FOR PUBLIC COMMENT

Comprehensive Study Scope of Assessment

Prepared Pursuant to Subsection 21(1) of the Canadian Environmental Assessment Act

For the proposed

Fairview Terminal Phase II Expansion Project (including Kaien Siding) in Prince Rupert, British Columbia

Proposed by

Prince Rupert Port Authority, and Canadian National Railway Company

Prepared by

Environment Canada,
Fisheries and Oceans Canada,
and
Canadian Transportation Agency

Canadian Environmental Assessment Registry Reference Number: 08-03-37956

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1.0 INTRODUCTION

1.1 Purpose of the Document

The purpose of this document is to facilitate public consultation on the scope of the environmental assessment for the proposed Fairview Terminal Phase II Expansion (including Kaien Siding) (the Project). The Prince Rupert Port Authority (PRPA), with Canadian National Railway Company (CN), proposes to construct a wharf extension and expand the newly constructed container and intermodal facilities at its existing Fairview Terminal, and construct two rail sidings, an access road, and a locomotive wye (i.e., turnaround) within Port of Prince Rupert lands, CN lands, and on provincial lands on Kaien Island, Prince Rupert, British Columbia (BC).

The Project, for the purpose of this environmental assessment and as scoped in section 4.1 of this document, is a prescribed project in respect of which a comprehensive study is required pursuant to the *Comprehensive Study List Regulations* under the *Canadian Environmental Assessment Act* (CEAA). Fisheries and Oceans Canada (DFO), Environment Canada (EC), and the Canadian Transportation Agency (CTA) have identified themselves as Responsible Authorities (RAs) for the Project, as they will likely issue authorizations for works or undertakings associated with the Project. Such authorizations are included in the *Law List Regulations* under CEAA. Consequently, DFO, EC, and the CTA as federal RAs must ensure that an environmental assessment (EA) is conducted in accordance with CEAA.

In addition to the requirements under CEAA, the PRPA is responsible for ensuring that an assessment of environmental effects is conducted under the *Canada Port Authority Environmental Assessment Regulations* (CPAEAR) prior to constructing the Project.

Under subsection 21(1) of CEAA, where a project is described in the *Comprehensive Study List Regulations*, the RAs must ensure that public consultation is carried out on:

- the proposed scope of the project for the EA;
- the proposed factors to be considered in the EA;
- the proposed scope of those factors; and
- the ability of the comprehensive study to address issues relating to the project.

This document provides information on the Project and the proposed approach to the EA by the PRPA, DFO, EC, and CTA. It outlines information on the federal EA process as set out in CEAA and CPAEAR, and is intended to assist the public in preparing comments on the four points listed above.

Following the public comment period on this scoping document, in accordance with subsection 21(2) of CEAA, the RAs will provide a report to the federal Minister of the Environment regarding:

- the scope of the Project, the factors to be considered in its assessment, and the scope of those factors:
- public concerns in relation to the Project;
- the potential of the Project to cause adverse environmental effects; and
- the ability of the comprehensive study to address issues relating to the Project.

The RAs also will recommend to the Minister to continue the EA by means of a comprehensive study or to refer the Project to a mediator or a review panel.

The PRPA and CN have initiated the EA process by filing a Project Description (*Project Description: Fairview Terminal Phase II Facility Expansion, Kaien Island, BC*). Under CPAEAR, as outlined below, the PRPA is required to conduct a comprehensive study of all aspects of the Project, including both marine and land components. The PRPA and CN will work cooperatively with the RAs, who will conduct an EA pursuant to CEAA.

1.2 Project Summary

The PRPA is an agent of the federal Crown responsible for operating a British Columbia (north coast) port. The PRPA, together with CN, is proposing to construct a wharf extension and expand container and intermodal facilities at the PRPA's Fairview Terminal, within both the boundaries of the Port of Prince Rupert and on provincial lands on Kaien Island. The Project is proposed to be built at 54°16'49" N 130°21'31" W. The proposed Phase II terminal site covers a 35 hectare (90 acre) parcel of federal and provincial Crown lands. The main components of the Project include:

- construction of an area of reclaimed (i.e., infilled) land approximately 16 hectares (40 acres) in size to accommodate the terminal wharf and a portion of the expanded container and intermodal yards;
- addition of up to 14 terminal rail tracks (approximately 14,000 m total of linear track);
- supporting facilities and infrastructure;
- two CN sidings to be constructed on the marine side of the existing mainline, requiring approximately two hectares of infilling above the High Water Mark (HWM);
- an access road adjacent to the two sidings, to allow for train inspections and basic maintenance; and
- a locomotive wye (turnaround) at the southern end of Kaien Island (northern end of Porpoise Harbour) requiring approximately one hectare of infilling.

1.2.1 Projected Timeline

The proposed timeline for review, construction and operation of the Project is as follows:

