY 64 CENTRELINE
- MUNICIPAL ROADWAY
- BRIDGE
- STUDY AREA BOUNDARY
- OPTION E
- TOP PARALLEL ACCESS OPTION
- CUT / FILL LINES

ENVIRONMENTAL
- WATERCOURSE

GEOTECHNICAL
- TOP OF VALLEY
- TOE OF SLOPE

LAND DEVELOPMENT
- ACREAGE
- FARMSTEAD

Preliminary for Discussion Purposes Only

SCALE 0 100 250 500 m

OPTION E

HIGHWAY 64 REALIGNMENT (CLEAR RIVER VALLEY) FUNCTIONAL PLANNING STUDY

| PHOTOGRAPHY DATE | LOCATION | DATE | FIGURE | DRAWING |
|---|---|---|---|---|
| 16-08-2021 | HIGHWAY 64:02 | 10/28/2022 | 1.9 | R-1270-PL009 |

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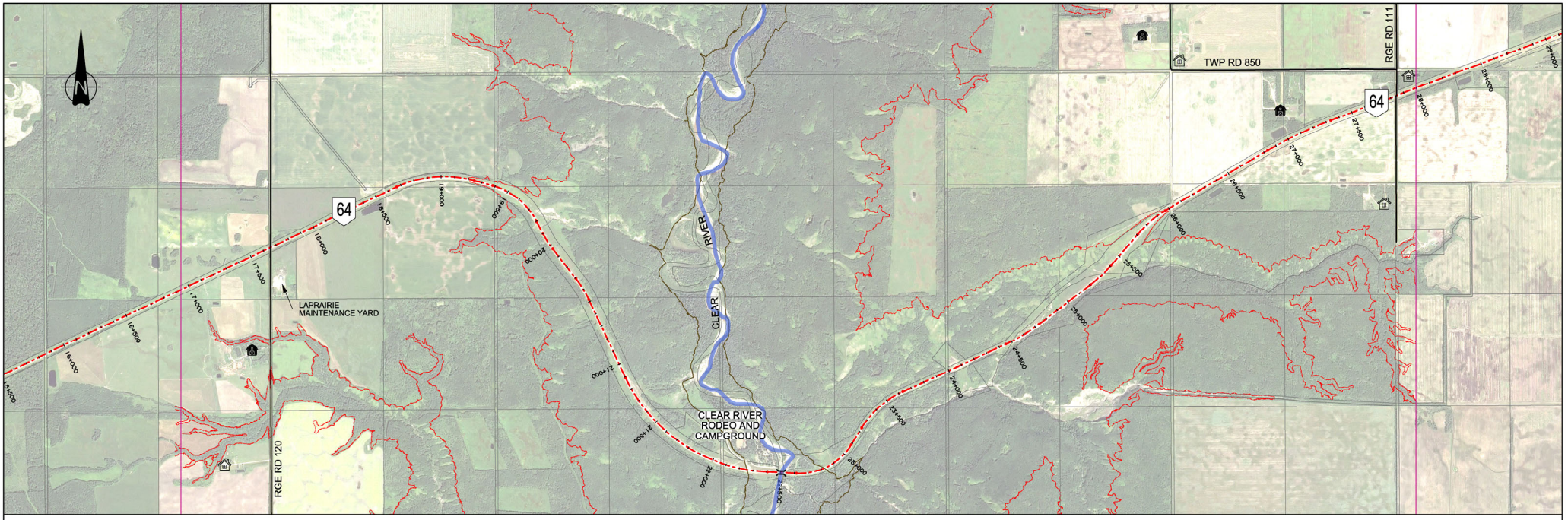
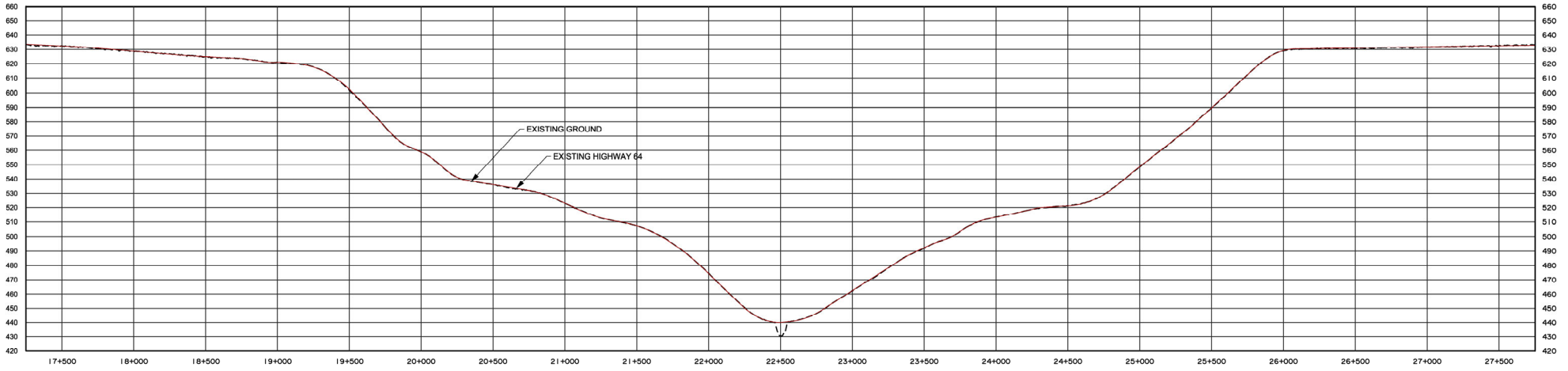
# Existing Crossing

