



February 10, 2023

Titilayo Fatigun
Project Engineer, Projects & Public Works
Canadian Pacific Railway Company
7550 Ogden Dale Road SE
Calgary, Alberta T2C 4X9

Dear Titilayo Fatigun:

Re: **Vancouver Fraser Port Authority Project Permit No. 21-042-01
Request for Construction Outside of Regular Work Hours
Canadian Pacific Railway – Commissioner Street Rail Expansion**

The Vancouver Fraser Port Authority (the port authority) has received a request from Canadian Pacific Railway Company (CPR) to undertake utility relocation construction works on Sunday, February 19, 2023 from 7:00 AM to 8:00 PM. These requested hours are outside the standard work hours stated in Condition No. 26 of Project Permit No. 21-042.

The port authority understands that the request for construction outside of regular work hours is to allow CPR to advance utility relocation works that have been delayed due to scheduling conflicts with other projects in the area. This work involves the relocation of the existing fibre optic cable line from within the CPR right-of-way to the CPR-leased area located south of Commissioner Street, using horizontal directional drilling (HDD). We understand that CPR is committed to minimizing potential disturbances to surrounding residents, and addressing complaints promptly should they arise.

The port authority further understands that these works are not anticipated to generate significant noise, that the Permit Holder is committed to implementing the mitigation measures identified in the request memorandum submitted on February 8, 2023.

The port authority will allow construction outside regular hours of work on Sunday, February 19, 2023 from 7:00 AM to 8:00 PM, provided the following conditions are met:

1. CPR shall ensure the scope of works undertaken during extended hours is limited to the activities outlined in the proposal.
2. All Project Permit 21-042 conditions shall continue to apply during extended work hours.

The port authority reserves the right to cancel or revoke authorization for extended work hours should noise levels exceed reasonable levels or should disturbances to surrounding residents persist.

.../2

Titilayo Fatigun
PER 21-042-01
February 10, 2023
Page 2 of 2

Should you have any questions please contact Noel Allison at 604.365.9213 or Noel.Allison@portvancouver.com.

Yours truly,

ORIGINAL COPY SIGNED

Andrea MacLeod, Director, Project and Environmental Review
Vancouver Fraser Port Authority

cc Chris Bishop, Manager, Project and Environmental Review, Vancouver Fraser Port Authority
Noel Allison, Project Lead, Project and Environmental Review, Vancouver Fraser Port Authority

encl PER No. 21-042

COPY



PER No.:	21-042
Tenant:	Canadian Pacific Railway Company
Project:	Commissioner Street Rail Expansion
Project Location:	Between Mile 125.37 and 127.00 of the Cascade Subdivision in the City of Vancouver
Vancouver Fraser Port Authority SID No.:	VAN048, VAN047, VAN046, VAN072, VAN071, VAN070
Land Use Designation:	Port Terminal
Permit Holder(s):	Canadian Pacific Railway Company
Category of Review:	C
Date of Approval:	May 13, 2022
Date of Expiry:	May 31, 2024

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 ("Port Authority") property :

- Excavation of approximately 5,110 cubic metres of soil, including approximately 2,920 cubic metres of contaminated soil. Excavation depths up to approximately 1.2 metres below grade
- Installation of two new yard tracks L30 and L31, approximately 2,400 metres and 1,300 metres in length respectively, including placement and grading of structural fill and standard track materials
- Adjustment of the existing Columbia Containers Limited (CCL) lead track to connect to the proposed L31 track, including new level crossing at Commissioner Street
- Installation of a utility protection slab over the Metro Vancouver sewer on Commissioner Street, including installation of approximately 42 piles to a maximum depth of 6 metres below finished grade
- Paving and roadway reinstatement at Commissioner Street
- Construction of a retaining wall along New Brighton Road, including installation of approximately 42 piles to a maximum depth of 6 metres below finished grade to accommodate the realignment of tracks below the Commissioner Street overpass
- Installation of turnouts and crossovers connecting the various yard tracks with the CP mainline and private customer trackage
- Installation of track derails, including sliding derails
- Installation of signals and warning system work, which includes the installation of four crossing gates with flashing lights and electronic bells (one bell at four locations) at Commissioner Street Westbound, Commissioner Street Eastbound, the CCL office driveway (replacement of existing bell), and Mariner Seafoods warehouse driveway, and an additional crossing gate with flashing lights and without a bell at the Mariner Seafoods office driveway.
- Utility works, including protection, upgrading and relocation, as required, of existing buried utilities and infrastructure in conflict with the proposed new track alignment.

This list includes portions of some components that do not fall within Port Authority jurisdiction.

Work is proposed to commence after the Commissioner Street Road Realignment work by the Port Authority is complete. The construction schedule is anticipated to include six months of grading, drainage and structural work, followed by three months of track construction and crossing modifications.

Where possible, all construction activity is anticipated to take place during standard construction hours. To manage unavoidable disruptions to rail and road traffic and existing terminal operations, certain construction activities may take place outside of standard hours (Monday to Saturday 7:00 a.m. to 8:00 p.m., excluding holidays). The Permit Holder must submit a written request, to the Port Authority's satisfaction, no less than 30 business days prior to the desired start date of these activities. The Applicant is also required to prepare a construction notification to be sent 10 business days before commencing works outside of standard hours.

PROJECT AND ENVIRONMENTAL CONDITIONS

The Port Authority 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 82 of the *Impact Assessment Act*.

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 the Port Authority determines that the Permit Holder has provided any incomplete, incorrect or misleading information in relation to the Project, the Port Authority 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*, the Port Authority 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 the Port Authority 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.

Port Authority Guidelines and Record Drawing Standards referenced in this document can be located at: <https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/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 the Port Authority'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 the Port Authority 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 the Port Authority 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, including any located underground. The Permit Holder shall provide an Infrastructure Surveyed Data Drawing that includes topographic and utility locate data based on surveys in accordance with the Port Authority's Record Drawing Standards. The Permit Holder is responsible for repair or replacement of any damage to existing site services and utilities, to the satisfaction of the Port Authority, that result from construction and operation of the Project.
6.	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. 21-042-A to P . The Permit Holder shall not carry out any other physical activities unless expressly authorized by the Port Authority.
7.	The Permit Holder shall cooperate fully with the Port Authority in respect of any review by the Port Authority of the Permit Holder's compliance with this Permit, including providing information and documentation in a timely manner, as required by the Port Authority. The Permit Holder is solely responsible for demonstrating the Permit Holder's compliance with this Permit.
8.	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.
9.	The Permit Holder shall make available upon request by any regulatory authority (such as a Fishery Officer) a copy of this Permit.
10.	Unless otherwise specified, the Permit Holder shall provide plans, documents, and notices required under this Permit to the following email address: per@portvancouver.com and referencing PER No. 21-042 .
11.	Unless otherwise specified, all plans, schedules, and other Project-related documentation that the Permit Holder is required to provide under this Permit, and any subsequent updates, must be to the Port Authority's satisfaction.
12.	The Permit Holder shall prepare and submit a self-report form to the Port Authority demonstrating compliance with conditions at each of the following project phases:

	<p>a) Prior to construction Conditions (self-report shall be submitted a minimum of 15 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)</p> <p>b) Conditions Upon Project Completion (self-report shall be submitted within 60 business days of completion of construction)</p>	
13.	The Port Authority shall have unfettered access to environmental compliance documentation and the Project site at all times during construction without notice.	
14.	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 the Port Authority.	
15.	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)
16.	The Permit Holder shall submit Issued For Construction Drawings for proposed works in accordance with the Port Authority's Record Drawing Standards. These drawings shall be signed and sealed and approved for construction by a professional engineer licensed to practice in the Province of British Columbia. In addition, these drawings shall be submitted in both AutoCAD and PDF format and shall be named according to the record drawing index numbering system set out at Section 2.10 of the Port Authority's Record Drawing Standards.	5 business days before commencing construction or any physical activities
17.	The Permit Holder shall submit a draft construction communications plan and construction notification in accordance with the Port Authority's Public Engagement Guidelines. The plan shall outline how the Permit Holder will engage and communicate with the public and stakeholders from the date of permit issuance to the completion of construction. The plan shall be updated as necessary and upon request by the Port Authority to ensure public and stakeholders are provided with relevant information as it becomes available. The Permit Holder shall carry out the Project in accordance with the construction communications plan, and any subsequent updates made to the Port Authority's satisfaction.	20 business days before commencing construction or any physical activities
18.	The Permit Holder shall distribute a construction notification to residents and businesses within approximately three blocks (280 and 420 metres) from the Project site, as specified in the PER report. This shall be completed to the Port Authority's satisfaction. The Permit Holder shall notify the Port Authority when such distribution has been completed.	10 business days before commencing construction or any physical activities and 10 business days before commencing works outside of standard work hours
19.	The Permit Holder shall submit a Construction Parking and Traffic Management Plan to the Port Authority's satisfaction. The Permit Holder shall carry out the Project in accordance with this plan, and any subsequent updates to the Port Authority's satisfaction if staging areas are required on the Port Authority road.	20 business days before commencing construction or any physical activities
20.	The Permit Holder shall submit an Archaeological Chance Find Procedure for the Project site, to the Port Authority's satisfaction. The Permit Holder shall carry out the Project in accordance with this Procedure, and any subsequent updates made to the Port Authority's satisfaction.	30 business days before commencing

		construction or any physical activities
21.	The Permit Holder shall provide a Project schedule to the Port Authority showing the anticipated start dates for all major phases of the Project as identified by the Port Authority. The Permit Holder shall notify the Port Authority of any material changes to the Project schedule and, upon request, shall provide an updated Project schedule.	20 business days before commencing construction or any physical activities
22.	If there is potential to affect birds and/or their active nests and eggs, the Permit Holder shall conduct nest surveys. For any nests identified in surveys, a qualified environmental professional shall confirm that the nest is not occupied by a species protected at that time of year under applicable legislation. To reduce the risk of Project-related harm, the Permit Holder should avoid certain physical activities during the general bird breeding season, which falls between April 1 and July 31, or outside of this time span if occupied nests are present. Immediately prior to activities with the potential to affect birds and/or their active nests and eggs.	Immediately prior to activities with the potential to affect birds and/or their active nests and eggs
23.	The Permit Holder shall submit an erosion and sediment control plan to the Port Authority's satisfaction. The Permit Holder shall carry out the Project in accordance with the erosion and sediment control plan, and any subsequent updates made to the Port Authority's satisfaction.	10 business days prior to commencing ground disturbing activities
24.	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 carry out the Project in accordance with the spill prevention, containment and clean-up plan.	Before commencing construction or any physical activities
CONDITIONS - DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES		
25.	The Permit Holder shall notify the Port Authority upon commencement of construction, or any physical activities (e.g., mobilization to the Project site).	
26.	Where possible, general construction and physical activities related to the Project shall be conducted from Monday to Saturday between the hours of 7:00 a.m. and 8:00 p.m. No construction and physical activities shall take place on Sundays or holidays. To manage unavoidable disruptions to rail and road traffic and existing terminal operations, certain construction activities may take place outside of standard hours (Monday to Saturday 7:00 a.m. to 8:00 p.m., excluding holidays). The Permit Holder must submit a written request in line with the Guideline for Construction Outside of Regular Work Hours , to the Port Authority's satisfaction, no less than 30 business days prior to the desired start date of these activities. No pile driving activities shall take place outside of the standard construction hours noted above.	
27.	The Permit Holder shall notify the Port Authority within two business days of any complaints received from the community and stakeholders during construction and indicate how the Permit Holder has responded to such complaints.	
28.	The Permit Holder shall remove all abandoned utilities from the Project site, both underground and aboveground. At locations of connection to municipal works (i.e., at property lines), the abandoned utilities shall be capped. The Permit Holder shall provide detailed drawings of abandoned utilities and capped connections in both AutoCAD and PDF format in accordance with the Port Authority's Record Drawing Standards.	

29.	The Permit Holder shall observe Metro Vancouver's "Proximal Work Requirements" to ensure that Metro Vancouver's existing sanitary trunk line remains undisturbed.	
30.	The Permit Holder may place temporary construction trailers on the Project site while this permit remains in effect, provided such trailers meet all of the criteria set out in the Port Authority's Temporary Construction Trailer Criteria, available at: https://www.portvancouver.com/permitting-and-reviews/building-permits/ . Should one or more of the criteria not be met, a Port Authority Building Permit is required.	
31.	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 the Port Authority.	
32.	The Permit Holder shall provide environmental monitoring reports to the Port Authority as specified in the Construction Environmental Management Plan or more frequently if the Port Authority requires. In addition, a summary report for the whole monitoring period shall be forwarded to the Port Authority within 30 days of the conclusion of the monitoring period.	
33.	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 of the <i>Fisheries Act</i> ; or (b) adversely affect fish or fish habitat in a manner contrary to Section 35 of the <i>Fisheries Act</i> .	
34.	The Permit Holder shall conduct all activities involving the use of concrete, cement, mortars and other Portland cement or lime-containing construction materials in a manner that shall not deposit sediments, debris, concrete (cured or uncured), and concrete fines to the aquatic environment, either directly or indirectly. Water that has contacted uncured or partly cured concrete or Portland cement or lime-containing construction materials (such as the water that may be used for exposed aggregate wash-off, wet curing, equipment and truck washing) shall not be permitted to enter the aquatic environment. The Permit Holder shall provide containment facilities at the site for the wash-down water from concrete delivery trucks, concrete pumping equipment, and other tools and equipment, as required.	
35.	The Permit Holder shall not dewater excavations unless a dewatering plan has been submitted to the Port Authority's satisfaction.	
36.	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.	
37.	The Permit Holder shall dispose of any soils excavated from the Project site that are not suitable for backfill at appropriate off-site facilities and maintain records of off-site disposal.	
38.	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.	
	CONDITIONS - UPON COMPLETION	SUBMISSION TIMING (Business Days)
39.	The Permit Holder shall notify the Port Authority upon completion of the Project.	Upon substantial completion
40.	The Permit Holder shall provide record drawings, including a Project site plan that clearly identifies the location of works, in both AutoCAD and PDF format (with an Engineers stamp where applicable) in accordance with the Port Authority's Record Drawing Standards. All drawings shall be named according to the record drawing	Within 40 business days of completion

	index numbering system set out at Section 2.10 of the Port Authority's Record Drawing Standards.	
The Port Authority reserves the right to rescind or revise these conditions at any time that new information warranting this action is made available to the Port Authority.		
LENGTH OF PERMIT VALIDITY		
The Project must be completed no later than May 31, 2024 (the "Expiry Date").		
AMENDMENTS		
<ul style="list-style-type: none"> • 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 the Port Authority for consideration of an amendment to this Permit. • For an extension to the Expiry Date, the Permit Holder must apply in writing to the Port Authority no later than 40 business days prior to that date. <p>Failure to apply for an extension as required may, at the sole discretion of the Port Authority, result in termination of this Permit.</p>		

PROJECT AND ENVIRONMENTAL REVIEW DECISION

In completing the project and environmental effects review, the Port Authority has reviewed and taken into account relevant information available on the proposed Project and has considered any adverse impact that the Project may have on the rights of Indigenous peoples, Indigenous knowledge, community knowledge, comments received from the public, and measures that would mitigate any significant adverse environmental effects of the Project. We conclude that with the implementation of proposed mitigation measures and Permit conditions, the Project is not likely to cause significant adverse environmental effects.