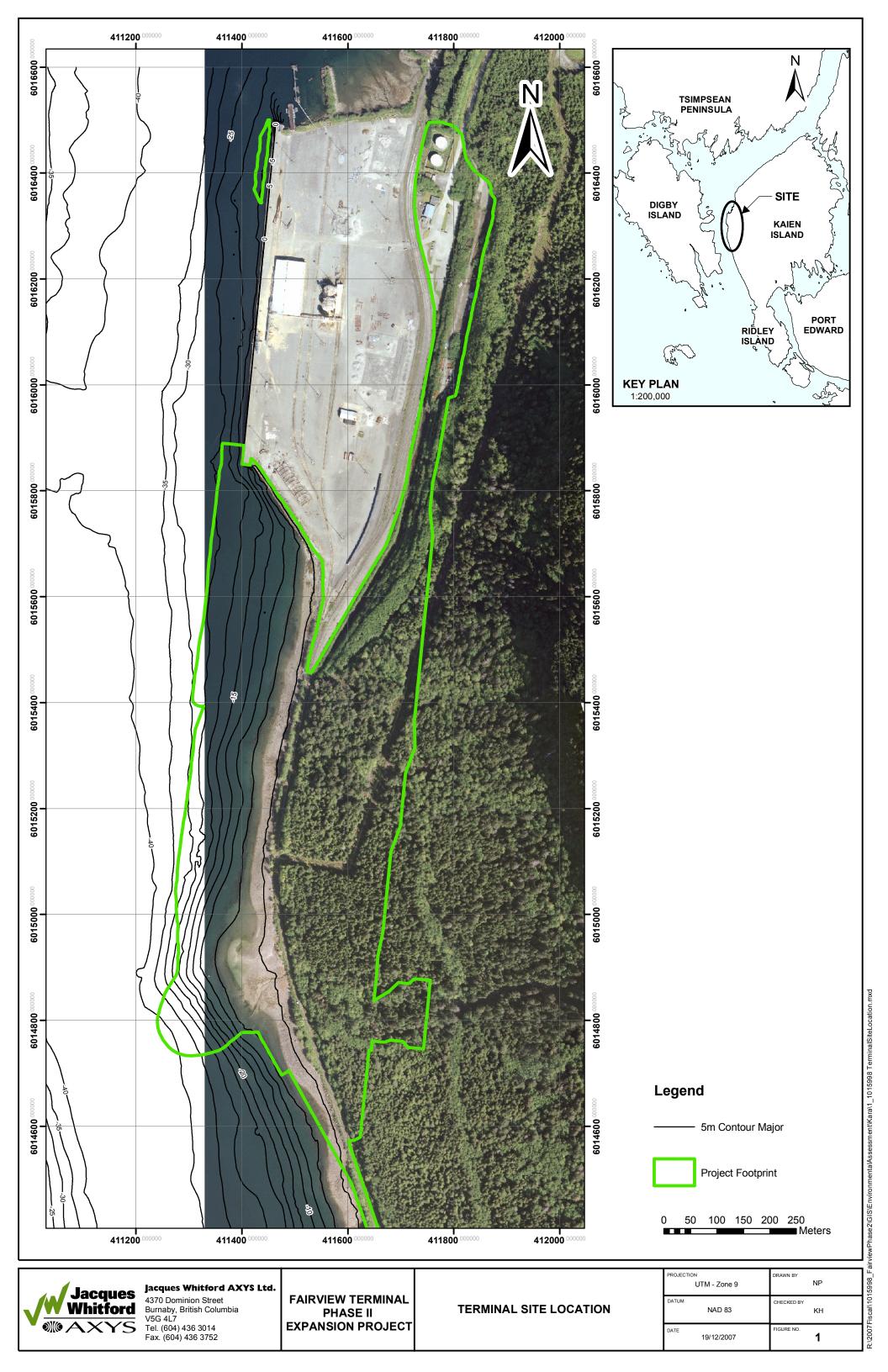
Table 1 Proposed Project Schedule

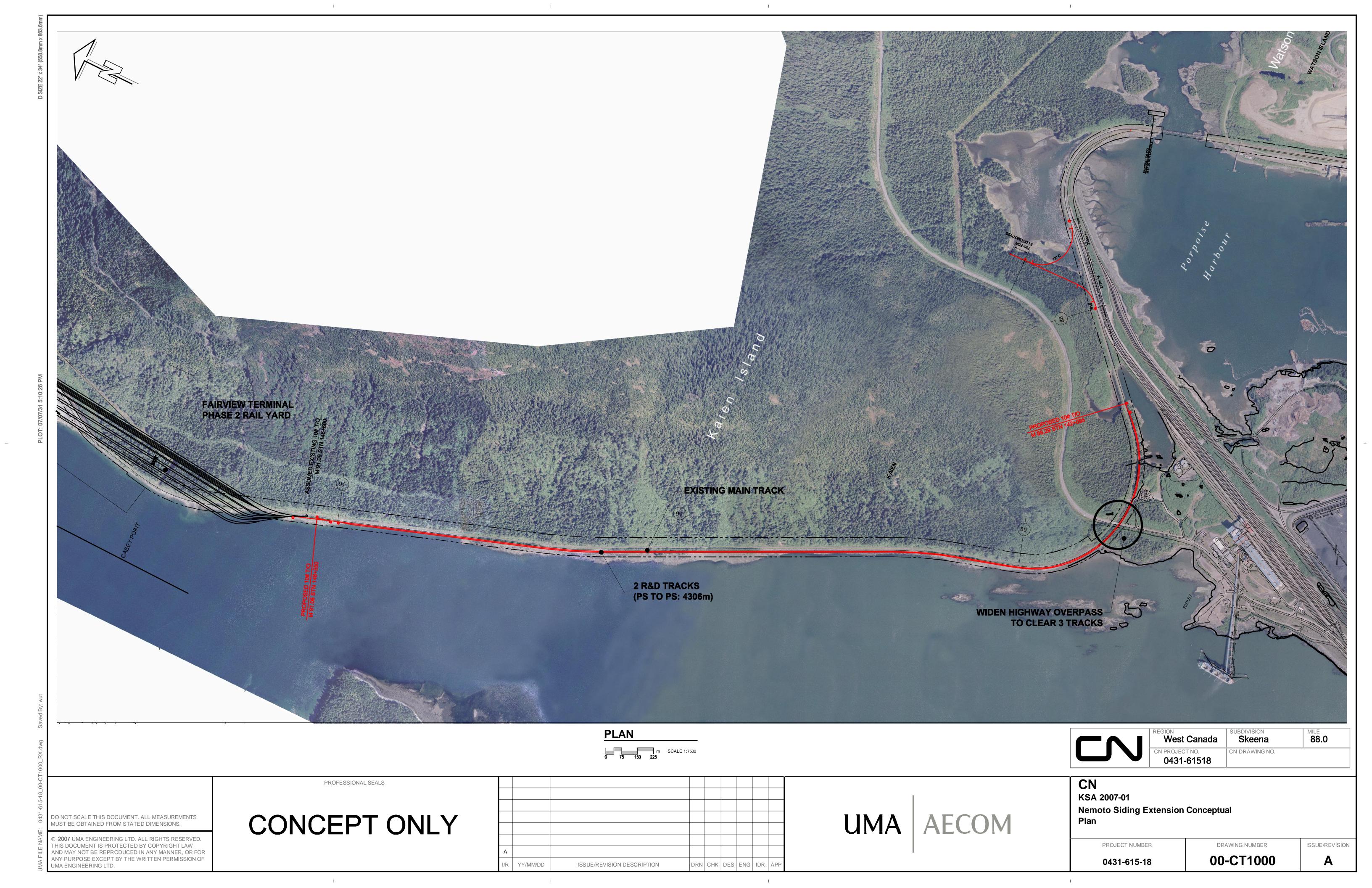
Task	Schedule	
EA Review	Summer 2009 – Winter 2010	
Permitting	2010	
Construction	Summer/Fall 2010 – Winter 2012	
Operation	2012 – 2060 (approximately)	

Further details on the Project can be found in Section 3.0.

The location of the Project is shown in Figures 1 and 2 below. The proposed capital Project budget is estimated to be \$600 million, including both the PRPA (\$585 million) and CN (\$15 million) Project components.

Figure 1 Fairview Terminal Phase II Expansion Project – Terminal Site Location
Figure 2 Fairview Terminal Phase II Expansion Project Site Location – CN Sidings and Wye
(see next pages)





2.0 FEDERAL ENVIRONMENTAL ASSESSMENT

2.1 Regulatory Context

Under subsection 5(1) of CEAA, a federal EA may be required when, in respect of a project, a federal authority:

- is the proponent;
- makes or authorizes payment or any other form of financial assistance to the proponent;
- sells, leases, or otherwise disposes of lands; or
- issues a permit, licence, or other form of approval pursuant to a statutory or regulatory provision referred to in the *Law List Regulations*.

These planned actions of federal authorities are commonly called "triggers". In the case of the Project, there are federal approvals required that are listed in the *Law List Regulations* which trigger a federal EA under CEAA.

DFO, EC, and the CTA have federal regulatory responsibilities and as such must ensure an EA is conducted prior to the issuance of federal permits and authorizations. It is anticipated that the following authorizations will be required:

- issuance of authorization by DFO for work with potential for the harmful alteration, disruption, or destruction of fish habitat (HADD) pursuant to subsection 35(2) of the *Fisheries Act.* Specific Project triggers include:
 - infilling of approximately 16 hectares of marine environment to construct the wharf and terminal;
 - re-alignment of watercourses to construct the intermodal and storage yards;
 - infilling of one hectare of marine environment below the HWM, and 2.2 hectares
 of marine riparian habitat above the HWM to accommodate the rail sidings and
 access road;
 - culvert extensions (approximately 15) on the marine side of the existing rail, to allow construction of the rail sidings and access road; and
 - infilling of approximately one hectare of salt water lagoon to accommodate construction of the locomotive wye.
- issuance of a permit by EC for disposal of dredged material at sea (outside of the boundaries of the port, i.e., at Brown Passage) pursuant to subsection 127(1) of the Canadian Environmental Protection Act, and
- issuance of an approval by the CTA for the construction of a railway line pursuant to subsections 98(2) and 98(3) of the *Canada Transportation Act*. The approval under subsection 98(3) is likely required as the two rail sidings, although within 100 m of the centre line of an existing rail line, will be greater than 3 km in length.

In addition to the above authorizations, the Project is subject to compliance with all other applicable federal and provincial legislation.

Other Federal Authorities (FAs), including Parks Canada and Health Canada, may provide expert advice during the assessment. For example, it is expected that Parks Canada would provide advice with respect to archaeological and heritage resources and Health Canada would provide advice with respect to human health.

In addition to CEAA, the PRPA is required to assess, for any proposed project located within the ports and lands under its control, the environmental effects of the project pursuant to the CPAEAR. Under the CPAEAR, a Canadian Port Authority (CPA) must conduct an EA of a project before exercising a power or performing a duty or function described in paragraphs 5(1) (a) to (c) of CEAA. This responsibility is reaffirmed in subsection 9(1) of CEAA. This section indicates that an EA is required if the CPA administers federal lands that are leased or otherwise disposed for the purpose of enabling the project to be carried out in whole or part.

