File CG3821

Cando Rail & Terminals

Cando Sturgeon Rail Terminal West Expansion Summary of the Detailed Project Description Under the Impact Assessment Act

N ½ 34-55-22-W4M
Sturgeon County, Alberta

Clifton

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24 May 2024 File CG3821

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Sturgeon County, Alberta

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List of Acronyms

ACIMS	Alberta Conservation Information Management System
ACO	Government of Alberta's Aboriginal Consultation Office
ACSW	Alberta Ministry of Arts, Culture and Status of Women
AD	Arrival/Departure Railyard
AEPA	Alberta Environment and Protected Areas
AER	Alberta Energy Regulator
AF	Activity Factor
amp	ampere
ATEC	Alberta Transportation and Economic Corridors
BAT/BEP	Best Available Technologies / Best Environmental Practices
CEAA	Canadian Environmental Assessment Agency
Cando	Cando Rail & Terminals
CH_4	Methane
CF	Conversion Factor
Clifton	Clifton Engineering Group Inc.
CN	Canadian National Railway Company
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
dB	decibel
DFO	Fisheries and Oceans Canada
DPD	Detailed Project Description
ECCC	Environment and Climate Change Canada
EDI	EDI Environmental Dynamics Inc.
EF	Emission Factor
ESDC	Employment and Social Development
USEIA	United States Energy Information Agency
ESA	Environmental Site Assessment
FWMIS	Fisheries and Wildlife Management Information System
GHG	Greenhouse Gas
GPS	Global Positioning System
GWP	Global Warming Potential
ha	Hectare
HC	Health Canada
HP	Horsepower

HRA	Historical Resources Act
IAAC	Impact Assessment Agency of Canda
IPCC	Intergovernmental Panel on Climate Change
IPD	Initial Project Description
ISC	Indigenous Services Canada
km	Kilometre
kV	kilovolt
kVA	kilovolt amps
kWh	kilowatt hour
LPG	Liquefied Petroleum Gas
LUC	Land Use Change
MBCA	Migratory Birds Convention Act
Mt	Million metric tonnes
MW	Megawatt
MWh	Megawatt hour
NCIA	Northeast Capital Industrial Association
NG	Natural gas
NO_x	Nitrous oxides
N_2O	Nitrous oxide
NRCan	Natural Resources Canada
PHC	Petroleum Hydrocarbons
$PM_{2.5}$	Fine Particulate Matter
PM_{10}	Particulate Matter
RAP	Restricted Activity Period
SARA	Species at Risk Act
scf	Standard cubic feet
SO_2	Sulphur dioxide
SOI	Summary of Issues
SWMP	Stormwater Management Plan
t	Metric tonne
TDG	Transportation of Dangerous Goods
TDS	Total Dissolved Solids
TC	Transport Canada
USEPA	United States Environmental Protection Agency
WAGE	Women and Gender Equality
WAIF	Wetland Assessment and Impact Form
WAIR	Wetland Assessment and Impact Report

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Introduction

This document summarizes the Detailed Project Description submitted by Clifton Engineering Group Inc. (Clifton) on behalf of Cando Rail & Terminals Ltd. (Cando). Cando is a Canadian company founded in Manitoba that provides custom rail solutions.

This application is presented to the Impact Assessment Agency of Canada (IAAC) under the *Impact Assessment Act* in support of the expansion of Cando's existing rail terminal located in Sturgeon County, Alberta, which was approved in 2019 under the *Canadian Environmental Assessment Act*, 2012 (CEAA) with the reference number 80167.

The information included in this summary has been prepared in accordance with the IAAC's Annex II – Contents of a Detailed Project Description. Throughout the document, blue italicized text is included to show the content requirements from Annex II. This was included to correlate the content with the guidelines to demonstrate concordance with IAAC's information requirements, and for the convenience of the reader.

1.0 General Information

1.1 Project's Name, Type/Sector, and Proposed Location

The project's name, type or sector, and proposed location.

Table 1.1 – General Project Information	
Name	Cando Sturgeon Rail Terminal West Expansion
Type/Sector	Railyard
Proposed Location of the Railyard	Municipality: Sturgeon County Alberta Zoning: Industrial Land Use – Alberta's Industrial Heartland Alberta Township Survey System Description: N ½ 34-55-22-W4M Approximate GPS Coordinates: 53°47'59.43"N (latitude), and 113°11'11.97"W (longitude) Legal Land Descriptions: NE 34-55-22-W4M, NW 34-55-22-W4M, Railway Plan 0824867 Area C (short legal 0824867;C), and Plan 0824867 Area D (short legal 0824867;D)

The project applicable to this submission is the expansion of Cando's existing rail terminal located in Sturgeon County, Alberta. The expansion is to include the half section directly to the west of the existing rail terminal, roughly the same amount of land as the existing rail terminal, essentially doubling the terminal's capacity. The official project name for this application is the Cando Sturgeon Rail Terminal West Expansion; however, it will be referred to as the Project, Site or the expansion rail terminal throughout this document. For reference, the previous submission for the existing rail terminal was similarly named the Cando Sturgeon Rail Terminal Project. The location of the project within Alberta is depicted in Figure 1.

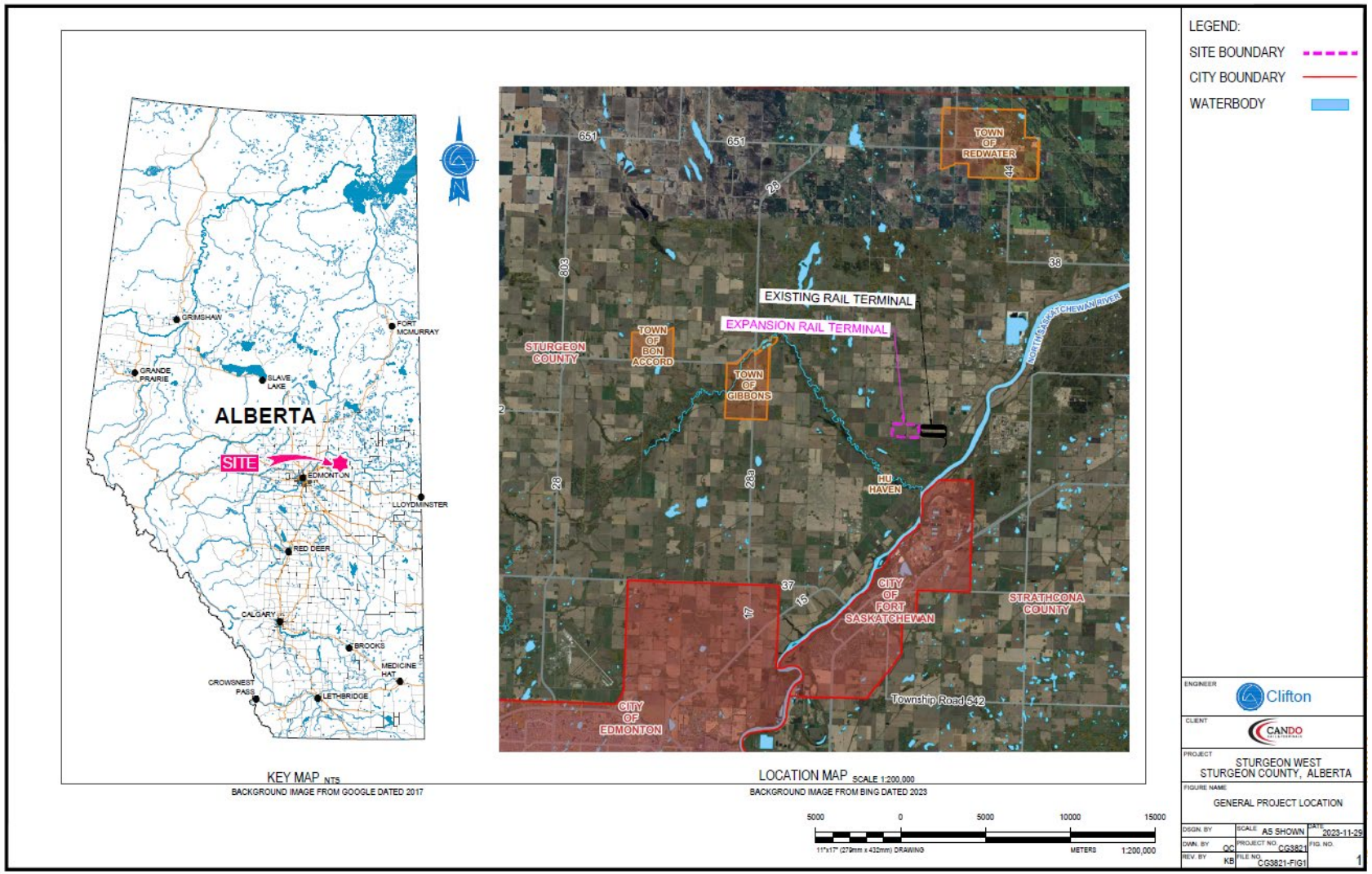

Figure 1 – General Project Location

After initial discussions with IAAC the project was determined to be an expansion of an existing rail terminal as the two rail terminals are adjacent, which establishes a clear connection between the two railyards. In addition, the two rail terminals will be directly connected by track, and components of the existing rail terminal, notably its connection to the Canadian National Railway Company (CN) rail line, will be necessary for the function and operation of the expansion rail terminal.

An important component of the project location is that it is in the Sturgeon County portion of Alberta's Industrial Heartland, a Designated Industrial Zone. The majority of the region (582 m^2) is zoned for heavy industrial land use and offers a concentrated location for chemical, petrochemical, and oil and gas facilities as well as provincial regulatory streamlining and cumulative environmental management (Alberta's Industrial Heartland, 2023). Figure 2 shows the location of the project within the boundaries of Alberta's Industrial Heartland.

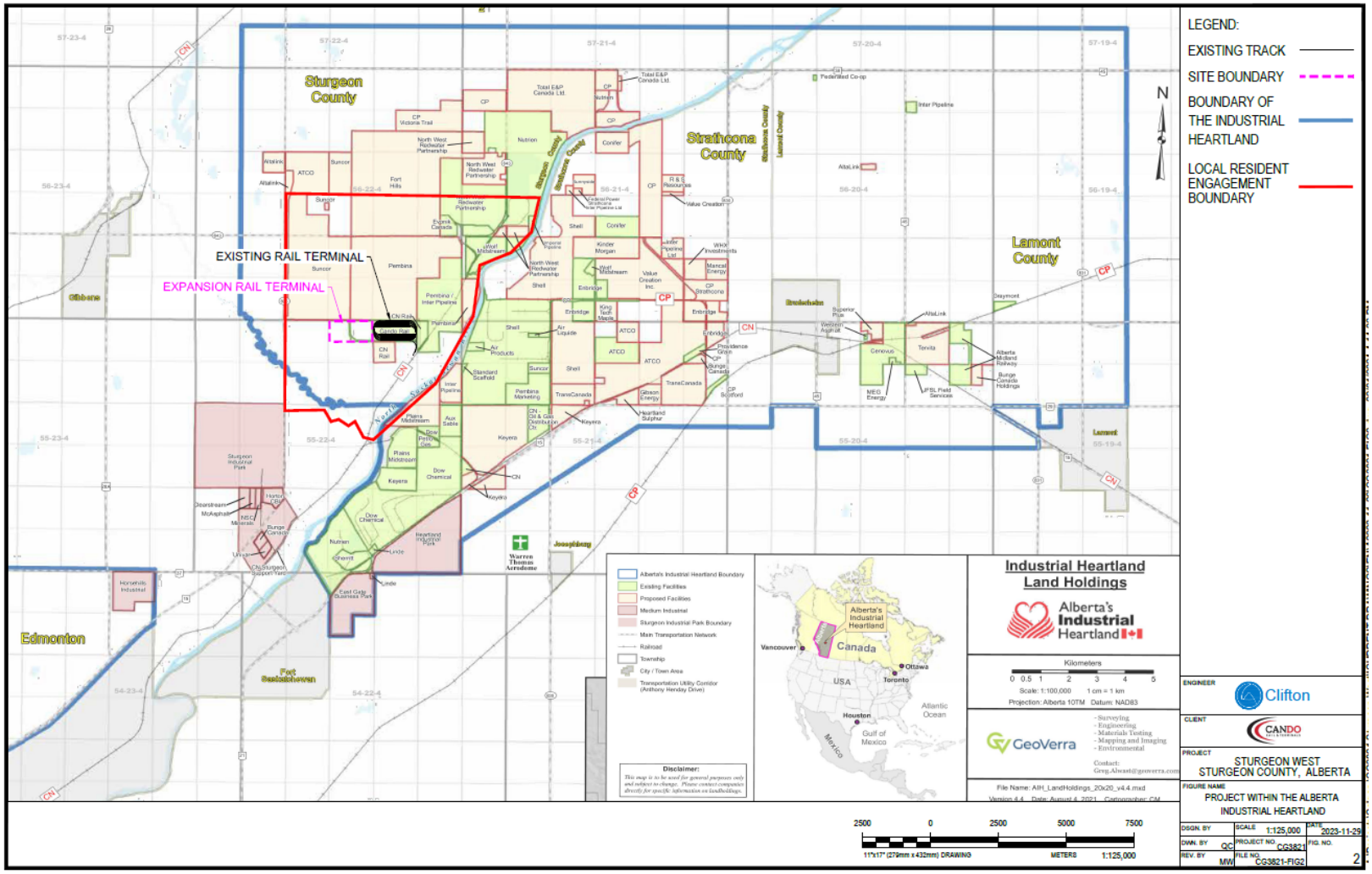

Figure 2 – Project Within the Alberta Industrial Heartland

The two quarter sections to be used for the expansion rail terminal are the northeastern and northwestern quarters of section 34, township 55, region 22, west of the 4th meridian (N ½ 34-55-22-W4M). The approximate latitude and longitude of the project are 53°47'59.43"N and 113°11'11.97"W, respectively. The legal land descriptions for the expansion rail terminal are: NE 34-55-22-W4M, NW 34-55-22-W4M, Railway Plan 0824867 Area C (short legal 0824867;C), and Plan 0824867 Area D (short legal 0824867;D). The two land titles for the quarter sections are privately owned whereas the two titles under Plan 0824867 are owned by CN Rail; however, CN Rail does not operate on the land. It is currently cultivated agricultural land. The total area to be used for the expansion rail terminal is approximately 130 hectares (ha).

A secondary component to the project consists of the creation of a bypass road. The connection between the existing rail terminal and the expansion rail terminal will cross Range Road 222 and may be used at almost any time of day for extended periods of time for railcar crossing. For safety and convenience of residents, Cando is working with Sturgeon County to close the portion of Range Road 222 between the two rail terminals. The bypass will enable continued local road connectivity and include upgrades to the existing Range Road 223 to the west of the W ½ 34-55-22-W4M, and the intersection of Range Road 222 and Township Road 560. To complete the bypass, roadways will also be constructed to the south of the S ½ 34-55-22-W4M (extension of Township Road 555) and a cul-de-sac will be constructed to the south of the expansion rail terminal where Range Road 222 ends. Once the road is constructed Sturgeon County will take over ownership and be responsible for the operation and maintenance. The bypass road is shown in Figure 3.

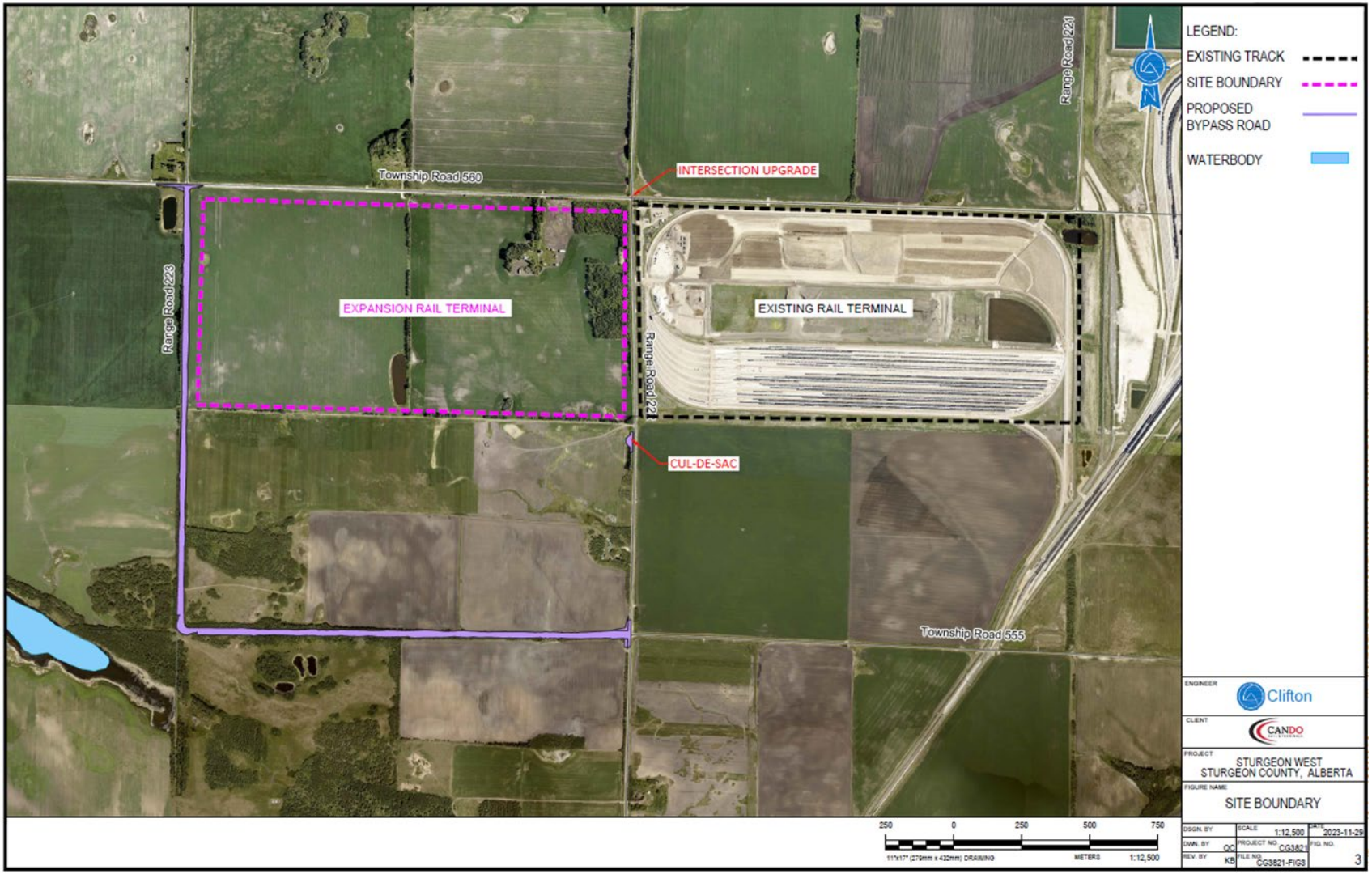

Figure 3 – Site Boundary

1.2 Proponent Contact Information

The proponent's name and contact information and the name and contact information of their primary representative for the purpose of the description of the project.

The proponent contact information for the purpose of this application is detailed below.

Table 1.2 – Proponent Information	
Name of Project	Cando Sturgeon Rail Terminal West Expansion
Name of Proponent	Cando Rail & Terminals Ltd.
Proponent's Contact Information	Unit 400 – 740 Rosser Avenue Brandon, Manitoba R7A 0K9 info@candorail.com Toll-Free: 1-866-989-5310 Phone: 204-725-2627 Fax: 204-725-4100
Primary Representative	Maxim Delisle GM Infrastructure Development
Primary Representative's Contact Information	Maxim.Delisle@candorail.com 1-416-799-5998

2.0 Planning Phase Results

2.1 Engagement with Jurisdictions or Agencies

A summary of and the results of any engagement undertaken with any jurisdiction or other party, including a description of how the proponent intends to address the issues raised in the Summary of Issues.