The Port Authority concludes that the Project has appropriately addressed all identified concerns subject to conformance with the project and environmental conditions in the Permit.

Project Permit PER No. 21-042 is approved by:

ORIGINAL COPY SIGNED

ANDREA MACLEOD
DIRECTOR, PROJECT AND ENVIRONMENTAL REVIEW

May 13, 2022

DATE OF APPROVAL

CONTACT INFORMATION

Vancouver Fraser Port Authority
 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.



PORT of
vancouver

Vancouver Fraser
Port Authority

PROJECT AND ENVIRONMENTAL REVIEW REPORT


PER NO. 21-042

COMMISSIONER STREET RAIL EXPANSION

Prepared for: Director, Project and Environmental Review

Table of Contents

Table of Contents	i
1 INTRODUCTION	1
2 PROJECT DESCRIPTION	2
2.1 Proposed Works	2
2.2 Proposed Construction Methods	2
3 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS	3
3.1 Planning	3
3.1.1 Land Use Designation	3
3.1.2 Existing Land Use Policies	3
3.1.3 Building Permit Requirements	4
3.2 Engineering	4
3.3 Transportation	4
3.4 Marine Operations	4
3.5 Add other Departments as required	4
4 STAKEHOLDER CONSULTATION	5
4.1 Municipal Consultation	5
4.2 Federal, Provincial, Regional Agency Consultation	6
4.3 Adjacent Tenant Consultation	6
4.4 Marine Users Consultation	7
4.5 East Vancouver Port Lands (EVPL) Liaison Group	8
4.6 Industry Association Consultation	9
5 PUBLIC ENGAGEMENT	10
5.1 Summary of Public Engagement	10
5.2 Summary of Public Engagement – Preliminary Review	12
5.3 Summary of Public Engagement – Application Review	14
6 INDIGENOUS CONSULTATION	16
7 ENVIRONMENTAL EFFECTS REVIEW	18
7.1 Scope of Environmental Review	18
7.2 Environmental Effects and Mitigation Summary	18
7.3 Environmental Effects Review Decision	22
8 CONCLUSION	22
APPENDIX A Location Plan	24
APPENDIX B List of Information Sources	25

 PORT of vancouver Vancouver Fraser Port Authority		VANCOUVER FRASER PORT AUTHORITY PROJECT AND ENVIRONMENTAL REVIEW REPORT
PER No.:	21-042	
Tenant:	Canadian Pacific Railway Company	
Project:	Commissioner Street Rail Expansion	
Project Location	Between Mile 125.37 and 127.00 of the Cascade Subdivision in the City of Vancouver	
Vancouver Fraser Port Authority SID No.:	VAN048, VAN047, VAN046, VAN072, VAN071, VAN070	
Land Use Designation:	Port Terminal	
Applicant(s):	Dillon Consulting Limited	
Applicant Address:	3820 Cessna Drive, Suite 510, Richmond BC	
Category of Review:	C	
Recommendation:	That PER No. 21-042 for Commissioner Street Rail Expansion be approved.	

1 INTRODUCTION

The Vancouver Fraser Port Authority (the “Port Authority”), a federal port authority, manages lands under the purview of the *Canada Marine Act*, which imparts responsibilities for environmental protection. The Port Authority accordingly conducts project and environmental reviews of works and activities undertaken on these lands to ensure that the works and activities will not likely cause significant adverse environmental effects. This project and environmental review report documents the Port Authority’s project and environmental review of PER No. 21-042 Commissioner Street Rail Expansion (the “Project”) proposed by Dillon Consulting Limited on behalf of Canadian Pacific Railway Company (CP; the “Applicant”).

This project and environmental review was carried out to address the Port Authority’s responsibilities under the *Canada Marine Act*, and to meet the requirements of the *Impact Assessment Act*, as applicable. The proposed Project is not a “designated project” under the *Impact Assessment Act* and an impact assessment as described in the *Impact Assessment Act* is not required. However, Port Authority authorization is required for the proposed Project to proceed and in such circumstances, where applicable, Section 82 of the *Impact Assessment Act* requires federal authorities to assure themselves that projects will not likely cause significant adverse environmental effects. The project and environmental review process is designed to provide that assurance. In addition, the Port Authority considers other interests, impacts and mitigations through the project and environmental review.

The project and environmental review considered the application along with supporting studies, assessments and consultations carried out or commissioned by the Applicant, as well as other information provided by the Applicant. In addition, this project and environmental review considered other information available to the Port Authority and other consultation carried out by the Port Authority. A full list of information sources germane to the review is provided in Appendix B.

This project and environmental review report is NOT a project authorization. This project and environmental review report summarizes the review outcome, and provides the basis for approval or denial. Should the Project be approved, the report is accompanied by a project permit (the “Permit”) and the conclusions described in this report require compliance with the conditions in the Permit.

2 PROJECT DESCRIPTION

As part of the Burrard Inlet Road and Rail Improvement Program, CP is proposing to install two additional rail tracks, north of the existing four rail tracks between the Commissioner Street overpass in the east and Victoria Drive in the west. The additional tracks are to increase rail car storage capacity and improve operations for existing Port of Vancouver rail customers.

The proposed Project is located between Mile 125.37 and Mile 127.00 of the Cascade Subdivision in the City of Vancouver. The western and eastern Project limits correspond approximately with the Victoria Drive alignment and the Commissioner Street overpass/McGill Street. A small piece of track work for installation of crossover and switches is proposed north of Salsbury Drive (west of Victoria Drive) to reconnect the new and realigned tracks. In addition, realignment of multiple tracks will be required immediately east of the Commissioner Street overpass. Significant works would occur within CP's existing right-of-way.

The work area is referred to as L Railyard (L-Yard) and is currently used to stage rail cars for delivery to customer sites, and to assemble rail cars into trains that leave the waterfront headed to CP's Port Coquitlam yard. The L-Yard is primarily used by freight trains transporting rail cars to and from the grain, intermodal container, and merchandise (canola oil and sugar) customers along the South Shore waterfront. The proposed installation of two additional rail tracks (L30 and L31) which will provide additional track footage of 3,700 metres (12,139 feet) or capacity for 160 additional rail cars, is intended to improve the efficient movement of rail cars, in particular grain cars. The portion of works occurring within the Port Authority's jurisdiction is approximately 40% of the overall project area.

This Project is the third of four components of the Burrard Inlet Road and Rail Improvement Project, which is intended to proceed after PER No. 2011-125 – South Shore Corridor Project, also referred to as the Commissioner Street Road Realignment project. PER No. 2011-125 is a roadwork project to widen and realign Commissioner Street to the north between Nanaimo and Slocan Street in order to accommodate the rail track work associated with the proposed Project. Note that PER No. 22-013 – Commissioner Street Proposed Gas Main Alteration, was issued in advance to relocate an existing distribution pressure gas main located along Commissioner Street.

2.1 Proposed Works

The Project includes the following components (note: this list includes portions of some components that do not fall within Port Authority jurisdiction):

- Excavation of approximately 5,110 cubic metres of soil, including approximately 2,920 cubic metres of contaminated soil. Excavation depths up to approximately 1.2 metres below grade
- Installation of two new yard tracks L30 and L31, approximately 2,400 metres and 1,300 metres in length respectively, including placement and grading of structural fill and standard track materials
- Adjustment of the existing Columbia Containers Limited (CCL) lead track to connect to the proposed L31 track, including new level crossing at Commissioner Street
- Installation of a utility protection slab over the Metro Vancouver sewer on Commissioner Street, including installation of approximately 42 piles to a maximum depth of 6 metres below finished grade
- Paving and roadway reinstatement at Commissioner Street
- Construction of a retaining wall along New Brighton Road, including installation of approximately 42 piles to a maximum depth of 6 metres below finished grade to accommodate the realignment of tracks below the Commissioner Street overpass
- Installation of turnouts and crossovers connecting the various yard tracks with the CP mainline and private customer trackage
- Installation of track derails, including sliding derails
- Installation of signals and warning system work, which includes the installation of four crossing gates with flashing lights and electronic bells (one bell at four locations) at Commissioner Street Westbound, Commissioner Street Eastbound, the CCL office driveway (replacement of existing bell), and Mariner

Seafoods warehouse driveway, and an additional crossing gate with flashing lights and without a bell at the Mariner Seafoods office driveway

- Utility works, including protection, upgrading and relocation, as required, of existing buried utilities and infrastructure in conflict with the proposed new track alignment

Work is proposed to commence once the Commissioner Street Road Realignment work by the Port Authority is complete. The construction schedule is anticipated to include six months of grading, drainage and structural work, followed by three months of track construction and crossing modifications. Some components of the project are on port authority lands outside of the area currently leased by CP. CP will require a valid lease agreement before commencing construction in those areas.

Where possible, all construction activity is anticipated to take place during standard construction hours. To manage unavoidable disruptions to rail and road traffic and existing terminal operations, certain construction activities may take place outside of standard hours (Monday to Saturday 7:00 a.m. to 8:00 p.m., excluding holidays). The Permit Holder must submit a written request, to the Port Authority's satisfaction, no less than 30 business days prior to the desired start date of these activities. Pile driving would be completed during standard construction work hours. The Applicant is also required to prepare a construction notification to be sent 10 business days before commencing works outside of standard hours.

3 TECHNICAL REVIEW

The Port Authority has reviewed the application and has the following project considerations.

3.1 Land Use Planning

The Port Authority has reviewed the application and has the following land use comments.

The Project is located on the South Shore of Burrard Inlet. To the north of the site is Commissioner Street, a busy truck route, restricted to Port of Vancouver traffic only. Across Commissioner Street, adjacent to the inlet, are a mix of port terminals and marine support services, which are supported by South Shore road and rail infrastructure. Directly to the south of the Project site are residential properties. The Port Authority's Land Use Plan requires that careful planning and collaboration between the Port Authority and adjacent municipalities and Indigenous groups take place in this area, in order to reduce the potential for conflicts between port-related and non-industrial uses. Sections 4, 5 and 6 of this report detail the engagement that has taken place to meet this requirement.

The proposal meets Port Authority requirements, based on the primary considerations of the Land Use Plan and the East Vancouver Port Lands Area Plan, which include the land use designation and current land use policies identified below.

3.1.1 Land Use Designation

The Project site is designated as Port Terminal in the Land Use Plan. Transportation infrastructure is permitted in all land use designation areas where compatible with primary uses on the site. Shipping and transportation of goods is also a primary use for Port Terminal designations. The South Shore terminals adjacent to the site are supported by the rail tracks and include rail spurs leading off the CP main line. Therefore, the proposed use of the site to increase storage capacity and improve rail operations for existing Port of Vancouver rail customers on the South Shore of Burrard Inlet is compliant with the Land Use Plan designation.

3.1.2 Existing Land Use Policies

The transportation policy in the Land Use Plan requires new and upgraded transportation infrastructure within the Port Authority's jurisdiction to comply with all transportation regulations and standards applicable to the Port Authority, and consider the applicable policies, guidelines, and designs of the connecting road and rail authorities. These requirements are considered under section 3.3 of this report. Transportation infrastructure projects should also generally meet the following objectives:

- Support the goals, objectives, and policy directions contained within the Vancouver Fraser Port Authority Land Use Plan
- Encourage the orderly and efficient development of port lands over the long term in support of Canada's trade priorities
- Ensure the long-term ability to efficiently manage port-related road and rail traffic

In line with these objectives, the Land Use Plan notes that the anticipated future uses of this area should support continued growth of port-related uses in all commodity sectors and further intensification of port-related industrial users on existing sites. Investment in rail infrastructure to improve operational efficiencies for the movement of goods, including the Burrard Inlet Road and Rail Improvement Project, is noted as a key feature for the South Shore. The installation of the additional rail tracks and the reconfiguration of existing tracks as part of the proposed Project would support the intensification of use in the area by improving storage capacity and rail logistics, supporting the objective for the efficient management of rail traffic in the long-term.

The proposed Project is also within the area of the South Shore known as the East Vancouver Port Lands (EVPL), to which an area plan applies. The EVPL Area Plan includes policies relating to transportation, and identifies the following transportation actions:

- Improve the functioning of Commissioner Street and its connections to the regional transportation system
- Work with CP to reduce operational impacts on the Burrardview neighbourhood

The EVPL Area Plan separates potential projects into colour coded land use categories: "Green" (outright approvable uses), "Yellow" (conditionally approvable uses) and "Red" (prohibited uses). A rail line is considered to be a yellow, conditionally approvable, use under the EVPL Area Plan, meaning that the use has the potential for higher impacts requiring more detailed review and consultation to ensure the impacts have been adequately addressed.

Notification and engagement with the EVPL Liaison Committee was conducted as part of the project and environmental review. These activities are described in detail in Section 4 – Stakeholder Consultation. Noise and emissions impacts and mitigations are considered under Section 7.2 – Environmental Effects and Mitigation Summary.

The Project is considered to be in conformance with the EVPL Area Plan.

3.1.3 Building Permit Requirements

A building permit is not required for the Project.

3.2 Engineering

The proposed Project has been designed by professional engineers licensed to practice in the Province of British Columbia and has been designed to applicable engineering standards. Many components integrate with infrastructure previously installed under the Commissioner Street Road Realignment Project (refer to PER No. 2011-125 for more information).

The proposal meets the Port Authority engineering requirements, subject to adherence to the listed project and environmental conditions in the Permit.

3.3 Transportation Planning

The proposed Project, particularly the implementation of L30 and L31 yard tracks, will add approximately 3,700 metres (12,139 feet) of rail infrastructure to accommodate 160 additional rail cars.

The construction of L30 and L31 provide functional operating tracks to create additional car capacity and free other tracks for servicing the South Shore. The additional capacity creates the potential for single blocks of cars for a South Shore customer to queue within the L-Yard in other tracks such as L27 and L28 to avoid further switching. This is the principal benefit of the Project: more efficient service for CP's South Shore customers, particularly for grain movements. Track L31 is intended to be used by CP to serve as an independent switch lead for switching terminal customers on the north side of the track right-of-way.

The proposed future operations will support the same volume of rail traffic in and out of the South Shore area, which is 6 trains per day in and 6 trains per day out in peak grain season, and 4 trains per day in and 4 trains per day out during regular operating scenarios. According to the operating plan, the redistribution of the track function in the L-Yard will provide:

- Increased capacity for trains on L27 and L28 to service terminals without the need to additionally handle rail cars in the yard prior to switching the terminal (i.e., direct hit)
- Reduced level of switching required to split out cars to multiple customers from trains currently received on L27 (i.e., grain, intermodal, and mixed merchandise)

Functionally the grain spotting, lifting and switching on L28 and L29 will be replaced with the ability to switch the same level of volume on L29 and L30 after the Project is implemented. An additional capacity of 86 rail cars will be provided by L30 alone.