Pursuant to section 6 of the CPAEAR, the PRPA is responsible for determining the scope of the project for which an EA must be conducted and, pursuant to section 17, for establishing the scope of factors to be taken into consideration during a comprehensive study (together referred to, with the scope of the project and the factors to be considered, as the scope of the assessment). Similarly, under subsection 15(1) of CEAA, the scope of the project in relation to which an EA is to be conducted pursuant to CEAA, and under section 16 of CEAA, the factors to be considered and the scope of those factors, will be determined by the RAs.

Where there is more than one RA for a project, the RAs will together determine the scope of the assessment. In addition, the CPAEAR allows for the coordination of the PRPA's duties and functions with those of the RAs. Thus, the PRPA and the RAs have agreed to together determine the scope of the assessment for the Project.

The Project is also subject to the British Columbia *Environmental Assessment Act.* A Memorandum of Agreement was signed by federal agencies and the British Columbia Environmental Assessment Office establishing that the federal EA process for the Project will be equivalent to the provincial process under section 27 of the British Columbia *Environmental Assessment Act.*

2.2 Level of Environmental Assessment

Pursuant to subsection 5(b) of the CPAEAR and section 21 of CEAA, a comprehensive study is required if a project is described in the *Comprehensive Study List Regulations* under CEAA. Section 28(c) of the *Comprehensive Study List Regulations* requires a comprehensive study for the proposed construction, decommissioning, or abandonment of a marine terminal designed to handle vessels larger than 25,000 dead weight tonnes (DWT) unless the terminal is located on lands that are routinely and have been historically used as a marine terminal or that are designated for such use in a land-use plan that has been the subject of public consultation. Some of the lands proposed for the Project are designated for such use in a land-use plan (PRPA, 2000) which was subject to public consultation. However, not all of the lands proposed for the Project were included in this plan. Therefore, the RAs have determined that a comprehensive study is required for the Project.

2.3 Overview of the Environmental Assessment Process

Although similar in many respects, the EA process followed by the PRPA under the CPAEAR differs from the EA process followed by the RAs under CEAA. In particular, the CPAEAR process is more streamlined, in recognition of the competitive environment in which CPAs must operate.

Subsection 21.1 of CEAA requires the RAs to provide the public with an opportunity to comment on the scope of the assessment and the ability of the comprehensive study to address issues relating to the project. The PRPA is not required to conduct public consultation in this regard.

However, as noted above, the PRPA and the RAs have agreed to coordinate the determination of the scope of the assessment. Thus, the process described below focuses on the process to be followed by the RAs. Key process variances by the PRPA are noted.

Following initial public consultation on this scope of assessment document, pursuant to subsection 21(2) of CEAA, the RAs must submit a report to the Minister of the Environment regarding:

- the scope of the project, the factors to be considered in the EA, and the scope of those factors;
- public concerns in relation to the project;
- the project's potential to cause adverse environmental effects; and
- the ability of the comprehensive study to address issues relating to the project.

The RAs must also recommend to the Minister of the Environment whether the EA should be continued by means of a comprehensive study, or whether the project should be referred to a mediator or review panel.

After considering the report and recommendation, the Minister of the Environment must decide whether to refer the project back to the RAs to continue with the comprehensive study process, or refer the project to a mediator or review panel. If the Minister of the Environment decides that the project should continue as a comprehensive study, the project cannot be referred to a mediator or review panel at a later date.

If, after considering the report and recommendations, the Minister of the Environment refers the project to a mediator or review panel, the project will no longer be subject to a comprehensive study under CEAA. The Minister of the Environment, after consulting the RAs and other appropriate parties, will set the terms of reference for the review, and appoint the mediator or review panel members. However, the PRPA may continue to conduct a comprehensive study pursuant to the CPAEAR.

If the Minister of the Environment determines that the EA pursuant to CEAA will continue as a comprehensive study, an EA will be undertaken and a Comprehensive Study Report (CSR) will be prepared and submitted to the Minister of the Environment and to the Canadian Environmental Assessment Agency (CEA Agency). The PRPA and RAs intend to prepare a single CSR to meet the requirements of both CPAEAR and CEAA.

Following submission of the CSR, the CEA Agency and the PRPA will invite the public to comment on the report. The Minister of the Environment may request additional information or require that public requests be further addressed before issuing his EA decision statement. Once the Minister's EA decision statement is issued, the Minister of the Environment will refer the project back to the RAs for a course of action. If the Minister concludes that the project is not likely to result in significant adverse environmental effects, then the Responsible Authorities may exercise any power or perform any duty or function that would permit the project to be carried out. The PRPA does not require a ministerial decision but may take a course of action after taking into consideration the CSR and any public comments. If the Minister concludes that the Project is likely to cause significant adverse environmental effects, no course of action can be taken by the Responsibilities Authorities without the approval of the Governor in Council. However, the Project cannot proceed until the EA pursuant to CEAA has been completed and necessary federal authorizations, permits, and/or approvals have been issued.

Whether the EA pursuant to CEAA proceeds by means of a comprehensive study or is referred to a mediator or review panel, participant funding will be made available by the CEA Agency to facilitate public participation.

2.4 Federal Coordination

While a CPA (i.e., PRPA) may assume the lead on an EA under CPAEAR, section 8 of CPAEAR states that where there are other RAs (i.e., DFO, EC, CTA) in addition to a CPA, subsections 12(1) and (2) of CEAA apply, with any modifications that are necessary. Those subsections and the *Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements* also direct coordination among RAs, when there is more than one RA in respect of a project. Therefore, the PRPA and the RAs will together determine the manner in which to perform their duties and functions, including the determination of the scope of the assessment. This document describes the scope of the assessment jointly developed by the PRPA and the RAs.

3.0 PROJECT OVERVIEW

3.1 Project Works and Activities

This section presents a summary of the Project components included in the scope of the Project to be assessed. Additional Project description information is presented in the *Project Description – Fairview Terminal Phase II Facility Expansion*, submitted to the CEA Agency on May 7, 2007.

3.1.1 Construction Phase

The construction phase of the Project will include the following:

- construction design and engineering;
- site clearing (approximately 33 hectares of upland environment);
- site grading, including grubbing, stripping, and cut and fill:
- large volume rock cuts (1,040,000 m³ overburden; 1,240,000 m³ rock excavation);
- on-site construction of nine concrete caissons (47.4 m long x 21.5 m wide x 21.5 m high) and one transition caisson;
- construction of a pile and deck extension of the existing wharf;
- dredging in front of the proposed caissons (180,000 m³);
- dredging for the containment berm and new wharf structure (145,000 m³);
- construction of rock berm and mattress:
- in-filling (16 hectares) behind the containment berm for the new terminal area;
- installation of caissons and construction of the wharf topside;
- eastern re-alignment of the existing CN mainline across the proposed terminal;
- container and intermodal yard facilities construction;
- construction of stormwater management and site drainage features (i.e., interception ditch);
- construction of two CN sidings and an access road between the terminal and the southern end of Kaien Island (1 hectare infilling below HWM; 2 hectares infilling above the HWM); and
- construction of the locomotive wye (one hectare of salt water lagoon infilling).

All construction materials for the terminal and rail works will be delivered to the site via truck, rail, or barge, depending on the nature of the materials.

Additional details pertaining to construction are provided below. Figures 3 and 4 show the general layout for the terminal and storage/intermodal yard, and for the sidings and wye.