Cando has completed engagement activities with various stakeholders including landowners, residents, industry, and Sturgeon County throughout the planning of the expansion rail terminal. Clifton, on Cando's behalf, has also been engaging with federal and provincial regulatory officials. Indigenous engagement is covered in Section 2.2. A list of the parties engaged is detailed below Table 2.1.

Table 2.1 – Public and Regulatory Stakeholders
Federal Stakeholders • Impact Assessment Agency of Canada (IAAC)
Provincial Stakeholders • Alberta Environment and Protected Areas (AEPA) • Alberta Transportation and Economic Corridors (ATEC) • Alberta Ministry of Arts, Culture and Status of Women (ACSW)
Municipal Stakeholders • Sturgeon County
Individual Stakeholders • Landowners • Residents • Surrounding Industry

Engagement began in Spring 2023 and will continue throughout the lifespan of the project. Cando will continue to respond to any issues that may arise and is open to discussions with stakeholders. Cando created a dedicated email (candolistens@candorail.com) for all non-government stakeholders. The email can be accessed by select Cando employees who are designated liaisons.

2.1.1 Federal Stakeholder Engagement

Correspondence with IAAC began in June 2023 when it was determined that the project would fall under the *Impact Assessment Act*. Clifton has taken part in correspondence and meetings with IAAC, which are ongoing. As the existing and expansion rail terminals are not a Class 1 railway, the operation is under the jurisdiction of ATEC. Clifton submitted, on behalf of Cando, the IPD to the IAAC in February 2024. Following closing of the comment period, Cando received the IAAC's Summary of Issues (SOI) on April 12, 2024. Engagement with representatives of the IAAC has been ongoing to discuss project progress, next steps in IAAC's planning process and recently, to align on the process and responses to the SOI.

2.1.2 Provincial Stakeholder Engagement

Clifton initially held a meeting with AEPA representatives in October 2023. The discussion included an introduction to the project scope and location and conversations around applicable legislation and provincial submissions. It was determined that approvals for the Stormwater Management Plan (SWMP), and the Wetland Assessment and Impact Reports (WAIR) will be required through the Alberta's *Water Act*. Cando has received a Water Act approval in early May 2024 for the railyard (Reference: DAUT0015982); the approval for the bypass road is under review with AEPA. The SWMP was finalized since issuance of the IPD and it has been provided to Sturgeon County and AEPA for approval.

Provincial applications submitted under Alberta's *Water Act* require the completion of a Pre-Consultation Assessment through the Aboriginal Consultation Office (ACO). The results of the ACO's assessment were returned to Cando in April 2024 and the ACO has determined that further consultation is not required (Reference: FNC202450136).

Clifton reached out to representatives of ATEC to discuss requirements under the *Railway (Alberta) Act*. This discussion was specific to the additional requirements and timeline for review necessary for approval. Specific project details were not included as part of this discussion. Cando's existing rail terminal complies with all the necessary provincial requirements to operate.

A historical resources application detailing the physical location of the project was submitted to ACSW for evaluation as is required prior to beginning any development project in Alberta. Cando received approval under the *Historical Resources Act* for the project in April 2024 (Reference: 4715-23-0102-002).

Although approval has been granted, the project is still subject to section 31 of the *Historical Resources Act* which relates to the chance discovery of a historical resource. Cando will be adapting the chance find protocol developed for the existing Sturgeon Rail Terminal for the project, which includes how to identify historic artifacts, and steps to take in the event of a chance find, including stopping and resuming construction work, notification procedures, and instructions on how to document the find and the information to collect. The protocol also includes working with an archaeologist for recommendations on subsequent steps, and for compliance with the Standard Requirements under the *Historical Resources Act*: Reporting the Discovery of Historic Resources.

2.1.3 Municipal Stakeholder Engagement

Cando has an ongoing, collaborative relationship with Sturgeon County since the commencement of the existing rail terminal project. Numerous meetings and correspondence between the Sturgeon County Administration and Cando have been completed throughout the planning phase of the Project. Representatives of Sturgeon County have been providing advice and support regarding the County's interest in the project including development of the railyard, partial closure of Range Road 222, construction of the Bypass Road, traffic management for these components, development permit obligations, and resident and business interests. Formal engagement activities have also included creation of a formal Project engagement email address (CandoListens@candorail.com), which is available to all persons with concerns or to seek additional information.

There was a municipal vote by Sturgeon County Council for the proposed partial closure of Range Road 222 with the First Reading by Sturgeon County Council of the statutory road closure bylaw (Bylaw 1638/23 – Road Closure for Portion of Range Road 222, Sturgeon County 2023c) took place on November 14, 2023 and was carried/passed unanimously (Sturgeon County, 2023d). After First Reading of the Range Road (RR) 222 Closure Bylaw, a Public Information Session on the Project, proposed Road Closure and Bypass was held. The event was used to inform nearby stakeholders (residents, landowners, and industry) about Project elements. The Information Session was lightly attended, although some local residents and industry stakeholders did ask questions related to the Project. Few concerns were noted, and most

attendees seemed to be gathering information to better understand Project elements. One resident/farm family noted a concern about the proposed closure of RR 222 and committed to bringing that forward at the Public Hearing (below).

Following statutory guidelines, a Public Hearing about the proposed closure of RR222 was held on January 16, 2024, to formally gather public input and to inform Sturgeon County Council ahead of a referral/submission to ATEC about the proposed closure. Although it is a local road closure, provincial Ministry sign-off is needed to progress the road closure Bylaw to Second and Third Readings. At the Public Hearing, four people noted concerns about the road closure. Two noted concerns about increased traffic and development near their properties, and the protection of trees and irrigation routes, and have suggested mitigation measures both publicly and privately to Cando. Cando is taking appropriate action on these mitigations, and will action them in partnership with the County, if feasible. One speaker noted concerns about industrial development of any kind in the area, given the local farming history. Cando notes the area has been zoned for heavy industrial development for decades as it is part of Alberta's Industrial Heartland, and the provincial Designated Industrial Zone. One resident claimed the road closure and the extra length of time needed to drive large trucks and farm equipment around the Bypass would be detrimental to farm operations. Cando indicated that the proposed closure and, as mitigation, the Bypass Road, are critical needs for Project safety as there is a likelihood of trains blocking the road for extended periods at any time of the day. It is simply not safe or feasible to have a local road/public access through an active railyard. While the Bypass may increase travel distance, it also increases safety and is the best possible mitigation to ensure safe rail-based development. Cando has continued to take appropriate action to address concerns from the Public Hearing and has been actioning mitigations in partnership with nearby residents, landowners, and the county as feasible.

Following referral of the Road Closure Bylaw to ATEC, and assuming Ministerial sign-off, a Second and Third Reading by Sturgeon County Council of the Bylaw will take place. Timing of the Second and Third Readings, and the likely approval of the partial closure of Range Road 222 by Sturgeon County, are dependent on a response from ATEC, the receipt of which is still pending as of the date of this DPD but is still anticipated in the first half of 2024. Cando is continuing to work with the County regarding the road closure and Bypass, and notes both the County Administration and Council have indicated their support throughout the process.

Cando has continued to collaborate with the County on stormwater management planning for the project. The county has reviewed both Clifton's preliminary and final SWMP developed for the project and provided approval of the final version of the SWMP to Clifton in early May 2024. The final SWMP has been submitted to AEPA for approval.

2.1.4 Landowner

The land allocated for the use of the project is currently owned by private residents and businesses. These individuals or representatives of the businesses have been informed of the project. Cando is working closely with the landowners. Currently there do not appear to be any issues or concerns regarding the land sales and the properties have been accessed for preliminary assessments. Cando is coordinating with

landowners as required for the planning and execution of any additional site-based evaluations required as the project progresses.

2.1.5 Resident Stakeholder Engagement

Cando has sent notification letters to residents that would be potentially affected by the project. This included residents of Sturgeon County within the area outlined in Figure 4. In order to maintain the residents' privacy Sturgeon County facilitated mailing the letters. The letters provided the residents with contact information for Cando and encouraged feedback. Cando, in conjunction with Sturgeon County, also advertised and assisted in organizing an information session for the residents which took place on 02 November 2023. The information session included a presentation by Cando on the project. The residents in attendance were able to ask questions and sign up to receive a copy of the presentation. Any concerns noted during the information session were logged by Cando and are being considered during the project. All residents who reached out to Cando have been provided an individual response.

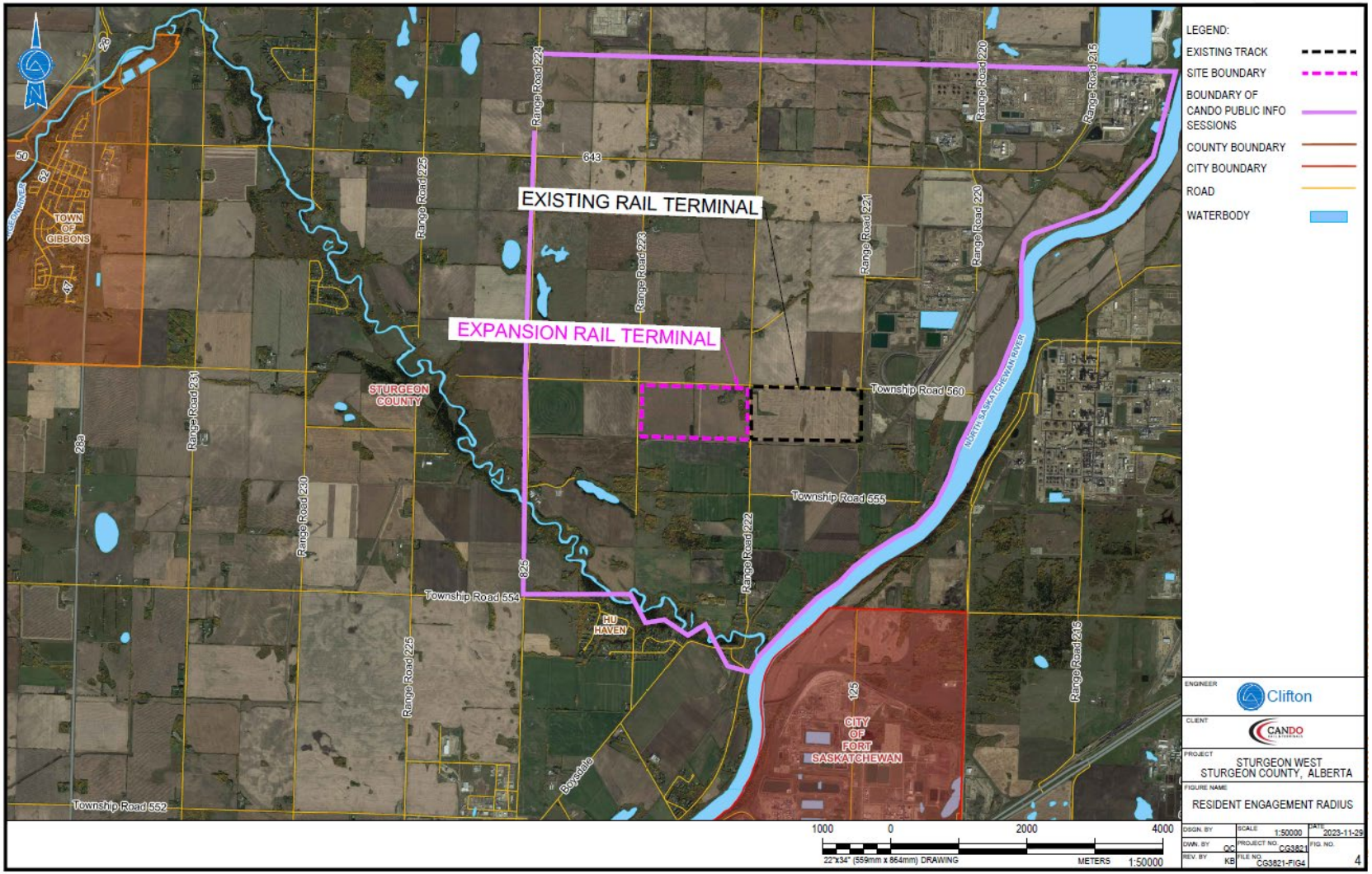

Figure 4 – Resident Engagement Radius

2.1.6 Industry Stakeholder Engagement

All industrial facilities within the Sturgeon County portion of the Industrial Heartland were emailed a letter describing the project with figures detailing the project location. The letters provided contact information for Cando and encouraged feedback. No objections or concerns regarding the project have been brought forward by industry stakeholders.

2.2 Indigenous Engagement

A summary of and the results of any engagement undertaken with Indigenous peoples of Canada, including:

- *A list of the Indigenous groups that may be affected by the project, including those that identified themselves during the planning phase as being potentially affected.*
- *A description of how the proponent intends to address the issues raised in the Summary of Issues.*

A list of Indigenous groups which may be impacted by the project was provided by the IAAC. In addition to the list provided, Cando contacted the Alexis Nakota Sioux Nation and Paul First Nation which are both located just west of Edmonton. The following Table 2.2 is the Indigenous groups contacted.

Table 2.2 – Name of Indigenous Community or Group

Alexander First Nation	Montana Cree Nation	Otipemisiwak Métis Government
Alexis Nakota Sioux Nation	Paul First Nation	Otipemisiwak Métis Government – Region 4
Enoch Cree Nation	Saddle Lake Cree Nation	Buffalo Lake Métis Settlement
Ermineskin Cree Nation	Samson Cree Nation	Kikino Métis Settlement
Kehewin Cree Nation	Foothills Ojibway First Nation	Lac Ste. Anne Métis Community Association
Louis Bull Tribe	Kelly Lake First Nation	

Following receipt of the Indigenous groups list from IAAC, contact information was collected from the ACO, IAAC, or the Indigenous group's website to initiate engagement activities by notifying each group of the project. Following responses to the Project Notification Letters, Cando completed subsequent engagement activities with the identified Indigenous groups. The main engagement initiatives are summarized in Table 2.3 below, and results of the engagement completed with are summarized in the sections following the table.

Table 2.3 – Main Engagement Initiatives with Indigenous Groups

Initiative	Issued/Occurred	Indigenous Groups Involved	Description
Project Notification Letters	Sent between September and December 2023	All groups listed in Table 2.3	Letters emailed with a 30-day response period requested to Cando (candolistens@candorail.com)
Follow-up Correspondence	January 2024 - ongoing	All groups listed in Table 2.3	Cando has been regularly corresponding with Indigenous groups as the project progresses
In-person and Virtual Meetings	October 2023 - ongoing	Enoch Cree Nation, Ermineskin Cree Nation, Samson Cree Nation, Buffalo Lake Métis Settlement, Lac Ste. Anne Métis Community Association	Cando met with Indigenous groups following Project Notification that expressed interest in meeting. Meetings to be scheduled as required.
Consultation Update Letters	Sent April 2024	Alexander First Nation, Buffalo Lake Métis Settlement, Enoch Cree Nation, Ermineskin Cree Nation, Kehewin Cree Nation , Lac Ste. Anne Métis Community Association, Paul First Nation, Samson Cree Nation	Response letters emailed in response to the Project Notification Letters and follow-up consultation

Table 2.3 – Main Engagement Initiatives with Indigenous Groups

Initiative	Issued/Occurred	Indigenous Groups Involved	Description
SOI of Comments to IAAC	April to May 2024	Michel Calihoo Nation Society, Montana First Nation, Otipemisiwak Métis Government, Friends of Michel Society, Enoch Cree Nation, Foothills First Nation, Lac Ste. Anne Métis Community Association	Responses to SOI are included throughout this DPD document
Continuing Engagement	Ongoing	Applicable Indigenous groups as required	Engagement activities will continue to include email correspondence, telephone discussions, meetings and site visits, as required,

The outcome and current status of ongoing engagement activities is summarized by each Indigenous group in the sections below:

Enoch Cree Nation (ECN)

Engagement activities have included numerous emails and an in-person meeting with ECN corporate representatives and senior management from Willows Construction (an ECN-owned business). In its comment submitted to IAAC, ECN identified concerns that land developments within and around their nation has resulted in a reduction in lands available for harvesting, as well as knowledge holders and elders with experience on the land. The project is not within or near ECN lands, which are approximately 63 km from the site. Most of the correspondence has been in relation to Cando's upcoming needs for contractors and Project-related services. Cando is currently developing its procurement strategy and will continue to engage with ECN as the project progresses to evaluate the potential for future collaboration or procurement opportunities. Cando has also offered to introduce ECN to project team who will be involved with procurement.

Ermineskin Cree Nation

A letter was received by Ermineskin Cree Nation requesting an in-person meeting. The letter further stated that the project is located on their ancestral territory and as such they would like to complete a site assessment to ground truth all potential impacts and to offer recommended mitigation measures to ensure seven generations of use. The letter stated that it was not Ermineskin's intent to impede the proposed project but as stewards of the land it is their duty to protect the safety of flora, fauna, birds, water, soil, air, and culturally sensitive areas. Cando has acknowledged receipt of the letter and has since held an in-person meeting with Ermineskin Cree Nation representatives to discuss the scheduling of a site assessment, the responses to the SOI and DPD, access to supporting studies and opportunities for community partnerships or scholarships.

Kehewin Cree Nation

An email was received by Cando from a representative of Kehewin Cree Nation requesting clarification on the Cando contact information for the project. Cando has responded to the request and has had several subsequent correspondence with representatives of Kehewin Cree Nation. Cando is coordinating a site visit with representatives of Kehewin Cree Nation and has confirmed their commitment to these arrangements in writing.

Kelly Lake First Nation

A representative of Kelly Lake First Nation contacted Cando stating that they had no objections to the project as outlined in the information letter. They did indicate that they would like to be informed about Project milestones.

Samson Cree Nation

An in-person meeting was conducted between Cando and representatives of Samson Cree Nation. The meeting went through an overview of the project with follow-up discussions and questions. During the meeting the representatives of Samson Cree Nation discussed having access to any wood following tree clearing activities and potentially providing a monitor during construction activities for spiritual safety and artifact identification. The Samson Cree representative also asked about contractor or procurement opportunities. Following the meeting, Samson Cree Nation was also to provide a list of companies and services they could potentially provide Cando for future collaborations, as well as the potential for community partnerships and scholarships. Cando is continuing to work with Samson Cree Nation regarding these requests. Cando is coordinating a site visit with representatives of the Samson Cree Nation and has confirmed their commitment to these arrangements in writing.

Lac Ste. Anne Métis Community Association

A virtual meeting was held to provide a Project overview and see if there were any initial questions or concerns by Lac Ste. Anne Métis Community Association. Representatives noted they would like additional mapping of the Project location (provided), asked how they were added to consultation lists for contact (IAAC, ACO), asked when IAAC would be making decisions, noted concern that Cando did not yet have a formal Indigenous Consultation Policy (in development), asked Cando to share early site works activities and opportunities for involvement, and noted interest in a site assessment. The group also requested to

conduct a site visit prior to construction to assess potential impacts and expressed interest in procurement and contracting opportunities for its partner companies. Cando is coordinating a site visit with representatives of the Lac Ste. Anne Métis Community Association and has confirmed their commitment in writing.

Paul First Nation

Cando and representatives of the Paul First Nation have been corresponding via email since the issuance of the Project Notification Letters. Paul First Nation has expressed interest in completing a site visit prior to construction, and Cando is coordinating a site visit with Paul First nation representatives and has confirmed their commitment in writing.

