VANCOUVER FRASER PORT AUTHORITY PROJECT AND ENVIRONMENTAL REVIEW PROJECT PERMIT

PER No.:	**19-006**
Tenant:	**Canadian Pacific**
Project:	**CP Track Extension – Cascadia Terminal**
Project Location:	**South Shore of Burrard Inlet, East of Second Narrows**
VFPA SID No.:	**BBY077, BBY086**
Land Use Designation:	**Port Water**
Permit Holder(s):	**Canadian Pacific**
Category of Review:	**C**
Date of Approval:	**December 17, 2019**
Date of Expiry:	**December 31, 2021**

PROJECT DESCRIPTION

For the purposes of this project permit, (the Permit), the project is understood to include the following works on Vancouver Fraser Port Authority (VFPA) property:

- Establishment of access, equipment and material laydown areas, including:
  - vegetation clearing
  - site mobilization
  - construction of a temporary work pad (approximately 1,900 m^2) located partially within the subtidal zone, using 6,800 m^3 of structural fill
- Dredging to prepare the seabed for fill placement
- Installation of approximately 9,700m^3 of structural fill along the construction corridor, to support rail sidings
- Installation of approximately 3,100 m^3 of rip rap as a 2:1 slope
- Extension of four (4) existing culverts
- Removal of temporary work pad
- Construction of habitat offsetting, including approximately 3,100 m^2 of artificial shallow rock reefs

PROJECT AND ENVIRONMENTAL CONDITIONS

The Vancouver Fraser Port Authority (VFPA) has undertaken and completed a review of the Project in accordance with the *Canada Marine Act* and Section 5 of the Port Authorities Operations Regulations and, as applicable, Section 67 of the *Canadian Environmental Assessment Act, 2012*.

If at any time the Permit Holder fails to comply with any of the project and environmental conditions set out in the Permit below, or if VFPA determines that the Permit Holder has provided any incomplete, incorrect or misleading information in relation to the Project, VFPA may, in its sole and absolute discretion, cancel its authorization for the Project or change the project and environmental conditions to which such authorization is subject.

Pursuant to Section 29 of the Port Authorities Operations Regulations, VFPA may also cancel its authorization for the Project, or change the project and environmental conditions to which such authorization is subject, if new information is made available to VFPA at any time in relation to the potential adverse environmental and other effects of the Project.

The following are the project and environmental conditions that must be followed by the Permit Holder to mitigate potential or foreseeable adverse environmental and other effects.

Canada

All VFPA Guidelines and Record Drawing Standards referenced in this document can be located at: https://www.portvancouver.com/development-and-permits/project-and-environmental-reviews/technical-guidelines/.

No.	GENERAL CONDITIONS
1.	The Permit Holder must have a valid lease, licence, or access agreement for the Project site prior to accessing the Project site or commencing construction or any other physical activities on the Project site. This Permit shall in no way limit any of the Permit Holder's obligations, or VFPA's rights, under such lease, licence, or access agreement.
2.	The Permit Holder shall at all times and in all respects, comply with and abide by all applicable statutes, laws, regulations and orders from time to time in force and effect, including all applicable environmental, labour and safety laws and regulations.
3.	This Permit in no way endorses or warrants the design, engineering, or construction of the Project and no person may rely upon this Permit for any purpose other than the fact that VFPA has permitted the construction of the Project, in accordance with the terms and conditions of this Permit.
4.	The Permit Holder shall indemnify and save harmless VFPA in respect of all claims, losses, costs, fines, penalties or other liabilities, including legal fees, arising out of: (a) any bodily injury or death, property damage or any loss or damage arising out of or in any way connected with the Project; and (b) any breach by the Permit Holder of its obligations under this Permit.
5.	The Permit Holder is responsible for locating all existing site services and utilities in the vicinity of the project area, including any located underground. The Permit Holder is responsible for repair or replacement of any damage to existing site services and utilities, to the satisfaction of VFPA, that result from construction and operation of the Project.
6.	The Permit Holder shall provide VFPA with updated mitigation plans for review and approval if plans are modified or new procedures are created to address site conditions not previously addressed in the plans submitted as part of the Application.
7.	The Permit Holder shall undertake and deliver the Project to total completion in a professional, timely and diligent manner in accordance with applicable standards and specifications set out in the sections above entitled Project Description and Information Sources, including the attached plans and drawings numbered **PER No. 19-006-A to I**. The Permit Holder shall not carry out any other physical activities unless expressly authorized by VFPA.
8.	The Permit Holder shall cooperate fully with VFPA in respect of any review by VFPA of the Permit Holder's compliance with this Permit, including providing information and documentation in a timely manner, as required by VFPA. The Permit Holder is solely responsible for demonstrating the Permit Holder's compliance with this Permit.
9.	The Permit Holder shall review the Permit with all employees, agents, contractors, licensees and invitees working on the Project site, prior to such parties participating in any construction or other physical activities on the Project site. The Permit Holder shall be solely responsible for ensuring that all such employees, agents, contractors, licensees and invitees comply with this Permit.
10.	The Permit Holder shall make available upon request by any regulatory authority (such as a Fishery Officer) a copy of this Permit.
11.	Unless otherwise specified, the Permit Holder shall provide all plans, documents, and notices required under this Permit to the following email address: **per@portvancouver.com** and referencing **PER No. 19-006**.
12.	Unless otherwise specified, all plans, schedules, and other Project-related documentation that the Permit Holder is required to provide under this Permit must be to VFPA's satisfaction.

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13.	The Permit Holder shall prepare and submit a self-report form to VFPA demonstrating compliance with conditions at each of the following project phases: a) Prior to construction Conditions (self-report shall be submitted a minimum of 10 business days prior to the commencement of construction, or any physical activities, to a maximum of 90 business days prior to construction, or any physical activities) b) Construction Conditions (self-report shall be submitted at 50% of construction) c) Conditions Upon Project Completion (self-report shall be submitted within 60 business days of completion of construction)	
14.	VFPA shall have unfettered access to environmental compliance documentation and the Project site at all times during construction without notice.	
15.	The Permit Holder must maintain and retain any records associated with, or produced by, actions or activities undertaken to achieve compliance or that indicate non-compliance with project permit conditions. These records must be made available at the request of VFPA.	
16.	All conditions in this Permit which expressly or by their nature survive expiration or termination of this Permit will remain in effect after the expiration or termination of this Permit.	
	CONDITIONS - PRIOR TO COMMENCING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES	**SUBMISSION TIMING (business days)**
17.	The Permit Holder shall submit signed and sealed drawings for proposed works approved for construction by a professional engineer licensed to practice in the Province of British Columbia.	5 days before commencing construction or any physical activities
18.	The Permit Holder shall provide a draft construction notice to VFPA's satisfaction in accordance with VFPA's Public Consultation Guidelines.	20 days before commencing construction or any physical activities
19.	The Permit Holder shall distribute an approved construction notice to residents and businesses to an area to VFPA's satisfaction. The Permit Holder shall notify VFPA when such distribution has been completed.	10 days before commencing construction or any physical activities
20.	The Permit Holder shall submit a copy of their *Fisheries Act* Authorization to VFPA.	Upon receipt of the Fisheries Act Authorization
21.	Prior to the commencement of any vessel-related activities, the Permit Holder must contact CCG Marine Communications and Traffic Services (MCTS), (email: NAVWARN.MCTSPrinceRupert@innav.gc.ca Telephone: 250-627-3070) regarding the issuance of a Navigational Warning (NAVWARN) to advise the marine community of potential hazards associated with the Project.	As per Coast Guard requirements
22.	The Permit Holder shall provide a Project schedule to VFPA showing the anticipated start dates for all major phases of the Project as identified by VFPA. The Permit Holder shall notify VFPA of any material changes to the Project schedule and, upon request, shall provide an updated Project schedule.	10 days before commencing construction or any physical activities

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23.	The Permit Holder shall provide a Project schedule and construction methodology to Metro Vancouver contact Marcin.Pachcinski@metrovancouver.org.	10 days before commencing construction or any physical activities
24.	The Permit Holder shall submit a marine construction and staging plan, including the following, to VFPA's satisfaction: • Identification of potential navigation related hazards and risk mitigation measures from construction related activities; • Staging and construction areas; • Dates and hours of operation; • Description of activities taking place; • Equipment and vessels (dimensions must be included); • Method of preferred communication with marine users; • Method of communicating updates to relevant users, as described in the Marine Communication Plan; • Proposed plan to implement and mitigate potential restrictions in navigational channels; and • Special request and/or additional information.	15 days before commencing in-water construction or any vessel-related activities
25.	The Permit Holder shall submit a Marine Communication Plan to VFPA's satisfaction, including: • Summary of details, timelines, equipment, staging, etc.; • Notice to Mariners – Regarding overall Project; • Regular NAVWARN advisories as required; • Public Notices at nearby boat launches; • Identify tug requirements and how these will be met for assisting marine users through construction area; and • Plan to communicate navigation restrictions and channel closures.	15 days before commencing in-water construction or any vessel-related activities
26.	The Permit Holder shall establish a Marine Users Working Group for the purposes of communicating relevant in-water work activities to local marine operators. The Permit Holder must provide the Marine Users Working Group a copy of the Marine Construction & Staging Plan for their consideration and feedback. Any updates to the documents must be provided to the working group before and during in-water construction phases.	15 days before commencing in-river construction or any vessel-related activities
	CONDITIONS - DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES	
27.	The Permit Holder shall notify VFPA upon commencement of construction, or any physical activities (e.g., mobilization to the Project site).	