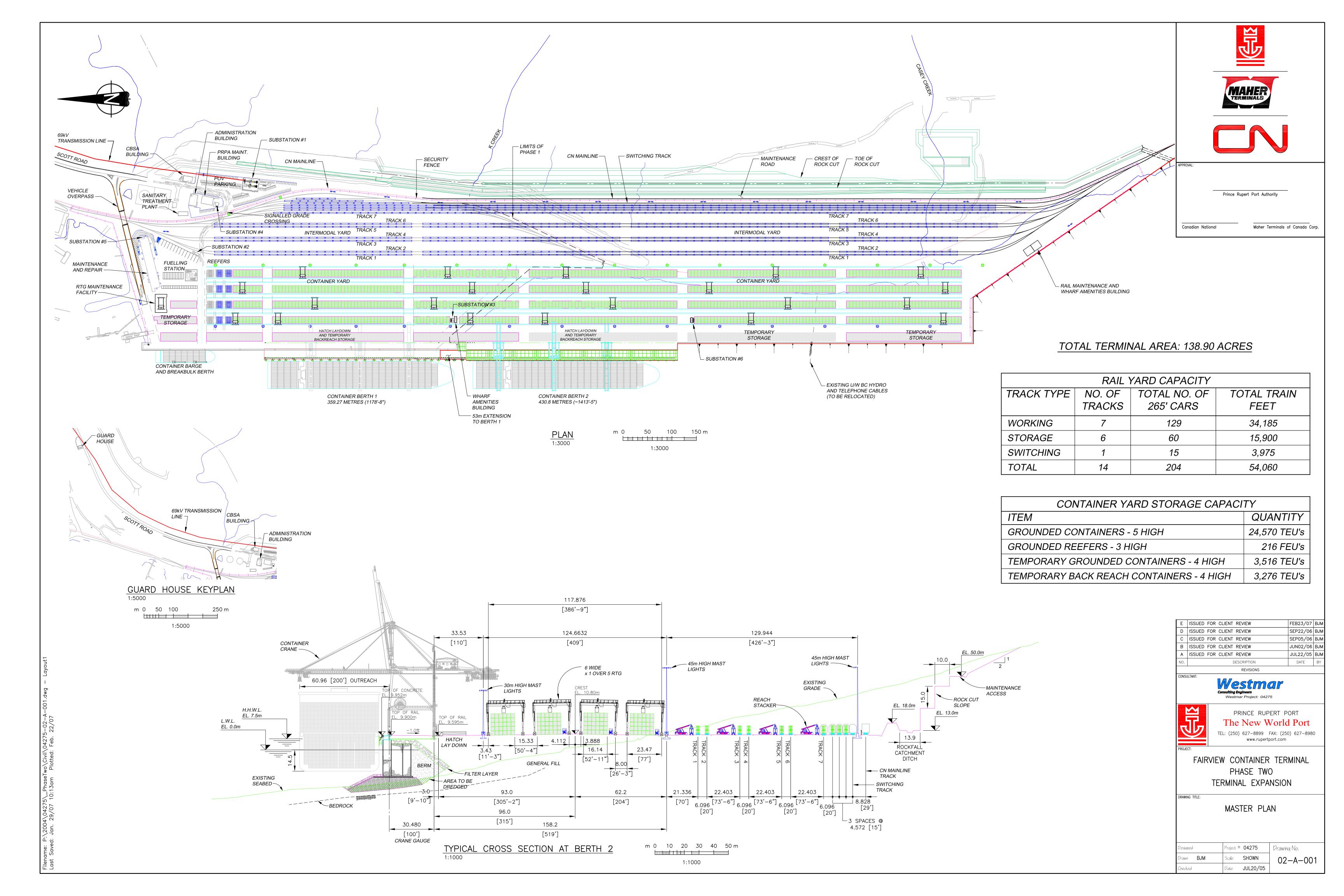
Dredge Areas and Terminal Land

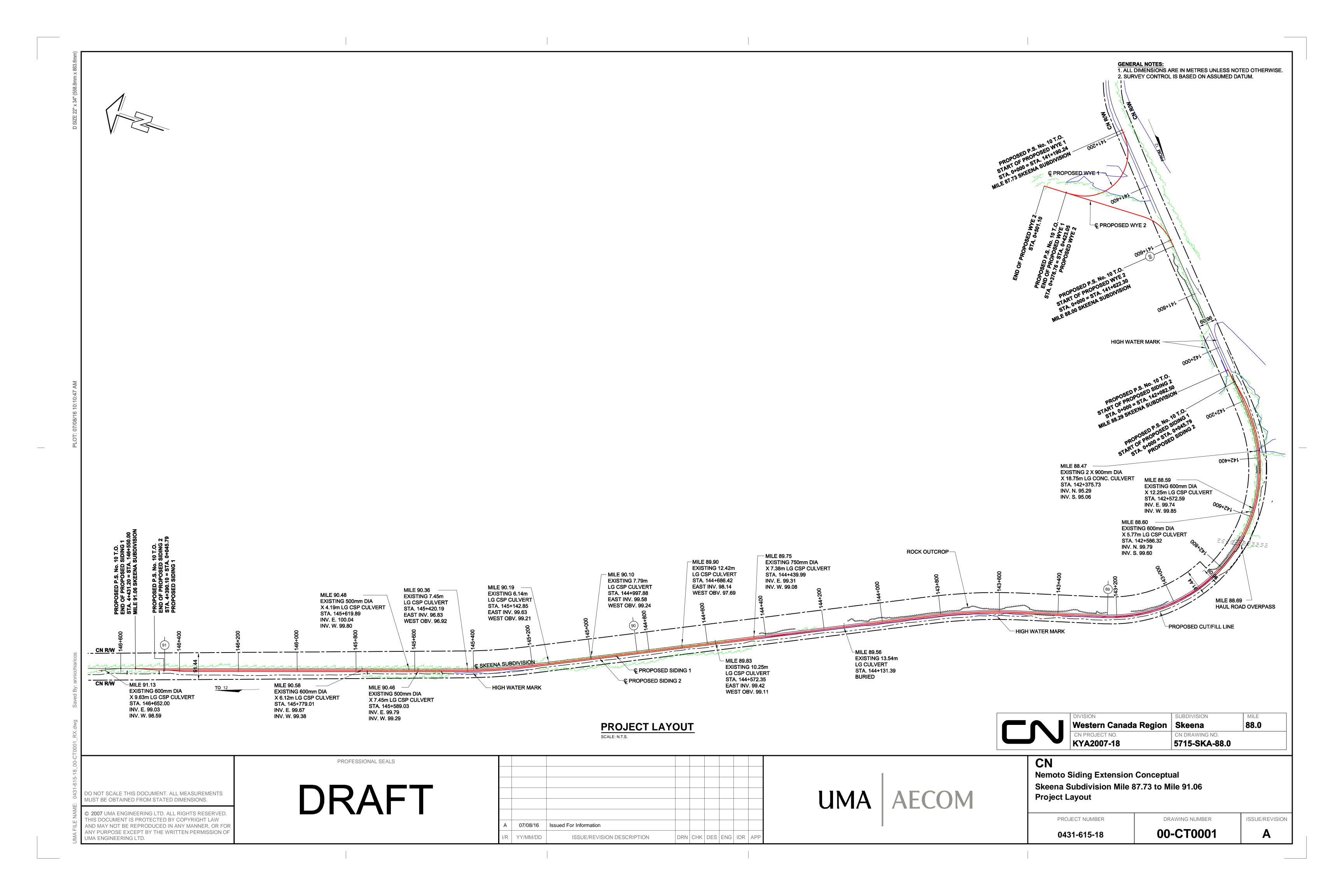
Preliminary estimates indicate that dredging of approximately 180,000 m³ of material is required in front of the proposed caissons, and dredging of approximately 145,000 m³ is required to accommodate the perimeter berm. It is expected that all of this material will be disposed of at sea at a previously used site outside of the Port (i.e., Brown Passage), in accordance with the *Canadian Environmental Protection Act.* In addition to the dredged material, 1,040,000 m³ of overburden waste will be disposed of at sea (at the same location as the dredged material). Alternatives to disposal at sea and to the use of the Brown Passage site will be considered as part of the alternatives assessment, described in section 4.2 of this document.

Dredging equipment will likely consist of cutter-suction dredges and clamshell dredges. Dredging operations will likely run 24 hours/day during the work windows established by DFO, and on the basis of an assessment of fish presence, abundance and habitat in the area. Maintenance dredging is not anticipated.

General fill for the marine portion of the infilling may include the rock taken from the rock cuts on the east end of the site. Only minimal treatment of the material is anticipated to be required in order to remove organics and other deleterious material.