Buffalo Lake Métis Settlement

Following the issuance of the Project Notification Letter, Buffalo Lake Metis Settlement met and corresponded with Cando where they expressed an interest in procurement and contracting opportunities for the project. Cando representatives were subsequently introduced to the General Manager of Buffalo Lake Development Corporation (BLDC) Cando will communicate with Buffalo Lake Metis Settlement and BLDC as it finalizes its procurement strategy to discuss potential opportunities.

Alexander First Nation (AFN)

Representatives of the Alexander Business Centre (ABC) expressed interest in procurement, contracting and investment opportunities for project. Cando is currently finalizing its Indigenous Relations Guidance Principles and Guidelines. Investment opportunities will be evaluated once the IR Principles and Guidelines are completed, which Cando expects at the end of May 2024 and has communicated this timeframe to AFN/ABC. Cando will advise ABC of procurement and contracting opportunities once a procurement strategy is finalized. In the interim, Cando has requested that ABC provides an overview of its industrial project capabilities, past project experience, labour availability, and equipment lists.

Alexis Nakota Sioux Nation

Representatives of the Alexis Nakota Sioux Nation informed Cando that they had completed a visit of the site in January 2024. Alexis Nakota Sioux Nation indicated that they were satisfied with the status and land usage of the site and did not have issues with the project proceeding but would like to be informed if there were any changes to the scope of the proposed project.

To date, Cando has not received responses or feedback from its Project Notification Letters or subsequent attempts at engagement from Montana Cree Nation, Saddle Lake Cree Nation, Foothills Ojibway Society, Louis Bull Tribe and Otipemisiwak Métis Government and Kikino Métis Settlement. Montana Cree Nation and Otipemisiwak Metis Government have elected to provide comments through the IAAC regulatory process; responses for these comments are addressed in this DPD.

Based on the engagement activities conducted to date since the issuance of the initial Project Notification Letters, the main outcomes of Cando's consultation program are summarized below:

- One group indicated that they wanted to have a monitor on site during the construction period. Cando has indicated that given the prior use of the site as a farm the likelihood of cultural artifacts being found is very low. Cando will have a chance find protocol in place in the unlikely event that a historic resource is discovered.
- Five groups have indicated that they would like a site visit in the spring and Cando considers this a reasonable request. Cando will coordinate with groups to accommodate and to make arrangements. Cando's preference is to make the site available for a day or two for groups, though not all groups may be open to having other First Nations or Indigenous organizations attend at the same time. These considerations will be discussed with the five Indigenous groups as arrangements progress.
- One group has indicated they would like access to the firewood when the site is cleared and grubbed. Cando is willing to accommodate the lumber salvage request, however, they have relayed that the group will need to arrange transport of the firewood.
- Several Indigenous groups have made requests for contracting and procurement opportunities, especially in clearing and grubbing, roads and civil earthworks. Cando is maintaining a list of interested contractors and their capabilities as engagement progresses and while finalizing its procurement strategy for the project.
- There were some requests for technical documents generated for the project and Cando indicated that some will be available online once regulatory submissions are available to the public, and that any that are not included in a report or submission are considered confidential. Cando has relayed during consultation that they are willing to discuss the findings of confidential reports in a summary manner.

Cando is currently finalizing its Indigenous Relations (IR) Guiding Principles and Guidelines, which will outline opportunities for partnerships with First Nations and Indigenous organizations. Cando is also developing its procurement strategy for the project and is establishing if there will be procurement and contracting opportunities for Indigenous communities and organizations. Through the course of ongoing engagement, Cando has requested that Indigenous groups interested in participating in procurement and contracting opportunities provide information relating to the capabilities of their owned or affiliated companies, including industrial project experience, specialized skills and capabilities, labour pool, and equipment fleets capabilities.

Cando strives to build long-standing partnerships in the communities where it operates. Across its network, Cando provides scholarships and sponsorships that focus on four pillars of social responsibility: safety and protection of the community, environmental conservancy, leadership development and the "Cando Spirit". Cando also provides charitable donations through the Cando Cares Fund, supporting youth development programs, healthcare and health-related initiatives, educational programs and community development and building. Cando has relayed this information to Indigenous groups and has requested that interested groups engage with Cando as they are looking to expand partnerships with First Nations communities and Indigenous organizations near their operations.

Cando is committed to maintaining community mindedness and ensuring a sustainable future. Cando's sustainability plan is grounded in four pillars: environmental stewardship, indigenous relations, workforce/people, and community giving. Cando is committed to Indigenous awareness and leveraging

business relationships and opportunities with Indigenous partners. Cando is a member of the Aboriginal Chamber of Commerce in its head office jurisdiction. Cando is an active member of the Canadian Council for Aboriginal Business.

2.3 Studies and Plans

Any study or plan relevant to the project that is being or has been conducted of the region where the project is to be carried out, including any regional assessment that is being or has been carried out under section 92 or 93 of the Act, or by any jurisdiction, including by or on behalf of an Indigenous governing body, if the study or plan is available to the public.

There are no studies or plan, relevant to the project, under section 92 or 93 of the Impact Assessment Act or by any jurisdiction, including by or on behalf of an Indigenous governing body.

There are environmental initiatives in the region set out by the province and the Industrial Heartland, including (Government of Alberta, 2023a):

- An air quality management framework with local air quality monitoring through the Fort Air Partnership. A greenhouse gas (GHG) inventory and a discussion on air quality management is included in this report.
- A topsoil guideline document specific to the Industrial Heartland which outlines conservation, off-site storage, and off-site use of topsoil. Cando will continue to discuss the topsoil management with Sturgeon County.
- Water quality will be managed through the North Saskatchewan Region Surface Water Quality Management Framework. Cando will implement best management practices to conserve the quality of the regional surface waters.
- Water drainage will be managed through municipal master drainage plans and *Water Act* approvals. Cando is working with qualified professionals to manage the on-site wetlands and surface water drainage. Both components are provincially regulated by AEPA through the *Water Act*.

Cando is working with qualified professionals and government agencies to preserve the environmental quality of the air, soil, and water and ensure that all requirements are considered prior to construction.

2.4 Strategic Assessments

Any strategic assessment, relevant to the project, that is being or has been carried out under section 95 of the Act.

The Strategic Assessment of Climate Change, published in 2020, would be relevant to the project; it is a strategic assessment conducted under subsection 95(2) of the Impact Assessment Act, and it applies to all designated projects under the Impact Assessment Act. The Strategic Assessment of Climate Change was considered during Clifton's GHG estimate.

3.0 Project Information

3.1 Project Purpose and Need

An updated statement of purpose of and need for the project, including any potential benefits.

Purpose

The purpose of the project remains to leverage connections to a Class 1 railroad (Canadian National), the purpose of the project is to provide rail services to clients in the petrochemical industry located in Sturgeon County, the adjacent Strathcona County, within the Alberta Industrial Heartland zone, and beyond. Those rail services include rail car storage, train marshalling and assembly especially for unit trains, limited transloading of hazardous and non-hazardous materials, minor repairs and servicing to railcars and locomotives, and other rail services as may be identified by rail customers. The Cando Sturgeon Rail Terminal West Expansion is intended to be a full-service, multi-purpose facility for the storage, grouping, maintenance, and transloading of rail cars from various industries. This has resulted in the need to expand the existing Sturgeon East Railyard to handle demand.

Need

The need for the project remains to provide railcar storage facilities. Class 1 railroads in Canada have largely stopped storing railcars for customers, thereby creating a national need for railcar storage facilities. Combined with the increasing industrial presence in the area of the Project, and the increasing need for the transport of bulk products, there is a need for railyards to service customer railcar needs. The petrochemical industry located in Sturgeon County and the adjacent Strathcona County use large numbers of predominantly tank cars and hopper cars to transport their products to customers. The tank cars are privately owned and require rail facilities to store cars when they are not actively in use at either a production facility, a user's facility or in transit. Consolidating rail staging operations in one area removes the need for each individual industry to provide its own facility, assists with network fluidity for the Class I's over the road, and improves railcar handling efficiency at the end destination. This in turn lowers industry infrastructure and capital costs and increases competitiveness.

To meet the local needs for handling and servicing unit trains (trains that contain a single commodity) and to maintain connections to the CN Rail line and the rest of the North American market, it is imperative that the expansion rail terminal be comprised of long tracks with connections on both the north and south sides to the existing rail terminal.

Cando is committed to creating sustainable, long-term economic development opportunities that expand market access, make support chains more resilient, and generating potentially 40 new full-time jobs. Additional financial benefits include an approximate $140 million dollar spend and an increased tax assessment to all levels of government.

The project layout, as shown in Figure 5, includes the construction of the arrival/departure yard (around the property), the classification yards for sorting railcars (east side of the property), and the mechanical area for locomotive and railcar repairs (centre of the property). Additional ancillary facilities may be built to support railway operations based upon customer requirements. Facilities that may be considered include storage tanks for fueling, mobile transloading, and an expansion of the repair facilities. These uses may be developed in time along with appropriate permits and support infrastructure including power and surface and stormwater management.

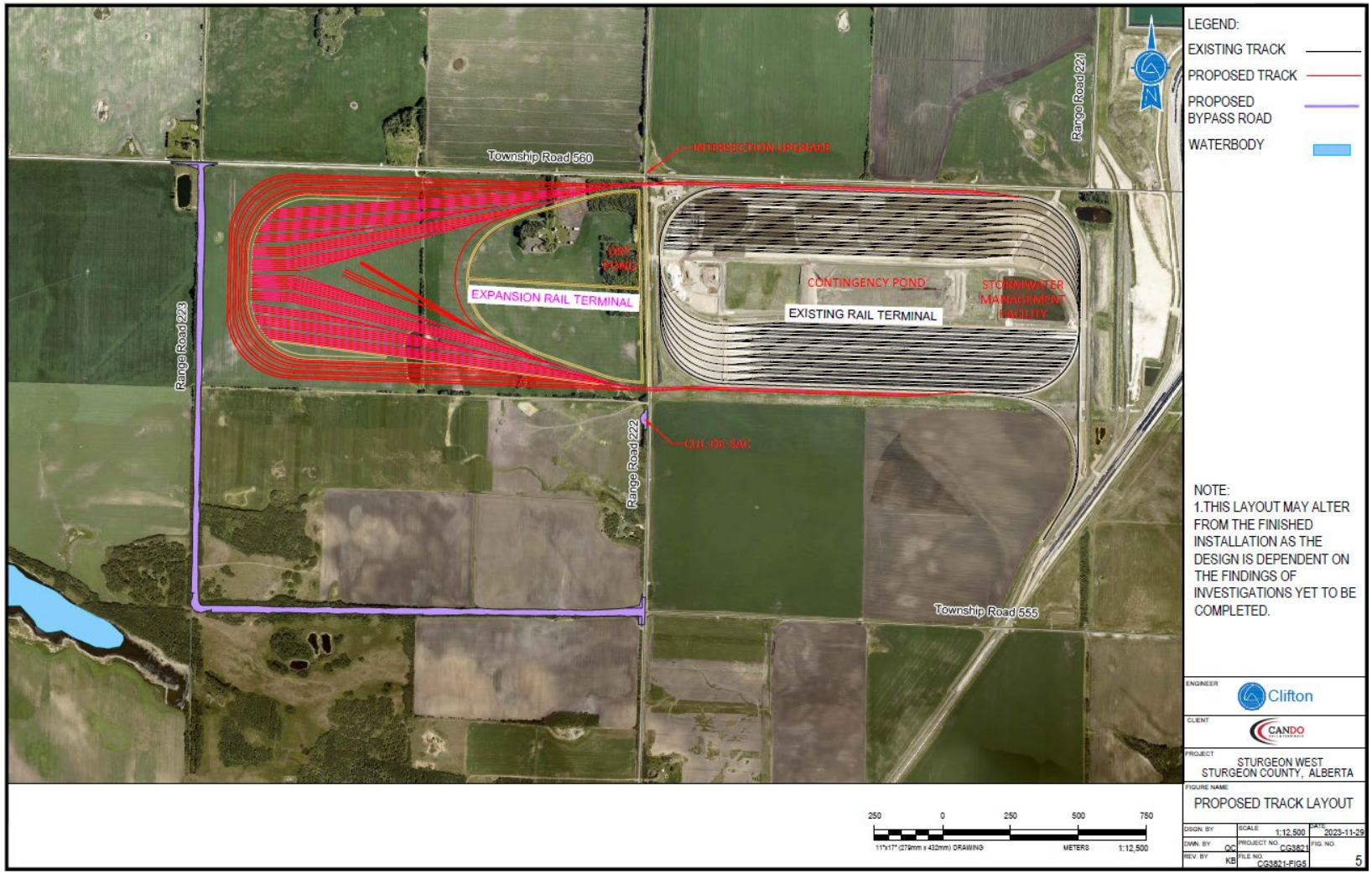

Figure 5 – Proposed Track Layout

3.2 Project Applicable Physical Activities Regulation

The provisions in the schedule to the Physical Activities Regulations describing the project, in whole or in part.

The project is subject to Section 55 of the Physical Activities Regulation which states the following:

"The expansion of an existing railway yard, if the expansion would result in an increase of its total area by 50% or more and a total area of 50 ha or more".

The expansion rail terminal encompasses a total area of approximately 130 ha of land which is greater than the 50 ha indicated and would also increase the capacity of the overall facility by approximately 50%.

There are no other criteria presented in the Physical Activities Regulation which would be applicable to the project. There do not appear to be any other federal authorities that would have direct jurisdiction over the expansion rail terminal. Cando is aware of the need to comply with the *Migratory Birds Convention Act* (MBCA) and the *Species at Risk Act* (SARA) in developing the project.

3.3 Project Activities, Infrastructure, and Physical Works

A description of all activities, infrastructure, permanent or temporary structures and physical works to be included in and associated with the construction, operation, decommissioning of the project, including their purpose, size and capacity.

3.3.1 Proposed New Infrastructure

The proposed new infrastructure for the project is detailed below in Table 3.1.

Table 3.1 – Proposed New Infrastructure for the Expansion Rail Terminal

Proposed Infrastructure	Description
Arrival/Departure Yard	The arrival/departure (AD) yard is to become the primary spot for the inbound and outbound train traffic. The AD tracks, ranging in holding capacity from 99 to 179 railcars, would provide a total of approximately 1,088 railcar spots. There is the potential to add locomotive storage tracks on the north and south sides of the AD yard to allow staging of locomotive power while trains are being built.
Classification Yards	The classification yards are comprised of four smaller yards with a combined railcar capacity of 1,860 railcars. These yards would be used to support the railcar demands of local industries and to assist in breaking up inbound unit trains and building outbound unit trains.

Table 3.1 – Proposed New Infrastructure for the Expansion Rail Terminal

Proposed Infrastructure	Description
Mechanical Yards	The mechanical yard/repair facility is in the center of the terminal and connects the classifications yards and the AD yard. It contains a small staging yard of approximately 70 railcar spaces, locomotive parking, and locomotive/railcar maintenance and servicing areas. These areas would be intended for minor repairs. It also includes a connecting track to assist in movements between the north and south of the facility.
Rail Connection	The new terminal is to be connected at both the north and south track extents to the existing rail terminal located to the east of Range Road 222. The extension of both the south and the north line is to be completed to ensure that all operations on both the expansion and existing rail terminals can occur simultaneously without disturbing the ability of either facility to meet customer demands.
Access Roads	Roadways will be constructed for crew and staff access by personal vehicle, for truck traffic to enter to refuel locomotives, and for service vehicles to provide water and remove waste products. The portion of Range Road 222 between the expansion and existing rail terminals is to be repurposed into the designated access point. Primary access is planned to be on the south side of the expansion rail terminal property from Range Road 222 with a second access from Township Road 560.
Internal Roads	Internal gravel service roads will be constructed beside the tracks along with gravel pads in the designated repair and transload areas (if constructed in the future) to allow for inspections and light maintenance of rail cars and equipment, and to provide access to emergency service vehicles. The service roads will be crowned to provide positive drainage away from the rail tracks and into the stormwater management system.
Water Management Infrastructure	Water supply for the expansion rail terminal is to be trucked in and stored in cisterns until it is needed. Additional infrastructure may require water supply which will be completed in accordance with all provincial requirements under Alberta's *Water Act*. A SWMP has been completed and has been approved by Sturgeon County, and is now under review for approval by AEPA under Alberta's *Water Act*.
Offices	Offices used during project construction will be housed in mobile, temporary trailers. Offices for the operation of the rail terminal are expected to be housed in a series of modular buildings with portable services (tanks for water, sewer, and gas connections) with gravel parking areas. As services expand, offices could migrate into structures, such as maintenance shops, with fixed utility connections.

Table 3.1 – Proposed New Infrastructure for the Expansion Rail Terminal

Proposed Infrastructure	Description
Services	Services including electrical power and internet will be connected to the expansion rail terminal from the existing rail terminal. Electrical power will be upgraded to support 3-phase power requirements and to power the various equipment, facilities, and offices. The power feed and distribution lines will be constructed and operated in accordance with an arrangement between Cando and the service provider. A small motor control center building may be required to house major electrical components. Internet and radio connections will be installed and operated in agreement with a third-party provider.
Security	Planned security measures for the expansion rail terminal include a standard 6 feet high chain link fence. The fence will be installed around the perimeter with strategically placed gates and emergency egress points. Lights and cameras are to be placed to cover important operational areas, gates, and office locations. The fence will limit unpermitted access from both humans and wildlife.
Bypass Road	Due to the closure of Township Road 222 between the two rail terminals a bypass road is to be built. The bypass will include upgrades to Range Road 223 to the west of the W ½ 34-55-22-W4M and the intersection of Range Road 222 and Township Road 560 to the northeast of the project. To complete the bypass, roadways will also be constructed to the south of the S ½ 34-55-22-W4M and a cul-de-sac will be constructed on Range Road 222 to the south of the project.

The only temporary structures are the mobile office and workspaces to be used during the project construction phase. The remaining infrastructure will be permanent. The temporary structures will be removed once the construction phase is complete.

3.3.2 Existing Infrastructure

Some infrastructure critical to the project is already in place at the existing rail terminal and includes:

- Utilities and third-party infrastructure services are in place or have been upgraded for the existing rail terminal. These services include internet and upgraded electrical power to 600-amp peak usage services – 300 kVA 3 phase power.
- Once the tracks of the expansion and the existing rail terminal are connected this will provide the connection to the CN Rail line.
- The surface and stormwater management system on the existing rail terminal will also be part of the SWMP for the expansion rail terminal.
- There are facilities for staff such as offices and washrooms on the existing rail terminal.

- The bypass road will include upgrades to the existing roadways including Range Road 223, the intersection of Township Road 560 and Range Road 222, and Range Road 222 to the south of the expansion rail terminal where a cul-de-sac will be constructed.

3.3.3 Project Activities

Activities associated with the project completed by third-party consultants and contractors remain under the care and control of Cando. The contractors/consultants have been procured by Cando and are subject to Cando's safety and environmental standards. Activities to be completed potentially outside of the care and control of Cando are those related to utilities. These activities will be directed by the utility provider with Cando's involvement as required.

Planning Activities

The project is undergoing an extensive planning period including:

- A desktop biophysical baseline review with field verification to determine features related to the siting, landscape, land use terrain, soils, vegetation, wildlife, habitat, surface water, and hydrology.
- A Wetland Assessment Impact Report (WAIR) for both the expansion rail terminal and the bypass road meeting the AEPA requirements.
- A Phase I Environmental Site Assessment (ESA) for both the expansion rail terminal and the bypass road to determine the potential for contamination to the subsurface soil and groundwater.
- A Phase II ESA to collect surface, subsurface soil and groundwater samples targeting areas identified in the Phase I ESAs for having potential contamination. The Phase II ESA was completed to meet applicable requirements and included assessment of baseline soil (surface and subsurface) and groundwater conditions.
- A geotechnical investigation to determine the soil characteristics to support the design of the project.
- A Wetland Assessment and Impact Form (WAIF) was completed to allow for the temporary disturbance to wetlands caused by the geotechnical drilling program in accordance with AEPA requirements.
- A Stormwater Management Plan (SWMP) has been completed and reviewed by Sturgeon County in May 2024; the county has indicated it is satisfied with the SWMP and the plan has been provided to AEPA to finalize the *Water Act* approval for stormwater management.
- A traffic impact assessment to support the design of the bypass road.
- Field surveys to determine the elevations and topographical terrain of the expansion rail terminal.