In summary, the Project will:

- Provide new capacity to pull through longer trains (up to 160 rail cars in length) on one long track
- Enable larger blocks of cars for terminal customers
- Reduce switching, cutting, and double/triple handling of cars

CP do not expect any changes to current rail volumes, power, and rail speeds as a result of the Project.

A detailed Rail Operations Plan was submitted by CP in support of the application. Based on the Rail Operations Plan the Port Authority is satisfied that there are no impacts to rail capacity resulting from the Project that require mitigation.

The Port Authority has reviewed the application and requires the Applicant to:

- Submit a Construction Parking and Traffic Management Plan 20 days prior to any construction activity, if staging areas are required on the Port Authority road

Should all construction activity be managed within the rail yard, then a Construction Traffic Management Plan is not required.

This is reflected in condition No. 19 in the Permit.

The proposal meets Port Authority requirements, subject to adherence to the listed project and environmental conditions in the Permit.

3.4 Environment

The environmental review of the proposed Project is summarized in Section 7, Environmental Effects Review.

4 STAKEHOLDER CONSULTATION

The proposed Project was assessed to have potential impacts to stakeholders and the local community and consultation activities were determined to be required. The following sections describe the stakeholder engagement activities undertaken by the Port Authority as part of the project and environmental review.

4.1 Municipal Consultation

The proposed Project was assessed by the Port Authority to have potential impacts to municipal interests. A referral letter was sent to the City of Vancouver on November 30, 2021 notifying them of the proposed Project.

The City of Vancouver responded on January 31, 2022 with comments from their Sewer Department. The Applicant reviewed and addressed the comments from the City of Vancouver by confirming that excavation and additional loading from the Project would not have any impact on the City's existing sewers. No further comments were received from the City of Vancouver.

4.2 Federal, Provincial, Regional Agency Consultation

The proposed Project was assessed by the Port Authority to be of potential interest to other regulatory agencies. A referral letter was sent to Metro Vancouver on November 30, 2021 notifying them of the proposed Project.

Metro Vancouver responded with a letter on December 23, 2021 that summarized their engagement with the Applicant to date and identified four different areas along the proposed alignment which fall under Metro Vancouver's "Proximal Work Requirements" due to proximity with a sanitary trunk line. The letter was provided to the Applicant who confirmed that it appropriately summarized the scope of concerns and discussion completed to date and that consultation is ongoing as the Project progresses.

4.3 Adjacent Tenant Consultation

The proposed Project was assessed to have potential impacts to adjacent Port Authority tenant operations. A referral letter was sent to the following Port Authority tenants on November 30, 2021 notifying them of the proposed Project:

- BC Hydro
- Canadian National Railway Properties
- Columbia Containers Limited
- Fortis BC
- Greater Vancouver Sewer & Drainage District (Metro Vancouver)
- Kiewit-Ledcor TMEP Partnership (KLTP)
- Lafarge Canada Inc.
- Mariner Seafoods Limited
- SAAM Towage Canada Inc. and SAAM Towage Vancouver Inc.
- Telus Communications Inc.
- Viterra - Cascadia Terminal
- Western Canada Marine Response Corporation

BC Hydro provided comments on December 7, 2021 requesting confirmation of which of their infrastructure and rights-of-way (ROWs) are affected by the Project. In addition, BC Hydro also requested confirmation of the proposed equipment that will be installed under the overhead lines, the clearance from the proposed equipment to the energized lines and whether any workers would be within the "Limits of Approach" during installation and future maintenance of the Project. The Applicant responded on December 17, 2021 noting that two railway crossing gates and a flashing light signal would be installed within BC Hydro's ROW, the clearance between the crossing gates and the energized lines will be confirmed prior to construction, and that there will be no workers within the "Limits of Approach". No further comments were received from BC Hydro.

Fortis BC provided comments on December 7, 2021 and January 27, 2022. The December 7, 2021 comments focused on the confirmation of details relating to the relocation of a gas main that was covered under a separate Project Permit – PER No. 22-013 Commissioner Street Proposed Gas Main Alteration. The January 27, 2022 comments summarized the Project Environmental Screening conducted by the Environmental Department at Fortis BC for the proposed gas main relocation works. The summary was provided to the Applicant and they confirmed their commitment to appropriately manage soils, spill prevention and sediment and erosion control.

The remaining adjacent tenants did not provide comments in response to the referral, however due to the nature of the Project, the Applicant has undertaken direct engagement with affected tenants in the area. The Applicant provided a Stakeholder Engagement Summary on March 22, 2022 that tabulated the interactions the Applicant had with adjacent tenants that had not responded to the Port Authority’s referral letter. These tenants did not have major concerns with the Project and it has been confirmed that the Applicant will continue to engage with adjacent tenants throughout the duration of the proposed Project.

4.4 Community Liaison Committee Notification and Engagement Activities

The proposed Project was assessed to be of potential interest to the East Vancouver Port Lands liaison committee (EVPL) and the South Shore Community Liaison Committee (SSCLC).

Notification and engagement activities with both committees included:

- Early notification to the EVPL on April 7, 2021
- Email notification to the EVPL on September 29 and October 5, 2021 about upcoming presentation
- Presentation to the EVPL on October 6, 2021
- Email to the EVPL on October 26, 2021 with responses to questions raised during the presentation
- Email from CP committee member to the EVPL on November 12, 2021, clarifying the difference between Transport Canada-required Notice of Railway Works and PER requirements for public engagement
- Presentation to the SSCLC on December 9, 2021
- Email to the SSCLC on January 17, 2022 with a response to a question raised during the presentation
- Email to the SSCLC and the EVPL on February 9, 2022 with the public engagement summary and consideration report

Below is a table summarizing the comments received and how they were considered as part of the project and environmental review.

Issue	Mitigations and Permit Conditions	Rationale
Location of the two new tracks in relation to the embankment.	None required	The Applicant indicated the two new tracks are proposed on the inlet side of the existing rail, and not towards the embankment.
Pile driving methodology, number of piles and times of pile driving during construction.	None required	The Applicant clarified approximately 42 piles would be drilled at the New Brighton Road retaining wall, and approximately 42 piles at the protection slab over Metro Vancouver’s sewer at the Columbia Containers lead crossing of Commissioner Street. Pile driving would take place during standard Port Authority construction hours, over a few days.
Train idling after construction is complete.	None required	The Applicant indicated idling is regulated by Transport Canada and provided a link to the regulations which state that CP is permitted to idle for up to 30 minutes (unless special circumstances apply). The Applicant anticipates a reduction in idling upon Project completion.

Issue	Mitigations and Permit Conditions	Rationale
Locomotives parking in front of residences upon completion of the Project.	None required	The Applicant confirmed locomotives would not park in front of residences. Operations will remain unchanged and locomotives will be cycled back to Port Coquitlam.
CP's environmental best practices.	None required	The Applicant made reference to industry best practices and the CEMP available on the Port Authority's website. Additional details, such as a site-specific environmental plan, will be available once a construction contractor is engaged.
Engine noise after the Project is complete.	None required	The Applicant confirmed that operations, rail volumes, and equipment used are not anticipated to change from current operations. Engine noise is not anticipated to change, following completion of the Project.
Public engagement approach and mail drop area for public notification.	Condition 18 of the Permit requires the Applicant to distribute a construction notification within the area specified in the mail drop area for public notification.	The SSLC committee did not provide additional feedback regarding the approach, and was satisfied with the notification area.
Considerations of short and long-term impacts of the proposed Project during the PER process.	Condition No. 31 requires the Project to be carried out in compliance with the CEMP.	The Port Authority followed up to provide additional information about the PER process, and technical studies we require to consider all physical activities and effects during construction. Information about technical studies specific to Project impacts during operations was also provided. The Port Authority clarified that, for this Project, the Applicant was required to provide a CEMP, and a noise and vibration study (among other supporting documents).
Inquiries about the Notice of Railway Works issued to Wall Street residents.	None required.	The Applicant explained the Project is subject to two regulatory processes (Notice of Railway Works and PER), and offered to meet with the Burrardview Community Association.
General concerns about changes in CP operations as a result of the Project, and rationale for the project.	None required.	The Applicant confirmed the Project would not result in changes from current operations, nor an increase in trucks. The only difference would be longer trains, and potentially less switching as the Project would allow for moving more cars into the

Issue	Mitigations and Permit Conditions	Rationale
		terminals. The Applicant confirmed CP would be able to accommodate more grain as a result of the Project.

5 PUBLIC ENGAGEMENT

To meet requirements of section 86 of the *Impact Assessment Act*, the Port Authority posted a description of the Project and notice of public participation to the Canadian Impact Assessment Registry to provide the public 30 calendar days to comment on the Project and provide community knowledge.

The comment period ran from November 18 to December 17, 2021. At the close of the 30 calendar day public comment period, no comments were received.

In addition to posting information about the Project on the Registry website, the Port Authority required the applicant to conduct public engagement activities with a 25 business day public engagement period and host an online public information session. The objective of public engagement as part of PER is to solicit feedback from the public on the proposed Project, the completed technical studies, and proposed mitigations during construction and operation.

The Applicant carried out their public engagement activities on the proposed Project in November and December 2021. This included an online public information session held on December 7, 2021. The Port Authority reviewed the record of public engagement, including all comments received and the Applicant's response to comments, in determining mitigation requirements and in making a decision on the proposed Project.

5.1 Summary of Public Engagement

A description of the Project and proposed works, and all supporting materials were posted to the Port Authority's website on November 17, 2021 for public review and comment. The website included details on the Applicant's public engagement period and opportunities, and a link to the Applicant's website for more information.

The Applicant conducted public engagement activities between November 18 and December 22, 2021, including:

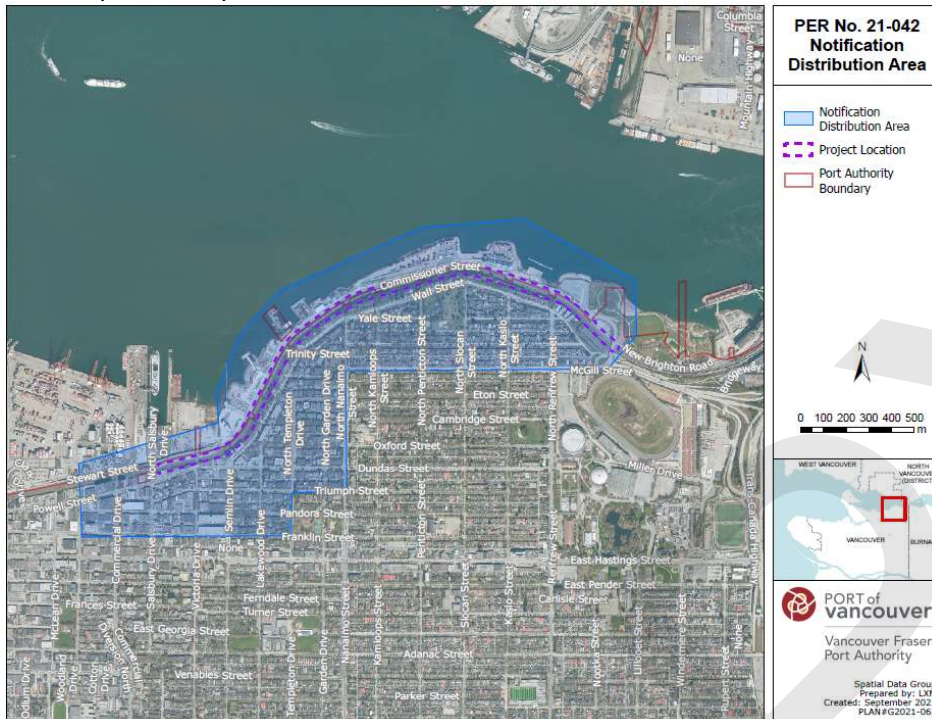
- Creating a project website with information about the public engagement period and opportunities
- Posting all public engagement materials on the project website
- Providing a dedicated project email address and telephone number for inquiries and submissions
- Creating and posting an online feedback form to the Applicant's website to collect community input
- Hosting an online public information session on December 7, from 6:00 to 7:30 p.m. over Zoom

To promote the above period and opportunities, the Applicant undertook the following notification activities:

- Placing digital advertisements in the Vancouver Sun and Vancouver is Awesome websites from November 16 to December 22, 2021 (targeted to the postal codes closest to the Project: V5K and V5L)
- Mailing a notification postcard to residents and businesses in Vancouver on November 18, 2021, as shown in the map below
- Placing an initial advertisement in the Vancouver Sun and Vancouver is Awesome on November 18, 2021, and halfway through the public engagement period on December 9, 2021
- Sending a notification email to an existing distribution list on November 19, 2021

The notification area included all residents and businesses within approximately three blocks (280 to 420 metres) from the Project site. The area of notification included approximately 3,045 residents and businesses in the area.

Mail drop area for public notification



The December 7 online public information session provided a project overview, details around Project and PER timelines, construction activities, completed studies, potential Project effects and mitigation strategies, and a summary of engagement conducted. The Applicant had project and technical consultants available to answer questions from the public during a facilitated question and answer session that followed the presentation. Port Authority employees also attended.

During the public engagement period, public participation was as follows:

- Six people attended the online public information session
- Twelve people completed the online feedback form
- The Applicant received three comments via emails, five submissions by mail, and two phone calls
- The Port Authority received three comments via emails and one phone call from the public

The Port Authority also received two email comments from the public outside of the public engagement period.

Comments from the public were mainly related to construction-specific impacts and potential operational noise, vibration and air quality impacts, as well as requests for additional information. Community knowledge was provided about slope stability and impacts of current operations, e.g., train idling, noise, effectiveness of CP’s monitoring and management protocols in their current operations, and ground vibration currently felt.

As part of Transport Canada’s Notice of Railway Work process, which is separate from the PER process, the Applicant received a number of opposition letters. The Port Authority was copied on some of these letters, and acknowledges that the feedback shared in these letters was consistent with the feedback received during the public engagement period required under the PER process.

The Applicant provided a Public Engagement Summary and Consideration Report dated February 2, 2022. The report contained a detailed summary of the public engagement process, all comments received, and the Applicant’s formal responses to public comments received, organized by theme. The Port Authority has reviewed the document and found it to be acceptable. The report was posted on the Port Authority and the Applicant’s websites on February 8, 2022.

Below is a table summarizing issues raised by the public, and how they were considered by the Port Authority as part of the project and environmental review.