Figure 3 Terminal Site Layout Figure 4 Sidings and Wye Layout (see next pages)





Wharf

The wharf structural system will consist of a pre-cast concrete deck apron attached to, and extending out from, the existing concrete caissons. Both cast-in-place and pre-cast concrete elements will be used for the wharf extension. The apron will be supported at the inshore edge on the existing cope wall and at the offshore edge by a new concrete pile-cap supported on a continuous row of vertical steel pipe piles. The pile cap will also act as the offshore crane rail beam.

Rail and Road

Widening of the site to the east to accommodate expanded rail facilities requires excavation into the existing hillside, as well as large rock cuts. In order to mitigate against potential landslides, the following measures will be undertaken:

- rock cuts will have overall slope of 45 to 55 degrees;
- the overburden above the rock cut will be sloped back at about 2H:1V to meet the natural hill slope above;
- where possible and if required, a cut-off ditch will be placed above the crest of the cut;
- where possible, retaining structures may be considered locally to assist in support of the overburden above the rock cut; and
- a landslide catch ditch will be constructed at the toe of the rock cut or at the first bench.

To achieve the terminal throughput design capacity, CN plans to extend two rail sidings approximately 4.5 km from the south end of the Fairview Terminal to the southern end of Kaien Island (see Figure 2). The new sidings will be built immediately adjacent to the existing mainline (on the marine side) and will extend from CN Mile 88.29 to approximately Mile 91.06 for a total rail construction length of 2.77 miles (4.45 km). In addition, an access road for train inspections will be constructed adjacent to the sidings.

Preliminary designs for the sidings and wye indicate the following construction components:

- infilling of foreshore habitat (including marine riparian habitat) along Chatham Sound (1 hectare below HWM; 2.2 hectares above HWM);
- extension of approximately 15 existing culverts; and
- infilling (approximately one hectare) of salt water lagoon north of the existing mainline, at approximately Mile 88 to accommodate the locomotive wye.

3.1.2 Operation Phase

The Project will be designed to allow efficient transfer of containerized cargo between vessels and the shore. The terminal will be operated by Maher Terminals of Canada Corp., and will be supported by CN.

PRPA will not own or operate the large vessels or smaller tug and barge vessels coming and going to the terminal; however, vessels calling on the terminal will operate:

- within existing shipping lanes within the Port of Prince Rupert;
- in existing approach lanes to the harbour; and
- in conformance with all existing port, provincial, federal, and international shipping regulations.

All shipping within the Port of Prince Rupert will be conducted following the rules of shipping established by the Port under the *Canada Marine Act* and in compliance with the requirements

of the Canadian Coast Guard (CCG), and with the *Port Authority Operations Regulations*. Furthermore, all shipping within Canadian waters will be subject to both the *Canada Marine Act* and the *Canada Shipping Act* and regulations.

The PRPA has the authority to monitor ships about to enter or within the waters of the Port of Prince Rupert, to establish traffic control zones, request information, and impose conditions under which a traffic clearance is to be granted. All marine vessel traffic entering, within, or leaving the Port is managed by PRPA, CCG Marine Communication and Traffic Services, and the Pacific Pilotage Authority. Any vessels over 350 gross tons will require pilotage, as per Port standard practices and procedures.

4.0 SCOPE

This section outlines the scope of the assessment to be conducted by the PRPA and the RAs pursuant to their respective legislation. The scope of the assessment includes the scope of the Project (i.e., the physical works and activities considered in the assessment), the factors to be considered, and the scope of those factors. The scope of the assessment focuses the EA on environmental components likely to be affected by the Project, and on relevant issues and concerns.

The scope of assessment as presented has been developed in a manner that is consistent with the requirements of the CPAEAR and CEAA, CEA Agency guidance, and the federal legislative intent to make CPAs responsible for EAs within the confines of a port. This scope of assessment is provided by the PRPA under the authority granted to it by sections 6, 10, 16 and 17 of the CPAEAR. This scope of assessment is also provided by DFO, EC, and the CTA pursuant to the authority granted to those bodies under section 15, 16(1) and 16(3) of CEAA.

4.1 Scope of the Project

The "scope of the project" refers to the proposed undertakings (in relation to physical works) or activities that will be considered part of the Project for the purposes of the EA.

For the purposes of the EA of the proposed terminal expansion at Fairview Terminal, it is proposed that the scope of the Project will be:

- the infilling of approximately 16 hectares (40 acres) of marine environment and the construction of the terminal wharf, container yard, and intermodal yard;
- the construction, operation, modification, decommissioning or abandonment of the additional 14 rail tracks within the intermodal yard, for a total of approximately 14,000 m of rail:
- the eastern re-alignment of the existing CN mainline across the proposed terminal site;
- •
- dredging in front of the proposed caissons, and in relation to the containment berm and new wharf structure:
- disposal at sea activities at Brown Passage including transit to the site;
- construction of two CN Rail sidings and an access road on the marine side of the existing mainline, requiring approximately one hectare of infilling below the HWM and approximately two hectares of riparian infilling above the HWM;
- the construction, operation, modification, decommissioning or abandonment of the locomotive wye (turnaround) at the southern end of Kaien Island (northern end of Porpoise Harbour) requiring infilling of approximately one hectare of salt water lagoon;

- operation of vessels while berthing and berthed at the marine terminal and while within harbour limits of the PRPA:
- operation of locomotives arriving/departing/idling in the intermodal yard and along the CN sidings and wye; and
- construction related to fish habitat compensation.

No ancillary facilities or components will be located outside of the Project footprint.

4.2 Factors to be Considered

The RAs are required to consider the factors specified in section 16 of CEAA, taking into consideration the definitions of environment, environmental effect, and Project, prior to making a decision regarding whether to take action (e.g., grant funding, dispose of land, or issue a permit or authorization) that would permit the Project to proceed.

As defined under CEAA, "environmental effect" means, in respect of a project:

- a) any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the Species at Risk Act,
- b) any effect of any change referred to in paragraph (a) on
 - i) health and socio-economic conditions,
 - ii) physical and cultural heritage,
 - iii) the current use of lands and resources for traditional purposes by aboriginal persons, or
 - iv) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or
- c) any change to the project that may be caused by the environment,

whether any such change or effect occurs within or outside Canada.

Under section 16 of CEAA, the following factors must be considered in an EA conducted as a comprehensive study:

- the environmental effects (as defined above) of the project, including the environmental
 effects of malfunctions or accidents that may occur in connection with the project and
 any cumulative environmental effects that are likely to result from the project in
 combination with other projects or activities that have been or will be carried out;
- the significance of the environmental effects;
- comments from the public obtained in accordance with CEAA;
- any measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project;
- · the purpose of the project;
- alternative means of carrying out the project that are technically and economically feasible, and the environmental effects of any such alternative means;
- the need for, and the requirements of, any follow-up program in respect of the project;
 and
- the capacity of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future.

The alternative means assessment will include assessment of those alternative means that are economically and technically feasible, and will include consideration of:

- alternative terminal locations;
- alternative terminal layouts and construction methods;
- alternatives to construction of two rail sidings;
- alternatives to selected placement of two rail sidings and access road;
- alternatives to selected wye configuration and location; and
- alternatives to disposal at sea and to the Brown Passage site for disposal of Projectrelated dredged material and overburden.

The RAs have not identified any additional factors that are required to be considered, pursuant to subsection 16(1)(e) of CEAA.

4.3 Scope of the Factors to be Considered

The proposed scope of the factors to be considered in the EA is outlined below.

4.3.1 Environmental Effects

The EA completed under CPAEAR and CEAA shall evaluate the potential environmental effects of the Project, including the environmental effects of accidents and malfunctions and cumulative environmental effects that are likely to result from the Project, on the following Valued Environmental Components (VECs):

- Air Quality;
- Noise and Vibration;
- Light;
- Vegetation;
- Wildlife and Wildlife Habitat;
- Avifauna:
- Freshwater Environment;
- Marine Environment;
- Socio-economic Conditions;
- Human Health and Safety;
- Archaeological and Heritage Resources;
- First Nations Current Traditional Use; and
- Country Foods.

Some of the VECs listed above will include key indicator resources which will further break down the VEC into species or other relevant components.