As design and as the project progresses, Cando and Clifton are planning additional assessments at the site in 2024, including completing supplemental sampling to further characterize baseline soil conditions and to inform on soil handling and management practices for the project. Cando is currently, or will be, working with interested parties in the planning and execution of these assessments or any additional field-based assessments that may become required at a later date.

Construction Activities

The physical works associated with the construction activities include the implementation of the rail tracks and associated components, site access roads, surface water drainage infrastructure, and the bypass

road. Cando is working with the county and provincial regulators to ensure that all requirements are met, including applicable approvals and authorizations are received. A safety plan and utility locates will be completed prior to construction. Security measures will be implemented to limit access by unauthorized personnel and animals. Equipment will be stored on the expansion rail terminal property. Cando anticipates that the procurement plan for the project will be complete by late-2024.

Land Preparation – Vegetation Clearing and Demolition

The first stage of construction activities includes planning with utility providers, removing vegetation, and demolition of existing structures. Only the vegetation within the footprint of the project is to be removed. Construction materials from demolition activities will be properly recycled or disposed of by a third-party contractor. If necessary, a Hazardous Building Materials Assessment will be completed on the existing structures to determine if abatement is required prior to demolition. Prior to vegetation clearing and demolition activities, a qualified professional will complete appropriate wildlife sweeps as required.

Soil Stripping

Stripping activities in the footprint will segregate the topsoil and the subsoil. Based on conversations with AEPA the topsoil management aspects of the project would fall under the jurisdiction of Sturgeon County. It is most likely that the topsoil will be stockpiled for potential future reuse or repurposed at another location.

Cut/Fill Activities

The area will be cut/filled with the reuse of soil from high elevations to areas of lower elevation if the material is deemed suitable. If imported material is required, it will be tested for environmental and geotechnical suitability prior to use. The material will be moved, spread, and compacted using appropriate equipment. As the material is being excavated additional work necessary for the completion of the approved SWMP such as site grading or ditches will also take place. The current stormwater management design ties into the existing stormwater system on the operating rail terminal. If any underground infrastructure such as power lines and natural gas connections is necessary, it will be completed to the standards of the specific utility provider. It is possible that dewatering activities will be necessary during construction. The groundwater removed may be discharged following any necessary approvals from AEPA or the county to ensure that the water quality and quantity will not cause adverse effects. The main contaminant during dewatering activities is expected to be suspended solids which can be reduced if the water is retained allowing the solids to settle.

Grading

The material will be spread and compacted to meet site specifications. Granular material for road surfaces, pit run gravel, and sub ballast will be trucked over, spread out, and compacted with appropriate equipment.

Track Construction

Once the grade has been completed and inspected, track construction can begin. Portions of the expansion and existing rail terminals will be used to store the construction materials including soil and aggregate stockpiles and track materials. Track construction includes material distribution, skeleton track construction, and ballasting and surfacing. Material distribution includes getting the ties, rail and other track

materials positioned for assembly. The skeleton track construction consists of laying out the ties at the correct spacing, connecting the sections of rail to each other and the ties while getting the track on the design alignment. The ballast will be brought to the property and placed around the skeleton track. The track is then raised, and the ballast is compacted under and between the ties while alignment and elevation are aligned.

Bypass Road Construction

Following necessary approvals, the bypass road construction will follow similar steps to the track construction: vegetation will be cleared, topsoil will be stripped, and fill material will be placed in engineered lifts and tested to meet specifications.

Vegetation Management

If required, weed control activities will be done in accordance with the Alberta *Weed Control Act* and Sturgeon County requirements. Construction equipment and any vehicles are to be brought to site clean and free of vegetation, debris, soil/mud and seeds. To avoid unnecessary erosion to undeveloped portions of the property weed-free seed mixtures will be used.

Operation Activities

The construction will be phased, and some railway operations may be able to take place at the same time as some construction activities. The main activities to take place at the expansion rail terminal include sorting incoming and outgoing railcars, storing railcars, and assembling unit trains for departure. The operations will be under the jurisdiction of ATEC. To ensure compliance with ATEC, updates to the existing site-specific General Operating Instructions, Emergency Response Plan, Safety Management System (completed to Transport Canada standard), and the Operating Certificate (which is issued under the *Railway (Alberta) Act*) would be completed. Cando also has a Environmental, Social and Governance Policy and an Occupational Health and Safety policy and procedures.

The purpose of the rail terminals is to allow a singular location for the storage of railcars for local industry. Additionally, the expansion rail terminal offers maintenance and repair services for cars and locomotives. Between the expansion and existing rail terminals there could be up to 120 employees with 40 employees working per shift. The expansion rail terminal will operate 24 hours a day, seven days a week.

Decommissioning Activities

The project will operate without a defined end point. The decommissioning activities will be completed in accordance with the industry standards and regulations in place at that time. In general, the decommissioning activities will include disconnecting any on-site utilities and removing any in-place infrastructure including buildings, tracks, tanks, etc. The materials will be removed from site by a qualified contractor. It is intended that the removal will include the recycling of any applicable construction materials with the remaining materials disposed of properly. The decommissioning process will include an assessment of potential contamination to the subsoil or groundwater. If determined to be necessary, the decommissioning process will also include the reclamation of contaminated soil and groundwater completed to the standards applicable at the time of decommissioning.

3.3.4 Incidental Activities

Include a description of the physical activities that are incidental to the designated project.

To make the expansion rail terminal project safe and feasible additional roadways are required to be constructed. This includes the completion of the bypass road works.

3.4 Production Capacity

An estimate of the maximum production capacity of the project and a description of the production processes to be used.

The arrival/departure yard is anticipated to have holding capacities ranging from 99 railcars to 179 railcars, with a total of approximately 1,088 railcar spots (approximately 60 ft or 18.3 m/rail spot). The classification yards have a combined railcar capacity of approximately 1,860 railcars. The mechanical yard contains a small staging yard of approximately 70 railcar spaces. The track and associated activities are thought to encompass the entirety of the half section, approximately 130 ha in size. The anticipated traffic is approximately as follows:

- CN Arrival: 4 to 5 Trains/day
- CN Departure: 4 to 5 Trains/day
- Customer Inbound: 2 to 3 Trains/day
- Customer Outbound: 2 to 3 Trains/day
- Up to 2,000 railcars arriving and departing daily
- Up to 730,000 railcars arriving and departing yearly

3.5 Anticipated Schedule

The anticipated schedule for the project's construction, operation, decommissioning, and abandonment, including any expansions of the project.

The anticipated construction schedule without an Impact Assessment is as follows Table 3.2.

Table 3.2 – Anticipated Construction Schedule Without a Federal Impact Assessment	
Project Task	**Timeframe**
From approval to full build out	6-7 years
Site Preparation	November 2024 to February 2025
Construction Phase 1	February 2025 to February 2026
Further Construction Phases	2027 to 2030
Project Lifespan	TBD – No fixed end date
Decommission	TBD – >50 years

The anticipated construction schedule with an Impact Assessment is shown in Table 3.3.

Table 3.3 – Anticipated Construction Schedule – With a Federal Impact Assessment	
Project Task	**Timeframe**
IAAC Planning Phase	2024
Impact Assessment Completion	2024 – 2026 (assumes limited federal scope requirements)
Assessment and Decision Making	Early 2027
From concept to full build out	6-7 years
Site Preparation	March 2027 to July 2027
Construction Phase 1	July 2027 to July 2029
Potential Further Construction Phases	2029 to 2033
Project Lifespan	TBD – No fixed end date
Decommission	TBD – >50 years

3.6 Potential Alternatives

A list of potential:

- *alternative means of carrying out the project that the proponent is considering and that are technically and economically feasible, including through the use of best available technologies; and,*
- *alternatives to the project that the proponent is considering and that are technically and economically feasible, and directly related to the project.*

For rail, alternative means are limited for delivering projects of this type. While Cando will start this project with conventional diesel electric locomotives, they are exploring the use low-carbon fuels for combustion engines in the short-term and the electrification of its fleet of locomotives using batteries, hydrogen fuel cells, or a hybrid of both. Cando, in cooperation with Emissions Reduction Alberta, is a leading participant in the lithium-ion battery-powered locomotive initiative. Battery powered trains use multiple locomotives that would carry batteries to provide traction power for in-service use. The traction system of a battery powered train is based on that of a conventional electric train, but which is self-contained with the addition of on-board battery storage, supporting power converters, and temperature management for the batteries.

The only practical alternative to the expansion yard is to require clients to build their own storage yards and assemble trains there. This would result in many storage yards that would require significant additional land, as a minimum area is required to provide for proper train movement, switching and storage. These customer yards would likely be under utilized relative to the Sturgeon East and West yards, which will be managed full time to maximize the yards utilization. By effectively managing the yard, Cando can service multiple clients.

In addition to the above there are potential items that may be included in the expansion rail terminal depending on the physical space available and customer demands Table 3.4. None of the potential future infrastructure would fall under federal jurisdiction put appropriate provincial and municipal legislation would be followed along with best industry practices.

Table 3.4 – Potential Infrastructure Development

Railcar Repair Shop	If constructed, the structure would be comprised of a main shop with an office and support area. The railcar repair shop would include flaring and purging capabilities, to ensure that works can be safely conducted on railcars.
Locomotive Repair Shop	A full-service locomotive repair facility to complete heavy repairs within the building. Light maintenance activities would be completed outside the building in a designated area. Electrical charging infrastructure associated with Emissions Reduction Alberta and Cando's lithium-ion battery locomotive initiative would be included in the locomotive repair shop area.

Table 3.4 – Potential Infrastructure Development	
Storage Tanks	Temporary and modular buildings will require storage or holding containers for potable water, liquid waste, and solid waste. Other above ground storage tanks may include: diesel fuel, gasoline, nitrogen, used oil, and glycol. The amount of storage is unknown at this time but is anticipated to remain below the provincial Activities Designation Regulation of 5,000 m^3 or more. The tanks will be registered with the province, county, and/or emergency response as necessary.
Mobile Transload	There is a potential to provide a small scale mobile transload services to move products between railcars and trucks in support of local industries. Products may include dry bulk, aggregates, biodiesel, refined fuels, liquefied petroleum gas (LPG), and other products. The quantity of materials is expected to be limited to a maximum of four railcars per day, generating a maximum of 24 truck movements in/out of the facility. The requirements regarding the transloading of products have been discussed with ATEC as well as AEPA and all necessary approvals will be acquired.

4.0 Location Information and Context

4.1 Geographic Coordinates

Provide a description of the designated project's proposed geographic coordinates, including, for linear development projects, the proposed locations of major ancillary facilities that are integral to the project and a description of the spatial boundaries of the proposed study corridor.

The geographic centre of the expansion rail terminal is approximately 53°47'59.43"N (latitude), and 113°11'11.97"W (longitude). The terminal itself will cover a half section of land, approximately 130 ha in size. The Alberta township description is N ½ 34-55-22-W4M. Table 4.1 shows the approximate geographic extents of the bypass road:

Table 4.1 – Bypass Road Geographical Extents		
Description	**Latitude**	**Longitude**
Intersection of Township Road 560 and Range Road 222	53°48'12.32"N	113°10'27.87"W
Upgrades to Range Road 223	53°48'12.43"N - 53°47'19.54"N	113°11'56.77"W - 113°11'55.95"W
Southern Side – New Road Construction	53°47'19.54"N - 53°47'20.56"N	113°11'55.95"W - 113°10'25.15"W
Cul-de-sac	53°47'44.39"N	113°10'25.56"W

The majority of the bypass road is contained either within properties that are to be used for the rail terminal or within existing rights-of-way. There will be portions that will need to be acquired from local landowners prior to construction. The exact amount of land to be purchased depends on the final design of the roadway.

4.1.1 Site Maps

Site maps produced at an appropriate scale in order to determine the project's proposed general location and the spatial relationship of the project components.

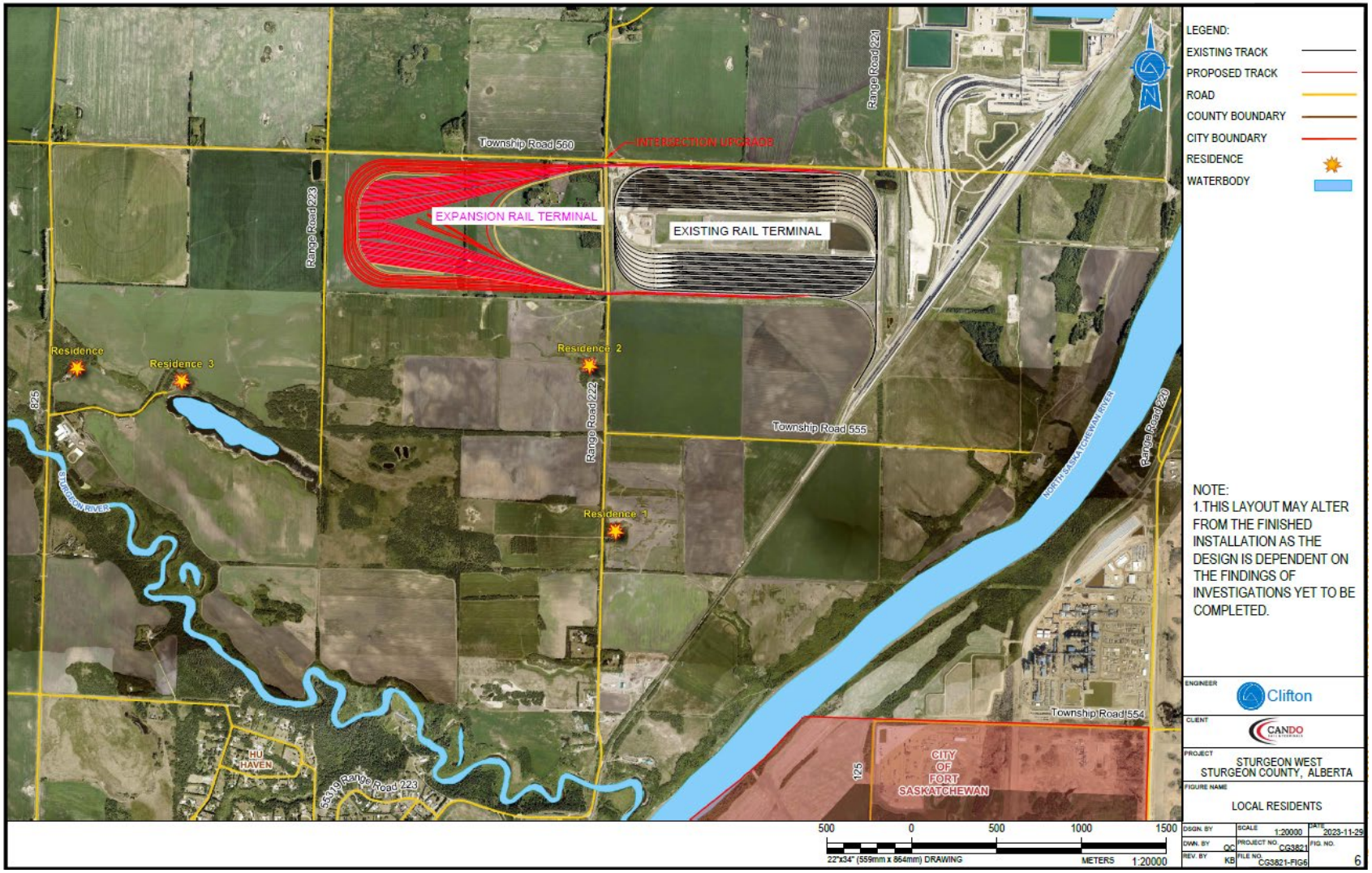

Figure 6 – Local Residents

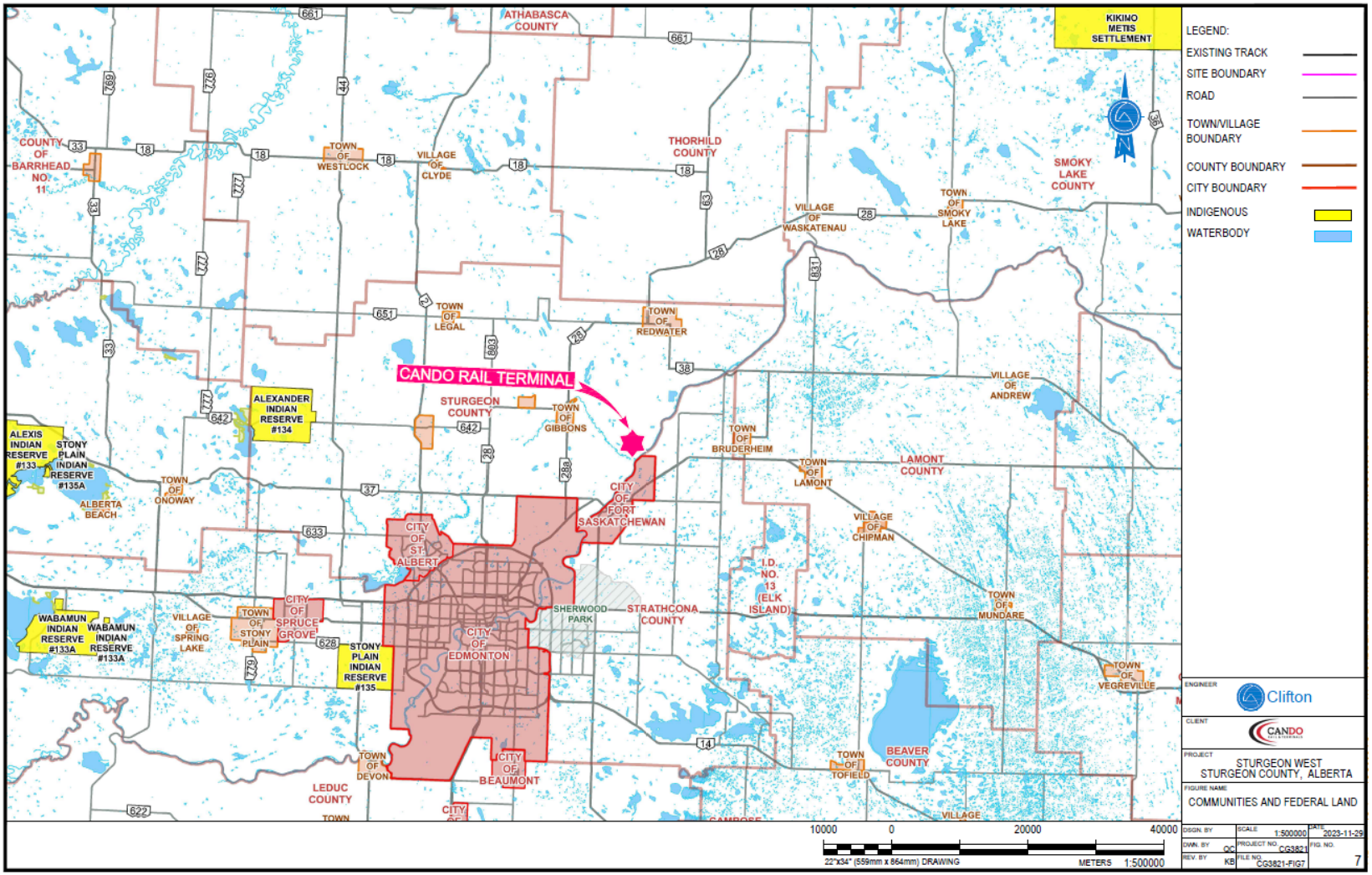

Figure 7 – Communities and Federal Land

4.1.2 Legal Land Descriptions and Landowner Documents

The legal description of land to be used for the project, including, if the land has already been acquired, the title, deed or document and any authorization relating to a water lot. The level of detail should be appropriate for the project type.

