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Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place
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Attention: Regan Elley, VFPA Planner, Planning & Development

Dear Regan,

Re: Cascadia Capacity Improvement Project (PER 19-006)– Extended Work Hours Request

Canadian Pacific (CP) is proposing a rail track extension east of the Viterra-Cascadia Grain Terminal (Terminal) along the south shore of Burrard Inlet, just east of the Second Narrows in Burnaby, BC (Cacadia Viterra Capacity Improvement Project, or the "Project"). The purpose of the proposed extension is to improve overall mainline and switching operations at the Terminal facility. The increased track length will also add capacity for additional grain product unloading.

Site preparation, construction and operation of the Project overlaps with federal lands within the jurisdiction of the Vancouver Fraser Port Authority (VFPA); the foreshore section of the Project is undesignated and in part under current CP lease. As you are aware, the Project is currently under Project Environmental Review (PER) by VFPA, undergoing a Class C PER review.

Further to information already submitted in support of a PER permit, this letter represents a formal request from VFPA for an approval for selected activities to occur during extended work hours. The various sections that follow describe the: request and rationale (**Section 1.0**); construction methodology (**Section 2.0**); potential disturbances from work (**Section 3.0**); dates and times of proposed work (**Section 4.0**); proposed mitigation (**Section 5.0**); and CP contact information (**Section 6.0**), if the VFPA receives noise complaints.

This letter is part of a package that contains: a map of the proposed work area and surrounding properties; site plan; completed screening level 1 worksheet; and draft construction notification letter.

1. REQUEST AND RATIONALE

As further described below, CP requests 2 different work hour extensions: 1) for regular construction activities and 2) for environmental and geotechnical monitoring/marine lifeform salvage:

1) CP requests an extension from regular construction activities during the period of "Monday to Saturday 7:00 am to 8:00 pm" to "Monday to **Sunday** 7:00 am to 8:00 pm". The rationale for this request is that construction work below the HHWM needs to be completed during the Fisheries and Oceans Canada (DFO) Burrard Inlet reduced risk window which ends on February 28th. Given the compressed construction timeline, seven day per week construction will be required to finish in water works by this date.
2) CP also requests an extension of work hours for environmental and geotechnical monitoring inspections and intertidal aquatic life salvage activities from "Monday to Saturday 7:00 am to 8:00 pm" to "Monday to **Sunday**, full 24 hr period". As part of the Construction Environmental Management Plan (CEMP), CP has committed to the marine and foreshore mitigation measure presented in the bullet point below (also see CEMP **Section 6.9**) which requires monitoring/salvage efforts during lowest low tides which will typically occur at night. An extension for environmental monitoring work hours is therefore requested to ensure that CP can fulfill its CEMP commitments

and limit environmental impacts on intertidal life. In addition, to ensure that the project is properly constructed, geotechnical engineers will need to inspect the foreshore periodically at low tide. Given the planned construction timing, these inspections will need to take place at night.

- During falling tides, the Environmental Monitor (EM) will monitor for and immediately salvage any fishes or other motile marine organisms (especially Commercial Recreational Aboriginal (CRA) species) from any natural tidal pools that may otherwise be affected by construction. Salvages will be completed using hand nets and/or seine nets if required and any salvaged species will be relocated to an unaffected area outside the construction zone.

2. CONSTRUCTION METHODOLOGY

Construction methodology will remain unchanged, apart from work hours, from that outlined in the CEMP.

1) Regular construction activities will continue as described in the Project Description of the CEMP (see CEMP **Section 2.2**)
2) Environmental and geotechnical monitoring inspection and aquatic life salvage activities will involve monitors walking and visually assessing the intertidal zone of the Project site during falling tides. Any fish or other motile marine organisms salvaged will be relocated to an unaffected area outside the construction zone. Site personnel will be using headlamps and/or flashlights and lights towers/plants may be temporarily set up on a barge or boat to facilitate safe work.

3. POTENTIAL DISTURBANCES FROM WORK

Potential disturbances from work will be increased, resulting in some noise and light disturbance.