Spatial and Temporal Boundaries

Spatially, the main Project site is located adjacent to the existing Fairview Terminal, at 54°16′49" N 130°21′31" W, with CN siding extensions extending from the southern end of the proposed Phase II terminal to the southern end of Kaien Island, at Porpoise Harbour (approximately 4.5 km south of the terminal footprint), and a locomotive wye to the north of Porpoise Harbour. Disposal at sea activities would take place at Brown Passage. The EA will encompass different spatial boundaries specific to each factor in order to effectively assess the potential environmental effects of the Project.

The temporal boundaries will encompass the entire lifespan of the Project, which is expected to be 50 years. The EA will discuss the effects of the Project on each factor beginning with the construction phase and throughout the operations phase (including maintenance and/or modifications), and through to the completion of the decommissioning phase. Potential malfunctions and accidents that could occur during any Project phase will also be considered, along with the likelihood and circumstances under which these events could occur.

The following subsections provide additional details on the scope of the factors to be considered in the environmental effects assessment of these VECs.Air Quality

For the purposes of the EA, air quality refers to the ambient air in the region surrounding the proposed Project site, and includes air quality and climate. The EA will identify potential effects on air quality associated with all phases of the Project. This includes construction, operations, and decommissioning.

An inventory of substantive emissions from the Project, by Project phase, will be provided. The evaluation of potential environmental effects on air quality will include dispersion modeling of contaminant emissions that are determined to be substantive, by Project phase. The modeling will be used to determine a Zone of Influence (ZOI) within which the potential environmental effects of contaminant release on air quality in the ambient air surrounding the Project site will be assessed.

The EA will include a detailed activity-based emission inventory for both the construction and operation phases of the Project. This will include all emissions sources expected to be different with the Project versus without the Project. The most appropriate emissions factors for criteria air contaminants, greenhouse gases, and other substances of concern will be used. These include: sulphur dioxide (SO_2), nitrogen dioxide (SO_2), carbon monoxide (SO_2), inhalable particulate (PM_{10}), respirable particulate ($PM_{2.5}$), and total volatile organic carbon substances (Total VOC).

The work being undertaken for the EA will result in the first detailed, quantitative assessment of existing air quality in Prince Rupert. Continuous meteorological data will be obtained from the BC Ministry of Environment (BC MOE). In consultation with the BC MOE, and consistent with their dispersion modelling guidance, the studies will include performing a dispersion assessment of the baseline air quality (existing sources, including Fairview Phase I), the Project alone, the Project plus baseline, and the Project, baseline, and announced future projects. This baseline air quality modelling exercise will be the first of its kind performed for the Prince Rupert area. It utilizes the United States Environmental Protection Agency (U.S. EPA) regulatory CALPUFF dispersion modelling system.

For the purposes of the assessment the boundaries established for the emission inventory is based on professional judgment and experience with previous assessments for marine terminal operations.

With respect to the emission inventory for Project-related ships and tugs, a methodology will be employed that captures all emissions from the location that a vessel departs the mid-channel position and begins movements towards the jetty; a distance of approximately 4 km. Despite these emissions being released some distance from shore, modelling will be to a worst-case fashion – as if they were all emitted at the jetty.

The spatial boundary for purposes of the air quality assessment will include:

- 1) Marine terminal: emissions from vessel traffic included in the Project as scoped above, including when vessels are berthed and when they are connected to tugs for maneuvering and berthing purposes.
- 2) Rail: emissions from locomotive traffic included in the Project as scoped above, including the arrival and departure of trains to and from Fairview Terminal, the idling, switching, and turnaround of locomotives at the Terminal and on the Kaien sidings and wye, and emissions within the ZOI as determined by the modeling.

The EA will include quantitative estimates of Project-related air emissions for small, medium, and large communities along the rail corridor. These estimates will be compared to total emission quantities for all existing sources in those communities. If the absolute or percentage emissions increase over that which is present indicates a potential for deleterious effects in the receiving environment, dispersion modeling will be conducted. Air quality emissions will also be compared to acceptable limits and/or provincial standards.

The intermodal trains serving Fairview Terminal will be through trains and would stop in Prince George, BC when traveling east for pick-up or drop-off only of bad order or repaired cars. This would be a very quick process as these intermodal trains are considered to be priority trains, thereby limiting idling times.

Particulate matter emissions from diesel combustion will be discussed in terms of human health of both terminal workers and the general public.

"Diesel PM" is a complex mixture of solid and semi-volatile substances. Given its highly variable and uncertain composition, emission factors for 'Diesel PM' are not published. The potential effect of Diesel PM will be addressed through the modelling of particulate emissions of all sources (as PM_{2.5}), and Total VOC as a conservative surrogate for specific substances of concern (e.g. individual VOCs). These constituents of Diesel PM are then individually compared to relevant thresholds for effects. With the quantities anticipated to be emitted and the limited potential for exceedances and receptor exposure, no significant adverse environmental effects on human or ecological health are expected, and no risk assessment is warranted. The EA report will refer to the Diesel PM emissions for line-haul locomotives and switchers published in Environment Canada's document titled "Locomotive Emissions Monitoring Program 2005" (2006).

Emissions of greenhouse gases will be estimated. The evaluation of potential environmental effects on climate will be limited to consideration of the contribution of Project emissions to provincial and national greenhouse gas emission totals.

Mitigation and emissions reduction strategies will constitute best practice, and will include, where appropriate, consideration of currently technically and economically feasible reduction

strategies that may not have been technically or economically feasible at the time of the Phase I conversion. Emissions reduction measures that will be implemented by PRPA, CN and their shipping and terminal partners will be definitively described in the EA.

Noise and Vibration

Given the expected generation of noise through construction, operation, and decommissioning of the Project, an evaluation of the environmental effects of noise and vibration on ambient sound levels and human and ecological health will be included in the EA. The noise study will include assessing existing acoustic conditions in the vicinity of the Project site (the area within which Project-related noises may be heard). For the purpose of assessing the potential effects associated with noise and vibration due to increased Project-related rail traffic, the spatial boundary of the assessment will extend from the Fairview Terminal to mile 97 Bulkley Subdivision, at or near the rail intersection with Lorn Creek, east of Kitselas. The spatial boundary of the environmental assessment for the potential effects associated with noise and vibration due to changes in railway operations along the railway line beyond the Project site will be subject to review as information becomes available during the environmental assessment.

For greater certainty, noise is both an environmental effect as well as a valued environmental component. Hydroacoustic effects due to noise on marine mammals and fishes will be assessed and discussed in the Marine Environment section. Noise effects on avifauna will be assessed and discussed in the Avifauna section.

<u>Light</u>

The EA will consider the environmental effects of light pollution and trespass from site and facility lighting. The effects of light on avifauna (i.e. birds) will be assessed and discussed in the Avifauna section.

Vegetation

For the purposes of the assessment, the environmental effects on vegetation, specifically vegetation species and ecological communities, will be considered. Vegetation species of special conservation status identified on provincial red and blue lists and by COSEWIC and/or Schedule 1 of the *Species at Risk Act* (SARA) will be considered.

The assessment area (spatial boundary) for vegetation will be limited to the Project footprint (areas of clearing for construction of the terminal) and any temporary work spaces or staging areas, including a 100 m buffer area around all areas of proposed disturbance. The EA will describe and evaluate direct and indirect effects to vegetation (i.e., rare plants and ecosystems, wetlands, riparian ecosystems, and old forests) resulting from the Project, and will address both the removal and disposal of vegetation associated with Project construction. In the consideration of wetlands, the EA will ensure that the Project is consistent with the goals, objectives and approaches to conserving wetland habitats and other wetland functions through reference to the *Federal Policy on Wetland Conservation* (Government of Canada 1991).

Potential environmental effects of the Project on terrain stability will be considered and presented in the Accidents and Malfunctions section of the EA report.

Wildlife and Wildlife Habitat

For purposes of the EA, wildlife and wildlife habitat will be identified as a VEC and refers to wildlife species and their habitats potentially affected by the Project. Wildlife species of special

conservation status, identified on provincial red and blue lists and by COSEWIC and/or Schedule 1 of SARA, will be included in the assessment. Effects on avifauna will be discussed in the Avifauna section.