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28.	All general construction and physical activities related to the Project shall be conducted from Monday to Sunday between the hours of 7:00 am and 8:00 pm. Pile driving, other activities that are impulsive in nature, and activities containing strong low frequency, shall only occur within regular hours (Monday to Saturday between the hours of 7:00 am and 8:00 pm). Exceptions to the above work hours will apply to the following activities for the duration of the permit, for which 24 hour work is permitted: • Intertidal aquatic life salvage • Environmental monitoring • Geotechnical inspection These hours shall not be modified without the prior approval of VFPA. To request permission to conduct activities outside of these hours, the Permit Holder must submit a written request no less than 30 business days prior to the desired start date.
29.	The Permit Holder shall notify VFPA of any complaints received from the community and stakeholders during construction and indicate how the Permit Holder has responded to such complaints.
30.	The Permit Holder shall ensure that Metro Vancouver staff are allowed access to all Metro Vancouver facilities and infrastructure in the vicinity of the project area.
31.	The Permit Holder shall ensure that an appropriately qualified archaeological monitor be on the Project site at all times during ground disturbing activities with the potential to intrude into native soils.
32.	The Permit Holder shall provide opportunities for interested Indigenous groups to monitor and be present on the Project site at all times for the purposes of environmental and archaeological monitoring.
33.	If the Permit Holder encounters, expects to encounter, or should expect to encounter an actual or potential archaeological resource, the Permit Holder shall: a) Immediately stop any activities that may disturb the archaeological resource or the site in which it is contained (Site); b) Not move or otherwise disturb the archaeological resource or other remains present at the Site; c) Stake or flag the Site to prevent additional disturbances; and, d) Immediately notify VFPA by email and phone.
34.	During any vessel-related activities, the Permit Holder shall: a) Position vessels and equipment associated with the Project in such a manner so as not to obstruct line of sight to navigational aids or markers; b) Exhibit the appropriate lights and day shapes at all times; c) Monitor the VHF channel used for MCTS communications in the respective area at all times and participate as necessary; d) Be familiar with vessel movements in areas affected by the Project; e) Plan and execute the Project in a manner that will not impede navigation or interfere with vessel operations; f) Have an understanding of the forces a passing vessel exerts and the possible interaction with passing vessels; and, g) During night hours, unless working 24 hours per day, ensure that the rig and associated equipment is moored outside the navigation channel and lit in accordance with all applicable regulations, any variations must be referred to the marine users working group and approved by VFPA.

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35.	The Permit Holder shall carry out the Project in accordance with the construction environmental management plan provided by the Permit Holder, and any versions updated to VFPA's satisfaction.
36.	There shall be no in-water works during the fisheries sensitive period from March 1 to August 15, inclusive, unless the Permit Holder provides a rationale and mitigation plan to VFPA's satisfaction. VFPA shall be notified of any DFO exemptions allowing works within the fisheries sensitive period.
37.	Without limiting the generality of permit condition #2, the Permit Holder shall not, directly or indirectly: (a) deposit or permit the deposit of a deleterious substance of any type in water frequented by fish in a manner contrary to Section 36(3) of the *Fisheries Act*; or (b) adversely affect fish or fish habitat in a manner contrary to Section 35(1) of the *Fisheries Act*, other than what is authorized under a *Fisheries Act* Authorization.
38.	The Permit Holder shall utilize slow start-up procedures and shall not operate equipment within 10 meters of migratory birds or other wildlife.
39.	The Permit Holder shall not permit barges or other vessels used during the Project to ground on the foreshore or seabed or otherwise disturb the foreshore or seabed (including disturbance as a result of vessel propeller wash), excepting only such disturbance as is reasonably required resulting from the use of barge spuds.
40.	The Permit Holder shall immediately cease work and notify VFPA if the Permit Holder has reasonable grounds to believe that the Project has harmed fish or fish habitat (unless otherwise permitted in a valid Fisheries Act Authorization), including observation of distressed, injured, or dead fish. The Permit Holder shall not resume work until allowed by VFPA.
41.	The Permit Holder shall not disturb the seabed outside the Project site.
42.	The Permit Holder shall repair and/or remediate any damage or erosion resulting from disturbance to the intertidal foreshore outside of the Project site.
43.	The Permit Holder shall not dewater excavations or discharge water to Burrard Inlet unless a dewatering plan has been reviewed and accepted by VFPA.
44.	Rip rap shall be clean and free of fines and shall be lowered through the water column and deposited near the seabed and not dumped or deposited from above or near the water surface.
45.	Without limiting the generality of permit condition #2, materials brought onto the Project site to be used for infilling, site preparation, or other uses shall be from sources demonstrated to be clean and free of environmental contamination, invasive species and noxious weeds. The Permit Holder shall maintain records to verify this.
46.	Without limiting the generality of permit condition #2, if suspect contaminated materials are encountered, the Permit Holder shall contain, test and dispose of such materials at appropriate licensed off-site facilities and maintain records of off-site disposal. VFPA shall be notified of such activities and provided relevant documentation upon completion.
47.	The Permit Holder shall contain and collect debris and waste material in the immediate working area within the Project site. The Permit Holder shall dispose of waste material at suitable upland locations and maintain records of off-site disposal.
48.	The Permit Holder shall use an environmentally clean excavator bucket. The bucket and any portion of the excavator arm that will be in contact with or near the water shall be cleaned of any residual hydrocarbons or other contaminants prior to the start of works.
49.	The Permit Holder shall maintain equipment in good mechanical condition and free of fluid leaks, invasive species, and noxious weeds.

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50.	The Permit Holder shall manage invasive plants in a manner that prevents their spread. Invasive plants and potentially affected materials, such as soil, shall be appropriately contained, collected and disposed of.
51.	The Permit Holder shall not permit sediment, sediment-laden waters, or other deleterious substances to enter the water during the Project. The Permit Holder shall carry out all physical activities in a manner that prevents induced sedimentation of foreshore and near shore areas and induced turbidity of local waters, and the release of sediment, sediment-laden waters, and turbid waters to the aquatic environment. The Permit Holder shall manage turbidity in compliance with the following water quality criteria: (a) when background is less than or equal to 50 nephelometric turbidity units (NTU), induced turbidity shall not exceed 5 NTU above the background values; and (b) when background is greater than 50 NTU, induced turbidity shall not exceed the background values by more than 10% of the background value. For the purposes of this condition, “background” means the level at an appropriate adjacent reference site (as determined to the satisfaction of VFPA) that is affected neither by physical activities at the project site, nor sediment-laden or turbid waters resulting from physical activities at the project site.
52.	During upland construction activities within VFPA jurisdiction, the Permit Holder shall not conduct refueling or maintenance activities on non-road equipment within 30 metres of any waterbody, or in an area where run-off may potentially reach surface waterbodies. Fuel and other hydrocarbon inventories shall not be stored in such areas, temporarily or otherwise.
53.	Prior to commencing construction or any physical activities, the Permit Holder shall have in place a spill prevention, containment and clean-up plan for hydrocarbon products (including fuel, oil and hydraulic fluid) and any other deleterious substances. Appropriate spill containment and clean-up supplies shall be available on the Project site at all times and all personnel working on the Project shall be trained on the spill prevention, containment and clean-up plan. The Permit Holder shall not store creosote railway ties in an area where run-off may potentially reach surface waterbodies. Appropriate storage and mitigations shall implemented to prevent creosote run-off into soils or waterbodies. The Permit Holder shall carry out the Project in accordance with the spill prevention, containment and clean-up plan.
54.	Air emissions from vehicle/equipment exhaust, dust and vapours shall be minimized and managed to avoid effects on and off the Project site. More detailed guidance is available in Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities prepared for Environment Canada (Cheminfo Services Inc. March 2005).
55.	All non-road diesel equipment in use within VFPA jurisdiction shall be reported as required under the Non-Road Diesel Equipment Program (http://www.portvancouver.com/environment/air-energy-climate-action/cargo-handling-equipment/nrde/).
56.	The Permit Holder, or their contractor, shall engage a qualified environmental professional to monitor the Project in order to ensure that the works are carried out in compliance with this Permit. Monitoring events shall take place as required by the environmental monitor, the construction environmental management plan, or VFPA, provided that monitoring will be no less than weekly and will be full time when works are underway that have the potential to adversely affect fish or fish habitat. The Permit Holder shall provide weekly environmental monitoring reports to VFPA or more frequently if VFPA requires. In addition, a summary report for the whole monitoring period shall be forwarded to VFPA within 30 business days of the conclusion of the monitoring period.
57.	The Permit Holder, or their contractor, shall engage a qualified environmental professional to monitor the Project in order to ensure that the works are carried out in compliance with this Permit. Monitoring events shall take place as required by the environmental monitor, the Construction Environmental Management Plan, or VFPA, provided that monitoring will be full time when works are underway that have the potential to adversely affect fish or fish habitat.

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	CONDITIONS - UPON COMPLETION	SUBMISSION TIMING (Business Days)
58.	The Permit Holder shall notify VFPA upon completion of the Project.	Upon substantial completion
59.	The Permit Holder shall provide record drawings in accordance with VFPA's Record Drawing Standards, in both AutoCAD and Adobe (PDF) format to VFPA, including a Project site plan that clearly identifies the location of works.	Within 40 days of completion
60.	The Permit Holder shall confirm that the Project was constructed within the approved area by providing to VFPA digital photographs of the Project site both before and after construction of the Project.	Within 40 days of completion
61.	Upon completion of work the Permit Holder shall provide a Hydrographic survey to VFPA and the Canadian Hydrographic Service (CHS). The survey must meet Canadian Hydrographic Service (CHS) "Standards for Hydrographic Surveys". In particular, Surveys must meet "Special Order Survey with Type C1 Coverage". This typically requires either multibeam or multitransducer survey equipment.	Within 40 days of completion
62.	VFPA shall be copied on the offsetting measures monitoring reports required by the *Fisheries Act* Authorization. VFPA shall be consulted during the development of any contingency plans and any measures in those plans that fall within VFPA jurisdiction.	Upon submission to DFO

VFPA reserves the right to rescind or revise these conditions at any time that new information warranting this action is made available to VFPA.

LENGTH OF PERMIT VALIDITY

The Project must commence by **December 31, 2020** (the Commencement Date) and be completed no later than **December 31, 2021** (the Expiry Date).

AMENDMENTS

- Details of any material proposed changes to the Project, including days and hours when construction and any physical activities will be conducted, must be submitted to VFPA for consideration of an amendment to this Permit.
- For an extension to the Commencement Date, the Permit Holder must apply to VFPA in writing no later than 30 days prior to that date.
- For an extension to the Expiry Date, the Permit Holder must apply in writing to VFPA no later than 30 days prior to that date.

Failure to apply for an extension as required may, at the sole discretion of VFPA, result in termination of this Permit.

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PROJECT AND ENVIRONMENTAL REVIEW DECISION

Project Permit PER No. 19-006 is approved by:

Original Copy Signed	December 17, 2019
GREG YEOMANS **DIRECTOR, PLANNING & DEVELOPMENT**	**DATE OF APPROVAL**

CONTACT INFORMATION

Vancouver Fraser Port Authority (VFPA)
100 The Pointe, 999 Canada Place,
Vancouver BC V6C 3T4 Canada

Project & Environmental Review
Tel.: 604-665-9047
Fax: 1-866-284-4271
Email: PER@portvancouver.com
Website: www.portvancouver.com

After normal business hours:

In the event of any land or marine construction incidents or concerns related to works carried out on-site under this permit, please contact the 24/7 Port Operations Centre 604-665-9086. In the event of an emergency requiring 'First Responders', please call 911 first.