Issue	Mitigations and Permit Conditions	Rationale
Concerns about potential for worsening air quality during construction after the project is complete.	Condition No. 31 requires the Project to be carried out in compliance with the CEMP.	<p>There were requests for a policy that would limit the duration of idling, and comments about soot on nearby property. The Applicant informed the public about CP's intent to use hydrogen powered locomotives, and ongoing reporting on individual locomotive emissions. The Applicant anticipates a reduction in idling upon Project completion.</p> <p>The Applicant indicated idling is regulated by Transport Canada and provided a link to the regulations which state that CP is permitted to idle for up to 30 minutes (unless special circumstances apply). The Applicant explained CP complies with federal locomotive emission regulations.</p>
Concerns about the Project causing increased noise during construction.	None required.	Results of the Noise and Vibration Assessment concluded there was potential for temporary increases in noise levels during construction activities. The Applicant indicated mitigation measures would be implemented during construction, e.g., minimizing the duration of particularly noisy activities and maintaining equipment to limit noise generation.
Potential long-term operational impacts, such as noise and vibration, for residents living close to the rail lines.	None required.	<p>The Applicant indicated once the new tracks are operational, rail operations will be more efficient than operations that are in place currently. Day-evening-night equivalent noise levels at the closest residences are predicted to increase by less than 2 dBA relative to existing conditions.</p> <p>The Applicant's Environmental Noise and Vibration Assessment completed for the project determined that vibration levels are not expected to change as a result of the Project</p>
Potential for erosion and soil instability after Project completion.	None required	The Applicant indicated design and installation of proposed Project components will be informed by geotechnical investigations and will comply with applicable engineering standards to prevent risks to structures and other hazards.

Issue	Mitigations and Permit Conditions	Rationale
		<p>The Applicant confirmed the work would be taking place on the north side of the mainline tracks, and is not anticipated to have any impact on the slope south of the mainline tracks.</p>
<p>Lack of details and information about public engagement within Notice of Railway Works issued to Wall St. residents.</p>	<p>None required.</p>	<p>The Applicant provided additional details to the residents who sent a letter in response to the Transport Canada-required notice. The Applicant provided information about the Port Authority-required public engagement process.</p> <p>CP has been directly addressing public comment on the Notice of Railway Works independent of PER as they are separate and distinct processes. CP convened a meeting with those objecting to the Notice of Railway Works and provided participants with a written response following that meeting. CP continues to interact with those individuals as well as the Minister of Transport regarding the Project, as well as concerns beyond the scope of the Commissioner Street Rail Expansion project.</p>
<p>Potential for increased rail traffic volumes over time, facilitated by the Project.</p>	<p>None required.</p>	<p>The Applicant confirmed train volumes are not anticipated to increase as a result of the Project, and that the two new tracks are intended to increase storage, resulting in longer trains. The Applicant indicated there would be no changes to current train volumes, timing of train arrivals or departures, locomotive power, train speeds, or operations management.</p>
<p>Low level of satisfaction with the Applicant's completed studies and mitigation measures to address the potential effects of the project, as presented.</p>	<p>None required</p>	<p>The Applicant provided clarifications and follow up emails to provide additional information. Some of the public's concerns were related to operational issues outside of the scope of this Project, and/or the Port Authority's jurisdiction. The Port Authority found Project-specific studies and mitigations satisfactory.</p>
<p>Maintenance of slope stability on the shared property line between CP and Wall Street residents.</p>	<p>None required.</p>	<p>The Applicant confirmed the work would be taking place on the north side of the mainline tracks, and is not anticipated to have any impact on the slope south of the mainline tracks.</p>
<p>Concerns about existing operations, e.g., noise, vibration and air quality.</p>	<p>None required.</p>	<p>The Applicant reiterated its commitment to safe and responsible operations and encouraged the public to contact CP at community_connect@cpr.ca.</p>

Issue	Mitigations and Permit Conditions	Rationale
Removal of contaminated soil.	Condition No. 31 requires the Project to be carried out in compliance with the CEMP.	The updated CEMP includes best practices for soil management, including erosion and sediment control measures to be implemented during construction, and appropriate stockpiling, handling and disposal procedures. Further mitigations and construction techniques would be determined in consultation with the contractor.

The Port Authority has reviewed the record of public engagement and, provided that the mitigation measures and conditions outlined in the table above are included in the Permit, is of the view that the Project has adequately addressed the concerns raised during public engagement.

The proposed Project was assessed by the Port Authority to have potential impacts to community interests in the surrounding area during construction and upon completion. These include potential noise and vibration impacts from construction activities, e.g., pile drilling/driving, concrete and vacuum trucks, concrete asphalt cutting, jackhammering, as well as temporary light impacts, and impacts to air quality and commercial traffic along Commissioner Street.

As a result, the Applicant is required to send a construction notification to adjacent residents and businesses in the area shown in the previous map. The Applicant shall distribute the construction notification at least 10 business days prior to the start of the works. The construction notification will be posted on the Port Authority's and the Applicant's websites. This is condition No. 18 in the project permit.

6 INDIGENOUS CONSULTATION

The Port Authority reviewed the proposed works and determined that the Project may have the potential to adversely impact Aboriginal or Treaty rights.

Best efforts were made to consult with the following Indigenous groups:

- Musqueam Indian Band
- S'ólhTéméxw Stewardship Alliance (via Sto:lo Connect to PRRO [People of the River Referrals Office]):
 - Aitchelitz First Nation
 - Chawathil First Nation
 - Cheam First Nation
 - Kwaw'Kwaw'Apilt First Nation
 - Scowlitz First Nation
 - Shxwha:y Village
 - Skawahlook First Nation
 - Skwah First Nation
 - Skowkale First Nation
 - Soowahlie First Nation
 - Squiala First Nation
 - Sumas First Nation
 - Tzeachten First Nation
 - Yakweakwoose First Nation
 - Yale First Nation
- Squamish Nation
- Tsleil-Waututh Nation

The following consultation activities were conducted:

- Project introduction letters were sent to Indigenous groups
- Referral package provided to Indigenous groups for review, including consultation letter and application package with Project documents
- Regular Project updates provided to Indigenous groups by email
- Indigenous groups provided comments on the proposed Project
- Responses provided to Indigenous groups who provided comments on the referral package, including updated Project documents

Below is a table summarizing comments received by the Port Authority from Indigenous groups and how they were considered as part of the project and environmental review.

Issue	Rationale	Mitigations and Permit Conditions
Impacts on archaeological resources	<p>Ground disturbing activities associated with the proposed Project are planned to occur within the imported fill layer. The proposed Project is not anticipated to impact native soils.</p> <p>Additionally, an Archaeological Overview Assessment (AOA) was prepared for the proposed Project, which confirmed that the Project footprint is of low archaeological potential.</p>	Condition No. 20 has been included to require an Archaeological Chance Find Procedure be implemented during construction activities.
Potential impacts of invasive vegetation	The CEMP prepared for the Project includes mitigation measures with respect to the management of invasive plant species.	Condition No. 36 has been included to require appropriate management of invasive plant species.
Potential impacts on bird nesting season	The CEMP prepared for the Project recommends that vegetation clearing occur outside of the bird nesting season.	<p>Condition No. 22 has been included to require nest surveys in the event that Project activities have the potential to affect birds.</p> <p>Condition No. 35 has been included to require a qualified environmental professional be retained as an environmental monitor.</p>
Potential impacts of soil erosion and sedimentation	The CEMP prepared for the Project includes mitigations with respect to erosion control measures.	Condition No. 23 has been included to require an erosion and sediment control plan be submitted prior to construction.

The Port Authority has made a meaningful effort to consult with all potentially affected Indigenous groups. Based on the record of consultation, the Port Authority is of the view that the duty to consult has been met.

7 ENVIRONMENTAL EFFECTS REVIEW

To fulfill its responsibilities under the *Canada Marine Act* and the *Impact Assessment Act*, the Port Authority must make a determination on the potential environmental effects of a proposed project on Port Authority managed lands and waters prior to authorizing those works to proceed. To make that determination, the Port Authority considers the residual adverse effects of the Project, that is, the effects after mitigation measures have been taken into account.

This section of the project and environmental review report summarizes the environmental effects review conducted for the Project, and provides the environmental effects decision. The environmental review also considered the information provided in the previous sections of this report.

7.1 Scope of Environmental Review

The environmental review includes consideration of the potential environmental effects of the proposed Project, taking into account mitigation measures to avoid or reduce those effects. This review considered the Project components and physical activities described in Section 2.

The temporal scope of the review includes Project construction and operation.

The environmental review considered potential adverse environmental and social effects of the Project on 14 environmental components (e.g., species with special status, aquatic species and their habitat, recreational interests, etc.) and from accidents and malfunctions. These environmental components are aspects of the biophysical and socio-economic environment considered to have ecological, economic, social, cultural, archaeological, or historical importance.

Section 7.2 summarizes the results of the environmental effects review and proposed mitigations.

7.2 Environmental Effects and Mitigation Summary

The following table summarizes the potential environmental effects the Project could have on the identified environmental components.

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Air quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects on air quality during construction activities from equipment operation and soil movement. Best management practices to reduce the potential for adverse effects on air quality during construction will be implemented as detailed in the CEMP. These include idling reduction, suppressing dust emissions using water, and using appropriate dust covers during transportation of soils.</p> <p>During operation, the Project will provide additional capacity to the existing yard, allowing for dedicated track operations which will avoid the need for multiple switches and reduce shunting. Train volumes are not expected to increase as a result of the Project. In addition, best management practices will continue to be implemented to mitigate adverse effects, including complying with federal locomotive emission regulations, using low-Sulphur fuels, and conducting regular inspection and maintenance of equipment.</p> <p>With mitigation in place, residual adverse effects on air quality are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lighting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Project-related light sources are not likely to result in impacts to adjacent communities.</p> <p>Best management practices to reduce the potential for adverse effects during construction will be implemented as detailed in the CEMP. This includes minimizing light spill by pointing lights downward and as close to work areas as possible. No new permanent lighting is proposed as part of the Project.</p> <p>With mitigation in place, residual adverse effects of lighting are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Noise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse noise effects during construction activities.</p> <p>Best management practices to reduce the potential for adverse effects during construction will be implemented as detailed in the CEMP. Where possible, construction work will be conducted during regular Port Authority construction hours (7:00 a.m. to 8:00 p.m., excluding Sundays and holidays). To manage unavoidable disruptions to rail and road traffic and existing terminal operations, certain construction activities may take place outside of standard construction hours. Pile driving would be completed during standard construction work hours. Construction noise is anticipated to have minimal adverse effects due to the location of the Project within and adjacent to current port and industrial operations in the area.</p> <p>Future yard operations will handle the same rail traffic into the South Shore area. Train volumes are not expected to increase as a result of the Project, and a reduction in shunting is expected due to additional capacity in the yard. During operation, day-evening-night equivalent noise levels at the closest residences are predicted to increase by less than 2 dBA relative to existing conditions.</p> <p>With mitigation in place, residual adverse effects associated with Project-related noise are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Soils	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>The Project is located within an industrial area with existing disturbance and historical fill.</p> <p>Mitigation measures to reduce the potential for adverse effects on soils will be implemented as detailed in the CEMP. These measures include containment and disposal of potentially contaminated soils at an approved licenced disposal facility, placing any re-usable stockpiles on impermeable surfaces including paved or concrete covered areas or areas covered with polyethylene sheeting, and implementing a spill prevention plan to reduce potential adverse environmental effects from Project-related spills.</p> <p>With mitigation in place, residual adverse effects on soils are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Sediments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>The Project has limited potential to result in adverse effects to sediment quality on nearby water bodies (i.e., Burrard Inlet).</p> <p>Project-related excavations will be contained as detailed in the CEMP and are not proposed within close proximity to water bodies (> 60 metres from Burrard Inlet). Additional mitigation measures to be implemented include erosion and sediment controls (e.g., temporary storage tanks for contaminated water, catch basin inserts, silt fencing), and containment and disposal of potentially contaminated material at an approved licensed facility.</p> <p>With mitigation in place, residual adverse effects on sediments are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>The Project footprint is located within an industrial area with existing disturbance and historical fill.</p> <p>Project excavations will be limited to an approximate maximum depth of 1.2 metres and are not anticipated to interact with groundwater. However, if groundwater is encountered or accumulated surface water is observed in excavated areas, these waters will be contained, tested, and if necessary, treated for proper disposal as outlined in the CEMP.</p> <p>With mitigation in place, residual adverse effects on groundwater quality are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Surface water and water bodies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects to surface water quality resulting from construction activities.</p> <p>Mitigation measures to reduce the potential for adverse effects will be implemented as detailed in the CEMP. Measures include installing erosion and sediment protection measures where applicable to prevent the dispersal of silts and fines into stormwater infrastructure, temporary construction of stormwater collection and treatment systems to remove contaminants during earthworks prior to discharge to existing stormwater infrastructure, and the implementation of a spill prevention plan during construction to reduce potential adverse environmental effects from project-related spills.</p> <p>With mitigation in place, residual adverse effects to surface water quality are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
<p>Species and habitat with special status</p> <p>Assessed under section 79 of the <i>Species at Risk Act</i>, as applicable</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Project is located within an industrial area with minimal native vegetation, low habitat values, and a high level of human activity. No species at risk, or their habitats, were observed during a field survey in March 2020. The Project area is unlikely to serve as habitat for species at risk.</p> <p>Species with special status are not anticipated to be affected by the Project.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Terrestrial resources (e.g., vegetation, wildlife, etc.)</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is limited potential for adverse effects on terrestrial resources during construction and operation. The Project is located within an industrial area with minimal vegetation, low habitat values, and a high level of human activity.</p> <p>Two bald-eagles were observed at the western end of the Project area, but no nesting activity was observed. Potential use by wildlife species is considered to be temporary and transient in nature. Mitigation measures to reduce the potential for adverse effects will be implemented as detailed in the CEMP. These include conducting pre-construction nest surveys prior to activities with the potential to affect birds and/or their active nests and eggs.</p> <p>With mitigation in place, residual adverse effects on terrestrial resources are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Wetlands</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Project is located within an industrial site with no wetlands present.</p> <p>Wetland habitat is not anticipated to be affected by the Project.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Aquatic resources (e.g., aquatic plants, fish and fish habitat, waterbirds, marine mammals, etc.)</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Project is not expected to affect aquatic resources.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Health and socio-economic conditions</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Based on the very low magnitude of residual effects on air and noise, the Project is not expected to cause adverse effects on health or socio-economic conditions of people, including Indigenous groups.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Archaeological, physical, and cultural heritage resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The Project is located within an area of historical fill and disturbance. An Archaeological Overview Assessment (AOA) completed for the Project determined that the risk of impact to archaeological or protected historical resources is very low. Adverse effects on archaeological, physical, and cultural heritage resources are not anticipated	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Accidents and malfunctions Assessed as required by the <i>Canada Marine Act</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There is potential for adverse effects on soils, sediments, groundwater, and surface water from accidental equipment leaks or spills. Mitigation measures will be in place to reduce potential for adverse, Project-related effects due to accidents, by implementing the measures outlined in the CEMP. With mitigation measures in place, the effect of an accident or malfunction on the environment, if it were to occur, is predicted to be not significant	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Residual adverse effects (i.e., effects that remain with mitigation in place) were identified for the following environmental components:

- Air quality
- Lighting
- Noise
- Soils
- Sediments
- Groundwater
- Surface water and water bodies
- Terrestrial resources
- Accidents and malfunctions

Overall, the residual adverse effects of the Project on all of the environmental components are characterized as:

- Low in magnitude, due to the location of the Project in an existing industrial area with no new activities or discharge to the aquatic environment, and the temporary nature of the construction activities
- Local in geographic extent, because effects will be limited to the Project area and immediate vicinity
- Short-term in duration because Project construction will be intermittent and temporary for approximately 9 months and unlikely to result in ongoing effects on air quality, noise, or water quality once construction is complete
- Continuous (daily to weekly) in frequency during Project construction
- Reversible and temporary because residual adverse effects of the Project would cease once Project construction is complete

Based on the characterization above, the mitigation measures proposed by the Applicant, and the permit conditions, the residual adverse effects from the Project are predicted to be not significant.