The legal land descriptions of the expansion rail terminal properties are NE 34-55-22-W4M, NW 34-55-22-W4M, Railway Plan 0824867 Area C (short legal 0824867;C), and Plan 0824867 Area D (short legal 0824867;D). Based on the current design the legal land descriptions and portions of land that may be purchased for the bypass road are as follows in Table 4.2.

Table 4.2 – Bypass Road Legal Descriptions

Location	Legal Land Description
Intersection of Township Road 560 and Range Road 222	Existing right-of-way and approximately 22.5 m^2 of SE 3-56-22-W4M
Intersection of Township Road 560 and Range Road 223	Existing right-of-way and approximately 338 m^2 of NE 33-55-22-W4M
Range Road 223	Existing right-of-way, 8,021 m^2 of SW 34-55-22-W4M, and approximately 8,121 m^2 of NW 34-55-22-W4M
Southern Boundary along the S ½ 34-55-22-W4M	Undeveloped right-of-way in SW 34-55-22-W4M and approximately 10,842 m^2 of SE 34-55-22-W4M and approximately 14,758 m^2 of NE 27-55-22-W4M
Cul-de-sac	Approximately 1,554 m^2 in the northern half of SE 34-55-22-W4M

Cando is currently in the process of completing land acquisitions for the project but all landowners have been engaged by Cando and discussions are proceeding as planned.

4.1.3 Proximity to Residents and Communities

The project's proximity to any permanent, seasonal, or temporary residences and to the nearest affected communities.

The zoning of the land in this portion of Sturgeon County is I5 – Heavy Industrial District (Sturgeon County Land Use Bylaw, Sturgeon County, 2023e). As noted, Alberta's Industrial Heartland (APEA, 2023d) is also

a Designated Industrial Zone within the province of Alberta. There is no intent of a future change in land use. No future residential development will occur within at least 800 m of the project boundaries. The railyard Project property is cultivated agricultural land with a single residence that will be vacated prior to construction.

To the north of the property is Township Road 560 followed by heavy industrial-zoned land that is primarily cultivated agricultural land leased out to local farmers. To the east is the existing rail terminal. To the south is a pipeline right-of-way followed by a sod farm, both with heavy industrial zoning. To the west is Range Road 223 followed by, again, heavy industrial-zoned land that is currently cultivated agricultural land. There are treed areas within the cultivated properties, though they are not numerous due to the agricultural history of the area. Based on a review of Google Earth© there appear to be four residences located within a 1.5 km radius of the site: two to the south of the site and the remaining two to the southwest.

The nearest residence is 500 metres south of the edge of the proposed expansion yard. This land is zoned heavy industrial, and it is for sale. After the January 16th Public Hearing closed, a member of the owner's family indicated that the owner/occupant of this residence did not consider the existing rail terminal noisy. The (existing) Sturgeon Terminal site GM and Supervisor have not received any noise complaints about the existing rail yard from the public to-date. This is likely due to the low population density, and the rural and industrial nature of the area. (M. Richard, Cando representative, personal communications, 2024).

The project is located approximately 2.5 km to the north of the Hu Haven rural subdivision. The northernmost boundary of the City of Fort Saskatchewan is located approximately 7.5 km to the southeast on the opposite side of the North Saskatchewan River. The community of Gibbons is approximately 7.6 km to the northwest of the project. The community of Redwater is located approximately 15 km to the north.

4.1.4 Project Proximity to Traditional Indigenous Uses

The project's proximity to land used for traditional purposes by Indigenous peoples of Canada, land in a reserve as defined in subsection 2(1) of the Indian Act, First Nation land as defined in subsection 2(1) of the First Nations Land Management Act, land that is subject to a comprehensive land claim agreement or a self-government agreement and any other land set aside for the use and benefit of Indigenous peoples of Canada.

The project properties are located on Treaty 6 land. The closest First Nation reserves are: Alexander First Nation 49 km west and Enoch Cree Nation 48 km to the southwest. The were other reserves further to the northeast, southwest, and west. There were no reserves within 150 km to the north, east, southeast, or south (Government of Alberta, 2021). The project is located within Otipemisiwak Métis Government Region 4 and District 11 – St. Albert Métis District (Otipemisiwak Métis Government, 2023). The closest documented Métis Settlement is Kikino Métis Settlement located approximately 84 km to the northeast. There were no First Nations within 150 km to the north, east, southeast, or south of the Site. These locations are based on a review of the documented reserves as mapped by the province (Government of Alberta, 2021, see Figure 6 and Figure 7).

Traditional land uses specific to the project location have not been identified. The larger area has been historically used by Indigenous communities through harvesting, fishing, and hunting. There may be some ancestral connections to the lands and Cando will continue to work with Indigenous groups. The landscape in the area has changed through cultivation and industrial developments. The project location has been used as cultivated agricultural land since at least 1950 (Clifton, 2023).

4.1.5 Proximity to Federal Lands

The project's proximity to any federal lands.

The Edmonton Garrison (Canadian Forces Base) is located to the north of the City of Edmonton and is approximately 18.5 km to the southwest of the project. Elk Island National Park is located approximately 20 km to the southeast of the project. Elk Island Nation Park is located within the Beaver Hills Biosphere. The boundary of the biosphere is approximately 16 km to the southeast (Beaver Hills Biosphere, 2023).

4.2 Physical and Biological Environment

A description of the physical and biological environment of the project's location, based on information that is available to the public.

Cando retained the services of EDI Environmental Dynamics (EDI) to complete a biophysical assessment which included a desktop review with field verification (EDI, 2023c). The following sections include information obtained from this report. Following the summary of the publicly available information is a description of the site-specific field observations, potential risks, and mitigation measures.

4.2.1 Terrain and Soil Summary of Publicly Available Information

4.2.1.1 Summary of Publicly Available Information

The project is located within the southern Dry Mixed Wood Natural Subregion (Natural Regions Committee, 2006). This region is typically characterized by undulating or hummocky surface expression with variable relief including some low-relief and inclined areas. The local topography was described as generally flat with a downward slope south towards the Sturgeon River and east towards the North Saskatchewan River (EDI, 2023c).

There are three soil mapping polygons consisting of five soil series listed within the project area (Government of Alberta and Alberta Agricultural and Forestry, 2023). Generally, the soils were described as eluviated or orthic black chernozems which one soil series described as gleyed black chernozems. The majority of the project footprint was noted to be loam, silty loam, silt loam, and very fine sandy loam textures (EDI, 2023c).

4.2.1.2 Site-Specific Risks and Mitigation

Field results generally confirmed the surface soil results from the desktop review. It was noted that black topsoil material (A horizon) was approximately 20 to 40 cm thick and described as a silty clay loam or clay

loam. The B horizon was an additional 20 to 40 cm thick and was described as clay loam or clay. The A and B horizon soils in the footprint of the project will be stripped prior to construction. In discussions between Clifton and AEPA it was determined that the conservation and management of the surface soils would fall under the jurisdiction of Sturgeon County. The management of the soils must still comply with Alberta's *Soil Conservation Act* (EDI, 2023c).

The risks to the soil due to the project include:

- Loss of soil due to erosion.
- Degradation of stockpiled materials.
- Soil compaction due to rutting and moving equipment.
- Potential for soil contamination.

Table 4.3 – Soil Risks and Mitigations

Risk	Mitigation
Erosion	• Limit the area stripped as much as practicable. • In dry, windy conditions use water on the surface of exposed soils. • If possible, place any stockpiled fine-grained materials away from low-lying areas and drainage courses and in locations with wind coverage to avoid material from entering waterbodies. • If possible, cover the stockpiled materials with a tarp or, if they are intended for long term storage, seed the stockpiles with an acceptable mixture. • To reduce siltation to nearby waterbodies, construct earthen berms, or ditches to control the surface water runoff as per an approved SWMP. The current SWMP includes the retention of waters to allow for the settlement of suspended solids.
Degradation	• Test the soils for clubroot, a soil borne disease affecting canola, mustard, and other crops in the cabbage family. • Soils will be stockpiled as required. • Reuse and/or remove soils, pending the approval, to avoid long-term storage. • If soils are stockpiled long-term, consider testing and amending the soil to improve the chemical/physical characteristics prior to reuse.
Compaction	• Avoid using equipment off-site to reduce the effects of compaction as compact soils result in the reduction of plant rooting and growth. • Use designated paths when running equipment.
Contamination	• Use drip pads and spill containment during activities with a higher risk of a spill/release occurring.

Table 4.3 – Soil Risks and Mitigations	
Risk	**Mitigation**
	• Properly dispose of all hazardous materials. • Keep all on-site vehicles and equipment in good condition and free of leaks. Inspect equipment regularly and repair as needed. • Keep spill response materials on-site and clean-up any spill or release immediately properly disposing of contaminated materials, including any soil or water, to avoid the contaminant migration. • Ensure compliance will all transportation of dangerous goods (TDG) and Workplace Hazardous Materials Information System (WHMIS) regulations. • Engage a qualified third-party for the remediation and removal of any contaminated materials. • Fueling will take place away from drainage systems and water bodies to prevent the spread of contaminants if a spill or release were to occur. • If there are contaminated materials on-site that will be disturbed then a soil management strategy will be created. This may include the segregation and off-site treatment or disposal of contaminated soils with confirmatory samples collected to determine if all contaminated materials were collected. The Phase II ESA being completed is specific to the areas identified as being potentially contaminated during the Phase I ESA.

4.2.2 Vegetation

4.2.2.1 Summary of Publicly Available Information

The Dry Mixed Wood Subregion of the Boreal Natural Region (Natural Regions Committee, 2006) is composed of aspen forests and cultivated lands with wetlands and low-lying areas. A review of the Alberta Conservation Information Management System (ACIMS) system did not indicate the presence of a listed vegetation species (AEPA, 2023a). A large portion of the project area consists of cultivated land with limited native species. The remaining areas consisted of a mix of deciduous trees, graminoid marshes, and deciduous swamps (EDI, 2023c).

4.2.2.2 Site-Specific Risks and Mitigations

The complete list of observed vegetation species is included in EDI's biophysical report. Five different noxious weed species were observed within the project area. There was also one listed plant, clammy hedge-hyssop, identified in two different locations. The plant is not federally listed in SARA. The plant is also known to be present in disturbed wetlands, is locally abundant, and was reported to ACIMS (EDI, 2023c).

Potential risks to vegetation include:

- Loss of native vegetation.
- Introduction and spread of invasive plants and noxious weeds.

Table 4.4 – Vegetation Risks and Mitigations

Risk	Mitigation
Vegetation Loss	• Limit clearing activities to the extents necessary and practicable. • Clearing actives should occur during the winter months to avoid disturbance to dormant plant species and wildlife, especially birds, as per the Alberta *Wildlife Act* and Canada's *Migratory Birds Convention Act*. • Use the existing and expansion rail terminals and cultivated land areas for laydown and equipment storage to avoid disturbing native plant species as much as possible. • Native vegetation is not to be harvested. • If culturally significant flora or fauna is identified in the area, specifically by an Indigenous group, Cando will engage with the party to come to a mutually agreed upon plan. • If possible, the listed plants will be salvaged prior to construction and translocated to local waterbodies.
Invasive Species	• To avoid the spread of invasive species and noxious weeds control measures approved by Sturgeon County conform to Alberta's *Weed Control Act* will be implemented. These measures could include removal of the weeds, mowing the areas to prevent seeding, landscaping, tilling the soils, and the use of approved herbicides.

4.2.3 Wildlife and Wildlife Habitat

4.2.3.1 Summary of Publicly Available Information

The project is not located in any designated wildlife sensitivity zones. The closest sensitivity zone is the Key Wildlife and Biodiversity Zone located approximately 280 m from the project and is associated with the Sturgeon and North Saskatchewan River Valleys (Government of Alberta, 2022). The project is located 200 m from a sharp-tailed grouse survey area and a sensitive raptor zone for the bald eagle (Government of Alberta, 2022). The project area does not overlap with any federally designated critical habitats (DFO, 2022; ECCC, 2022b) or any important bird areas, migratory bird sanctuaries, or national wildlife areas (Government of Alberta, 2022; EDI, 2023c).

Known wildlife to the area include mule and white-tailed deer, moose, many bird species, and small mammals. Three bird species have historically been reported within 2 km and there is documented fish presence within the Sturgeon and North Saskatchewan Rivers (AEPA, 2023b). These species were not

listed with the federal or provincial government. The cultivated lands may provide habitat for deer, some birds, and small mammals. The treed areas within the project area would provide habitat for birds, ungulates, and small mammals (EDI, 2023c).

4.2.3.2 Site-Specific Risks and Mitigations

Activity from woodpeckers was noted and there was an unoccupied stick nest observed. Other trees were noted to be large enough to support habitat for raptor nests and pileated woodpecker nest cavities. No active nests/cavities were noted during the site visit. Thirteen different bird species, deer tracks, mule deer, and red squirrel were observed (EDI, 2023c).

Risks to the wildlife and wildlife habitat due to the project include:

- Loss of habitat.
- Disturbance to present wildlife including the potential for nested bird.
- Increased human interference in the area due to the presence of workers.

Table 4.5 – Wildlife Risks and Mitigations

Risks	Mitigations
Loss of Habitat	• Limit the removal of habitat to the areas necessary. • Concentrate construction activities, such as vehicle parking, to areas that have already been disturbed.
Disturbance	• Complete clearing activities outside of the migratory bird nesting period (generally beginning of April to end of August). • Conduct a stick nest/nest cavity survey within suitable habitat of 1 km of the project during leaf-off conditions in 2024, with a follow-up survey in late May 2024 to verify if the nest is active or inactive and, if occupied, identify the occupant species. • Conduct a pre-disturbance wildlife and nest clearance sweep prior to the commencement of construction following the Wildlife Sweep Protocols (Alberta Environment and Parks 2020b). • Complete mitigation measures if occupied nests or other sensitive species are encountered. Mitigations would be specific to the findings but could include revisions to the construction plan or monitoring the wildlife for signs of stress. • Manage dust and noise as much as practicable to avoid stress on wildlife.
Human Interference	• Maintain the stormwater pond to avoid plant growth which can be desirable habitat and regularly remove the water from the pond.

Table 4.5 – Wildlife Risks and Mitigations	
Risks	**Mitigations**
	• Test the pond water promptly by a qualified professional prior to disposal if it is suspected of having been affected by a hazardous substance. • Include wildlife incidents, such as accidental vehicle collisions, in site-specific protocols as well as the steps to report an incident. • Avoid interactions with wildlife including hunting, chasing, or feeding.

4.2.4 Water – Surface Water, Wetlands, and Groundwater

4.2.4.1 Summary of Publicly Available Information

The project is located within the North Saskatchewan River watershed and the North Saskatchewan River Beaverhill Basin and Sub-basin. The Sturgeon River runs to the west, southwest, and south with the nearest point more than 1 km to the southwest. The Sturgeon River flows southeast into the North Saskatchewan River which is primarily located approximately 1.5 km to the east. The North Saskatchewan River then flows to the northeast. The regional surface water runoff generally follows in alignment with local topography meaning that the project would generally receive surface water from the northwest and that runoff from the project would generally flow to the south and east. Maps show a tributary of the North Saskatchewan River which may be connected to a wetland partially located within the project footprint (AEPA, 2023a; EDI, 2023c).

Another aspect of water is the groundwater. The groundwater in the area underwent a regional assessment in 2001 (Hydrogeological Consultants Ltd., 2001). Based on this assessment, the aquifer in the region of the project is the Oldman Aquifer. The groundwater is mainly sodium-bicarbonate based and has naturally elevated total dissolved solids (TDS) between 500 and 1,500 mg/L. Sulfate concentrations were generally below 500 mg/L. The chloride concentrations were expected to be greater than 250 mg/L which is the Canadian Drinking Water Guideline. The 250 mg/L guideline is an aesthetic objective (Government of Canada, 2023d) and does not necessarily indicate that there is an imminent risk to human health. There are also instances of fluoride levels above the Canadian drinking water quality guideline of 1.5 mg/L.

4.2.4.2 Site-Specific Risks and Mitigations

The local surface water runoff will be altered to direct the runoff to the engineered SWMP. The regional surface water runoff would be altered based on the presence of roadways, ditches, irrigation, cultivation, and berms. There is also a sluice gate located north of the project within the northern ditch of Township Road 560. When the gate is closed to the south the water flows east along the northern ditch of Township Road 560; however, when the sluice gate is open to the south the water flows south onto the land allocated for the expansion rail terminal (EDI, 2023c).

Thirty-two wetlands, described as land saturated with water for long enough to promote the formation of water altered soils, growth of water tolerant vegetation, and biological activity adapted to a wet environment

(Government of Alberta, 2013), were identified within the footprint of the expansion rail terminal. Nine wetlands were also identified within the footprint of the bypass road. These wetlands are shown in Figure 8. There were also ephemeral waterbodies and anthropogenic waterbodies (dugouts) identified within the project boundary. Ephemeral waterbodies are described as low-lying areas where water is briefly ponded in the spring or after a heavy precipitation events, but do not meet the requirements of a wetland (Government of Alberta, 2015). There were 18 ephemeral waterbodies, 13 ephemeral drainages, and three dugouts located within the project footprint. Detailed WAIRs regarding the wetland assessment have been completed under separate covers for submission to AEPA under the *Water Act*. The WAIR are designed to receive approval from AEPA for the removal of wetlands providing financial compensation (EDI, 2023c).