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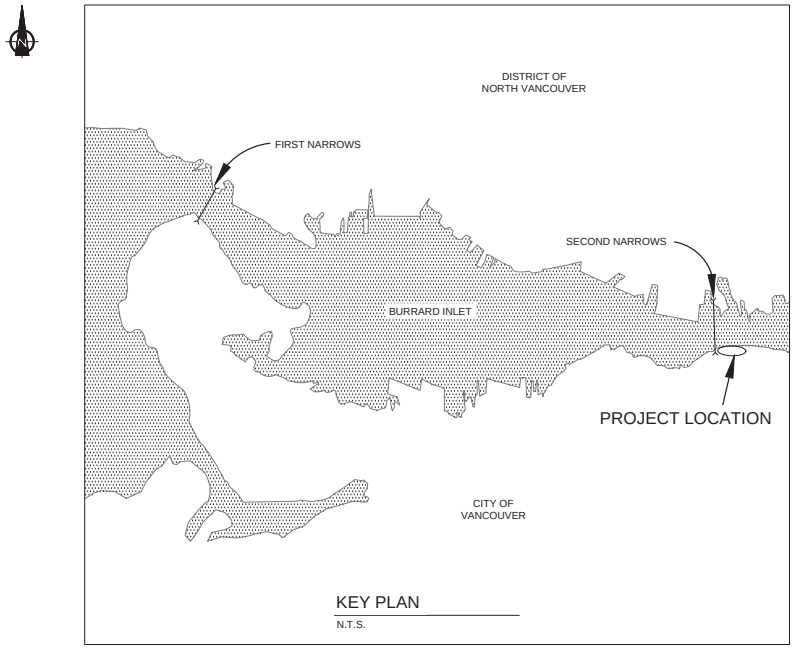
VANCOUVER FRASER PORT AUTHORITY
This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.

PER No. 19-006-A

VITERRA CASCADIA CAPACITY ENHANCEMENT
WESTERN REGION - VANCOUVER DIVISION



KEY PLAN
N.T.S.

MILE 124.16 TO MILE 124.29 CASCADE SUBDIVISION
GRADING AND DRAINAGE WORKS

NOT FOR CONSTRUCTION
OCTOBER 2019

CP
ENGINEERING PROJECTS - WEST

HATCH
PROJECT No: 360899
360899-G-100-S0-0000 REV A

PER No. 19-006-B

VANCOUVER FRASER PORT AUTHORITY

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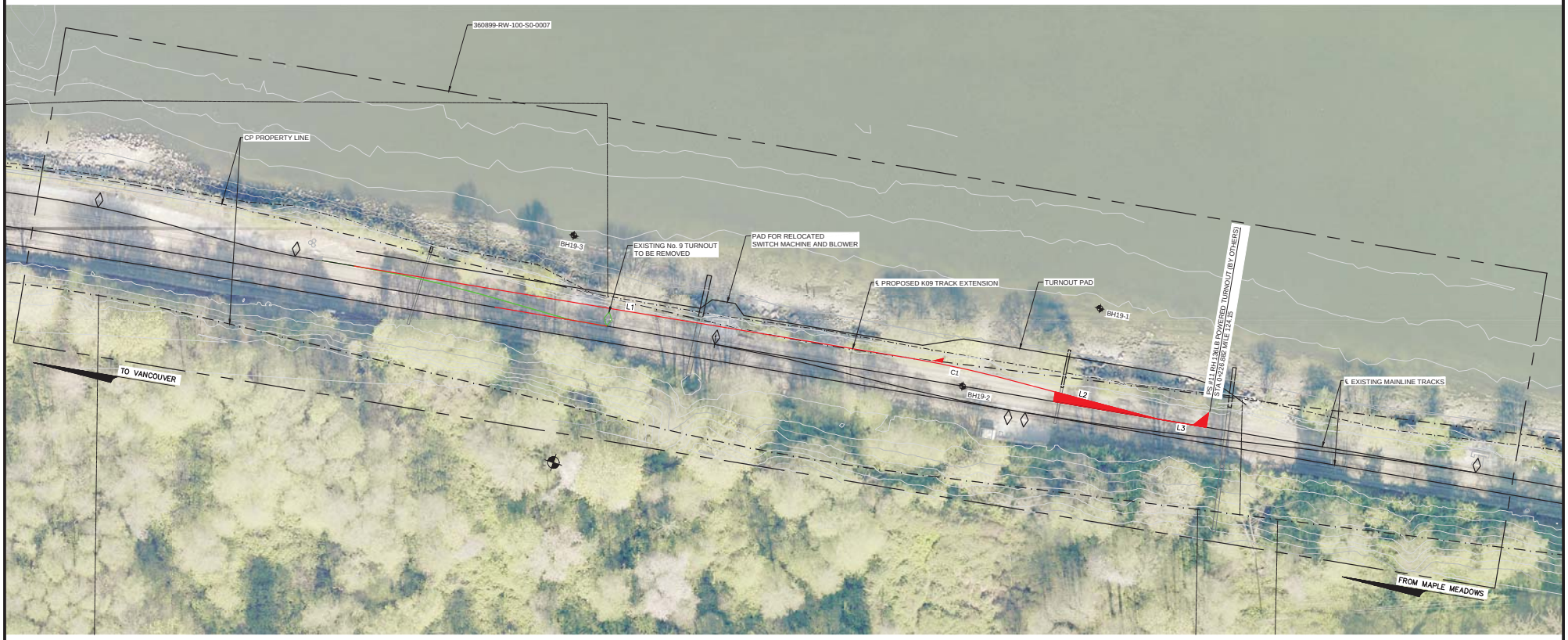


LOCATION PLAN
SCALE 1:500

NOT FOR CONSTRUCTION

HATCH

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED

DESIGNED BY: T.I. DATE: 24-10-19	DRAWN BY: N.H. DATE: 24-10-19
CHECKED BY: V.C. DATE: 24-10-19	PROJECT MANAGER: V.C. DATE: 24-10-19
HATCH PROJECT No: 360899	DWG SCALE(FULL SIZE): 1:500

PROFESSIONAL SEALS

THIS DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CANADIAN PACIFIC ("CLIENT") AND IS ISSUED PURSUANT TO THE HATCH CP ENGINEERING SERVICES AGREEMENT AND RELEVANT PURCHASE ORDER BETWEEN CLIENT AND HATCH CORPORATION ("HATCH"). UNLESS OTHERWISE AGREED IN WRITING WITH CLIENT OR SPECIFIED ON THIS DRAWING, HATCH DOES NOT ACCEPT AND DISCLAIMS ANY AND ALL LIABILITY OR RESPONSIBILITY ARISING FROM ANY USE OF OR RELIANCE ON THIS DRAWING BY ANY THIRD PARTY OR ANY MODIFICATION OR REUSE OF THIS DRAWING BY CLIENT, AND (B) THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS PARTICULARLY IN THIS DRAWING REMAIN THE PROPERTY OF HATCH.

No.	DATE	REVISION	BY
A	24-10-19	ISSUED FOR 90% DESIGN REVIEW	V.C.

CP
ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION — MILE 124.16 TO 124.29 CASCADE SUBDIVISION

VITERRA CASCADIA CAPACITY ENHANCEMENT

LOCATION PLAN

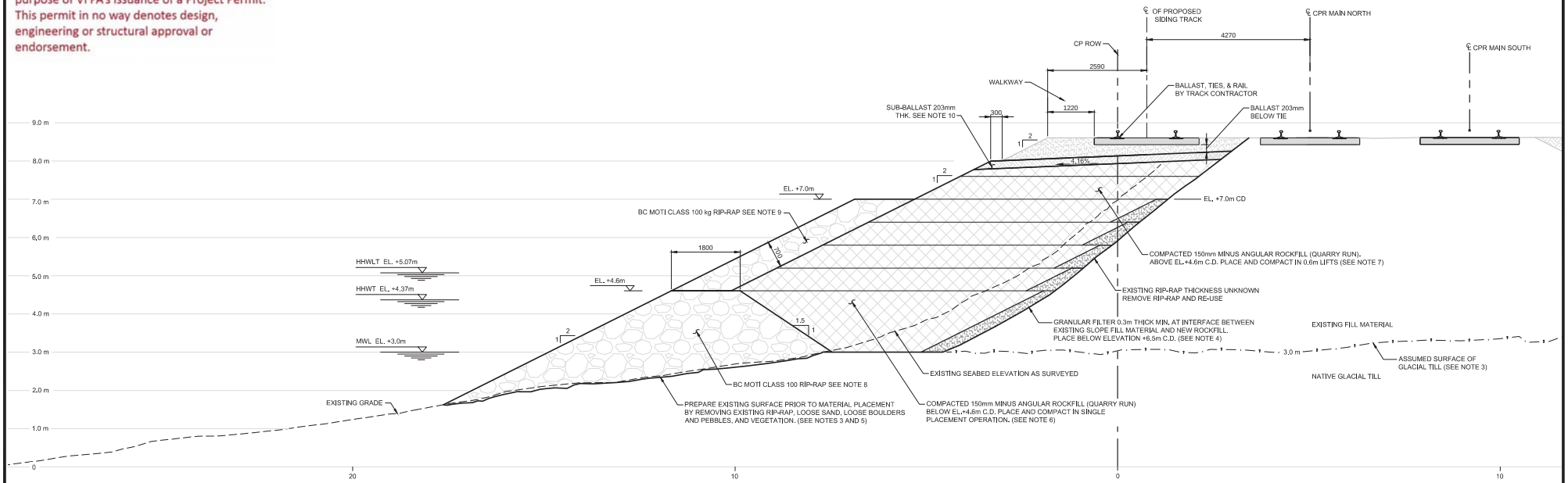
DWG. BY: CHK BY:	OFFICE FILE:
	SCALE:
MANAGER - DESIGN:	DATE:
M.FAVREAU DIR. PROJECTS & PUBLIC WORKS - WEST	PLAN No. 360899-G-100-S0-0001 Rev. A

Oct 25 , 2019 , 10:23am Login name: kim79037
Drawing Name: \\Vandata01\hmm-projects\CP\CP Viterra Capacity Enhancement, Cascadia\360899 DWG 0000 TO 0005.dwg

VANCOUVER FRASER PORT AUTHORITY

This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.