8 CONCLUSION

It is the recommendation of staff that this application be approved subject to conformance with the project and environmental conditions listed in project permit **PER No. 21-042**.

COPY



COOPY

**APPENDIX A
Location Plan**

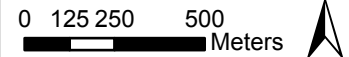


PER # 21-042

Commissioner Street Rail Expansion

-  Project Location
-  VFPA Boundary

Vancouver Fraser Port Authority:
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**PORT of
vancouver**

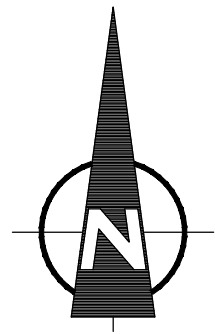
Vancouver Fraser
Port Authority

Date: November 25, 2021

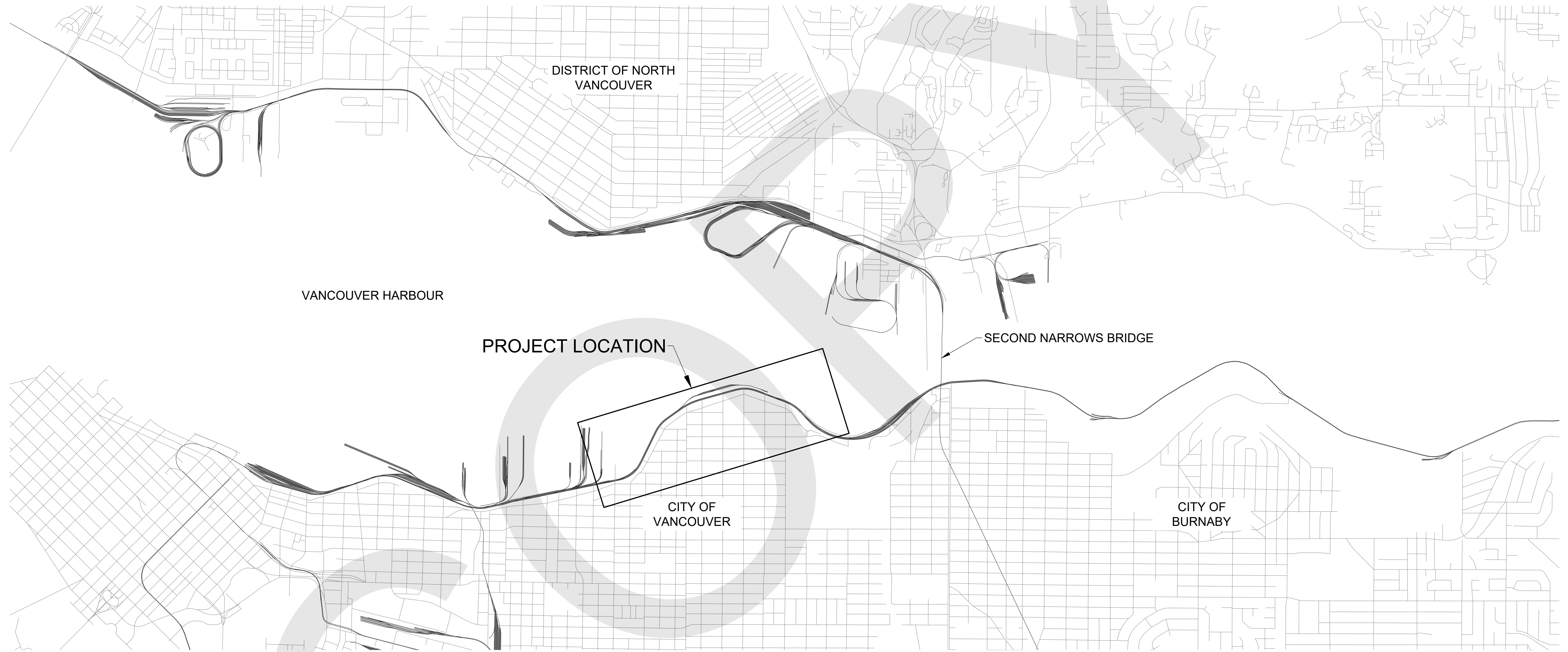
APPENDIX B
List of Information Sources

The port authority has relied on the following sources of information in the project and environmental review of the Project:

- Application form and materials submitted by the Applicant on August 27, 2021
- All Project correspondence with Dillon Consulting Limited on behalf of CP from September 23, 2021 to May 9, 2022
- All plans and drawings labelled PER No. 21-042 - A to P
- “Stakeholder Engagement Summary”, March 22, 2022, Dillon Consulting Limited
- “Commissioner Street Rail Expansion Environmental Noise Assessment Update”, May 9, 2022, Hemmera Envirochem Inc.



EAST L YARD EXPANSION WESTERN REGION - VANCOUVER DIVISION ISSUED FOR 90% DESIGN



MILE 125.37 TO 127.00 CASCADE SUBDIVISION EAST L YARD EXPANSION

AUGUST 03, 2021



ENGINEERING PROJECTS - WEST

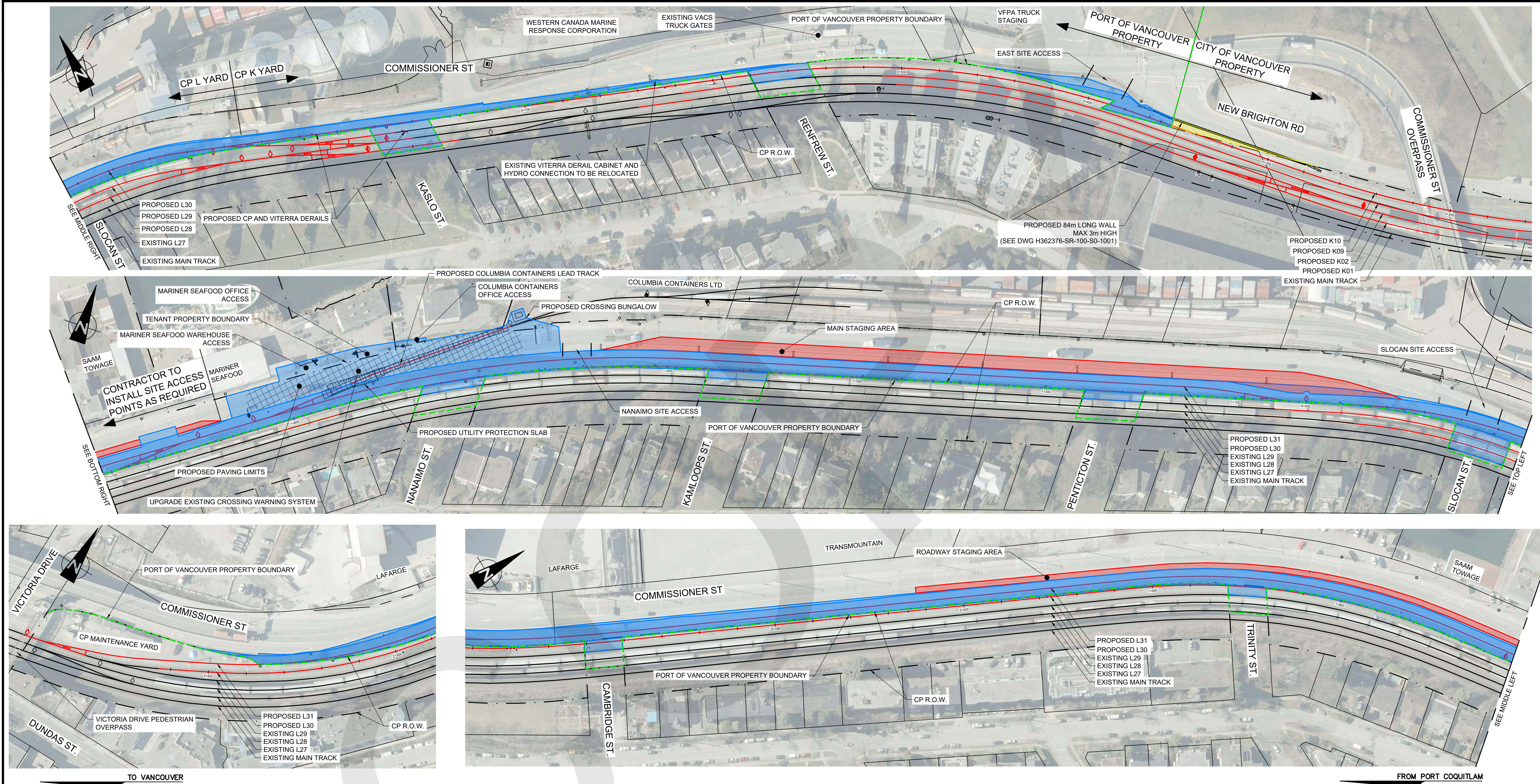
VANCOUVER FRASER PORT AUTHORITY

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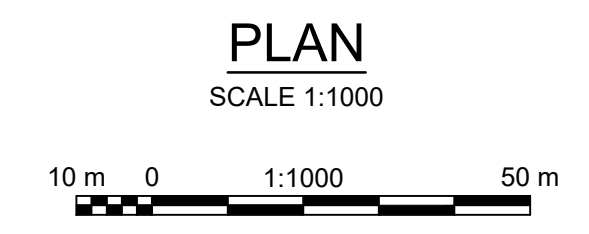


PROJECT No: 362376
H362376-RW-100-S0-0001 REV C

NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION



LEGEND:

VFPA LAND TENURE	█
CITY OF VANCOUVER LAND TENURE	█
STAGING AREA	█

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HATCH

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 DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED

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CHECKED BY: V.C.	PROJECT MANAGER: V.C.
DATE: 04-09-20	DATE: 04-09-20
HATCH PROJECT No: H362376	DWG SCALE(FULL SIZE): 1:1000

PROFESSIONAL SEALS

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A	03-08-21	ISSUED FOR 90% DESIGN	A.S.

CP

ENGINEERING PROJECTS - WEST

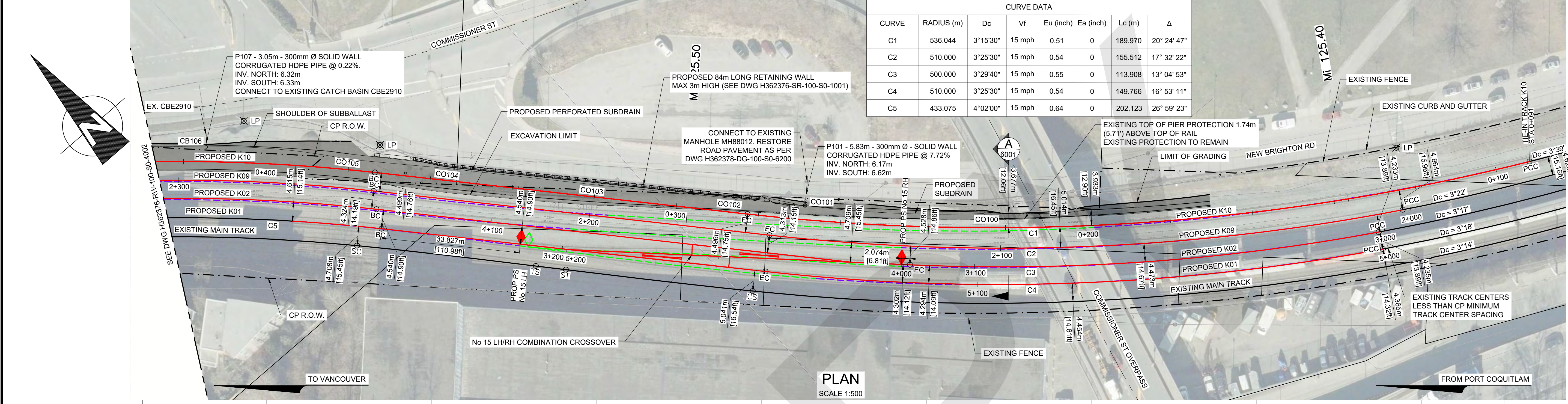
VANCOUVER DIVISION MILE 125.27 TO 127.00 CASCADE SUBDIVISION

COMMISSIONER STREET RAIL EXPANSION

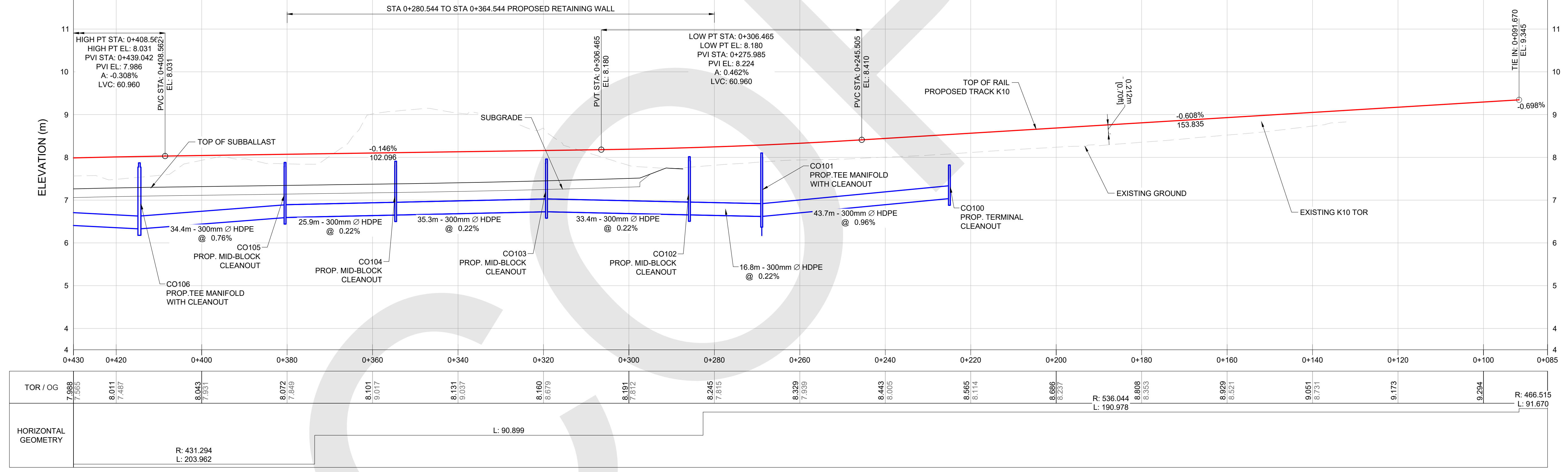
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M.FAVREAU	PLAN No.	Rev.
DIR. PROJECT SERVICES WEST	H362376-GA-100-S0-2100	C