1) Noise associated with regular construction activities will occur on Sundays (7:00 am to 8:00 pm), including some light disturbance after sunset.
2) Night-time monitoring/salvage efforts will involve onsite noise from Site personnel communicating as well as the potential for additional noise from light plants.
3) Light disturbances will include lights from headlamps, flashlights, and light plants (if deployed).

4. DATES AND TIMES OF PROPOSED WORK

Construction of the Project is scheduled to commence in November 2019 and is estimated to take up to four months to complete (i.e., completion by April 12, 2020).

All in-water construction and maintenance activities, i.e. the period of work to which the extended hours are applicable, is anticipated to be completed in 2020 within the DFO Burrard Inlet reduced risk work window of August 16 – February 28.

5. PROPOSED MITIGATIONS

It is anticipated that both noise and light disturbance from equipment and personnel will be mitigated to a large extent by distance and topography, along with efforts to minimize effects (e.g., avoidance of light plants if feasible, directional pointing of lights, and personnel communication through handheld radios).

Proposed mitigations include:

1) Scheduling, as best possible, key activities that are impulsive or have very rapid onset noises so that they do not occur on Sundays or, if necessary, that they occur around midday on Sunday.
2) Keeping noise and light, as best possible to a minimum during evening and night shift work.
3) Site personnel will be reminded to keep communications and voices to a minimum, with communications supported by handheld radios with the volume turned down. Noise dampening measures will be applied if generators are used for light towers/plants.
4) Lights will be directed towards the ground and not up the hill towards public residences.

6. CONTACT INFORMATION

If VFPA receives a noise complaint, please contact:

Joe Van Humbeck
Phone: 403-319-6530
Email: Joe_VanHumbeck@cpr.ca

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Dear Neighbour,

Re: Cascadia Capacity Improvement Project – Rail Track Expansion – Notification Regarding Extended Work Hours

This letter provides important information about a proposed project on port and railway lands in Burnaby, B.C.

Canadian Pacific (CP) is proposing a rail track extension east of the Viterra-Cascadia Grain Terminal (Terminal) along the south shore of Burrard Inlet, just east of the Second Narrows in Burnaby, BC (Cascadia Capacity Improvement Project, or the "Project"). The purpose of the proposed extension is to improve overall mainline and switching operations at the Terminal facility. The increased track length will also facilitate CP's previously announced 8500' grain train program.

The proposed track extension will not result in an increase in operations, only facilitate the previously announced 8500' grain train program. There will be no additional locomotives added to the work of lifting the cars from Cascadia Terminal (i.e., operation does not change). Furthermore, the seasonality or daily timing of workload for switching will not change.

The proposed track extension will involve widening of the existing CP rail embankment, including placement of clean, engineered, fill material extending onto the edge of Burrard Inlet and will involve construction of fish habitat offsetting features within both the intertidal and subtidal marine environment.

CP is working with the Vancouver Fraser Port Authority (VFPA) to ensure that community interests are considered as part of VFPA's Project and Environmental Review (PER) Process. This letter is to notify you that the Project will have two different work hour extensions: 1) for regular construction activities and 2) for environmental and geotechnical monitoring/marine lifeform salvage.

1) An extension of regular construction activities has been approved from "Monday to Saturday 7:00 am to 8:00 pm" to "Monday to Sunday 7:00 am to 8:00 pm". In order to construct the portion of the works below the High High-Water Mark during the period of least risk for fish (i.e., prior to March 1), seven days per week construction will be required.

2) An extension of work hours for environmental and geotechnical monitoring inspections and intertidal aquatic life salvage activities has been approved from "Monday to Saturday 7:00 am to 8:00 pm" to "Monday to Sunday, full 24 hr period". As part of the Construction Environmental Management Plan (CEMP), CP has committed to the marine and foreshore mitigation measures which requires marine life monitoring/salvage efforts during lowest low tides which will typically occur at night. An extension for environmental monitoring work hours has, therefore, been approved to ensure that CP can fulfill its CEMP commitments and limit environmental impacts on intertidal life. In addition, to ensure proper construction techniques are being applied, geotechnical engineers will periodically be inspecting the foreshore at low tide.

Potential disturbances from work will be increases in low-level noise and potentially some light disturbance. We will, however, be implementing mitigation measures to keep noise and light as best possible to a minimum during evening and night shift work, and Sunday mornings.