The assessment area (spatial boundary) for wildlife and wildlife habitat will be based on the areal extent of the Project activities and their likely environmental effects. This will include at a minimum the area proposed for the terminal expansion plus a buffer; Brown Passage; and a buffer on either side of the CN line, between the terminal and Zanardi bridge. The EA will identify potential environmental effects, both direct and indirect (i.e., sensory disturbance (noise), habitat loss or alteration, direct mortality), on wildlife and wildlife habitat, giving consideration to, and demonstrating linkages between, predicted physical and biological changes resulting from the Project. For the purpose of assessing potential increases in moose mortality due to increased rail traffic associated with the Project, the spatial boundary of the assessment will extend from the Fairview Terminal to mile 97 Bulkley Subdivision, at or near the rail intersection with Lorn Creek, east of Kitselas.

An assessment of SARA species within and near the Project area has been completed, and no SARA species have been identified. SARA species will be discussed within the CSR.

To focus the EA, two (2) wildlife species will be used as Key Indicator Resources in order to determine the potential effects of the Project: black bearand black-tailed deer. These species have been selected because their needs (i.e., life requisites) and habitat requirements are shared by a broad spectrum of other wildlife species and are therefore considered to be representative of other species that potentially inhabit the Project area, based on terrestrial wildlife baseline studies undertaken to date. Effects of the Project on small mammals, reptiles, and amphibians and their habitat will also be assessed.

The EA will describe baseline conditions within and adjacent to the Project area, including species presence, abundance, and habitat use across all seasons for terrestrial wildlife (including birds), sufficient to enable the assessment of potential environmental effects of the Project. Baseline conditions will include existing information where appropriate (i.e., literature review and/or baseline studies completed for other projects in the area). If less than two years of baseline data are included in the EA, the EA will provide justification as to why additional baseline data are not required and/or describe follow-up programs to compile additional data to confirm predicted environmental effects and effectiveness of mitigation.

Avifauna

For purposes of this assessment, avifauna will also be considered a VEC and refers to bird species associated with the terrestrial and marine environment that are potentially affected by the Project. The spatial boundaries for the Avifauna VEC include the marine habitats located between the marina and Zanardi Rapids (with an emphasis on the marine environment in the immediate vicinity of the marine terminal), Brown Passage, the CN siding extension and wye. The terrestrial portion of the assessment area will include the area proposed for the terminal expansion plus a buffer; and a buffer on either side of the CN line and wye.

Key indicator resources for the Avifauna VEC include marine birds and land birds. Marine birds are defined as birds that frequent coastal waters (e.g., scoter, merganser, loon) and the open ocean (e.g., alcids) and forage upon small fish, crustaceans and mollusks. Only marine birds likely to occur within the Regional Study Area were included in the assessment of effects. Land birds are defined as perching birds (e.g., vireos, flycatchers) other birds (e.g., ravens), and

raptors, including all potentially occurring birds of prey, both nocturnal (i.e., owls) and diurnal (e.g., hawks, eagles) that are considered dependent upon the terrestrial environment.

To assist in focusing the EA, two species have been identified as indicators of bird habitat for this VEC: Marbled Murrelet and Northern Goshawk. These species have been selected because the habitats they require for breeding are used by other species of birds that potentially inhabit the Project area, based on baseline studies undertaken to date. As discussed above, under the Wildlife and Wildlife Habitat section, baseline studies are being undertaken to determine the bird species present (across seasons). These studies will assess the habitat types that those birds are using for nesting, feeding, and roosting. The assessment of Project effects on Avifauna will include consideration of the potential effects on breeding and feeding areas within the assessment boundaries, and will identify and describe the presence of marine (e.g., mudflat, estuarine and/or rocky intertidal habitat) and terrestrial (e.g., ecosystem type) habitats.

The Interim Canadian Wildlife Service (PYR) Guidance for Addressing Migratory Birds and Species at Risk in Project Environmental Assessment will be used as general guidance to ensure that the EA meets the standard of baseline information expected by EC.

Freshwater Environment

For the purposes of the assessment, the freshwater environment was selected as a VEC because the construction and operation of the Project facilities have the potential to affect a number of freshwater streams and ponds, some of which support fish. The freshwater environment as a VEC encompasses freshwater fish, fisheries and fish habitats, hydrogeology, surface water hydrology, and water quality.

No specific Key Indicator Resources were selected for the Freshwater VEC; instead three potential environmental effects from Project activities were chosen to govern the protection of fish and fish habitat by addressing the regulatory requirements of the *Fisheries Act*. The three potential environmental effects are: a change in water quality, a change in fish mortality and a change in habitat quantity and quality.

The spatial boundaries for the assessment of effects include the freshwater environment located within or immediately adjacent to or affected by the footprint of the terminal facility and the CN siding extension and locomotive wye.

With respect to freshwater fish species, changes in fish mortality and fish species of special conservation status, identified on provincial red and blue lists and by COSEWIC and/or Schedule 1 of SARA, will be included in the assessment.

Impacts on species that form part of a First Nations, commercial and/or recreational fishery will also be assessed. Discussions related to fishery species will be presented in the First Nations Current Use and Country Foods VEC sections.

In accordance with the *Fisheries Act*, freshwater fish habitat will refer to the freshwater aqueous and riparian environment which makes up the spawning grounds, nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes, and will include the benthos, water quality, and substrate conditions. The area of instream and riparian habitat lost or altered as a result of the Project will be included in the assessment.

The effects of the Project on water quality will be assessed.

Studies are being undertaken (using existing information where appropriate i.e., literature review and/or baseline studies completed for other projects in the area) to determine the spatial and temporal baseline conditions of the areas of freshwater environment potentially affected by the Project.

Marine Environment

For the purpose of the assessment, the marine environment will be considered a VEC and refers to all life stages of marine fish and the habitats necessary to support marine life. Marine fish include finfish, shellfish, crustaceans, and marine mammals (as defined by the *Fisheries Act*). The definition of fish habitat includes the benthic environment, pelagic environment, riparian environment, and marine water quality. The marine environment was selected as a VEC because of the potential for direct interactions between construction of the marine terminal and the marine environment.

The assessment area (spatial boundary) for the Marine Environment VEC will be limited to the Project footprint (areas of infilling and dredging) and any other areas in which direct and indirect effects of the Project may be felt, including Brown Passage and the salt water lagoons at the southern end of Kaien Island. Potential effects from vessels within the harbour limits of the PRPA will be included in the assessment of the marine environment. In addition, the potential effect of propeller wash, and ballast water management/hull fouling, will be considered. Mitigation measures related to ballast water management and invasive marine species will also be discussed in the Marine Environment section.

Key indicator resources to be considered within the EA include marine mammals (toothed whales and baleen whales), salmon, marine benthos and zooplankton, cockles, eelgrass, bull kelp, abalone, riparian environment, sediment quality, and water quality. Potential direct Project effects on each of these will be considered, as will the direct effects on associated habitats. The assessment will also consider the potential effects of the Project on coastal processes.

Impacts on species that form part of a First Nations, commercial and/or recreational fishery will also be assessed. Discussions related to fishery species will be presented in the First Nations Current Traditional Use and Country Foods sections.

With respect to water quality, the EA will consider the potential for acid rock drainage and/or metal leaching resulting from the excavations upland, and its effect on water quality. Geochemistry of the Project's upland area will be included in the baseline studies. The assessment of potential changes to water quality will consider the potential effect of these changes on wildlife and wildlife habitat (terrestrial and marine).

Baseline studies will be completed as per the discussion in the Wildlife and Wildlife Habitat section, above.

Socio-economic Conditions

The potential for a change in the environment caused by the Project to affect socio-economic conditions will be examined. The current use of lands First Nations for traditional purposes will be discussed in the First Nations Current Traditional Use section.

Human Health and Safety

The potential for a change in the environment caused by the Project to affect human health will be examined, including the health of members of the public and workers at the terminal. For the

purposes of the EA, consideration of human health and safety will focus on the potential impacts resulting from changes to air quality and noise. The focus will be on potential health risks to people living in communities in closest proximity to the terminal.