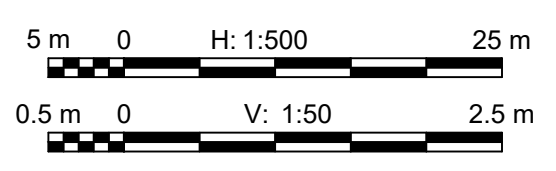
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C2	510.000	3°25'30"	15 mph	0.54	0	155.512	17° 32' 22"
C3	500.000	3°29'40"	15 mph	0.55	0	113.908	13° 04' 53"
C4	510.000	3°25'30"	15 mph	0.54	0	149.766	16° 53' 11"
C5	433.075	4°02'00"	15 mph	0.64	0	202.123	26° 59' 23"



PLAN
SCALE 1:500



PROFILE
SCALE H 1:500
V 1:50



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HATCH PROJECT No: H362376	DWG SCALE(FULL SIZE): AS SHOWN

PROFESSIONAL SEALS

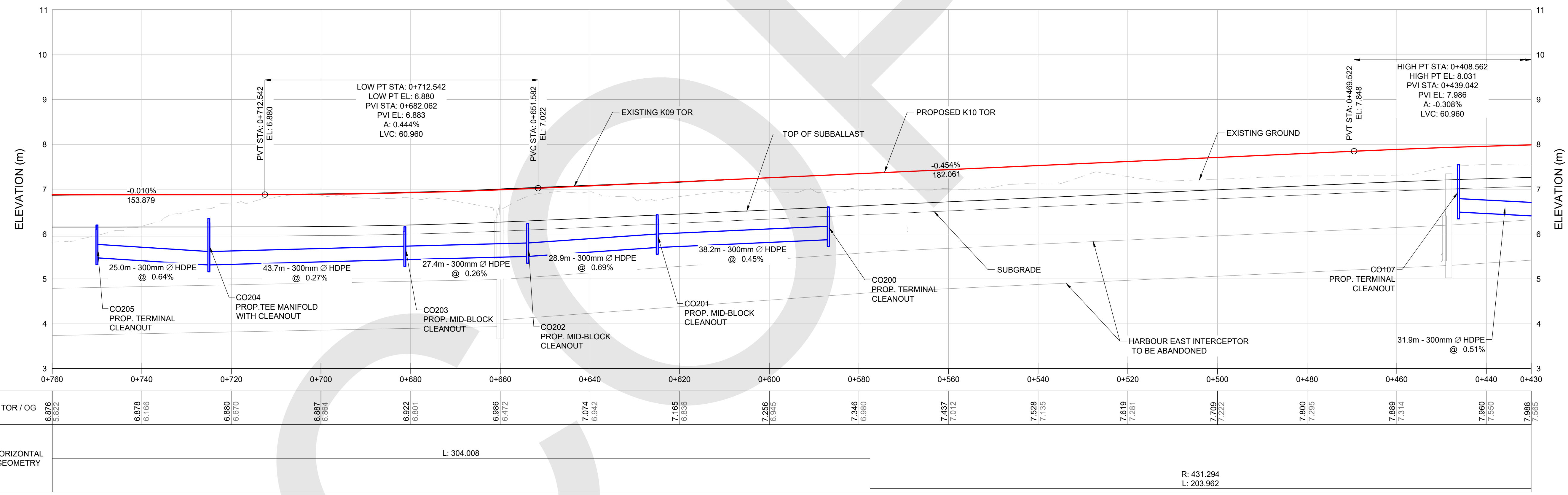
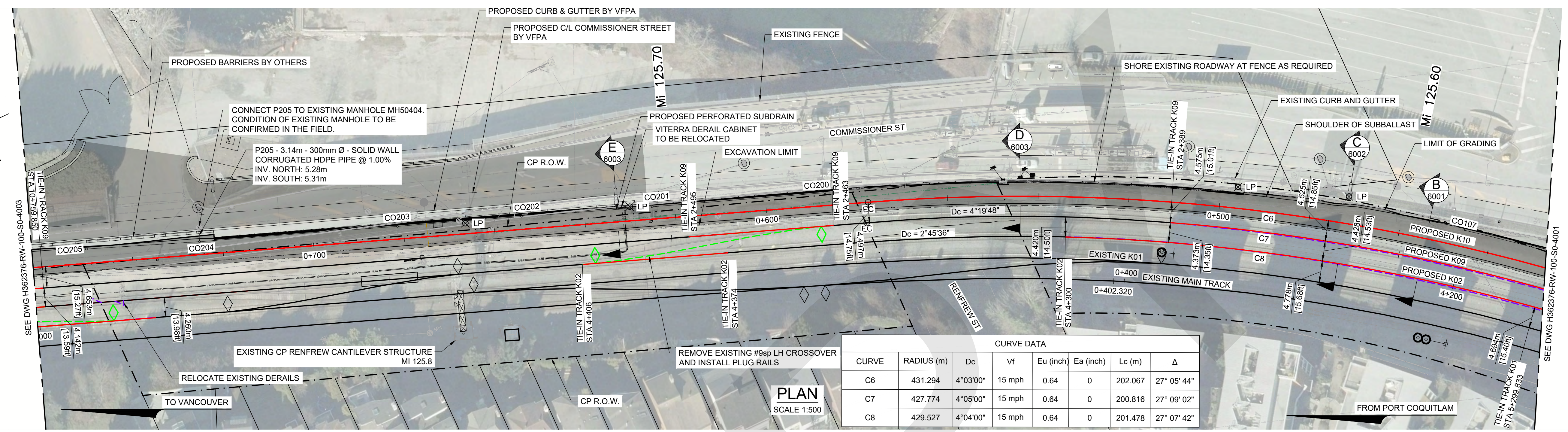
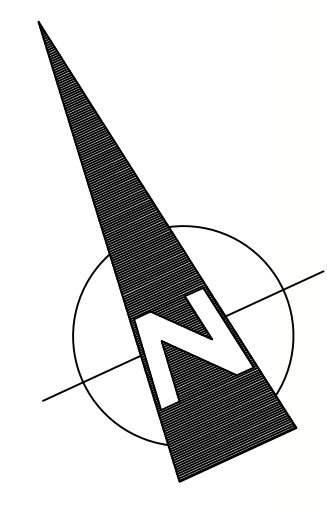
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A	11-09-20	ISSUED FOR 30% DESIGN	L.C.

VANCOUVER DIVISION		MILE 125.37 TO 127.00 CASCADE SUBDIVISION	
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M.FAVREAU DIR. PROJECT SERVICES WEST	H362376-RW-100-S0-4001		Rev. C

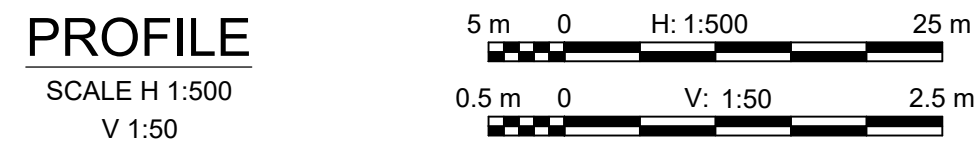
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ENGINEERING PROJECTS - WEST

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NOT FOR CONSTRUCTION



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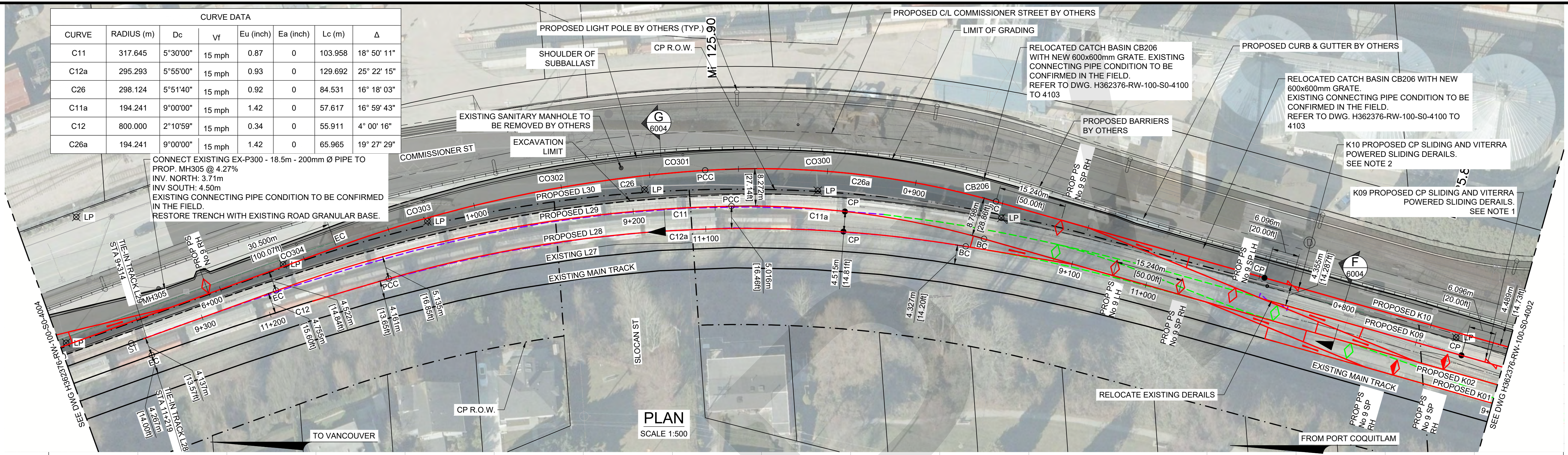
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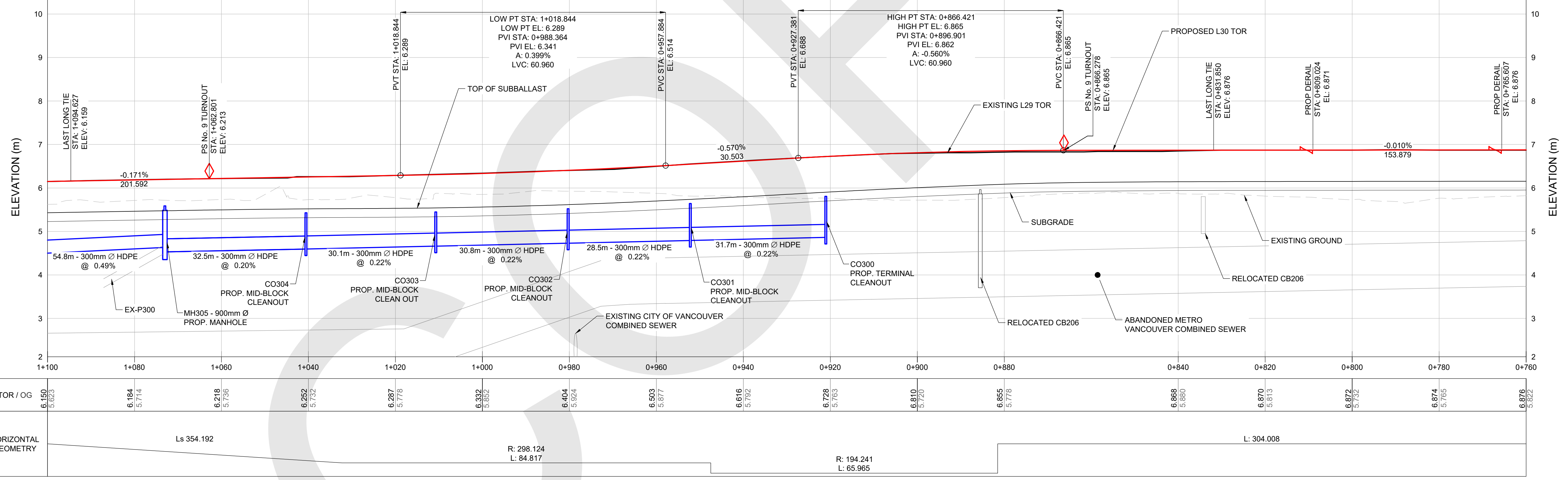
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 CHK BY: DIR. PROJECT SERVICES WEST
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 DATE: 11-09-20
 PLAN No. H362376-RW-100-S0-4002
 Rev. C

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C26	298.124	5°51'40"	15 mph	0.92	0	84.531	16° 18' 03"
C11a	194.241	9°00'00"	15 mph	1.42	0	57.617	16° 59' 43"
C12	800.000	2°10'59"	15 mph	0.34	0	55.911	4° 00' 16"
C26a	194.241	9°00'00"	15 mph	1.42	0	65.965	19° 27' 29"

CONNECT EXISTING EX-P300 - 18.5m - 200mm Ø PIPE TO PROP. MH305 @ 4.27% INV. NORTH: 3.71m INV. SOUTH: 4.50m EXISTING CONNECTING PIPE CONDITION TO BE CONFIRMED IN THE FIELD. RESTORE TRENCH WITH EXISTING ROAD GRANULAR BASE.