PER No. 19-006-C



TYPICAL TRACK FILL SECTION

LEGEND:

- GRANULAR FILTER
- 150mm MINUS ANGULAR ROCKFILL (QUARRY RUN)
- RIP-RAP (BC MOTI CLASS 100 kg)
- SUB-BALLAST

NOTES:

1. BATHYMETRIC AND TOPOGRAPHIC DATA OBTAINED FROM VITERRA DWG. V17183-TOP-01-U-R4 ELEVATIONS SHOWN IN CHART DATUM.
2. FAA PERMIT APPLICATION LIMITS ARE APPROXIMATE. TAKEN FROM HEMMERA'S MARINE FISH HABITAT ASSESSMENT DATED JULY 22, 2019.
3. THE APPROVED FOUNDATION IS "GLACIAL TILL" AND THE CONTRACTOR SHOULD AVOID DISTURBING OR EXCAVATING INTO GLACIAL TILL. THE TILL UNDER THE FOOTPRINT OF NEW EMBANKMENT IS CREATED IN FORM OF STEPS.
4. THE GRANULAR FILTER SHALL BE PLACED IN CONTACT WITH ORIGINAL FILL UNDER EXISTING RAIL EMBANKMENT AND CAN BE TERMINATED ABOVE GLACIAL TILL.
5. FOUNDATION CAN BE APPROVED ONCE THE TILL IS EXPOSED AND SHALL BE VISUALLY INSPECTED DURING LOW TIDE. DURING HIGH-TIDE THE CONTRACTOR SHOULD DEMONSTRATE THAT NO MATERIAL IS LEFT ABOVE GLACIAL TILL AFTER THREE ATTEMPTS BY EXCAVATOR OR CLAM SHELL.
6. COMPACT THE ROCKFILL USING A MINIMUM OF 5 PASSES OF DOSER D7 TRACKS OR EQUIVALENT FROM EL. 4.6 C.D, FOLLOWED BY 5 PASSES OF A LOADED ARTICULATED TRUCK LOADED CAT OR EQUIVALENT.
7. FOR LIFTS ABOVE EL. 4.6m, USE 5 PASSES OF DOSER CAT D7 TRACKS FOR COMPACTION.
8. RIP-RAP BELOW EL. 4.6m SHALL BE PLACED IN ONE OPERATION USING MACHINE IN WELL INTERLOCKED FASHION.
9. RIP-RAP ABOVE EL. 4.6m, SHALL BE MACHINE OR HAND PLACED IN WELL INTERLOCKED FASHION.
10. THE ROCKFILL SURFACE VOIDS SHALL BE FILLED AND SURFACE SHALL BE APPROVED BY ENGINEER PRIOR TO THE PLACEMENT OF SUB-BALLAST.

NOT FOR CONSTRUCTION

1:50 0 1 2m

HATCH

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED

DESIGNED BY: A.M. DATE: 25-10-19	DRAWN BY: T.E.B. DATE: 25-10-19
CHECKED BY: J.C. DATE: 25-10-19	PROJECT MANAGER: V.C. DATE: 25-10-19
HATCH PROJECT No: 360899	DWG SCALE(FULL SIZE): 1 : 50

PROFESSIONAL SEALS

THIS DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CANADIAN PACIFIC COMPANY AND IS VIEWED PURSUANT TO THE AGREEMENT BETWEEN HATCH CORPORATION (HATCH) AND CANADIAN PACIFIC COMPANY. UNLESS OTHERWISE AGREED IN WRITING WITH EXCLUSIVE OR SPECIFIED ON THIS DRAWING, (a) HATCH GIVES NOT ACCEPT AND DISCLAIMS ANY AND ALL LIABILITY OR RESPONSIBILITY ARISING FROM ANY USE OF OR RELIANCE ON THIS DRAWING BY ANY THIRD PARTY OR ANY VARIATION OR REUSE OF THIS DRAWING BY CLIENT, AND (b) THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS EMBODIED OR REFERENCED IN THIS DRAWING REMAIN THE PROPERTY OF HATCH.

No.	DATE	REVISION	BY
A	25-10-19	ISSUED FOR 90% DESIGN REVIEW	V.C.

CP
ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION — MILE 124.16 TO 124.29 CASCADE SUBDIVISION

VITERRA CASCADIA CAPACITY ENHANCEMENT

TYPICAL TRACK EMBANKMENT SECTION

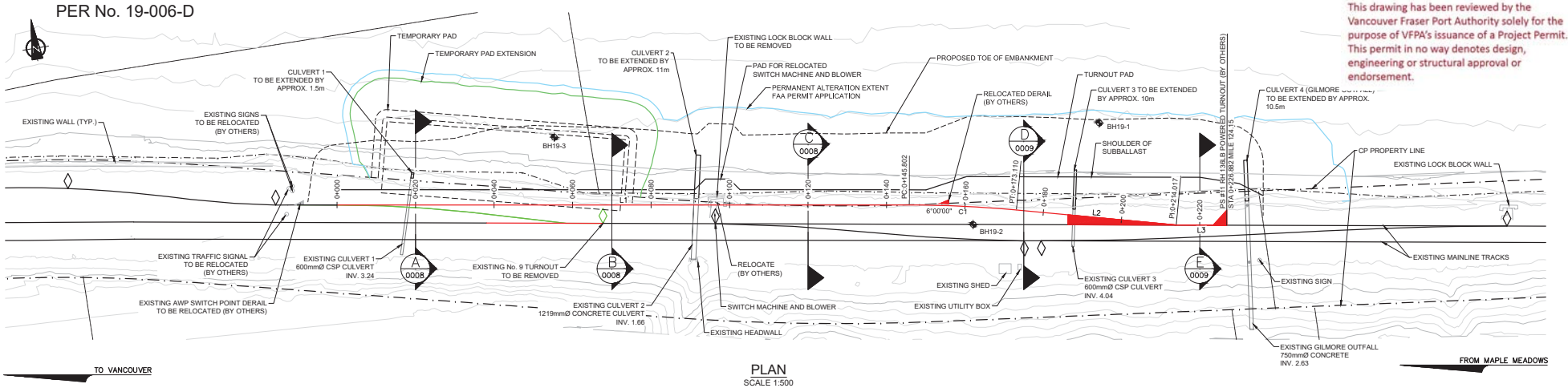
DWG. BY:	CHK BY:	OFFICE FILE:
MANAGER - DESIGN:		SCALE:
		DATE:
M. FAVREAU DIR. PROJECTS & PUBLIC WORKS - WEST		PLAN No. 360899-RW-100-S0-0006 — Rev. A

Oct 25 , 2019 , 11:28am Login name: kim79037
Drawing Name: \\Vandata01\kmm-projects\CP\CP Viterra Capacity Enhancement, Cascadia\Sections\360899-RW-100-S0-0006.dwg

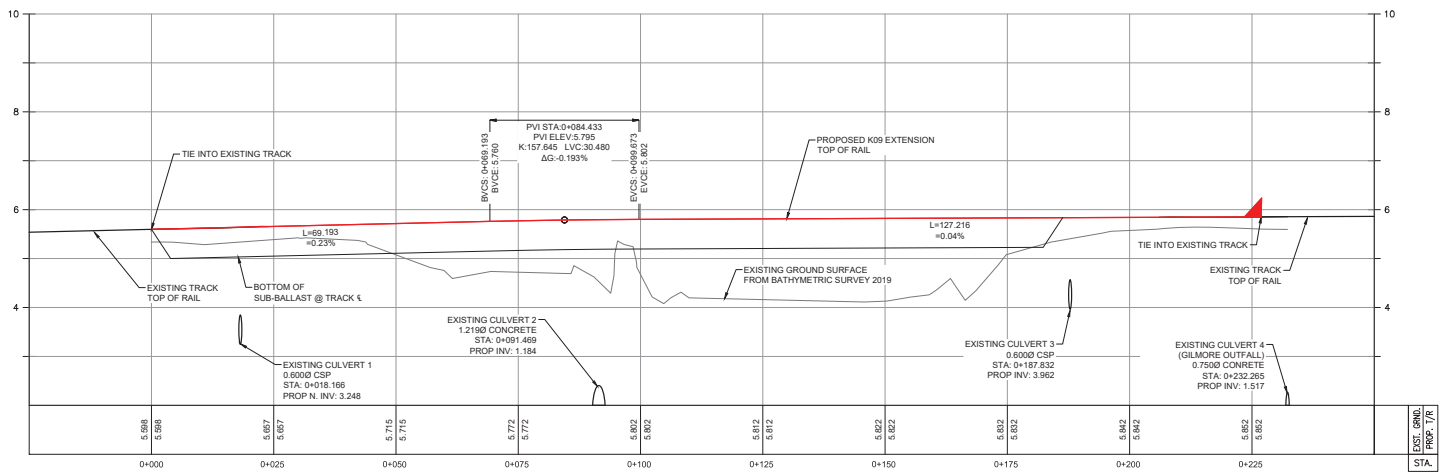
PER No. 19-006-D

VANCOUVER FRASER PORT AUTHORITY

This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.



PLAN
SCALE 1:500



PROFILE
SCALE H:1:500 V:1:50

NOTES

1. CULVERT MATERIAL, GRADE, SIZE AND INVERT TO BE CONFIRMED.
2. BATHYMETRIC AND TOPOGRAPHIC DATA OBTAINED FROM VITERRA DWG. V17183-TOP-01-U-R4. ELEVATIONS IN PLAN AND PROFILE ARE SHOWN IN GEODETIC DATUM.
3. FAA PERMIT APPLICATION LIMITS ARE APPROXIMATE. TAKEN FROM HEMMERA'S MARINE FISH HABITAT ASSESSMENT DATED JULY 22, 2019.

NOT FOR CONSTRUCTION

0 10 20 30 40 50 m
HORIZONTAL SCALE: 1:500

0 1 2 3 4 5 m
VERTICAL SCALE: 1:50

HATCH

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED

DESIGNED BY: T.L. DATE: 25-10-19	DRAWN BY: N.H. DATE: 25-10-19
CHECKED BY: V.C. DATE: 25-10-19	PROJECT MANAGER: V.C. DATE: 25-10-19
HATCH PROJECT No: 360899	DWG SCALE(FULL SIZE): 1:500/50

PROFESSIONAL SEALS

THIS DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CANADIAN PACIFIC ("CLIENT") AND IS ISSUED PURSUANT TO THE HATCH-CP ENGINEERING SERVICES AGREEMENT AND SUBJECT TO THE TERMS AND CONDITIONS THEREIN. THIS DRAWING MAY NOT BE RELIED UPON BY ANY PERSON OTHER THAN CLIENT, AND WE (HATCH) DO NOT ACCEPT AND DISCLAIMER ANY AND ALL LIABILITY OR RESPONSIBILITY ARISING FROM ANY USE OF OR RELIANCE ON THIS DRAWING BY ANY THIRD PARTY OR UNAUTHORIZED USE OF THIS DRAWING BY CLIENT, AND (B) THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS EMBODIED OR REFERENCED IN THIS DRAWING REMAIN THE PROPERTY OF HATCH.