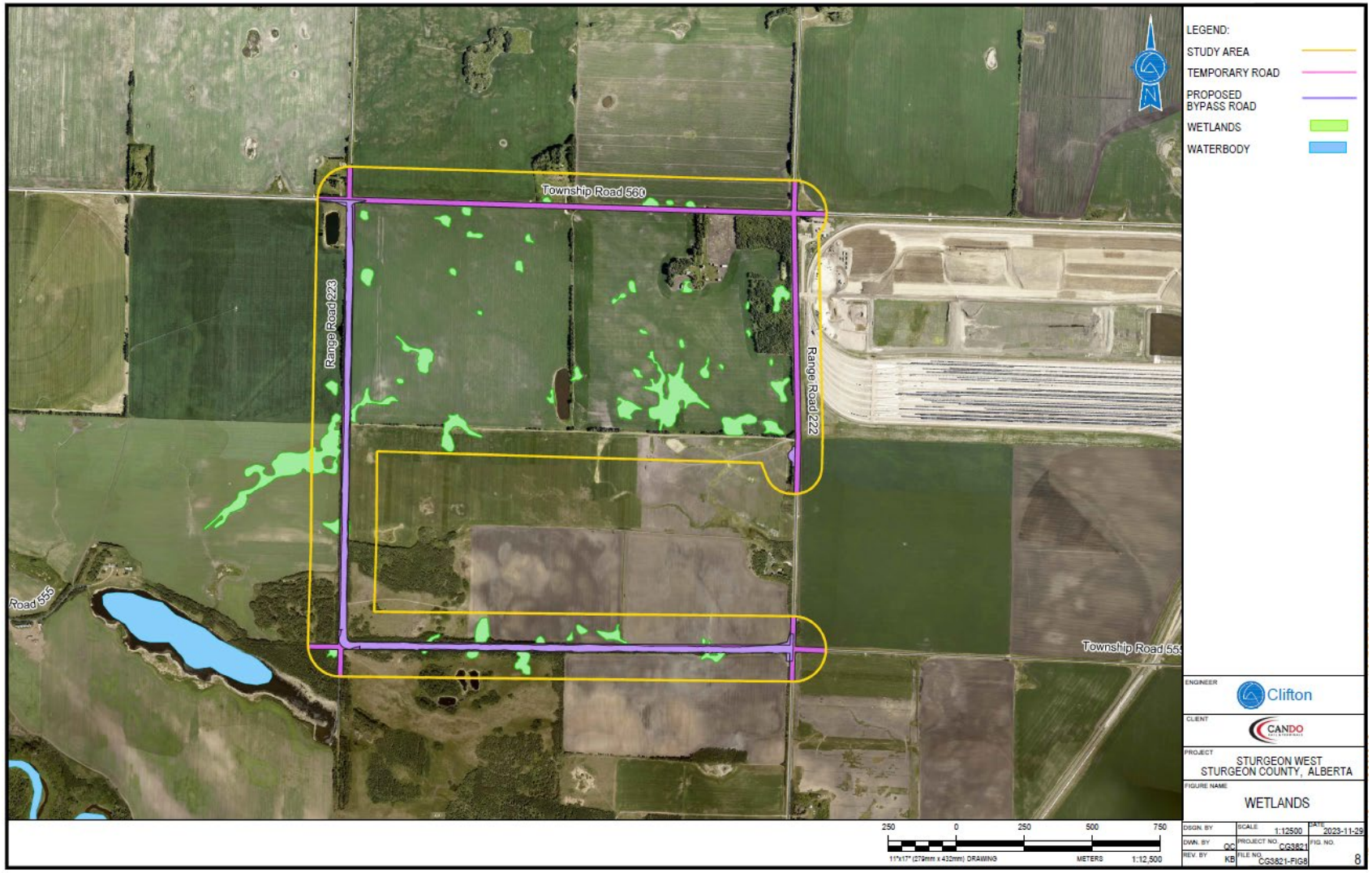

Figure 8 – Wetlands

Clifton completed a subsurface investigation to support a Phase II ESA and a baseline environmental assessment was completed with surficial soil samples and groundwater samples collected throughout the footprint of the expansion rail terminal. Groundwater samples were collected and analyzed for a variety of analytes during these investigations. There was a geotechnical investigation completed which included the installation of piezometers to determine the groundwater elevations. The results of the subsurface investigation are being reviewed and assessed. The results of the baseline environmental investigation may support the determination of soil and groundwater chemistry prior to operation of the expansion rail terminal.

The risks to groundwater, surface water, and wetlands due to the project include:

- Contamination due to a spill or release.
- Sedimentation to surface waterbodies.
- Changes to drainage courses causing alterations to waterbodies.
- Destruction of wetland habitat.

Table 4.6 – Water Risks and Mitigations

Risk	Mitigations
Contamination	• Potential contamination sources identified in the Phase I ESAs should be properly assessed in a Phase II ESA and, if contamination is present, specific handling procedures should be created by a qualified professional including guidance around removal, containment, and proper disposal of contaminated soil and groundwater. • Prevent contamination by using proper primary and secondary containment when storing hazardous substances as required by regulations. Storage tanks should be double walled or have other secondary containment capable of holding 110% of the contents of the container. • Ensure that there is an emergency response procedure if a spill or release is to occur. Including reporting procedures and clean-up using on-site spill kits. • Use drip trays or absorbents when completing activities that may be high risk for the release of a hazardous substance. • If the on-site ponds appear to have a hydrocarbon sheen or are known to have been affected by a hazardous substance use skimmers and booms to remove as much oil as possible. • Surface waters accumulated in the SWMP will be tested prior to release and if there are parameters above discharge criteria, then the water would be removed and properly disposed of by a qualified third-party. AEPA has advised that, physical/chemical characteristics for surface water at the site

Table 4.6 – Water Risks and Mitigations	
Risk	**Mitigations**
	will not be provincially regulated but should follow local precedence based on *Water Act* approvals issued to other industry stakeholders within Alberta's Industrial Heartland. • Complete high-risk activities in a designated area, potentially with mitigation measures to protect drainage channels. • Inspect equipment regularly and if a leak is observed ensure the equipment is properly repaired and fitted with a drip tray in the interim. • Use proper TDG and WHMIS protocols for the handling and transportation of hazardous materials and ensure staff are properly trained for the tasks they complete.
Sedimentation	• Allow retention of surface waters in the on-site ponds for the settlement of suspended solids. • Reduce dust and airborne particles by watering the ground surface (or using other dust prevention amendments) during dry, windy conditions. • If possible, cover or vegetate areas with a high potential for erosion. • Reduce dust generation through speed limits.
Drainage Courses	• Ensure that a properly engineered SWMP is implemented that follows the provincial *Water Act* regulations and municipal master drainage plan. The SWMP is to be approved by AEPA prior to implementation.
Destruction of Wetland Habitat	• Avoid wetlands outside of the project footprint to reduce unnecessary destruction of habitat. • Complete a thorough investigation of the wetlands within the project footprint and document the investigation in a WAIR for AEPA approval. The approval is contingent on compensation for all wetlands destroyed. The compensation is part of a wetland replacement program which aims to re-establish wetlands in other parts of the province.

4.2.5 Air Quality and Noise

4.2.5.1 Summary of Publicly Available Information

The air quality in Alberta's Industrial Heartland is managed on a regional basis, rather than individual facilities, through the Capital Region Air Quality Management Framework. Four concentration level limits have been established for nitrogen dioxide (NO_2), sulphur dioxide (SO_2), fine particulate matter ($PM_{2.5}$) and ozone (O_3). These limits are reviewed annually and are based on the Alberta Ambient Air Quality

Objectives (AAQO) for NO_2 and SO_2, and the Canada Wide Standards for $PM_{2.5}$ and O_3. Mitigative management actions are to be implemented as needed in response to triggering of limit thresholds (Clifton, 2023b).

Air quality in the region of the project is monitored by the Fort Air Partnership, which currently operates ten continuous and sixty-three passive air monitoring stations. Data is compared to provincial AAQOs and is used to calculate the Air Quality Health Index. The Air Quality Health Index is a publicly accessible report which provides daily risk ratings on a scale from low to very high risk related to outdoor activity. The closest continuous monitor to the project is located southeast at the Scotford Shell Refinery. The closest passive monitor lies approximately 65 km east of the project. The Air Quality Trend Health Index for 2019-2021 indicates that hourly readings were in the low-risk range for 85% to 90% of the monitoring period (Clifton, 2023b).

Noise levels in the area are managed for member companies under the Northeast Capital Industrial Association (NCIA) Regional Noise Management Plan. The development of the Regional Noise Management Plan was based on a predictive computer noise model that incorporates noise models from various facilities in the region, as well as road and rail traffic noise levels. The model is publicly accessible via Google Earth and displays four model cases. Case 3D shows 'Existing Facilities plus main Road and Rail Contributions' using 2019 roadway traffic data and estimated rail traffic volume on the main lines over a 24-hour period in 2020. The industrial facilities model assumes all equipment is running at 100% capacity 100% of the time. The regional model is updated every few years and considers significant changes in noise levels at industrial facilities and new data provided by ATEC and rail companies (if available). The current model predicts sound levels to be 43 to 48 dBA (Clifton, 2023b).

The nearest noise monitoring stations are located at the southwest fence line of the Pembina Redwater Fractionation facility to the east of the project, with another located more than 1,500 m from the project. Measured noise levels at most locations were shown to be generally consistent with model predictions. The field validation annual report conducted on behalf of NCIA also indicated that noise levels at most locations consisted of low frequency components with occasional mid/high frequency components. Trend analysis indicated no significant increasing or decreasing trends over baseline sound levels. Regarding rail transport activities, noise from train passages through the monitoring regions dominated the noise climate, although there had not been an increase of rail passages over 2019 observations (Clifton, 2023b).

4.2.5.2 Site-Specific Risks and Mitigations

Air contaminant emissions are expected to be negligible, or minimal during all project phases. Expected emissions during the construction phase will be transient in nature. During construction, the major sources of atmospheric emissions are expected to be exhausts from the onsite mobile equipment and fugitive dust. The key contaminants from mobile equipment combustion will be SO_2, nitrogen oxides (NO_x), carbon monoxide (CO), petroleum hydrocarbons (PHC), and particulate matter (PM). The construction phase is planned to extend for 12 hours/day, 6 days/week for up to seven years. The emissions in air due to on year of construction were estimated to be: 64.8 kg of SO_2; 51,129 kg of NO_x; 33,436 kg of CO; 8,617.4 kg of HC, and 4,752.7 kg of PM. Diesel fuel was assumed to be used in the mobile equipment (Clifton, 2023b).

During operation, the main source of air emissions will be the combustion of diesel fuel in the locomotives. Based on information regarding locomotive use provided by Cando the preliminary expected emissions during the operation were estimated to be: 20 tonnes/year of SO_2; 20 tonnes/year of NO_x; 20 tonnes/year of CO; 0.5 tonnes/year of PM_{10}; and 0.3 tonnes/year of $PM_{2.5}$. Additional sources of emissions during the operations include fugitive emissions from the loaded rail cars, fugitive emissions from fuel storage, and fugitive dust resulting from the traffic on unpaved internal roads. These emission sources are expected to be negligible compared to the locomotives operation and will be transient in nature (Clifton, 2023b).

During the construction phase, noise will result from vehicles and equipment. Construction noise will be transient in nature. The primary noise sources during operation will be train shunting, coupling of rail cars, and the operation of locomotives. These activities will continue daily. The project will result in increased noise levels in the vicinity of the site. The increased noise is not expected to contribute significantly to increasing trends at a regional level. Noise receptors are expected to be occupied residences within a 5 km radius. It is not expected that increased noise levels will adversely affect receptors as the overall increase in noise levels over background is expected to be minor (Clifton, 2023b).

Table 4.7 – Air Risks and Mitigations

Risk	Mitigation
Fugitive Dust	• Limit the area of disturbance as much as practical. • Implement reduced vehicle speed limits or other speed control measures. • Suppress dust as necessary using water trucks. • Conduct visual monitoring of dust to determine when suppression is needed.
Air Emissions	• Avoiding unnecessary vehicle and equipment idling. • Implement a regular maintenance program of vehicles, locomotives and equipment to reduce combustion emissions and maximize fuel efficiency.
Potentially Disturbing Noise	• Maintain equipment, machinery and locomotives in good working order, including noise abatement equipment. • Reduce the amount of time that switchers are left idling at the yard.

4.3 Health, Social, and Economic Context

A description of the health, social and economic context in the region where the project is located, based on information that is available to the public or derived from any engagement undertaken.

4.3.1 Health Context

Based on a profile report completed by Alberta Health in 2022 there were 6,102 people located in Sturgeon County East, the portion of Sturgeon County which includes the project area. Sturgeon County East had a

population increase of 35.9% between 2001 and 2022. The percentage of obese individuals and those with mental health issues were similar to the provincial averages. The percentage of single parent households and low-income households were lower than provincial averages as were the general and teen birth rates (Alberta Health, 2022).

The most common disease in Sturgeon County was hypertension at a rate marginally higher than the provincial average. The next most common chronic illnesses were diabetes, ischemic heart disease, and chronic obstructive pulmonary disease. The mortality rate per 100,000 people over the three year period of 2019 to 2021 was 759.8 which was slightly higher than that of the province which was 700.3. The three main causes of death were neoplasms (cancer), circulatory system issues, and external causes (injury). All three of these causes of death had three-year averages higher than that of the province (Alberta Health, 2022).

The most common reason for emergency room visits was upper respiratory infections. The rate of upper respiratory infections was similar to that of the province. The top three reasons for inpatient care was ischemic heart disease, diabetes, and mental/behavioural disorders due to psychoactive substance use. It was noted in the report that 100% of ambulance visits resulted in the patient receiving care outside of the geographical area. In addition, 73.2% of residents had a primary care physician outside of their geographical range; the provincial average was 53.2% (Alberta Health, 2022).

The project is not anticipated to contribute impacts to human health. Cando is committed to ensuring the health and safety of all individuals who work on the project. All staff and workers receive training to complete their assigned duties and are mandated to follow Cando's health and safety protocols. The rail industry is heavily regulated and part of gaining the Operating Permit under the *Railway (Alberta) Act* includes the submission of General Operating Instructions, an Emergency Response Plan, and a Safety Management System (completed to Transport Canada standard). All of these documents provide detailed, site-specific information regarding the safety procedures and emergency protocols. Cando is committed to operating safely and with minimum impact on communities and the environment. Cando has an award-winning safety program and in 2023 won a Railway Association of Canada Safety and Environment Award for their Good Catch Campaign which aims to recognize and reward exceptional staff safety hazard identification and action (Cando Rail & Terminals. 2021).

4.3.2 Social Context

The population of Sturgeon County in 2021 was 20,061 people. This was a 2.1% decrease between 2016 and 2021. The population distribution is as such: 19.2% 14 years and younger, 65.2% 15 years old to 64 years old, 15.6% 65 years and older, and 1.3% 85 years and older (Statistics Canada, 2023). The median age of the population is 41.2 (Statistics Canada, 2023). Sturgeon County represents an area of 2,146.8 km^2 and has 0.46% of Alberta's population (Government of Alberta, 2023d).

There is a total of 7,021 private residences with the vast majority being single detached homes. On average there are 2.8 people per household and a population density of 9.6 people per km^2. There are reportedly 5,870 families in private households with the following demographics: 4,700 of those are married

households with 2,495 of those having children; 695 are common-law with 305 having children; and 475 are single parent households with 270 being single mothers and 205 single fathers (Statistics Canada, 2023).

Most of the population at 17,725 people state that English is their mother tongue, 675 identified French as their mother tongue, and 10 people identify an Indigenous language as their mother tongue. Most people speak English in the home, 150 speak French, and no households identified Indigenous languages as the household language. The most common household languages other than French and English, were Polish and Portuguese both listed at 25 people (Statistics Canada, 2023).

There were 1,640 people who identified as Indigenous. There were 415 that identified as First Nation, 1,085 identified as Métis, 80 who identified as Inuit, and the remainder either had multiple or no identifications. There were 350 responses from Registered or Treaty Indians. The Alexander First Nation Reserve is located on the western boundary of the county. Most of the population of Sturgeon County, at 19,245 people, are Canadian citizens. There have been 70 people who have immigrated to the area between 2016 and 2021 (Statistics Canada, 2023). In 2021, 3.83% of the population identified as a visible minority and 8.4% of this group identified as aboriginal (Government of Alberta, 2023d).

Of the population 25 to 64 years old a total of10,450 people, 9,380 have their high school diploma or equivalent, 6,795 have postsecondary education, and 1,915 have a bachelor's degree or higher (Statistics Canada, 2023).

Sturgeon County has five towns within its boundaries: Bon Accord, Gibbons, Legal, Morinville, and Redwater. The county has an active recreation and parks department including community events, trail maps, golfing, ice skating, and ski trails. The county offers a variety of adult, child, and youth programs and family and community support services such as counselling, grants, and scholarship programs. The county is involved in other initiatives including truth and reconciliation through active engagement and industrial and economic growth initiatives. They are involved in several environmental initiatives such as tree establishment, vegetation management, wetland replacement, and a clean energy improvement program (Sturgeon County, 2023).

As a company with rural roots, Cando is committed to fostering and maintaining strong relationships in the community and helping to build a sustainable future. Some of Cando's initiatives include monitoring and working towards lowering emissions, charitable donations, long-term community partnerships, sponsorships, and a national scholarship program. Cando has four core values that they stand by in every community they work; these are environmental stewardship, indigenous relations, workforce/people, and community giving. Through genuine engagement, Cando becomes a community partner in all areas in which they work (Cando Rail & Terminals, 2021).

4.3.3 Economic Context

In 2020, the median household income was $124,000 and $105,000 after taxes. The median income for single person households was $56,400 and $48,800 after taxes and the average incomes was $68,400

and $56,500 after taxes. The median income of households with two-or-more people was $139,000 and $117,000 after taxes. The average household income was $151,400 and $120,900 after taxes. The average income for two or more people households was $166,400 and $132,600 after taxes (Statistics Canada, 2023). The median income for lone parent households was $92,000 (Government of Alberta, 2023d).

The top five employment sectors, in order from the most employed to the least were: construction; public administration; health care and social assistance; retail trading; and agriculture, forestry, fishing, and hunting (Statistics Canada, 2023). In 2022, Sturgeon County produced 34.9 million cubic meters of natural gas and 141,548 m^3 of oil. There was approximately $744.6 million spent on major projects and 302 building permits were issued. The participation rate of the working population of Sturgeon County had decreased between 2021 and 2016 as well as the employment rate. In 2021, the unemployment rate was reportedly 8% which represented an 11.1% increase since 2016 when the unemployment rate was 7.2% (Government of Alberta, 2023d).

It is estimated that the project will generate an additional 40 full-time jobs. There would employment opportunities for part-time skilled labour throughout the construction phase of the project. Additional financial benefits include an approximate $140 million dollar spend and an increased tax assessment to all levels of government. The project is ideally suited to Sturgeon County's goal of investment. Their website states that the county has multiple rail-ready sites available for development with properties that enable a direct connection to critical rail transportation and logistics infrastructure (Sturgeon County, 2023). The project would provide an overall economic benefit to the area through its capital spend, and the creation of both part-time and full-time jobs. Sturgeon County has publicly expressed interest in the development of rail transportation projects as there has been an overall increase in the unemployment rate in the county over the last five years. The project is ideally suited to continue within Sturgeon County.

5.0 Federal, Provincial, Territorial, Indigenous and Municipal Involvement and Effects

5.1 Federal Financial Support

A description of any financial support that federal authorities are, or maybe, providing to the project.

Cando is the sole financer of the project.

5.2 Federal Project Lands

A description of any federal lands that may be used for the purpose of carrying out the project.

There are no federal lands within the footprint of the project or adjacent to the project's boundaries.

5.3 Jurisdictions with Powers, Duties, or Functions

A list of the permits, licenses, or other authorizations that may be required by jurisdictions that have powers, duties, or functions in relation to an assessment of the project's environmental effects. A description of any changes to the environment or to health, social or economic conditions that may occur in Canada that are directly linked or necessarily incidental to the involvement of a federal authority that would permit or enable the project to be carried out in whole or in part.

The project requires authorizations through the provincial and municipal governments. No other approvals will be sought from other federal agencies in pursuit of the project.

The other agencies requiring approval would be:

- AEPA through the *Water Act.*
- ATEC through the *Railway (Alberta)* Act.
- ACMW through the *Historical Resources Act.*
- Sturgeon County through the Planning and Development Department.
- Alberta's Safety Codes Council.

AEPA will regulate the removal and compensation for the wetlands located within the footprint of the expansion rail terminal and bypass. Cando received a *Water Act* approval for the site in May 2024 (Ref.# DAUT0015982) and the approval for the bypass road is currently under review. AEPA is also the authority for the approval of the SWMP; Sturgeon County has provided approval of the SWMP and Cando has provided the plan to AEPA for final approval. The existing rail terminal received a *Water Act* approval from the province for the removal, and subsequent compensation, of the wetlands and the implementation of the existing stormwater management facility.

ATEC will approve the expansion rail terminal for operation. If, in the future, the transloading of dangerous goods is to be added to the services of the facility it would also require approval through ATEC. The bypass road will also require a submission to ATEC by the county. The existing rail terminal has received all applicable documentation through ATEC to operate.