Archaeological and Heritage Resources

As required under the *Canadian Environmental Assessment Act* (see section 4.2 of this document), potential effects on archaeological and heritage resources in the vicinity of the Project site and surrounding area that result from the environmental effects of the Project will be considered. IArchaeological Resources are defined as any human work or place that gives evidence of human activity and that has historic value. Heritage Resources are defined as any resources resulting from past human activity, surface or subsurface structures, or any site or thing that is of historical, palaeontological, or architectural significance.

First Nations Current Traditional Use

The Project site is located within the traditional territory of the Tsimshian Nation. Five First Nations communities assert Aboriginal rights to lands in the Prince Rupert harbour area (Metlakatla First Nation, Lax Kw'alaams Band [Coast Tsimshian Tribal Society], Gitxaala Nation [Kitkatla], Kitsumkalum First Nation, and Kitselas First Nation). The effect of any change in the environment arising from the Project on the current use of lands and resources for traditional purposes by Aboriginal persons will be evaluated. These First Nations will be invited to meet to identify the work required to properly identify current traditional uses. Aboriginal or community knowledge that may be provided by these First Nations will be considered in the EA.

Country Foods

The EA will consider the effects of Project activities on wildlife, vegetation, freshwater and marine species used as country food resources. The importance of country foods to the Tsimshian communities will be addressed in the First Nations Current Traditional Use section.

Capacity of Renewable Resources

The EA will consider the capacity of renewable resources that are likely to be significantly affected by the Project to meet the needs of the present and those of the future. The Project's potential effects on wildlife and aquatic resources that support First Nations culture, health and traditional economy will be assessed and discussed in the First Nations Current Traditional Use section.

Accidents and Malfunctions

The EA will consider potential malfunctions and accidents that may occur in any phase of the Project, the likelihood and circumstances under which these events could occur, and the residual environmental effects that may result from such events. This will include, but not necessarily be limited to, consideration of the effects of chronic oil releases as well as catastrophic fuel and engine oil releases upon fish and wildlife and associated habitat, as well as the effects of an accidental train and cargo derailment resulting in the loss of cargo and diesel fuel and engine oil in to the freshwater and/or marine environment. The boundaries of the assessment of potential malfunctions and accidents will encompass, in addition to the study boundaries described above, areas, including any sensitive environmental areas, which may not be affected by routine Project construction or operation, but which may be affected by potential malfunctions and accidents.

Cumulative Environmental Effects

The evaluation of potential cumulative environmental effects will include the net environmental effects that are likely to result from the Project in combination with the environmental effects of past, present or future projects or activities that have been or will be carried out. Cumulative effects are to be considered for those projects and activities that have been or will be carried out, the effects of which are likely to overlap in time and/or space with the residual environmental effects (i.e., those remaining after mitigation) of the proposed Project (construction and operations phases). The approach and methodologies used to identify and assess cumulative environmental effects will be explained in the EA report.

The spatial boundaries for the cumulative environmental effects assessment will be defined on the basis of the characteristics of each VEC, and will encompass the area within which a residual environmental effect of the Project is likely to interact cumulatively with the effects of other past, present or future projects and activities that have been or will be carried out. In some cases, this may be limited to the lands and Port of Prince Rupert under the administration of the PRPA, and the municipal boundaries of Prince Rupert. In other cases, such as for air quality, the spatial boundary will encompass the airshed (or other VEC-specific boundary), extending beyond the Project site and/or Kaien Island, within which cumulative environmental effects are likely to occur.

The temporal boundaries for the cumulative environmental effects assessment will be limited to other projects or activities that have been or will be carried out and which are not hypothetical. The assessment of cumulative environmental effects on climate will be limited to consideration of the contribution of Project emissions of greenhouse gases to provincial emissions.

Effects of the Environment on the Project

In addition to evaluating the environmental effects of the Project, changes to the Project that may arise as a result of the environment will also be considered. This analysis will include consideration of natural hazards such as extreme weather events, landslides, and natural seismic events. Proposed mitigation, including design strategies, will be considered in the evaluation of the effects of the environment on the Project and the determination of their significance.

Public Comments

The EA report will document the public comments received in accordance with the requirements of CPAEAR and CEAA, and through the consultation efforts of the PRPA and CN.

Design of a Follow-up Program

The purpose of a follow-up program is to verify the accuracy of impact predictions and determine the effectiveness of mitigation measures. Pursuant to section 16(2)(c) of CEAA, the EA will consider the need for and requirements of any follow up program. In accordance with subsection 38(2) of CEAA, a follow up program will be designed and the RAs will ensure its implementation. The EA will describe the recommended follow-up, and will indicate who will be responsible for implementing the various aspects of the recommended follow-up programs.

5.0 ABILITY OF THE COMPREHENSIVE STUDY TO ADDRESS ISSUES RELATED TO THE PROJECT

Comments are also being solicited on the ability of the comprehensive study to address issues relating to the Project. The public is encouraged to identify any reasons why issues, associated with the Project to be considered within the environmental assessment, can or cannot be addressed within the comprehensive study.

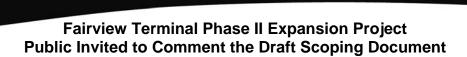
6.0 PUBLIC CONSULTATION

See next page.

7.0 REFERENCES

More information about this proposed development may be found on the PRPA website, at the following address: [http://www.rupertport.com/container2.html].

More information on the federal EA process associated with the Project may be found on the Canadian Environmental Assessment Registry, at the following address: [http://www.ceaa-acee.gc.ca/050/details-eng.cfm?CEAR_ID=37956].



and Attend Open Houses

The Prince Rupert Port Authority is proposing to expand its existing Fairview Container Terminal in Prince Rupert Harbour, British Columbia. This will include extending the existing wharf structure and expanding the on-shore terminal. As part of the project, the Canadian National Railway Company is proposing improvements to the associated rail infrastructure.

The Canadian Environmental Assessment Agency (the Agency), invites the public to comment on the scoping document for the environmental assessment of the Fairview Terminal Phase II Expansion Project.

The Agency prepared the draft scoping document on behalf of the responsible authorities, Fisheries and Oceans Canada, Environment Canada, the Canadian Transportation Agency, as well as the Prince Rupert Port Authority, as a regulator for this project.

The scoping document incorporates the requirements of the federal environmental assessment process and identifies key issues to be addressed in the comprehensive study.

Public comments received by June 26, 2009, will be considered. All written submissions received will be considered public and will become part of the public registry. Interested persons are invited to send their comments in the official language of their choice to:

Fairview Terminal Phase II Expansion Project Canadian Environmental Assessment Agency Suite 805 – Alberni Street Vancouver BC V6G 1A5 Tel.: 604-666-2401 / Fax: 604-666-3493

FairviewPhase2@ceaa-acee.gc.ca

The draft scoping document along with more information on the project is available on the Agency Website at www.ceaa-acee.gc.ca, under reference number 08-03-37956 or on the Prince Rupert Port Authority Website at www.rupertport.com. Copies of the draft scoping document are also available for public viewing at the above address, as well as at the following locations:

Prince Rupert Public Library 101 – 6th Avenue West Prince Rupert BC Prince Rupert City Hall 424 – 3rd Avenue West Prince Rupert BC

Terrace Public Library 4610 Park Avenue Terrace BC

This project is subject to a comprehensive study environmental assessment under the Canadian Environmental Assessment Act and under the Canadian Port Authority Environmental Assessment Regulations.

OPEN HOUSES

The Agency also invites the public to attend open houses in the project area. The open houses will give the public an opportunity to learn more about the federal environmental assessment process and how they can participate. Federal government representatives will be making presentations and will answer questions.

The dates and the locations of the open houses are as follows:

Date	Location	Time
June 9, 2009	Crest Hotel	16:30 - 19:30
	222 1st Avenue West	
	Prince Rupert BC	
June 10, 2009	Coast Hotel	16:30 - 19:30
	4620 Lakelse Avenue	
	Terrace BC	