No.	DATE	REVISION	BY
A	25-10-19	ISSUED FOR 90% DESIGN REVIEW	V.C.

CP
ENGINEERING PROJECTS - WEST

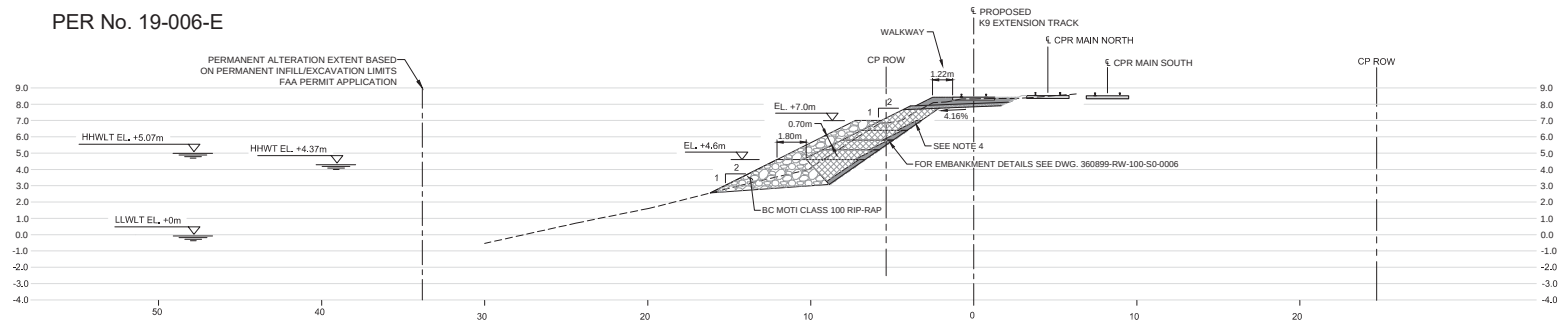
VANCOUVER DIVISION — MILE 124.16 TO 124.29 CASCADE SUBDIVISION

VITERRA CASCADIA CAPACITY ENHANCEMENT
PROPOSED K09 SIDING PLAN AND PROFILE
STA. 0+000 TO 0+226.882

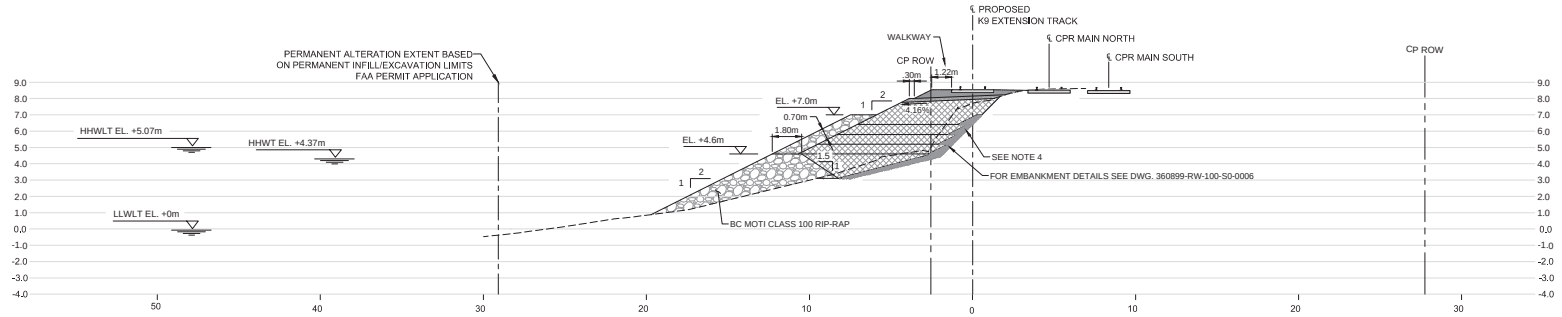
DWG. BY:	CHK BY:	OFFICE FILE:
		SCALE:
MANAGER - DESIGN:		DATE:
M.FAVREAU DIR. PROJECTS & PUBLIC WORKS - WEST		PLAN No. 360899-RW-100-S0-0007 — Rev. A

Oct 25 , 2019 - 11:31am Login name: kim79037
Drawing Name: \\Vanda01\hmm-projects\CP\CP Viterra Capacity Enhancement, Cascadia\360899-RW-100-S0-0007.dwg

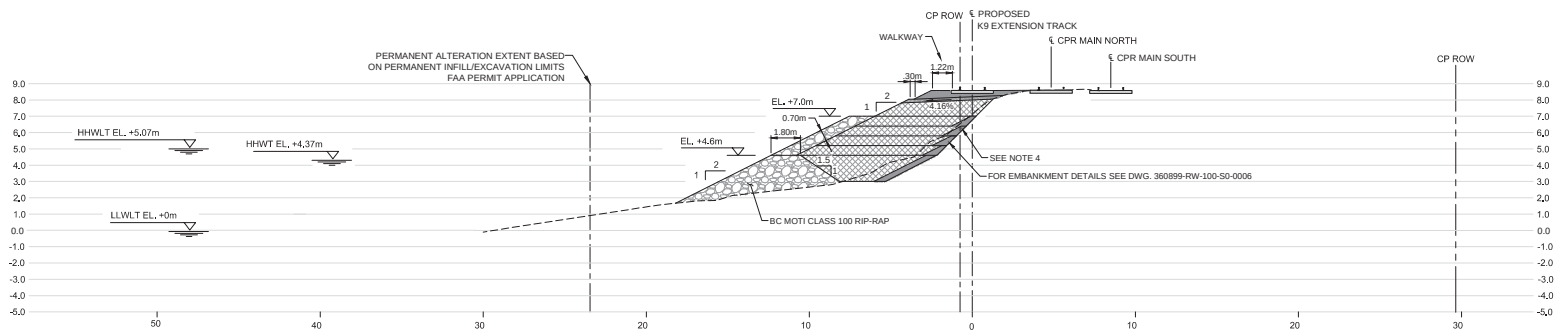
PER No. 19-006-E



STA. 0+020 SECTION A



STA. 0+070 SECTION B



STA. 0+120 SECTION C

NOTES:

1. ELEVATIONS SHOWN IN CHART DATUM (C.D.) ELEVATIONS +0m. IN GEODETIC CORRESPONDS TO EL +2.975m C.D. (APPROX.)
2. FOR GENERAL NOTES REFER TO DWG. 360899-G-100-S0-0004.
3. FOR EMBANKMENT NOTES REFER TO DWG. 360899-RW-100-S0-0006.
4. THE TEMPORARY CUT SLOPE SHALL BE SPECIFIED BY CONTRACTOR. MAXIMUM ALLOWABLE TEMPORARY EXCAVATION SHOULD BE CONSISTENT WITH CP EXCAVATION CRITERIA.
5. ALL FINAL SLOPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER.
6. MATERIAL GRADATION SHALL BE APPROVED BY GEOTECHNICAL ENGINEER BEFORE PLACEMENT.
7. PREPARE EXISTING SURFACE PRIOR TO MATERIAL PLACEMENT. REMOVE EXISTING RIP-RAP, LOOSE SAND, AND VEGETATION.
8. PLACE GRANULAR FILTER (0.3m THK.) MATERIAL AT INTERFACE OF EXISTING SLOPE FILL MATERIAL & NEW QUARRY RUN MATERIAL. GRANULAR FILTER NOT REQUIRED ABOVE EL. 7.0m
9. FAA PERMIT APPLICATION INFILL LIMITS ARE APPROXIMATE. TAKEN FROM HEMMERA'S MARINE FISH AND FISH HABITAT ASSESSMENT, DATED JULY 22, 2019.

LEGEND:

- GRANULAR FILTER
- 150mm MINUS ANGULAR ROCKFILL (QUARRY RUN)
- RIP-RAP (BC MOTI CLASS 100 kg)
- SUB-BALLAST

VANCOUVER FRASER PORT AUTHORITY

This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.

NOT FOR CONSTRUCTION

1:150 0 1 2 3 4 5 6m

HATCH

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED

DESIGNED BY: A.M. DATE: 25-10-19	DRAWN BY: T.E.B. DATE: 25-10-19
CHECKED BY: J.C. DATE: 25-10-19	PROJECT MANAGER: V.C. DATE: 25-10-19
HATCH PROJECT No: 360899	DWG SCALE(FULL SIZE): 1 : 150

PROFESSIONAL SEALS

THIS DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CANADIAN PACIFIC ("CLIENT") AND IS ISSUED PURSUANT TO THE HATCH-CP ENGINEERING SERVICES AGREEMENT AND SUBSEQUENT AGREEMENTS BETWEEN HATCH AND CLIENT. THIS DRAWING IS PROVIDED WITHOUT REPRESENTATION OR WARRANTY OF ANY KIND WHATSOEVER BY HATCH AND HATCH DOES NOT ACCEPT AND DISCLAIMS ANY AND ALL LIABILITY OR RESPONSIBILITY ARISING FROM ANY USE OF OR RELIANCE ON THIS DRAWING BY ANY THIRD PARTY OR ANY MODIFICATION OR ABUSE OF THIS DRAWING BY CLIENT, AND (B) THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS PERTAINING OR REFERRED TO IN THIS DRAWING REMAIN THE PROPERTY OF HATCH.

No.	DATE	REVISION	BY
A	25-10-19	90% SUBMITTAL ISSUED FOR TENDER	V.C.