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PROJECT NO. E00791A

LEGEND

ROADWAY
- EXISTING HIGHWAY 64 CENTRELINE
- MUNICIPAL ROADWAY
- BRIDGE
- STUDY AREA BOUNDARY

ENVIRONMENTAL
- WATERCOURSE

GEOTECHNICAL
- TOP OF VALLEY
- TOE OF SLOPE

LAND DEVELOPMENT
- ACREAGE
- FARMSTEAD

Preliminary for Discussion Purposes Only

SCALE
0 100 250 500 m

## EXISTING HIGHWAY 64

HIGHWAY 64 REALIGNMENT (CLEAR RIVER VALLEY)
FUNCTIONAL PLANNING STUDY

Alberta

| PHOTOGRAPHY DATE | LOCATION | DATE | FIGURE | DRAWING |
|---|---|---|---|---|
| 16-08-2021 | HIGHWAY 64:02 | 10/28/2022 | 1.10 | R-1270-PL010 |

# Preliminary Screening

| | Criteria No.: | 1 | 2 | 3 | | 4 | 5 | 6 | 7 | | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DESCRIPTION: | Environ-mental & Historical Resources | Bridge Placement & River Training | Geotechnical Stability | | Construct-ability - Traffic Disruption | Access to Rodeo & Camp-ground | Impact to Land Uses | Land Requirements | | Excavation | Preliminary Cost Estimate |
| | ALIGNMENT OPTIONS | | | Bridge Placement | Hillsides | | | | In the River Valley | Above the River Valley | | |
| 1 | **Option 'C'** (north of existing) | Good | Good | Moderate | Moderate | **Best** | **Best** | Moderate | Moderate | Good | Moderate | **Worst** |
| 2 | **Option 'E'** (crossing existing) | Moderate | **Best** | Moderate | Moderate | Good | Good | Good | **Best** | **Best** | Good | **Worst** |

| RANKING LEGEND | Scale: | Poor Outcomes | | | | Better Outcomes |
|---|---|---|---|---|---|---|
| | | Worst | Poor | Moderate | Good | Best |

## Screening Criteria

1. **Environmental & Historical Resources**
   Impact on watercourse crossings, fisheries, wetlands and historical resources.
2. **Bridge Placement & River Training**
   Ability to move the river, hold it in place using river training spur & guide bank structures
3. **Geotechnical Stability**
   Compares alignments to a typical river crossing with flat stable terraces on each side and approach fills less than 10 m high and considers added risks compared to a typical approach cut of less than 15 m depth in a stable valley slope
4. **Constructability – Traffic Disruption**
   Extent of construction related disruption to access and traffic flow
5. **Ease of Access to Rodeo Grounds & Campground**
6. **Impact to Land Uses**
   Level of fragmentation to existing agricultural and grazing areas.
7. **Land Requirements**
   Comparison of land requirements both in & above the river valley
8. **Excavation**
   Amount of surplus material, including disposal impacts, ability to adjust design to improve material balance
9. **Cost Estimate**
   Anticipated construction and property costs

# Next Steps

- Review and summarize Information Session comments
- Finalize review and evaluation of alternatives
- Assess environmental, stormwater, bridge planning, and geotechnical requirements
- Develop functional plans for the possible realignment
- Hold Information Session 2 to present the preferred technically feasible alignment

*Highway 64, Looking East Across the Clear River Valley*

# Keep in Touch

Your input is important. **Please fill out a comment form.**

Was the information provided helpful in understanding the study? Please provide your general comments on the study information presented.

To receive notification of the next information session, please provide your email address on the comment forms.

Information session information will be available at: https://www.alberta.ca/highway-64-clear-river-valley.aspx

# Thank you for attending!

Please plan to join us at the next session in early 2023