Construction of the Project is scheduled to commence in January 2020 and is estimated to take up to four months to complete (i.e., finish by May 1, 2020). The extended hours are applicable from November to February 28, 2020.

Thank you for your understanding and patience. If you have any general questions or comments, we can be reached by phone or email:

Phone: 403.319.6530

Email: joe_vanhumbeck@cpr.ca

Kind Regards,

Crystal Lloyd
Project Manager
604.669.0424
clloyd@hemmera.com

APPENDIX I – NOISE SCREENING WORKSHEET

This worksheet should be filled out by one or more informed individuals representing the Applicant in order to establish the potential to create noise impacts within surrounding areas. This screening procedure is opinion-based and largely qualitative in nature. Complete this worksheet marking each of the eight questions and submit to the Vancouver Fraser Port Authority as part of the extended work hours request.

Question 1 – Noise levels expected on project site	
Based on experience with similar construction operations, or on your best judgment, do you expect that noise levels within the project site will be:	
Very Low	☑
Low	☐
Moderate	☐
High	☐
Very High	☐

Question 2 - Presence of undesirable characteristics	
Will any of the key activities create ongoing noise which (indicate all that apply):	
are clearly tonal (hums, whirs, whines)	☑
are impulsive or have very rapid onset (bumps, bangs, material handling impacts, rail car shunting, compressed air release etc.)	☐
contains strong low-frequency content (e.g. large diesel engines, large fans or air compressors)	☐

Question 3 – Presence of high-energy impulsive noise	
Will any activities create noise which could be classified as "High-energy Impulsive"? Examples could include the industrial use of explosives, explosive circuit breakers, or pile driving.	
No	☑
Yes	☐

Question 4 – Hours/ days of operation	
Will the extended hours schedule be (check all that apply):	
Evening Shift [8 p.m. to midnight; weekdays]	☑
Evening Shift [8 p.m. to midnight; weekend]	☑
Night Shift [midnight to 7 a.m.; weekdays]	☑
Night Shift [midnight to 7 a.m.; weekend]	☑

Question 5 – Proximity to noise-sensitive areas	
How far is the nearest noise-sensitive land use (residences, schools, hospitals, parks etc.) from the property line of the project site?	
More than 1,000 m	☐
500 to 1,000 m	☐
250 to 500 m	☐
125 to 250 m	✔
less than 125 m	☐

Question 6 – Presence of noise shielding or reflection	
Will buildings, structures and/or landforms partially or totally screen construction noise sources from nearby noise receptors (that is, interrupt the line of sight and direct hearing)? Here consideration should be given to the relative elevations of the noise sources, the noise receivers (ground and upper floors) and the intervening buildings and/or landforms.	
Substantial, continuous noise shielding	✔
Substantial, but not total, screening	☐
Intermittent shielding, e.g., row of smaller, non-adjoining buildings	☐
Scattered shielding by objects, machinery, stockpiles	☐
No shielding potential	☐

Question 7 – Existing noise environment	
How would you rate the existing noise environment in the vicinity of the project site?	
Very noisy (near busy highway, busy port, airport, heavy industry)	✔
Noisy (near busy arterial road, light industrial area, urban core)	☐
Moderately noisy (near collector road, suburban residential)	☐
Quiet (suburban residential away from collector roads)	☐
Very quiet (rural residential, well away from industry or main roads)	☐

Question 8 – Population potentially exposed to project noise	
Approximately how many residences are located within 500 m of the project site?	
5 or less	☐
5 to 15	☐
16 to 40	☐
41 to 100	☐
more than 100	✔

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Question 1 – Noise levels expected on project site	
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Very Low	☑
Low	☐
Moderate	☐
High	☐
Very High	☐

Question 2 - Presence of undesirable characteristics	
Will any of the key activities create ongoing noise which (indicate all that apply):	
are clearly tonal (hums, whirs, whines)	☑
are impulsive or have very rapid onset (bumps, bangs, material handling impacts, rail car shunting, compressed air release etc.)	☑
contains strong low-frequency content (e.g. large diesel engines, large fans or air compressors)	☐