CP
ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION — MILE 124.16 TO 124.29 CASCADE SUBDIVISION

VITERRA CASCADIA CAPACITY ENHANCEMENT

EMBANKMENT SECTIONS - SHEET 1 OF 2

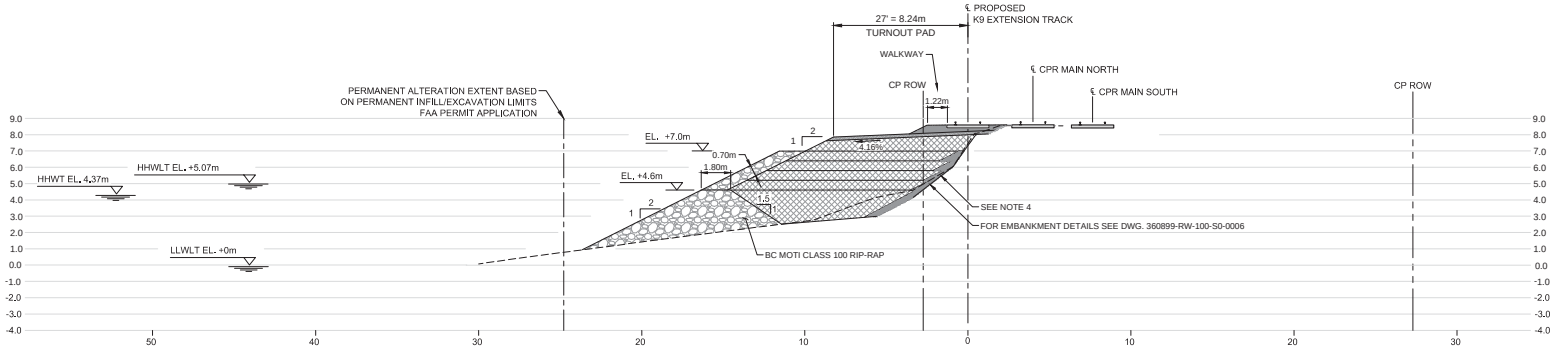
DWG. BY:	CHK BY:
MANAGER - DESIGN:	OFFICE FILE:
	SCALE:
	DATE:
M.FAVREAU DIR. PROJECTS & PUBLIC WORKS - WEST	PLAN No. 360899-RW-100-S0-0008 — Rev. A

Oct 25 , 2019 , 11:05am Login name: kim79037
Drawing Name: \\Vandata01\mm-projects\CP\CP Viterra Capacity Enhancement, Cascadia\Sections\360899-C-100-S0-0006-0008-0009.dwg

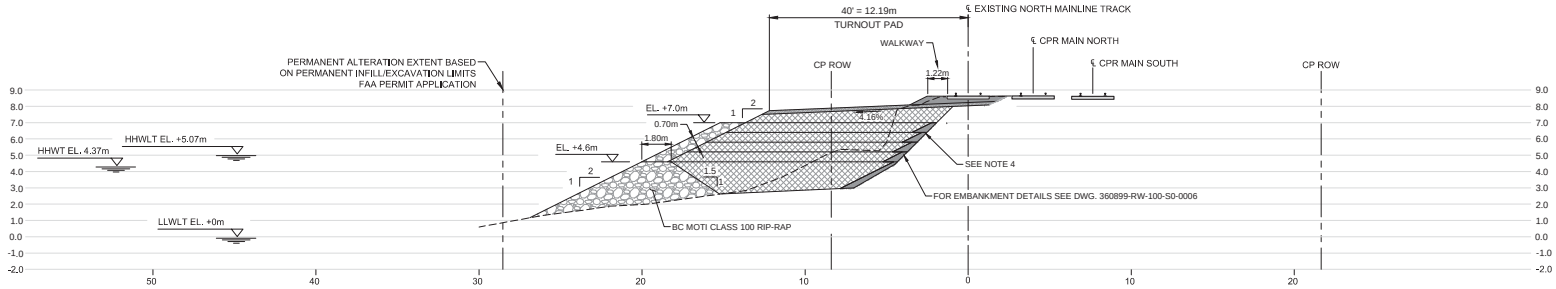
VANCOUVER FRASER PORT AUTHORITY

This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.

PER No. 19-006-F



STA. 0+170 SECTION D



STA. 0+220 SECTION E

NOTES:

1. ELEVATIONS SHOWN IN CHART DATUM (C.D.) ELEVATIONS +0m. IN GEODETIC CORRESPONDS TO EL +2.975m C.D. (APPROX.)
2. FOR GENERAL NOTES REFER TO DWG. 360899-G-100-S0-0004.
3. FOR EMBANKMENT NOTES REFER TO DWG. 360899-RW-100-S0-0006.
4. THE TEMPORARY CUT SLOPE SHALL BE SPECIFIED BY CONTRACTOR. MAXIMUM ALLOWABLE TEMPORARY EXCAVATION SHOULD BE CONSISTENT WITH CP EXCAVATION CRITERIA.
5. ALL FINAL SLOPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER.
6. MATERIAL GRADATION SHALL BE APPROVED BY GEOTECHNICAL ENGINEER BEFORE PLACEMENT.
7. PREPARE EXISTING SURFACE PRIOR TO MATERIAL PLACEMENT. REMOVE EXISTING RIP-RAP, LOOSE SAND, AND VEGETATION.
8. PLACE GRANULAR FILTER (0.3m THK.) MATERIAL AT INTERFACE OF EXISTING SLOPE FILL MATERIAL & NEW QUARRY RUN MATERIAL. GRANULAR FILTER NOT REQUIRED ABOVE EL. 7.0m
9. FAA PERMIT APPLICATION INFILL LIMITS ARE APPROXIMATE. TAKEN FROM HEMMERA'S MARINE FISH AND FISH HABITAT ASSESSMENT, DATED JULY 22, 2019.

LEGEND:

- GRANULAR FILTER
- 150mm MINUS ANGULAR ROCKFILL (QUARRY RUN)
- RIP-RAP (BC MOTI CLASS 100 kg)
- SUB-BALLAST

NOT FOR CONSTRUCTION

1:150 0 1 2 3 4 5 6m

HATCH

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED

DESIGNED BY: A.M. DATE: 25-10-19	DRAWN BY: T.E.B. DATE: 25-10-19
CHECKED BY: J.C. DATE: 25-10-19	PROJECT MANAGER: V.C. DATE: 25-10-19
HATCH PROJECT No: 360899	DWG SCALE(FULL SIZE): 1 : 150

PROFESSIONAL SEALS

THIS DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CANADIAN PACIFIC ("CLIENT") AND IS ISSUED PURSUANT TO THE HATCH-CP ENGINEERING SERVICES AGREEMENT AND SUBSEQUENT AGREEMENTS. THERE ARE NO REPRESENTATIONS OR WARRANTIES TO ANY PARTY OTHER THAN THE CLIENT. THE DRAWING IS PROPRIETARY TO CANADIAN PACIFIC AND HATCH. THEY ACCEPT NO LIABILITY OR RESPONSIBILITY WHATSOEVER FROM ANY USE OF OR RELIANCE ON THIS DRAWING BY ANY THIRD PARTY OR ANY MODIFICATION OR MISUSE OF THE DRAWING BY CLIENT, AND (B) THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS PARTICIPATED OR REFERRED TO IN THE DRAWING REMAIN THE PROPERTY OF HATCH.

No.	DATE	REVISION	BY
A	25-10-19	90% SUBMITAL ISSUED FOR TENDER	V.C.

CP

ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION — MILE 124.16 TO 124.29 CASCADE SUBDIVISION

VITERRA CASCADIA CAPACITY ENHANCEMENT

EMBANKMENT SECTIONS - SHEET 2 OF 2

DWG. BY:	CHK BY:	OFFICE FILE:
		SCALE:
MANAGER - DESIGN:		DATE:
M. FAVREAU DIR. PROJECTS & PUBLIC WORKS - WEST		PLAN No. 360899-RW-100-S0-0009 — Rev. A

Oct 25 , 2019 , 11:04am Login name: kim79037
Drawing Name: \\Vandatb01\hmm-projects\CP\CP Viterra Capacity Enhancement, Cascadia\Sections\360899-C-100-S0-0006-0008-0009.dwg

VANCOUVER FRASER PORT AUTHORITY

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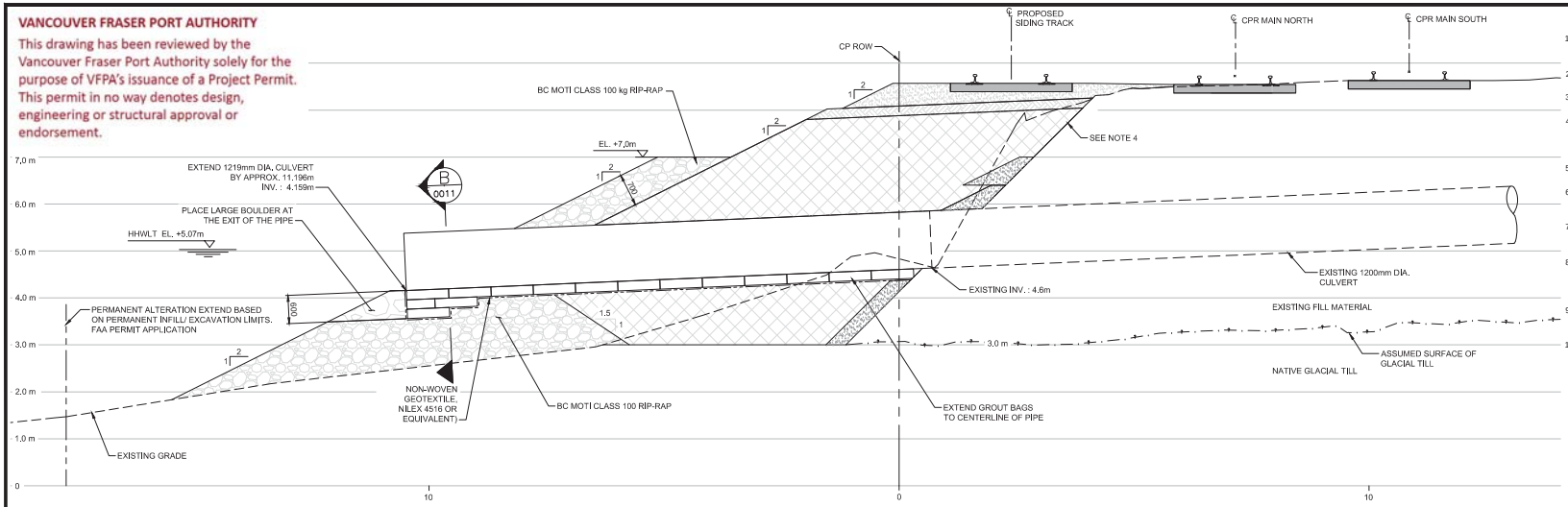