An application for a *Historical Resources Act* approval has been sent and ACSW has confirmed in March 2024 that an approval is not required (Reference: 4715-23-0102-002). This is consistent with the existing rail terminal which also received approval to proceed without a historical resources impact assessment. Although clearance was received, Cando is aware of its requirement to comply with Section 31 of the Act regarding the reporting of discovered historical resources. Cando will modify its chance find protocol developed for the existing rail terminal so that it can be used for the project, as well as report chance finds in accordance with the Standard Requirements under the *Historical Resources Act*: Reporting the Discovery of Historic Resources.

Sturgeon County would be the authority for the operation of the bypass roadway, as it would ultimately be a county owned and operated road. The project will also require a development permit through the county. Based on discussions with AEPA the county would also be the authority for the management and conservation of topsoil. Cando continues to work closely with the county throughout the planning phase of the project.

The Alberta Safety Codes Council manages the permitting and inspection of storage tanks within unaccredited areas of Alberta. The portion of Sturgeon County which includes the project is in an unaccredited area which means that any storage tanks containing flammable or combustible liquids would be permitted and licensed through Alberta Safety Codes Council.

6.0 Potential Effects of the Project

6.1 Relevant Environmental Legislation

A description of any changes that, as a result of the carrying out of the project, may be caused to the following components of the environment that are within the legislative authority of Parliament:

a. Fish and fish habitat as defined in subsection 2(1) of the Fisheries Act.
b. Aquatic species, as defined in subsection 2(1) of the Species at Risk Act (marine plants).
c. Migratory birds, as defined in subsection 2(1) of the Migratory Birds Convention Act, 1994.

6.1.1 Fish and Fish Habitat

The are no waterbodies within the project footprint and no activities associated with the project will take place in areas that support fish, fish habitat, or marine plants. Two known fish-bearing watercourses are located within 2 km of the project footprint (AEPA, 2023b). The Sturgeon River, located approximately 1 km southwest, flows southeast approximately 3 km to its confluence with the North Saskatchewan River, which then flows northeast. The North Saskatchewan River is located approximately 1.7 km southeast of the project footprint. The Sturgeon River is a large permanent Class C watercourse with a Restricted Activity Period (RAP) from April 16 to June 30, and the North Saskatchewan River is a large permanent Class C watercourse with a RAP from April 16 to July 31 (Alberta Environment and Sustainable Resource Development 2012). One potential watercourse was indicated by FWMIS which is located within close proximity to the south. No evidence of this watercourse was observed within 100 m of the project footprint during the field assessments.

Cando will mitigate potential effects to downgradient receptors through the SWMP which is designed to retain surface water runoff on the property. The main quality criteria thought to be affecting the surface water is sedimentation. This may change if additional services are to be provided on-site. The retention of the water will allow for sediments to settle prior to discharge. Surface waters will be released to Sturgeon

County's drainage system which discharges into the North Saskatchewan River. The quality criteria to be tested prior to discharge is currently thought to include pH, electrical conductivity, turbidity, and oil and grease. These criteria are based on the precedence set by *Water Act* approvals received from other industry within Alberta's Industrial Heartland. Acquiring the criteria from past precedence is based on AEPA's recommendations and may change as the project progresses.

The water for washrooms will be trucked to and stored on-site. Any wastewater generated will be kept in tanks or containers designed for this specific purpose. The wastewater will be removed from the property by a qualified third-party contractor.

Based on Cando's current operating procedure for the existing rail terminal and the mitigations measures to be put in place for the expansion rail terminal there are no known risks to fish or fish habitat as defined in the *Fisheries Act*.

6.1.2 Species at Risk Act: Aquatic Species/Marine Plants

The *Species at Risk Act* prohibit the killing, harming, harassing, or capturing of species listed within the Act. The property and surrounding areas are primarily industrial and agricultural land use. It is not expected that species at risk would be present within the project footprint. There were no federally listed species at risk identified during the field verification portion of the biophysical assessment nor during the desktop assessment. Cando will comply with the prohibitions in the *Species at Risk Act* throughout all stages of the project.

6.1.3 Migratory Birds

The *Migratory Birds Convention Ac*t (MBCA) prohibits the harming of migratory birds or the disturbance/destruction of their nests and eggs. Bird species were noted to be located within the project footprint during the desktop review and the field verification. The general nesting period beginning for the area is from the mid-April to late August. There are treed areas within the footprint of the project which could potentially be used as habitat for breeding birds as well as tall plants within the cultivated sections. No active nests/cavities were noted during the field verification; however, there was an unoccupied stick nest and habitat suitable for raptor nests and pileated woodpeckers. Given the proximity of industrial facilities it is anticipated that wildlife would prefer the landscape of the nearby Sturgeon River and North Saskatchewan River.

Due to the potential for migratory birds to be present within the project footprint mitigation measures must be considered. A wildlife sweep will be conducted by a qualified biologist prior to the commencement of construction activities. Trees within the footprint of the project will be cleared outside of the breeding bird window and grasses will be mowed to prevent ground nesting birds. Additional mitigation measures can be implemented if migratory birds are observed at the time of construction. These include adjusting the construction schedule by postponing activities near occupied nests, implementing a barrier between the occupied nest and the activity, moving equipment daily, relocating nests or wildlife, and/or monitoring the nest to determine if the inhabitant is showing signs of stress. With the primary mitigation measures in place, it is unlikely that an issue to migratory birds would occur during construction/operation.

6.2 Changes to Federal Lands

A description of any changes to the environment that, as a result of carrying out the project, may occur:

- *On federal lands.*
- *In a province other than the province in which the project is proposed to be carried out.*
- *Outside of Canada.*

No changes to federal lands are anticipated, nor will the footprint of the project cross provincial or international boundaries. Due to the direction and distance to the nearest federal lands, provincial boarders, and international boarders it is not anticipated that the project would create any changes to these lands.

6.3 Impact to Indigenous Peoples

With respect to the Indigenous peoples of Canada, the description of any impact — that, as a result of the carrying out of the project, may occur in Canada and result from any change to the environment — on:

- *Physical and cultural heritage.*
- *The current use of lands and resources for traditional purposes.*
- *Any structure, site or thing that is of historical, archaeological, paleontological, or architectural significance, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada.*

A description of any change that, as a result of the carrying out of the project, may occur in Canada to the health, social or economic conditions of Indigenous peoples of Canada, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada.

Cando is dedicated to building strong relationship within the communities that they work and service. They have taken a hands-on approach to the engagement process with all Indigenous groups by issuing information packages as described in Section 2.2 of this document. All communications received from Indigenous groups throughout the process have been responded to directly by Cando. This has included phone calls, emails, and in-person meetings. Cando believes in the importance of understanding unique perspectives and will continue to work closely with all project stakeholders.

Potential effects to the physical and cultural heritage or the socio-economic health of the Indigenous peoples of Canada may continue to be revealed. If any potential effects are brought forth, Cando will work with the party to help mitigate any issues. Given the responses received to date there are not anticipated to be any effects to the physical heritage, cultural heritage, or traditional land uses for Indigenous people.

The area in which the project is located is entirely zoned for industrial purposes and is designed to be a consolidated location for industrial purposes. The land has been cultivated agricultural and privately owned for more than 70 years. The project footprint also contains a rural residential property. Given the zoning,

current land use, and historical land use the potential for traditional land use is considered to be low as it would not be used for hunting, fishing, plant gathering, or spiritual use.

There are no listings of historical resources within the footprint of the project. The closest historical resource listings are along the North Saskatchewan and Sturgeon Rivers. The listings are primarily 5a and 5p which indicate an area with a high potential for an archaeological or palaeontological finding (ACSW, 2023). An application for a *Historical Resources Act* approval has been submitted and ACSW has confirmed in March 2024 that an approval is not required (Ref. 4715-23-0102-002), which is consistent with existing rail terminal which also received approval to proceed without a historical resources impact assessment. Although clearance was received, Cando is aware of its requirement to comply with Section 31 of the Act and will modify the chance find protocol it developed for the existing rail terminal so that it can be used for the project, as well as report chance finds in accordance with the Standard Requirements under the *Historical Resources Act*: Reporting the Discovery of Historic Resources.

Given the location of the project and the mitigations planned for the construction and operation there are thought to be no negative health effects. The site will be primarily used as a storage yard for rail cars with some maintenance of locomotives and refueling. These activities will be performed in specific locations with the use of containment materials, as necessary. If a spill or release occurs, Cando will implement a spill response plan that conforms to the provincial regulations. Negative health or environmental effects due to the project will be localized and would be unlikely to affect Indigenous communities.

The project is not expected to increase travel, use, or disturbance to lands that are currently used for traditional purposes. The construction and operation activities will be limited to the project footprint and established roadways. Based on all the information available there are thought to be low social impacts to Indigenous people.

The economic impacts to the area include a capital investment into the project. There will also be an increase in the workforce during the construction phase and the creation of up to 40 full-time jobs for operation. There has been some interest from Indigenous groups to have the opportunity to bid on or provide vendor services. Cando will work with qualified Indigenous peoples with skills and services required for the project during the procurement process.

6.4 Greenhouse Gas Estimate

An estimate of any greenhouse gas (GHG) emissions associated with the project.

Section 6.4 and subsequent subsections include a summary of the GHG estimate completed by Clifton. In general, the equation used to calculate the carbon dioxide equivalent is as follows:

$$CO_{2e} \text{ (tonnes/year)} = AF * EF * GWP * CF$$

Where:

- CO_{2e} (tonnes/year) – estimated GHG emissions expressed as CO_{2e} equivalent in metric tonnes per year
- AF – Activity Factor
- EF – Emission Factor
- GWP – Global Warming Potential for an evaluated GHG gas
- CF – Units Conversion Factor

The GWP conversion factors based on the IPCC 5th Protocol are 1 for CO_{2e}, 28 for CH_4, and 265for N_2O.

6.4.1 Construction Phase

Identified significant sources (more than 1 % of the overall GHG emissions) for the construction phase of the proposed project (excluding any GHG emissions from the existing terminal operation) can be summarized as follows (Clifton, 2023b):

- **Direct GHG Emissions**:
  - Mobile Combustion:
    - Mobile Diesel Combustion.
  - Land Use Change:
    - Biomass Oxidation.

- **Indirect GHG Emissions:**
  - Construction Personnel Travel by Road.

6.4.1.1 Mobile Combustion – Diesel

Cando and their affiliated contractors/consultants supplied the information on the equipment type, number of units, and usage required for the calculation of GHG emissions from diesel mobile combustion during the construction phase. Other information required for the calculation including EF and equipment horsepower were obtained from public information sources. Based on all the information available, the total GHG emissions for one year of construction was estimated to be 6,743.7 tonnes CO_{2e}/year (Clifton, 2023b).

6.4.1.2 Land Use Change – Biomass Oxidation

The estimated GHG emissions contribution as a result of the Land Use Change (LUC) contains two types of the carbon-related impacts (Clifton, 2023b):

- Emissions caused by the removal and oxidation of biomass during construction.
- The carbon not trapped by native vegetation that would have remained at the site should the project not have been constructed referred to as the lost carbon sequestration potential.

Calculations assumed a permanent removal of approximately 25 ha of the forest and 7.505 ha of the wetlands in the expansion area of the project during the construction phase. Estimated LUC-related GHG

emissions for the construction phase of the project were estimated to be 8,460.64 tonnes CO_{2e} (Clifton, 2023b).

6.4.1.3 Construction Personnel Travel by Road

The estimated GHG emissions released during the construction phase of the project as a result of the construction personnel travelling were quantified. The EF for gasoline was obtained from a public source. Based on information from Cando, it was estimated that 35 people would travel to site, assuming a schedule of 6 days a week for construction and a travel distance of Fort Saskatchewan to the site (about 30 km round trip). For estimate purposes, the assumption considered gasoline fuel consumption for a light pickup truck, 2015 or newer. This resulted in a total estimate of 109.29 tonnes CO_{2e}/year (Clifton, 2023b).

6.4.1.4 Estimated Net Total GHG Emissions – Construction Phase

Estimated net total GHG emissions for the construction phase are as follows (Clifton, 2023b):

Table 6.1 – Estimated Net Total GHG Emissions – Construction Phase of the Project

Construction Year	Estimated GHG Emissions CO_{2e} (tonnes)	
	Mobile Diesel Combustion	Biomass Oxidation
Y-6	6,743.7	8,460.64
Y-5	6,743.7	
Y-4	6,743.7	
Y-3	6,743.7	
Y-2	6,743.7	
Y-1	6,743.7	
Subtotal	40462.2	8,460.64
Estimated Net Total GHG Emissions		**48,922.84**

6.4.2 GHG Emission Sources – Operation Phase

Identified significant GHG emission sources for the operation phase of the proposed project (including GHG emissions from the existing terminal operation) can be summarized as follows (Clifton, 2023b):

- **Direct GHG Emissions**:

  - Static Combustion:
    - Propane Combustion.
  - Mobile Combustion:
    - Mobile Diesel Combustion – Locomotives.
    - Mobile Diesel Combustion – Auxiliary Vehicles and Equipment.

- **Indirect GHG Emissions** (Formerly Scope 2 GHG Emissions):
  - Acquired Energy GHG Emissions.

- **Indirect GHG Emissions:**
  - Employees Travel by Road.

6.4.2.1 Static Combustion – Propane Combustion

Propane is the primary heating source for the project. The EF for propane was determined from publicly available sources. The proposed expansion does not require a new propane-burning emission sources, and therefore, the AF is based on the average propane usage at the existing terminal. Estimated GHG emission for this category is 11.24 CO_{2e} tonnes/year (Clifton, 2023b).

6.4.2.2 Mobile Combustion – Diesel Combustion, Locomotives

The EF for the combustion of diesel fuel due to the locomotives operating was collected from a publicly available source and the AF was estimated based on the information provided by Cando. The GHG emissions calculated for this category were 4,068 CO_{2e} tonnes/year (Clifton, 2023b).

6.4.2.3 Mobile Combustion – Diesel Combustion, Auxiliary Vehicles and Equipment

This category covers the estimated GHG emissions due to the use of diesel fuel by auxiliary vehicles and equipment. The AFs were calculated using the estimated requirements for the on-site equipment. The equipment and usage were based on the information provided by Cando. Other information was collected from public sources. The estimated GHG emission for the usage of equipment/vehicles was 3,721.2 CO_{2e} tonnes/year (Clifton, 2023b).

6.4.2.4 Acquired Energy GHG Emissions

The AF for the energy imports from the public electric grid were estimated using assumed requirements based on information provided by Cando. Other information was collected from publicly available sources. The estimated GHG emissions for this category are 164.91 CO_{2e} tonnes/year (Clifton, 2023b).

6.4.2.5 Employee Travel by Road

The AF was calculated using the estimated average railyard terminal personnel count estimated to be 90 people, assuming 3 rotating shifts, 7 day a week operations schedule and a road distance between the site and Fort Saskatchewan (about 30 km round trip). The average gasoline fuel consumption for the light pickup truck road travel, 2015 or newer, was used in the estimated. The estimated GHG emissions were 318.76 CO_{2e} tonnes/year (Clifton, 2023b).

6.4.2.6 Estimated Net Total GHG Emissions – Operation Phase

The estimated net total GHG emissions for an average operation year is summarized as follows (Clifton, 2023b):

Table 6.2 – Estimated Net Total GHG Emissions – Operation Phase of the Project

Estimated GHG Emissions CO_{2e} (tonnes/year)				Estimated Net Operation GHG Emissions CO2e (tonnes/year)
Static Combustion	Mobile Combustion Diesel-Locomotives	Mobile Combustion Diesel Vehicles	Acquired Energy	
11.24	4068	3721	164.91	7965

6.4.2.7 Estimated Carbon Intensity of the Project

The estimated carbon intensity per a year of operation is presented as a ratio between the calculated net GHG emissions and railcars spots after the expansion is as follows (Clifton, 2023b):

Table 6.3 – Estimate Carbon Intensity

Estimated Net Operation GHG Emissions CO_{2e} (tonnes/year)	Projected Capacity (railcars spots)	Estimated Carbon Intensity (t CO_{2e}/railcars spots per a year)
7,965	5,000	1.59

6.4.3 Decommissioning Phase

The project will operate for the foreseeable future (>50 years) and there are plans for decommissioning at this time. As a conservative approach, GHG contributions at decommissioning, including types of direct and indirect sources, are anticipated to be of similar nature and magnitude as the estimates calculated for the construction phase and include the following stages:

- Tracks and infrastructure will need to be removed.
- Re-grading and recontouring of the site to restore pre-development drainage to the extent practicable.
- Topsoil spreading, grading and revegetation.

Specific plans and estimates would be calculated in a more realistic timeframe for the project's end-of-life and using updated tools and information available at that time. At present, emissions at decommissioning

are conservatively estimated to be the equivalent of 2 years of construction emissions (13,487.4 CO_{2e} tonnes).

6.5 Additional Considerations

6.5.1 Carbon Sinks Impact

Carbon sinks impacts related to the LUC/vegetation removal were quantified using the methodology described in Section 5.4.1.2. Estimated GHG emissions resulting from a loss of carbon sequestration were estimated to be 342.7 CO_{2e} tonnes/year (Clifton, 2023b).

6.5.2 Carbon Sinks Mitigation Measures

Based on the current project design and footprint options, a total area of approximately 7.505 ha of wetlands will be removed during the project development. In accordance with the Alberta Wetland Policy, Cando has submitted applications to AEPA for a *Water Act* approval. As part of the approval process Cando has provided compensation for loss of wetlands which will go into the wetland replacement program.

Wetlands will not be disturbed and vegetation clearing in the vicinity of the wetland will not be conducted until *Water Act* approvals for wetland removal has been received. Mitigation will include the applicable compensation for the affected wetlands. The effect of the proposed wetland mitigations is estimated to be as follows:

Table 6.4 – Carbon Sinks Mitigation Measures Summary

Area Classified As	Estimated Removal/Restoration Area (ha)	CO_{2e} (tonnes/year)
Forest	25	319.5
Wetlands	7.505	23.2
Estimated GHG Emissions Total (Before Mitigation)		**342.7**
Wetlands	18.617	- 57.5
Estimated GHG Emissions Total (After Mitigation)		**285.2**

6.5.3 Estimation of Uncertainty

Qualitative estimation of the impact of uncertainties on the accuracy of the presented GHG assessment is presented below (Clifton, 2023b):

Table 6.5 – Uncertainty Ranking	
Propane Combustion	Low Uncertainty – Propane consumption is based on the quantity of fuel purchased. Minimal loss is expected from storage or leakages. Propane emission factors are consistent and accurate.
Diesel Combustion	Medium Uncertainty – Diesel consumption is based on the utilization rates estimated by Cando and power rating. Minimal loss is expected from storage or leakages. Diesel emission factors are consistent and accurate.
Acquired Energy	Low Uncertainty – Electricity consumption is based on the metered electricity data purchased that is calibrated. The emission factor is based on an annual provincial grid average that includes all the province's controllable fuel sources.
Road Travel	High Uncertainty – Annual road transport is an estimate based on available information regarding future staffing levels. Gasoline emission factors are consistent and accurate.

6.5.4 Net-Zero Plan

The presented net-zero plan is based on the Best Applicable Technology/Best Environmental Practices (Delphi Group, 2022). The proposed decarbonization path applicable to the project consists of the following implementation steps (Clifton, 2023b):

6.5.4.1 Efficiency Improvements

Efficiency improvements to existing and new equipment and infrastructure have been the focus of railway decarbonization efforts. All efficiency improvements will serve to reduce the decarbonization burden placed on fuels and propulsion technologies.

Description: There are numerous ways to continue to enhance rail efficiency including further enhancing aerodynamics of locomotives and rail cars, automation, and data-driven solutions.
Carbon Reduction Potential: less than 7 %.
Implementation Timeframe: Available immediately.