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No	☑
Yes	☐

Question 4 – Hours/ days of operation	
Will the extended hours schedule be (check all that apply):	
Evening Shift [8 p.m. to midnight; weekdays]	☐
Evening Shift [8 p.m. to midnight; weekend]	☐
Night Shift [midnight to 7 a.m.; weekdays]	☐
Night Shift [midnight to 7 a.m.; weekend]	☐

Question 5 – Proximity to noise-sensitive areas	
How far is the nearest noise-sensitive land use (residences, schools, hospitals, parks etc.) from the property line of the project site?	
More than 1,000 m	☐
500 to 1,000 m	☐
250 to 500 m	☐
125 to 250 m	✔
less than 125 m	☐

Question 6 – Presence of noise shielding or reflection	
Will buildings, structures and/or landforms partially or totally screen construction noise sources from nearby noise receptors (that is, interrupt the line of sight and direct hearing)? Here consideration should be given to the relative elevations of the noise sources, the noise receivers (ground and upper floors) and the intervening buildings and/or landforms.	
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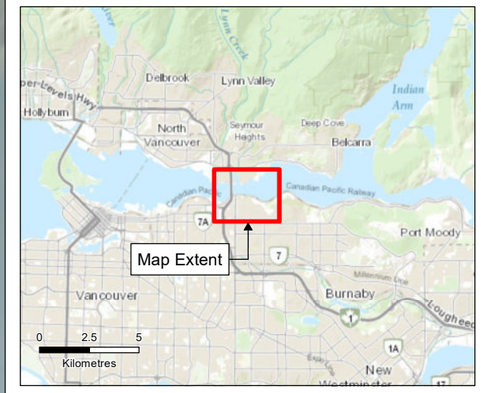
Substantial, but not total, screening	☐
Intermittent shielding, e.g., row of smaller, non-adjoining buildings	☐
Scattered shielding by objects, machinery, stockpiles	☐
No shielding potential	☐

Question 7 – Existing noise environment	
How would you rate the existing noise environment in the vicinity of the project site?	
Very noisy (near busy highway, busy port, airport, heavy industry)	✔
Noisy (near busy arterial road, light industrial area, urban core)	☐
Moderately noisy (near collector road, suburban residential)	☐
Quiet (suburban residential away from collector roads)	☐
Very quiet (rural residential, well away from industry or main roads)	☐

Question 8 – Population potentially exposed to project noise	
Approximately how many residences are located within 500 m of the project site?	
5 or less	☐
5 to 15	☐
16 to 40	☐
41 to 100	☐
more than 100	✔

Cascadia - Viterra Capacity Improvement Project
Burrard Inlet, Burnaby, BC

Project Location



Legend

- Proposed Track Extension
- Project Footprint
- CP Mileage
- Existing CP Railway

Notes

1. All mapped features are approximate and should be used for discussion purposes only.
2. This map is not intended to be a "stand-alone" document, but a visual aid of the information contained within the referenced Report. It is intended to be used in conjunction with the scope of services and limitations described therein.

Sources

- Contains information licensed under the Open Government Licences - Province of British Columbia and City of Vancouver
- Proposed Project Features: AECOM, 2019
- Aerial Image: City of Vancouver, 2015; ESRI World Imagery
- Inset Basemap: ESRI World Topographic Map

N

1:10,000

0 100 200 300 400 500

Metres

NAD 1983 CSRS UTM Zone 10N

Page Size: 11" x 17"