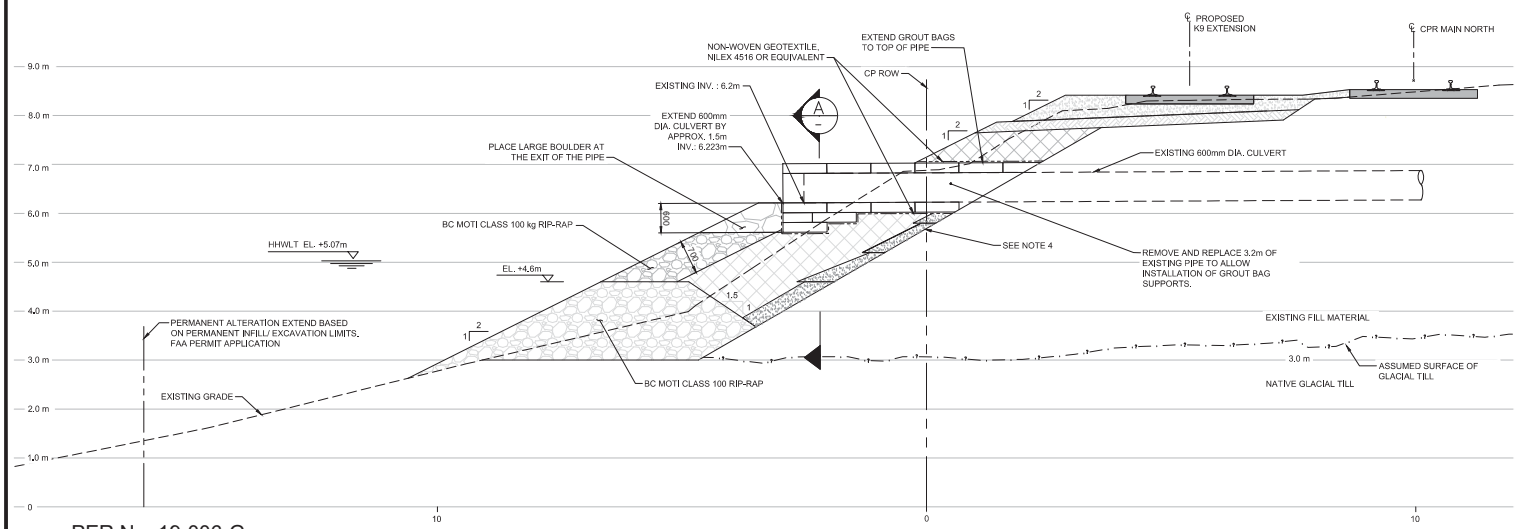
STA. 0+091.469 CULVERT 2

NOTES:

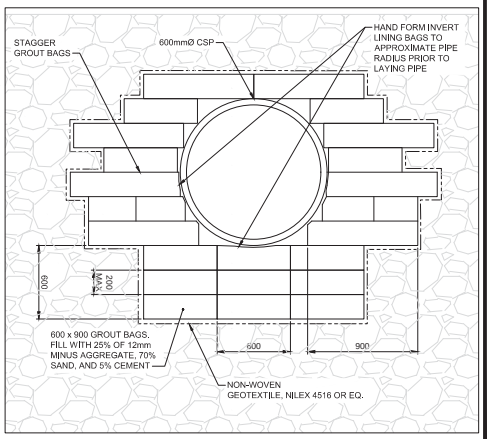
1. ELEVATIONS SHOWN IN CHART DATUM (C.D.) ELEVATIONS +0m. IN GEODETIC CORRESPONDS TO EL +2.975m C.D. (APPROX.)
2. FOR GENERAL NOTES REFER TO DWG. 360899-G-100-S0-0004.
3. FOR EMBANKMENT NOTES REFER TO DWG. 360899-RW-100-S0-0006.
4. THE TEMPORARY CUT SLOPE SHALL BE SPECIFIED BY CONTRACTOR. MAXIMUM ALLOWABLE TEMPORARY EXCAVATION SHOULD BE CONSISTENT WITH CP EXCAVATION CRITERIA.
5. ALL FINAL SLOPES TO BE CONFIRMED BY GEOTECHNICAL ENGINEER.
6. MATERIAL GRADATION SHALL BE APPROVED BY GEOTECHNICAL ENGINEER BEFORE PLACEMENT.
7. PREPARE EXISTING SURFACE PRIOR TO MATERIAL PLACEMENT. REMOVE EXISTING RIP-RAP, LOOSE SAND, AND VEGETATION.
8. PLACE GRANULAR FILTER (0.3m THK.) MATERIAL AT INTERFACE OF EXISTING SLOPE FILL MATERIAL & NEW QUARRY RUN MATERIAL. GRANULAR FILTER NOT REQUIRED ABOVE EL. 7.0m
9. FAA PERMIT APPLICATION INFILL LIMITS ARE APPROXIMATE. TAKEN FROM HEMMERA'S MARINE FISH AND FISH HABITAT ASSESSMENT, DATED JULY 22, 2019
10. CULVERT MATERIAL, GRADE, SIZE AND INVERT TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

LEGEND:

- GRANULAR FILTER
- 150mm MINUS ANGULAR ROCKFILL (QUARRY RUN)
- RIP-RAP (BC MOTI CLASS 100 kg)
- SUB-BALLAST



STA. 0+018.171 CULVERT 1



SECTION A
N.T.S

(CULVERT SECTION THROUGH CSP)

PER No. 19-006-G

NOT FOR CONSTRUCTION

1:50 0 1 2m

HATCH

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED

DESIGNED BY: M.J. DATE: 25-10-19	DRAWN BY: T.E.B. DATE: 25-10-19
CHECKED BY: A. M. DATE: 25-10-19	PROJECT MANAGER: V.C. DATE: 25-10-19
HATCH PROJECT No: 360899	DWG SCALE(FULL SIZE): 1 : 50

PROFESSIONAL SEALS

THIS DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CANADIAN PACIFIC ("CLIENT") AND IS ISSUED PURSUANT TO THE HATCH-CP ENGINEERING SERVICES AGREEMENT AND SUBJECT TO THE TERMS AND CONDITIONS THEREIN. THIS DRAWING MAY NOT BE RELIED UPON BY ANY PERSON OTHER THAN CLIENT AND PROPERLY QUALIFIED PERSONNEL OF HATCH. CLIENT MUST ACCEPT AND DISCLAIMS ANY AND ALL LIABILITY OR RESPONSIBILITY ARISING FROM ANY USE OF OR RELIANCE ON THIS DRAWING BY ANY THIRD PARTY OR ANY MODIFICATION OR ABUSE OF THIS DRAWING BY CLIENT, AND (B) THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS PARAMOUNT OR PERTINENT(S) IN THIS DRAWING REMAIN THE PROPERTY OF HATCH.

No.	DATE	REVISION	BY
A	25-10-19	ISSUED FOR 90% DESIGN REVIEW	V.C.

CP
ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION — MILE 124.16 TO 124.29 CASCADE SUBDIVISION

VITERRA CASCADIA CAPACITY ENHANCEMENT
CULVERT CROSS SECTIONS
CULVERTS 1 AND 2

DWG. BY:	CHK BY:	OFFICE FILE:
		SCALE:
MANAGER - DESIGN:		DATE:
M. FAVREAU DIR. PROJECTS & PUBLIC WORKS - WEST		PLAN No. 360899-CV-100-S0-0010 — Rev. A

Oct 25 , 2019 , 11:15am Login name: kim79037
Drawing Name: \\Vandatb01\imm-projects\CP\CP Viterra Capacity Enhancement, Cascadia\Sections\360899-CV-100-S0-0010.dwg

VANCOUVER FRASER PORT AUTHORITY

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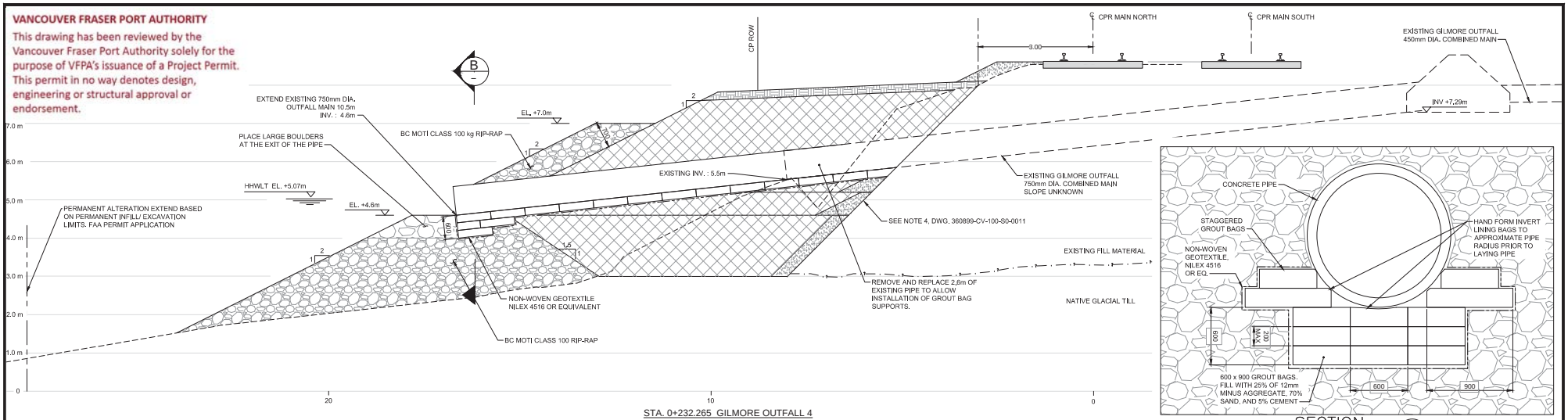