PLAN SCALE 1:500



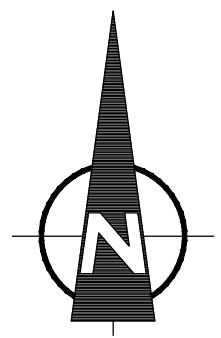
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 - VITERRA POWERED SLIDING DERAIL LOCATED AT STA 10+763.713, 25' EAST OF CLEARANCE POINT
 - K10 - CP SLIDING DERAIL LOCATED AT STA 0+812.610, 20' EAST OF CLEARANCE POINT
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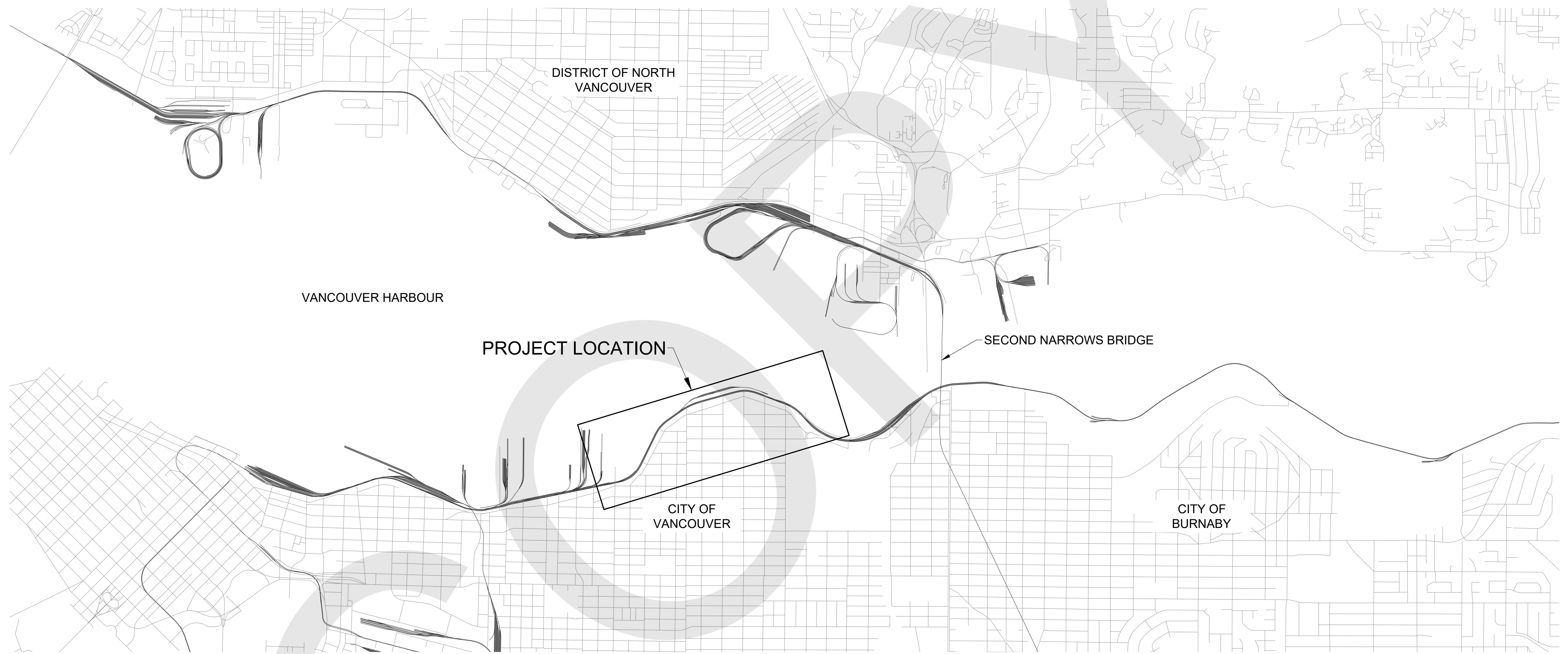
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VANCOUVER FRASER PORT AUTHORITY This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.		PROFESSIONAL SEALS	<table border="1"> <tr> <td>C</td> <td>03-08-21</td> <td>ISSUED FOR 90% DESIGN</td> <td>F.D.</td> </tr> <tr> <td>B</td> <td>31-05-21</td> <td>REISSUED FOR 30% DESIGN</td> <td>F.D.</td> </tr> <tr> <td>A</td> <td>11-09-20</td> <td>ISSUED FOR 30% DESIGN</td> <td>L.C.</td> </tr> <tr> <td>No.</td> <td>DATE</td> <td>REVISION</td> <td>BY</td> </tr> </table>	C	03-08-21	ISSUED FOR 90% DESIGN	F.D.	B	31-05-21	REISSUED FOR 30% DESIGN	F.D.	A	11-09-20	ISSUED FOR 30% DESIGN	L.C.	No.	DATE	REVISION	BY	<p>ENGINEERING PROJECTS - WEST</p>	VANCOUVER DIVISION MILE 125.37 TO 127.00 CASCADE SUBDIVISION
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A	11-09-20	ISSUED FOR 30% DESIGN	L.C.																		
No.	DATE	REVISION	BY																		
METRIC DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED DESIGNED BY: F.D. DATE: 11-09-20 CHECKED BY: V.C. DATE: 11-09-20 HATCH PROJECT No: H362376 DWG SCALE(FULL SIZE): AS SHOWN	<table border="1"> <tr> <td colspan="2"> EAST L YARD EXPANSION RAIL - PLAN & PROFILE TRACK L30 - STA 0+760 TO 1+100 </td> </tr> <tr> <td>DWG. BY:</td> <td>CHK BY:</td> </tr> <tr> <td>MANAGER - DESIGN:</td> <td>DATE:</td> </tr> <tr> <td>M.FAVREAU DIR. PROJECT SERVICES WEST</td> <td>H362376-RW-100-S0-4003</td> </tr> </table>	EAST L YARD EXPANSION RAIL - PLAN & PROFILE TRACK L30 - STA 0+760 TO 1+100		DWG. BY:	CHK BY:	MANAGER - DESIGN:	DATE:	M.FAVREAU DIR. PROJECT SERVICES WEST	H362376-RW-100-S0-4003	OFFICE FILE: SCALE: PLAN No. Rev. C											
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M.FAVREAU DIR. PROJECT SERVICES WEST	H362376-RW-100-S0-4003																				



EAST L YARD EXPANSION WESTERN REGION - VANCOUVER DIVISION ISSUED FOR 90% DESIGN



MILE 125.37 TO 127.00 CASCADE SUBDIVISION EAST L YARD EXPANSION

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AUGUST 03, 2021

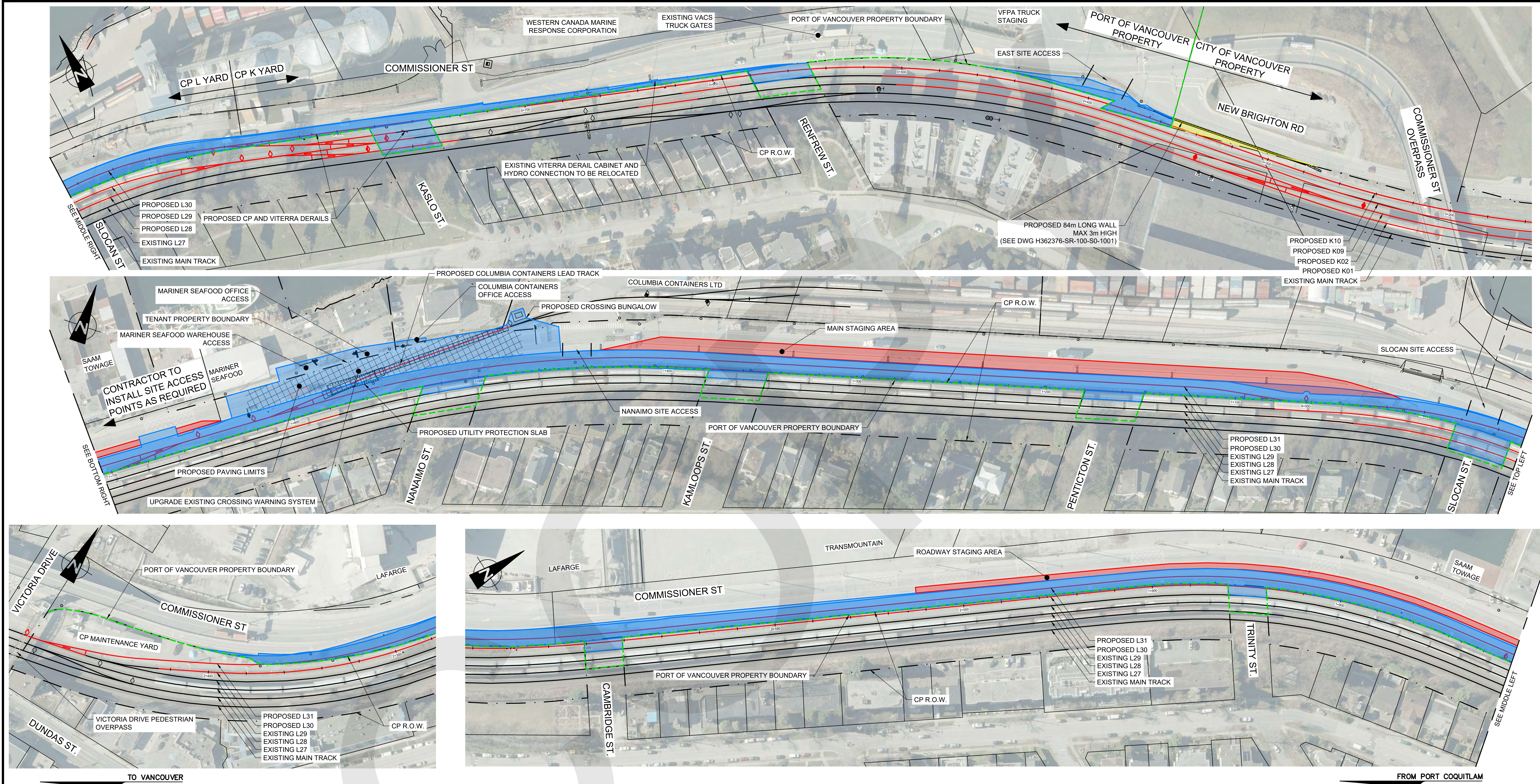


ENGINEERING PROJECTS - WEST

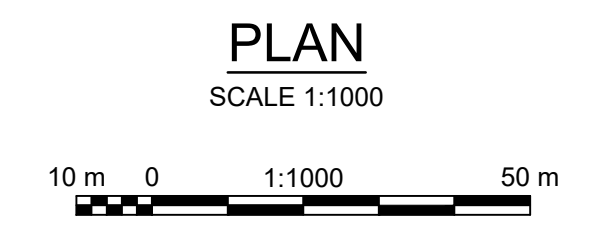


PROJECT No: 362376
H362376-RW-100-S0-0001 REV C

NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION



LEGEND:

VFPA LAND TENURE	
CITY OF VANCOUVER LAND TENURE	
STAGING AREA	

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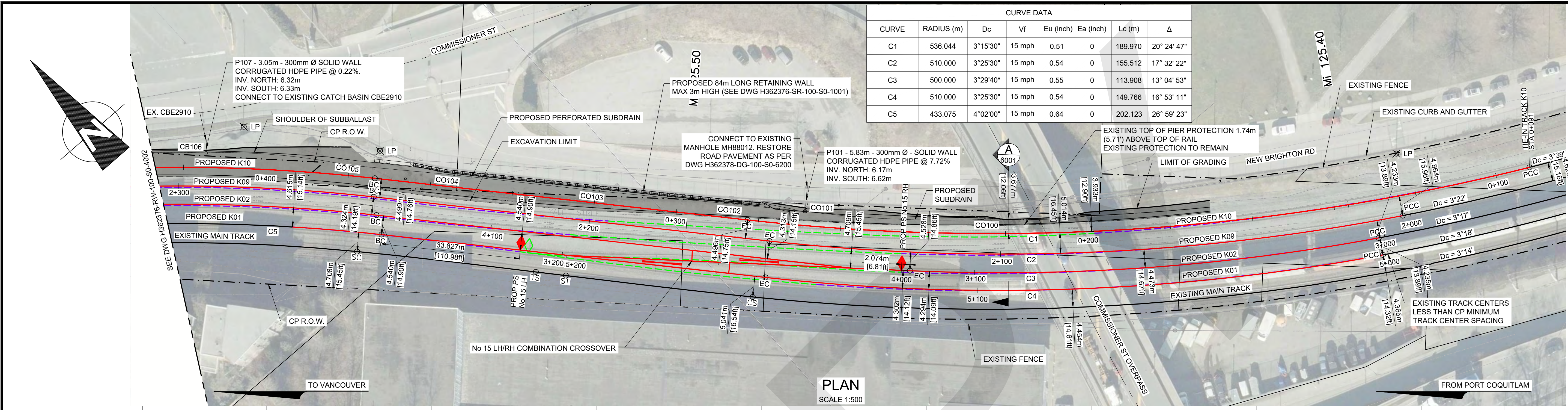
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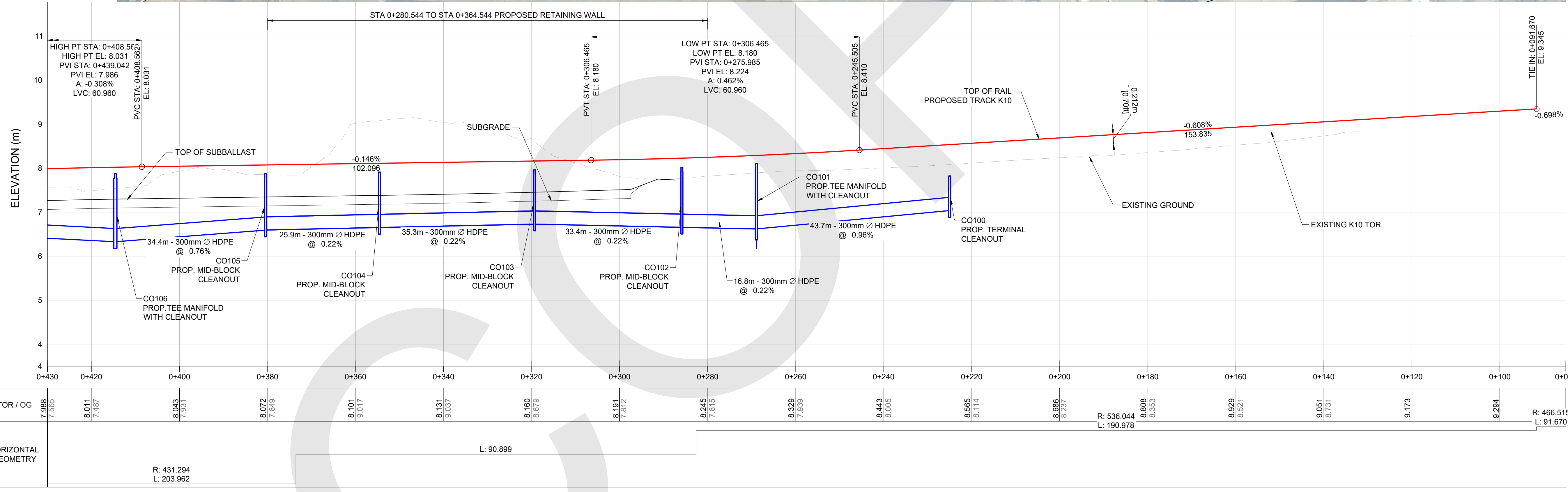