6.5.4.2 Low-Carbon Fuels

Through low-carbon/renewable fuel regulations, federal and provincial governments have already mandated minimum blending requirements of up to 5% renewable content in diesel. Efficiency improvements may be supplemented by the blending fuels beyond what is regulated.

Description: Biodiesel is a renewable fuel that can be manufactured from various oils and fats for use in diesel vehicles or equipment. Biodiesel's physical properties are like those of petroleum diesel, with some notable exceptions including inferior cold weather properties and reduced energy content.
Carbon Reduction Potential: up to 16 %.
Implementation Timeframe: Estimated around 2030.

6.5.4.3 Alternative Propulsion

As railways seek to move past the limits of what low-carbon fuels and combustion engines can offer, electrification via battery, or hydrogen fuel cells are long-term solutions. Cando, in cooperation with Emissions Reduction Alberta, is leading a lithium ion battery-powered locomotive initiative.

Description: Battery powered trains are electric multiple units and locomotives which carry batteries in order to provide traction power for in-service use.
Carbon Reduction Potential: up to 100 %.
Implementation Timeframe: Estimated around 2035 (provided further technology development and successful testing).

6.6 Types of Waste and Emissions

A description of waste and emissions that are likely to be generated — in the air, in or on water and in or on land — during any phase of the project.

6.6.1 Air

The emissions to air include dust and emissions generated by equipment during the construction phase and operations. In addition, the equipment operating will generate localized noise. As discussed in detail in previous sections, the GHG emissions, fugitive emissions, and noise generation due to the project are thought to be minimal in comparison to the background conditions within Alberta's Industrial Heartland. The fugitive emissions generated are thought to be primarily sulfur dioxide, nitrogen oxides, carbon monoxide, petroleum hydrocarbons, and particulate matter due to exhaust. Cando will implement general mitigation measures including dust suppression, speed limits, vehicle/equipment maintenance programs, and avoiding idling whenever practicable. Cando is also currently developing a lithium-ion powered switching locomotive which will provide long-term GHG reductions (Cando Rial & Terminals, 2023).

6.6.2 Water

There will be limited liquid waste generated as part of the project including stormwater, liquid domestic waste, and waste oils. Stormwater created within the footprint of the project are to be stored within the stormwater management facility. Given the current purpose of the existing and expansion rail terminals is primarily for rail car storage there is thought to be little generation of dangerous goods or risk of

contamination to the surface waters. The primary risk to surface waters is sedimentation which will be reduced as the SWMP includes the retention of water in the on-site pond which will allow time for the suspended solids to settle. If it is suspected that the water has become contaminated further tests specific to the suspected substance would be performed by a qualified professional. If the water is unsuitable to be diverted to the municipal drainage system, it will be collected by a third-party for removal off-site to a designated facility with a receipt or waste manifest collected for documentation.

Liquid domestic waste generated will be retained in tanks/containers specific to this purpose. When required, the materials will be removed from the tanks/containers by a qualified third-party for proper disposal. Receipts or waste manifests documenting the removal of hazardous materials will be kept on record.

6.6.3 Land

Potential solid waste generated by the project are contaminated soils, hazardous building materials, conventional building materials, construction waste, and garbage/scrap materials. A Phase II ESA with the collection of subsurface soil and groundwater materials was completed. If there are contaminated materials that will be disturbed then a soil management strategy will be created. This may include the segregation and off-site treatment or disposal of contaminated soils with confirmatory samples collected to determine if all contaminated materials were collected.

Prior to the demolition of any on-site buildings suspected of containing hazardous building materials an assessment including the collection and analysis of representative building materials will be completed. If the materials are found to contain hazardous substances, then further abatement will be completed with the materials disposed of off-site by a qualified third-party.

Cando is committed to reducing landfill waste and follows the waste reduction hierarchy starting with the source reduction of materials. This includes understanding quantities and project needs and not over ordering materials. Waste will be separated with materials recycles or reuses whenever appropriate. Refuse generated by Cando will be stored within the boundaries of the project footprint with appropriate storage containers, such as dumpsters, used for refuse. Other non-hazardous materials may be stored external to storage containers. When necessary, materials will be properly removed for example by a third-party to the landfill or to scrap metal recycling. All solid waste materials that may be generated can not be anticipated at this time but based on Cando's experience and commitment to waste reduction care will be taken to ensure proper removal.

7.0 References

Alberta Agriculture and Forestry. 2017. Land Suitability Rating System (LSRS). Government of Alberta. Available Online: https://open.alberta.ca/dataset/dc0e6b58-b9d9-45d4-8d68-9d9dbd21687a/resource/f339217e-c4ae-4dc3-b619-883023350199/download/lsrs-explained.pdf.

Alberta Agriculture and Irrigation. 2023. Alberta Climate Information Service. Available Online: https://agriculture.alberta.ca/acis/township-data-viewer.jsp.

Alberta Biodiversity Monitoring Institute. 2019. Predictive Landcover (PLC) 3.0 and ABMI Wetland Inventory - metadata. Available Online: https://abmi.ca/home/data-analytics/da-top/da-productoverview/Advanced-Landcover-Prediction-and-Habitat-Assessment--ALPHA--Products/Predictive-Landcover-3.0.html.

Alberta Biodiversity Monitoring Institute. 2021. ABMI Wetland Inventory – Metadata. (esri)

Alberta Culture. 2023. Alberta Listing of Historic Resources, Fall 2022. Available Online: https://www.alberta.ca/listinghistoric-resources.aspx.

Alberta Environment and Parks. 2016a. Guide for Assessing Permanence of Wetland Basins. Land Policy Branch, Policy and Planning Division. 28 pp.

Alberta Environment and Parks. 2016b. The Air Monitoring Directive.

Alberta Environment and Parks. 2016c. Alberta's Ambient Air Quality Objectives and Guidelines.

Alberta Environment and Parks. 2020. Alberta Merged Wetland Inventory. Available Online: https://geodiscover.alberta.ca/geoportal/rest/metadata/item/bfa8b3fdf0df4ec19f7f648689237969/html.

Alberta Environment and Parks. 2022. Parks and Protected Areas of Alberta. Available Online: https://open.alberta.ca/opendata/gda-6b96341f-2e19-4885-98af-66d12ed4f8dd.

Alberta Environment and Protected Areas. 2023a. Alberta Conservation Information Management System (ACIMS). Available Online: https://www.albertaparks.ca/albertaparksca/management-land-use/albertaconservation-information-management-system-acims/.

Alberta Environment and Protected Areas. 2023b. Fish & Wildlife Management Information System (FWMIS). Available Online: https://www.alberta.ca/access-fwmis-data.aspx.

Alberta Environment and Protected Areas. 2023c. Wild Species Status Search, General Status of Alberta Wild Species. Available Online: https://www.alberta.ca/lookup/wild-species-status-search.aspx.

Alberta Environment and Protected Areas. 2023d. Industrial Heartland Designated Industrial Zone, https://www.alberta.ca/industrial-heartland-designated-industrial-zone

Alberta Environment and Sustainable Resource Development. 2015. Alberta Wetland Classification System. Water Policy Branch, Policy and Planning Division, Edmonton, Alberta. 54 pp.

Alberta Government. 2021. Cumulative clubroot infestations in Alberta. Available Online: https://www.alberta.ca/cumulative-clubroot-infestations-in-alberta.aspx.

Alberta Health. 2022. Community Profile: Sturgeon County East Health Data and Summary. Available Online: https://open.alberta.ca/dataset/482a6e31-2425-4b9a-913e-3198a35d23a5/resource/c5dbfcc7-4e9e-431a-b9e4-f262d822f9d0/download/hlth-phc-sturgeon-county-east-2022.pdf.

Alberta's Industrial Heartland. Who We Are. Accessed December 2023. Available Online: https://industrialheartland.com/about/.

AltaLIS Ltd. 2023. Spatial Data. Available Online: https://www.altalis.com/.

Beaver Hills Biosphere. Accessed 2023. About the Association. Available Online: https://www.beaverhills.ca/about.

Birds Canada and Nature Canada. 2023. IBA Canada Important Bird Areas. Available Online: https://www.ibacanada.org/explore_how.jsp?lang=en)

Cando Rail & Terminals Ltd. 2021. Cando Rail & Terminals website. Available Online: https://www.candorail.com/aboutus/.

Cando Rail & Terminals Ltd. 2023. Advancing the Zero Emission Fleet of the Future.

Clifton Engineering Group. 2023a. Cando Rail & Terminals Phase I Environmental Site Assessment Near Fort Saskatchewan, AB.

Clifton Engineering Group. 2023b. Cando Rail & Terminals Ltd. Ambient Air Quality, Noise & Greenhouse Gase (GHG) Assessment Sturgeon Railyard West Expansion Sturgeon County, Alberta.

Delphi Group. 2022. Towards Net Zero: Developing a Rail Decarbonization Roadmap for Canada.

EDI Environmental Dynamics Inc. 2023a. Wetland Assessment and Impact Report Cando Sturgeon Terminal West Proposed Development N 1/2 34-55-22-W4M.

EDI Environmental Dynamics Inc. 2023b. Wetland Assessment and Impact Report Cando Sturgeon West Railyard Bypass Road. 49 pp.

EDI Environmental Dynamins Inc. 2023c. Cando Sturgeon Terminal West Draft – Biophysical Baseline Report.

Environment and Climate Change Canada. 2019. National wildlife areas. Available Online: https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas.html.

Environment and Climate Change Canada. 2021. Technical Guide Related to the Strategic Assessment of Climate Change.

Environment and Climate Change Canada. 2022a. Migratory bird sanctuaries. Available Online: https://www.canada.ca/en/environment-climate-change/services/migratory-birdsanctuaries.html.

Environment and Climate Change Canada. 2022b. Critical Habitat for Species at Risk National Dataset - Canada. Available Online: https://maps-cartes.ec.gc.ca/arcgis/rest/services/CWS_SCF/CriticalHabitat/MapServer

Environment and Climate Change Canada. 2022c. Emission Factors and Reference Values Version 1.1.

Environment and Climate Change Canada. 2023. Canada's GHG and Air Pollutant Emissions Projections.

Fiera Biological Consulting. 2014. Environmentally Significant Areas in Alberta: 2014 Update. Prepared for the Government of Alberta. 51 pp.

Fisheries and Oceans Canada. 2022. Aquatic species at risk map. Available Online: https://www.dfo-mpo.gc.ca/speciesespeces/sara-lep/map-carte/index-eng.html

Government of Alberta. 2013. Alberta Wetland Policy. 25 pp.

Government of Alberta. 2015. Alberta Wetland Identification and Delineation Directive. Water Policy Branch, Alberta Environment and Parks, Edmonton, Alberta. 55 pp.

Government of Alberta. 2017. Oil Transloading Facilities Acceptable Industry Practices. Available Online: https://open.alberta.ca/dataset/b63fbe6d-7486-4db6-b40d-2c6b223cb90c/resource/efec2dec-6bcb-4296-a4f4-b20919200b4b/download/oiltransloadaipguide-oct05-2017.pdf.

Government of Alberta. 2021. First Nation Reserves and Metis Settlements Map. Available Online: https://open.alberta.ca/dataset/04074608-dabc-49c6-b25e-840a4b2844ee/resource/28f32e73-c0bb-4ead-99ee-66a7646fd030/download/ir-first-nations-reserves-and-metis-settlements-map-2021-04.pdf.

Government of Alberta. 2022. Wildlife Sensitivity Maps. Available Online: https://www.alberta.ca/wildlife-sensitivitymaps.aspx).

Government of Alberta. 2023a. Industrial Heartland Designated Industrial Zone. Available Online: https://www.alberta.ca/industrial-heartland-designated-industrial-zone.

Government of Alberta. 2023b. Aerial Photographic Record System. Available Online: https://securexnet.env.gov.ab.ca/aprs/inquiry.jsp.

Government of Alberta. 2023c. Alberta Clubroot Management Plan. Available Online: https://www.alberta.ca/albertaclubroot-management-plan.aspx.

Government of Alberta. 2023d. Species at Risk Assessed in Alberta. Available Online: https://open.alberta.ca/dataset/0b3421d5-c6c1-46f9-ae98-968065696054/resource/f797b0abc05c-482a-939f-81604f8b060f/download/epa-species-at-risk-assessed-alberta-2023-01.pdf.

Government of Alberta. 2023e. Sturgeon County Regional Dashboard. Available Online: https://regionaldashboard.alberta.ca/region/sturgeon-county/#/.

Government of Alberta and Alberta Agriculture and Forestry. 2022. Alberta Soil Information Viewer. Available Online: https://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/sag10372.

Government of Alberta and Alberta Agriculture and Forestry. 2023. Alberta Soil Information Viewer. Available Online: https://soil.agric.gov.ab.ca/agrasidviewer/.

Government of Canada. 2019a. Impact Assessment Act. Available Online: https://laws-lois.justice.gc.ca/eng/acts/I-2.75/FullText.html.

Government of Canada. 2019b. Information and Management of Time Limits Regulations. Available Online: https://laws.justice.gc.ca/eng/regulations/SOR-2019-283/page-2.html#h-1193965.

Government of Canada. 2019c. Physical Activities Regulations. Available Online: https://laws.justice.gc.ca/eng/regulations/SOR-2019-285/FullText.html.

Government of Canada. 2020. Guide to Preparing an Initial Project Description and a Detailed Project Description. Available Online: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guide-preparing-project-description-detailed-project-description.html#_Toc17794707.

Government of Canada. 2021. Canadian Net-Zero Emissions Accountability Act, S.C. 2021, c-22.

Government of Canada. 2023a. Transportation of Dangerous Goods Act, 1992. Available Online: https://laws-lois.justice.gc.ca/PDF/T-19.01.pdf.

Government of Canada. 2023b. Species at risk public registry. Available Online: https://www.canada.ca/en/environmentclimate-change/services/species-risk-public-registry.html.

Government of Canada. 2023c. Migratory Birds Convention Act 1994. Available Online: https://laws-lois.justice.gc.ca/PDF/M-7.01.pdf.

Government of Canada. 2023d. Guidelines for Canadian Drinking Water Quality – Summary Tables. Available Online: https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html.

Hydrogeological Consultants Ltd. 2001. Sturgeon County Part of the North Saskatchewan River Basin Parts of Tp 053 to 058, R 20 to 28, W4M & Tp 054 to 057, R 01, W5M Regional Groundwater Assessment. Available Online: https://www.hcl.ca/public/download/documents/11758.

Intergovernmental Panel on Climate Change: Guidelines for National Greenhouse Gas Inventories, 2006a; ISO 14064-1:2018: Greenhouse Gas Inventories & Measuring Carbon Footprint.

Intergovernmental Panel on Climate Change. Forest Land, Cropland, Grassland, Wetlands, and Other Lands. 2006b.

Link, 2024a. Property Description for TWP 555 RD 222 – For Sale. https://www.remax.ca/ab/rural-sturgeon-county-real-estate/twp-555-rd-222-wp_idm00000692-e4336312-lst

Otipemisiwak Métis Government. 2023. Districts. Available Online: https://albertametis.com/governance/districts/.

Natural Regions Committee. 2006. Natural Regions and Subregions of Alberta. T/852. Government of Alberta, Edmonton, Alberta. 254 pp.

Province of Alberta. 2015. Industrial Railway Circular No. – 1 Guideline for the Transfer of Dangerous Goods To or From a Railway Vehicle. Available Online: https://open.alberta.ca/dataset/3ce91391-b20b-4401-86aa-aee06f277d22/resource/44807222-542a-4d78-a49f-2b7cfe8b312f/download/industrial-railway-circular-no-1-16-jan-2015.pdf.

Province of Alberta. 2012. Industrial Railway Circular No. – 2 Guideline for the Development of Security Management Program for Dangerous Good Transfer Sites. Available Online: https://open.alberta.ca/dataset/71d6275a-c448-4ce7-a937-9c4c825e093e/resource/19861e97-e737-4910-b9ac-810f7f4da6e1/download/industrial-railway-circular-no-2.pdf.

Province of Alberta. 2015. Industrial Railway Circular No. – 3 Guideline for the Long Term Storage of Last Contained Dangerous Goods Tank Cars. Available Online: https://open.alberta.ca/dataset/c805cb1a-59af-41ef-b472-d8d884e2cd5b/resource/4d644b5a-fc31-4607-aa0d-898441a37b1c/download/industrial-railway-circular-no-3.pdf.

Province of Alberta. 2021. Environmental Protection and Enhancement Act – Release Reporting Regulation. Available Online: https://kings-printer.alberta.ca/1266.cfm?page=1993_117.cfm&leg_type=Regs&isbncln=9780779826186.

Province of Alberta. 2022a. Railway (Alberta) Act. Available Online: https://kings-printer.alberta.ca/1266.cfm?page=R04.cfm&leg_type=Acts&isbncln=9780779838042.

Province of Alberta. 2022b. Railway (Alberta) Act Industrial Railway Regulation. Available Online: https://kings-printer.alberta.ca/1266.cfm?page=2009_338.cfm&leg_type=Regs&isbncln=9780779832040.

Province of Alberta. 2022c. Soil Conservation Act. Available Online: https://kings-printer.alberta.ca/1266.cfm?page=S15.cfm&leg_type=Acts&isbncln=9780779838271.

Province of Alberta. 2022d. Wildlife Act. Available Online: https://kings-printer.alberta.ca/1266.cfm?page=W10.cfm&leg_type=Acts&isbncln=9780779844401.

Province of Alberta. 2022e. Weed Control Act. Available Online: https://kings-printer.alberta.ca/1266.cfm?page=W05P1.cfm&leg_type=Acts&isbncln=9780779838455.

Province of Alberta. 2023. Environmental Protection and Enhancement Act. Available Online: https://kings-printer.alberta.ca/1266.cfm?page=E12.cfm&leg_type=Acts&isbncln=9780779841660.

Province of Alberta. 2023b. Environmental Protection and Enhancement Act – Activities Designation Regulation. Available Online: https://kings-printer.alberta.ca/1266.cfm?page=2003_276.cfm&leg_type=Regs&isbncln=9780779840663.

Province of Alberta. 2023c. Water Act. Available Online: https://kings-printer.alberta.ca/1266.cfm?page=W03.cfm&leg_type=Acts&isbncln=9780779843503.

Railway Age. 2023. *Cando Rail & Terminals Jump-Starts Battery Loco Project.* Available Online: Cando Rail & Terminals Jump-Starts Battery Loco Project - Railway Age.

Railway Association of Canada. 2021. Locomotive Emissions Monitoring Report.

SLR. 2019. Cando Sturgeon Terminal, Summary of the Project Description under CEAA 2012.

Statistics Canada. 2023. Sturgeon County Census Profile, 2021 Census. Available Online: https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Sturgeon%20County&DGUIDlist=2021A00054811059&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0.

Sturgeon County. 2017. Sturgeon County Land Use Bylaw 1385/17.

Sturgeon County, 2023a. Sturgeon Property Information Viewer. Accessed 27 November 2023. Available online:

https://sturgeoncounty.maps.arcgis.com/apps/PublicInformation/index.html?appid=09e9fb1a1f974cd1bccb504bf028260e .

Sturgeon County, 2023b. Sturgeon County website. Available Online: https://www.sturgeoncounty.ca/.

Sturgeon County, 2023c: https://pub-sturgeoncounty.escribemeetings.com/Meeting.aspx?Id=63088093-3757-4d55-82e6-4d71a28680a8&lang=English&Agenda=Agenda&Item=23&Tab=attachments

Sturgeon County, 2023d, https://pub-sturgeoncounty.escribemeetings.com/FileStream.ashx?DocumentId=16332

Sturgeon County 2023e; Bylaws: https://www.sturgeoncounty.ca/resource/bylaw-1385-17-land-use-bylaw/

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