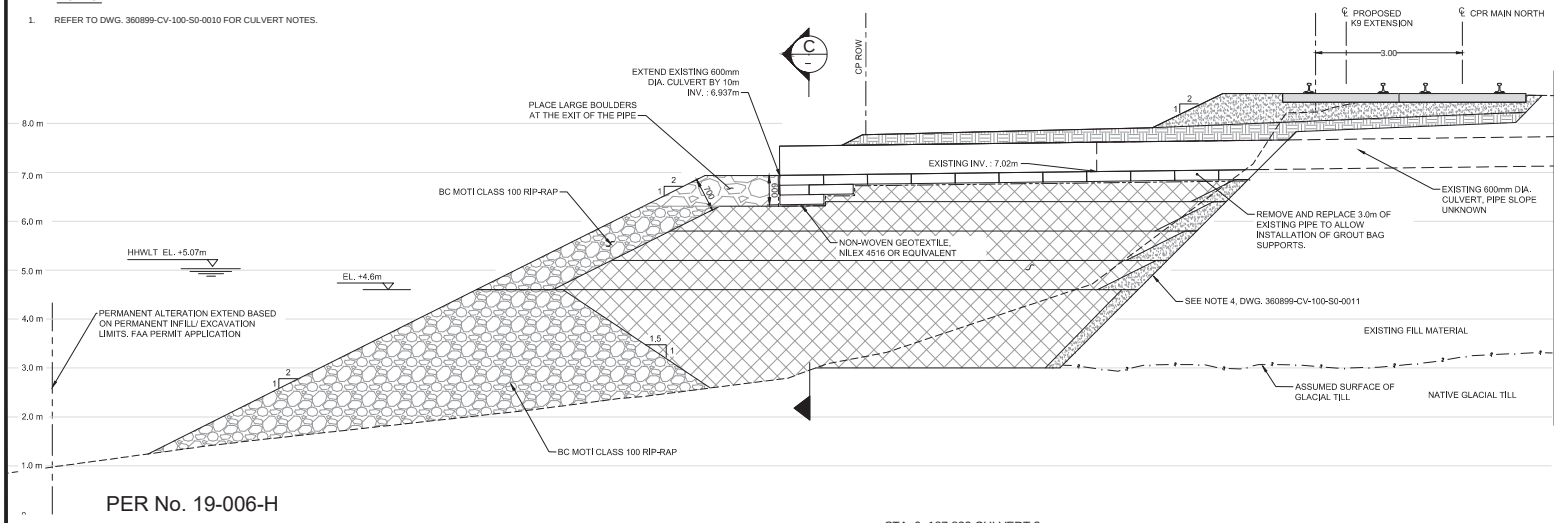
STA. 0+232.265 GILMORE OUTFALL 4

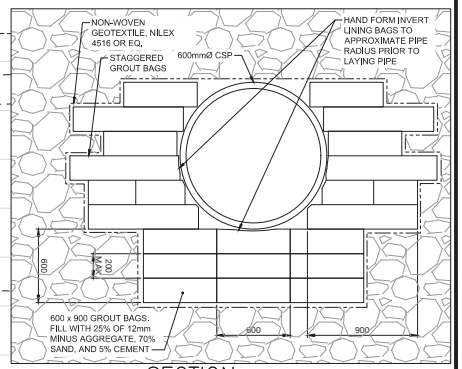
SECTION B
SCALE 1:20

(CULVERT SECTION THROUGH CONCRETE PIPE, TYP.)

NOTES:

1. REFER TO DWG. 360899-CV-100-S0-0010 FOR CULVERT NOTES.





SECTION C
SCALE 1:20

(CULVERT SECTION THROUGH CSP)

PER No. 19-006-H

STA. 0+187.832 CULVERT 3

NOT FOR CONSTRUCTION

1:50 0 1 2m

1:20 0 500 800mm

HATCH

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED

DESIGNED BY: A.M. DATE: 25-10-19	DRAWN BY: T.I DATE: 25-10-19
CHECKED BY: J.C. DATE: 25-10-19	PROJECT MANAGER: V.C. DATE: 25-10-19
HATCH PROJECT No: 360899	DWG SCALE(FULL SIZE): 1 : 50

PROFESSIONAL SEALS

THIS DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CANADIAN PACIFIC ("CLIENT") AND IS ISSUED PURSUANT TO THE HATCH-CP ENGINEERING SERVICES AGREEMENT AND SUBJECT TO THE TERMS AND CONDITIONS THEREIN. THIS DRAWING MAY NOT BE RELIED UPON BY ANY PERSON OTHER THAN CLIENT AND HATCH. HATCH DOES NOT ACCEPT AND DISCLAIMS ANY AND ALL LIABILITY OR RESPONSIBILITY ARISING FROM ANY USE OF OR RELIANCE ON THIS DRAWING BY ANY THIRD PARTY OR ANY MODIFICATION OR ABUSE OF THIS DRAWING BY CLIENT, AND (B) THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS PERTAINING OR REFERRED(LIE) IN THIS DRAWING REMAIN THE PROPERTY OF HATCH.

No.	DATE	REVISION	BY
A	25-10-19	90% SUBMITTAL ISSUED FOR TENDER	V.C.

CP

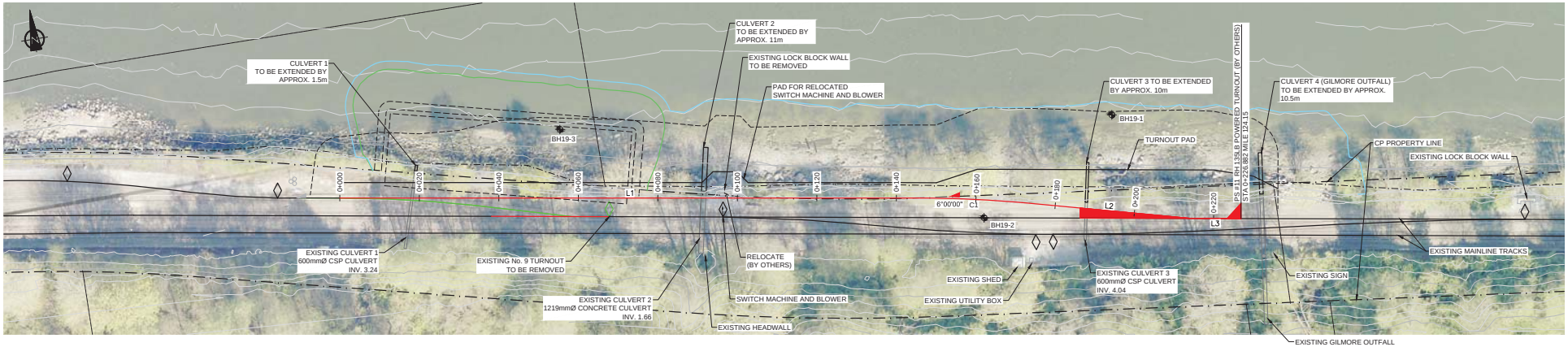
ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION MILE 124.16 TO 124.29 CASCADE SUBDIVISION

VITERRA CASCADIA CAPACITY ENHANCEMENT
CULVERT SECTIONS
CULVERTS 3 AND 4

DWG. BY:	CHK BY:	OFFICE FILE:
		SCALE:
MANAGER - DESIGN:		DATE:
M. FAVREAU DIR. PROJECTS & PUBLIC WORKS - WEST		PLAN No. 360899-CV-100-S0-0011 — Rev. A

Oct 25 , 2019 , 11:34am Login name: kim79037
Drawing Name: \\Vandata01\mm-projects\CP\CP Viterra Capacity Enhancement, Cascadia\Sections\360899-CV-100-S0-0011.dwg

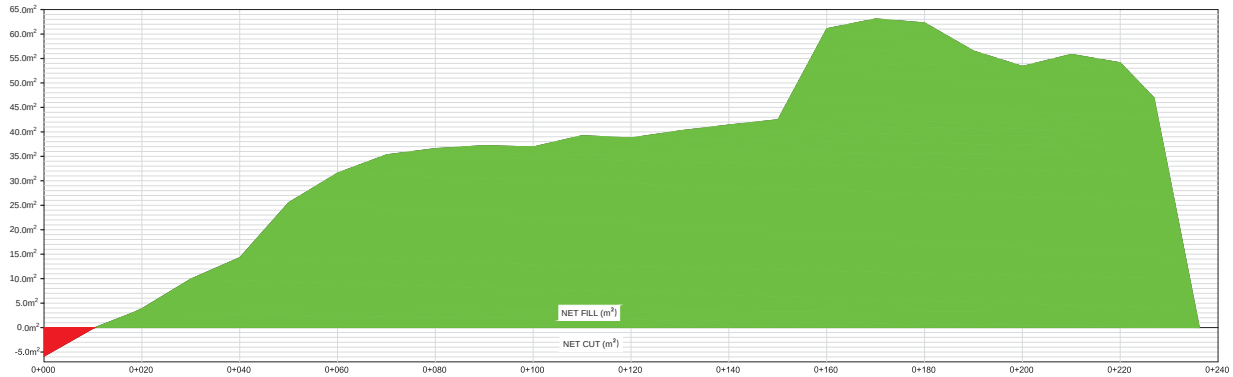


TO VANCOUVER

FROM MAPLE MEADOWS

PLAN

SCALE 1:500



NET CUT/FILL BY STATION

LEGEND

AREA OF FILL

AREA OF CUT

NOT FOR CONSTRUCTION

PER No. 19-006-I

VANCOUVER FRASER PORT AUTHORITY

This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.

0 10 20 30 40 50 m

HORIZONTAL SCALE: 1:500

HATCH

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED

DESIGNED BY: T.I. DATE: 25-10-19	DRAWN BY: N.H. DATE: 25-10-19
CHECKED BY: V.C. DATE: 25-10-19	PROJECT MANAGER: V.C. DATE: 25-10-19
HATCH PROJECT No: 360899	DWG SCALE(FULL SIZE): 1:500

PROFESSIONAL SEALS

THIS DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CANADIAN PACIFIC ("CLIENT") AND IS ISSUED PURSUANT TO THE HATCH CP ENGINEERING SERVICES AGREEMENT AND SUBSEQUENT AGREEMENTS BETWEEN HATCH AND CLIENT. THIS DRAWING IS PROVIDED AS-INSTRUMENT OF SERVICE AND HATCH MAKES NO REPRESENTATIONS TO ANY PARTY EXCEPT CLIENT (AND ANY PARTIES CLIENT AND HATCH AGREE TO DISCLOSE, BUT HATCH MAKES NO REPRESENTATIONS TO ANY OTHER PARTY IN ANY EVENT) REGARDING THE SUITABILITY OF THE DRAWING FOR ANY PURPOSE OTHER THAN THE PURPOSE FOR WHICH IT WAS PREPARED, NAMELY, (1) THE PRIMARY USE OF OR RELIANCE ON THIS DRAWING BY ANY THIRD PARTY OR ANY MODIFICATION OR REUSE OF THIS DRAWING BY CLIENT, AND (2) THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS HANDSHAKE OR REFERENCES IN THIS DRAWING REMAIN THE PROPERTY OF HATCH.

No.	DATE	REVISION	BY
A	25-10-19	ISSUED FOR 90% DESIGN REVIEW	V.C.

CP

ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION — MILE 124.16 TO 124.29 CASCADE SUBDIVISION

VITERRA CASCADIA CAPACITY ENHANCEMENT
PROPOSED K09 SIDING NET CUT/FILL
STA. 0+000 TO 0+226.882

DWG. BY:	CHK BY:	OFFICE FILE:
		SCALE:
MANAGER - DESIGN:		DATE:
M.FAVREAU DIR. PROJECTS & PUBLIC WORKS - WEST		PLAN No. 360899-RW-100-S0-0012 — Rev. A

Oct 25 , 2019 , 11:36am Login name: kim79037
Drawing Name: \\Vandata01\\mm-projects\CP\CP Viterra Capacity Enhancement, Cascadia\360899-RW-100-S0-0012.dwg