103396-02	Production Date: Jun 11, 2019	Figure 1

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An Ausenco Company

CP

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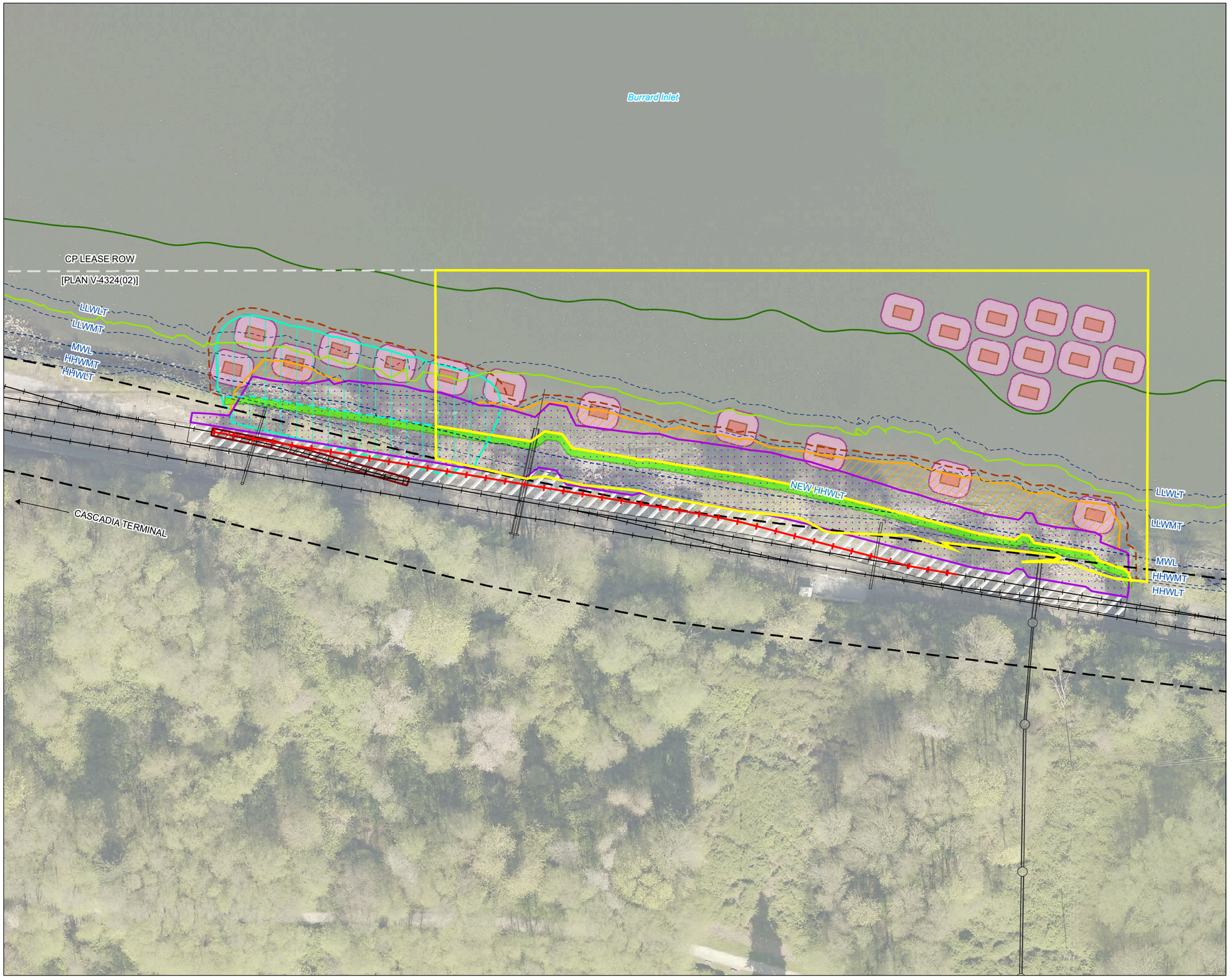
Viterra-Cascadia
Terminal Capacity Expansion Project
Burrard Inlet, Burnaby, BC

Existing and Proposed Lease Areas



Legend

- Construction Zone Limit
- Proposed Track Extension
- Seaward Kelp Bed Extent (2019)
- Shoreward Kelp Bed Extent (2019)
- Proposed CP Lease Area
- Excavation Area Beyond Grading Structure
- Proposed Riprap
- Proposed Track Removal
- Proposed Walkway for Turnout
- Riparian Vegetation
- Existing CP Railway
- Proposed Higher High Water Large Tide (HHWLT)
- Tide Line

Artifical Reefs

- 3m Buffer of Cobble
- Rocky Reef Complex

Notes

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- Aerial Image: City of Vancouver, 2015

N

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Metres

NAD 1983 CSRS UTM Zone 10N

Page Size: 11" x 17"

103396-02	Production Date: Jul 24, 2019	Figure 6

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