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PLAN
SCALE 1:500



PROFILE
SCALE H 1:500
V 1:50

NOT FOR CONSTRUCTION

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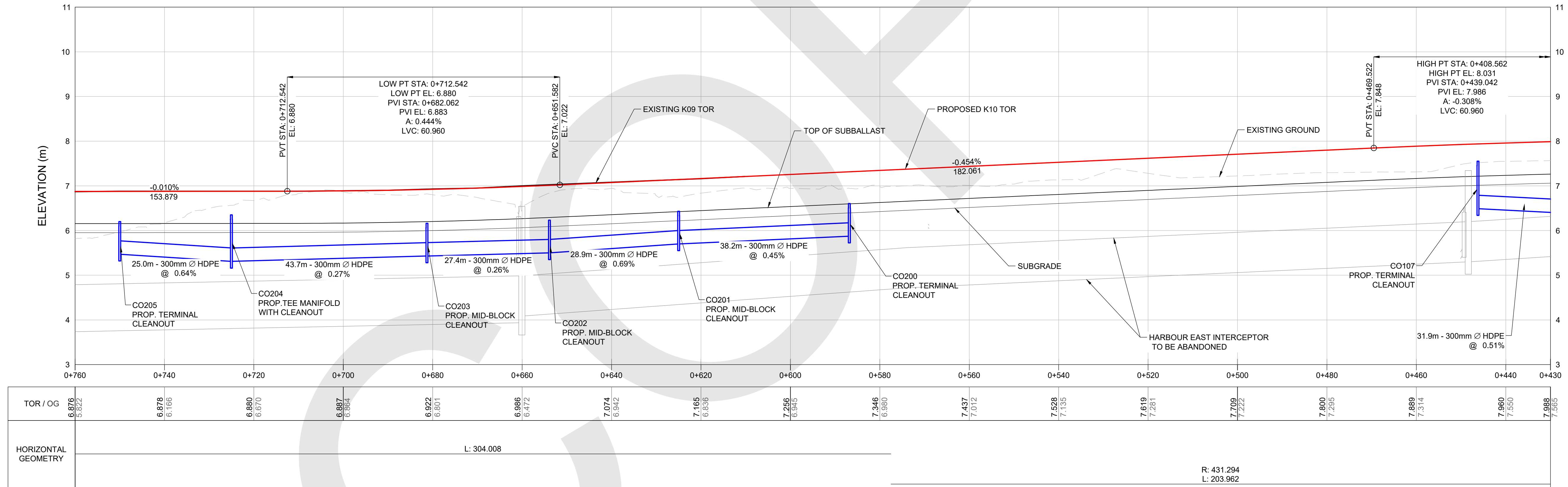
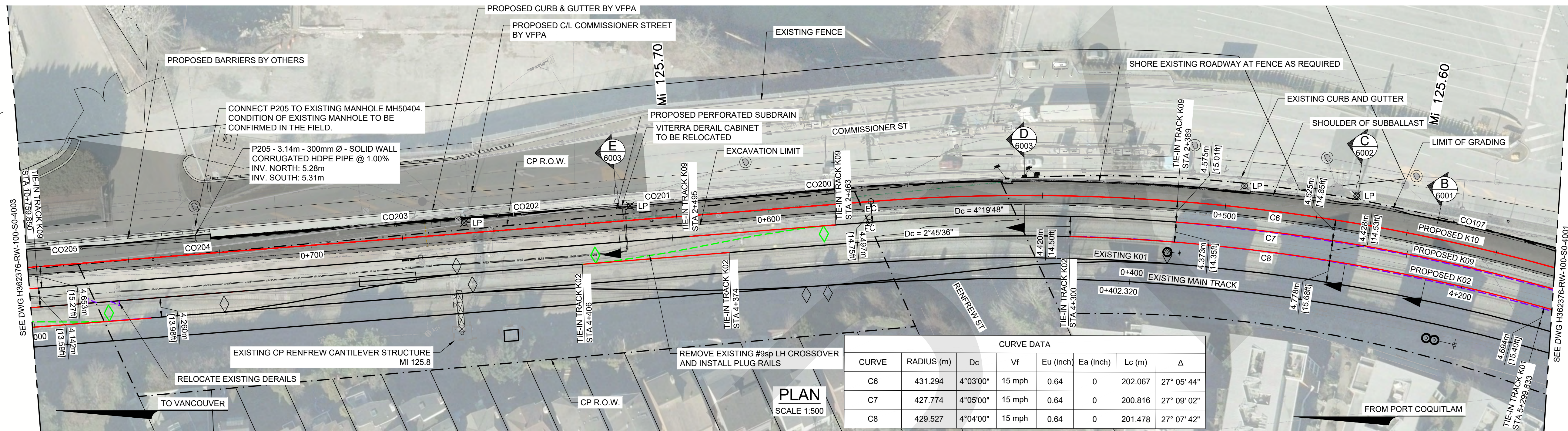
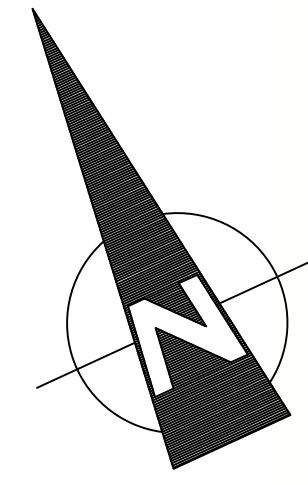
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DWG SCALE(FULL SIZE): AS SHOWN

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 (PARTY), 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 REVISION OF THIS DRAWING BY CLIENT, AND BY THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS RESERVED OR REFERENCED IN THIS DRAWING REMAIN THE PROPERTY OF HATCH.

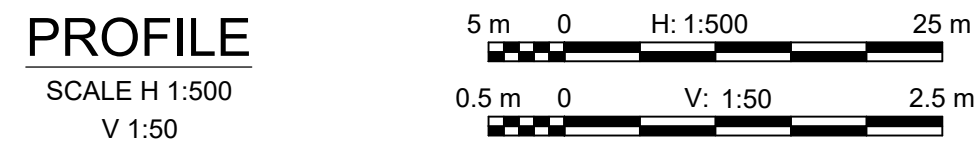
No.	DATE	REVISION	BY
C	03-08-21	ISSUED FOR 90% DESIGN	F.D.
B	31-05-21	REISSUED FOR 30% DESIGN	F.D.
A	11-09-20	ISSUED FOR 30% DESIGN	L.C.

CP
ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION		MILE 125.37 TO 127.00 CASCADE SUBDIVISION	
EAST L YARD EXPANSION RAIL - PLAN & PROFILE TRACK K10 - STA 0+085 TO 0+430			
DWG. BY:	CHK BY:	OFFICE FILE:	
MANAGER - DESIGN:		SCALE:	
M.FAVREAU DIR. PROJECT SERVICES WEST		DATE:	PLANNING No.
		H362376-RW-100-S0-4001	Rev. C



NOT FOR CONSTRUCTION



Aug 03, 2021, 6:54pm Login name: mckee2314
 Drawing Name: C:\pwworking\hatch\mckee2314\00694048\H362376-RW-100-S0-4001 to 4008.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.

HATCH

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

DESIGNED BY: F.D. DATE: 11-09-20
 CHECKED BY: V.C. DATE: 11-09-20
 HATCH PROJECT No: H362376
 DWG SCALE(FULL SIZE): AS SHOWN

PROFESSIONAL SEALS

No.	DATE	REVISION	BY
C	03-08-21	ISSUED FOR 90% DESIGN	F.D.
B	31-05-21	REISSUED FOR 30% DESIGN	F.D.
A	11-09-20	ISSUED FOR 30% DESIGN	L.C.



VANCOUVER DIVISION MILE 125.37 TO 127.00 CASCADE SUBDIVISION

**EAST L YARD EXPANSION
 RAIL - PLAN & PROFILE
 TRACK K10 - STA 0+430 TO 0+760**

DWG. BY: M.FAVREAU
 DIR. PROJECT SERVICES WEST

CHK BY: DIR. PROJECT SERVICES WEST

OFFICE FILE: H362376-RW-100-S0-4002

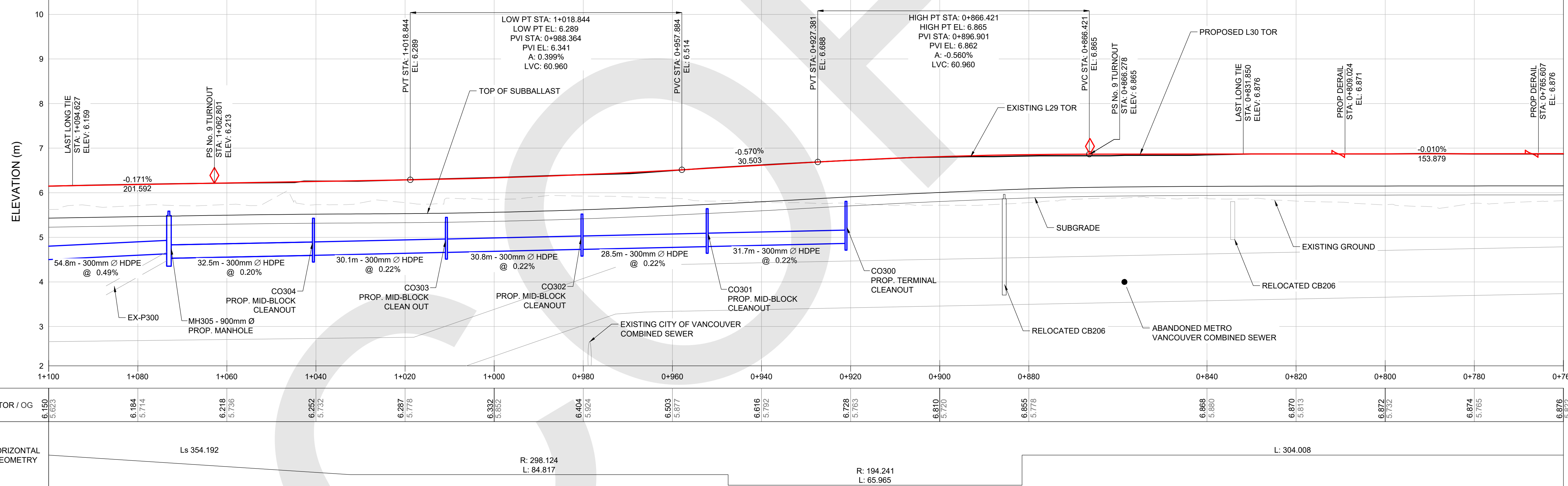
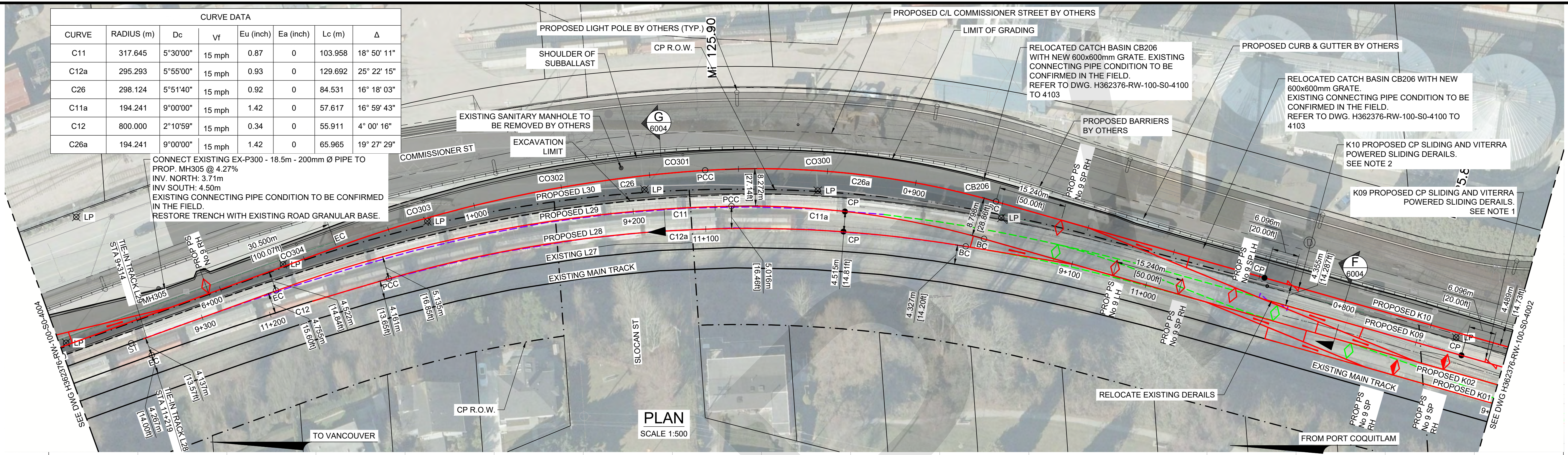
SCALE: AS SHOWN

DATE: 11-09-20

Rev. C

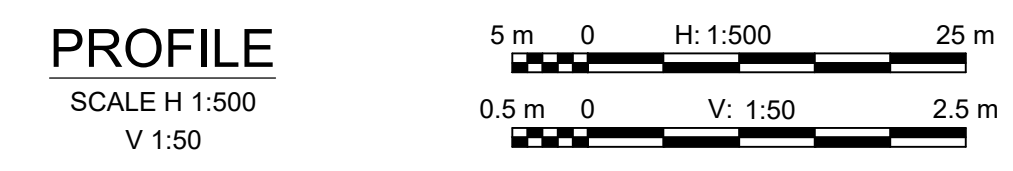
CURVE DATA							
CURVE	RADIUS (m)	Dc	Vf	Eu (inch)	Ea (inch)	Lc (m)	Δ
C11	317.645	5°30'00"	15 mph	0.87	0	103.958	18° 50' 11"
C12a	295.293	5°55'00"	15 mph	0.93	0	129.692	25° 22' 15"
C26	298.124	5°51'40"	15 mph	0.92	0	84.531	16° 18' 03"
C11a	194.241	9°00'00"	15 mph	1.42	0	57.617	16° 59' 43"
C12	800.000	2°10'59"	15 mph	0.34	0	55.911	4° 00' 16"
C26a	194.241	9°00'00"	15 mph	1.42	0	65.965	19° 27' 29"

CONNECT EXISTING EX-P300 - 18.5m - 200mm Ø PIPE TO PROP. MH305 @ 4.27% INV. NORTH: 3.71m INV. SOUTH: 4.50m EXISTING CONNECTING PIPE CONDITION TO BE CONFIRMED IN THE FIELD. RESTORE TRENCH WITH EXISTING ROAD GRANULAR BASE.



STATION	TOR / OG	HORIZONTAL GEOMETRY
1+100	6.150	
1+080	6.184	Ls 354.192
1+060	6.218	
1+040	6.252	
1+020	6.287	
1+000	6.321	R: 298.124 L: 84.817
0+980	6.355	
0+960	6.389	
0+940	6.423	
0+920	6.457	
0+900	6.491	R: 194.241 L: 65.965
0+880	6.525	
0+860	6.559	
0+840	6.593	
0+820	6.627	L: 304.008
0+800	6.661	
0+780	6.695	
0+760	6.729	

NOT FOR CONSTRUCTION



- NOTES:
- K09 - CP SLIDING DERAIL LOCATED AT STA 10+765.237, 20' EAST OF CLEARANCE POINT
 - VITERRA POWERED SLIDING DERAIL LOCATED AT STA 10+763.713, 25' EAST OF CLEARANCE POINT
 - K10 - CP SLIDING DERAIL LOCATED AT STA 0+812.610, 20' EAST OF CLEARANCE POINT
 - VITERRA POWERED SLIDING DERAIL LOCATED AT STA 0+811.500, 25' EAST OF CLEARANCE POINT

Aug 03, 2021, 6:51pm Login name: mckee2314
 Drawing Name: C:\pwworking\hatch\mckee2314\00694048\H362376-RW-100-S0-4001 to 4008.dwg

VANCOUVER FRASER PORT AUTHORITY
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HATCH
 METRIC
 DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED

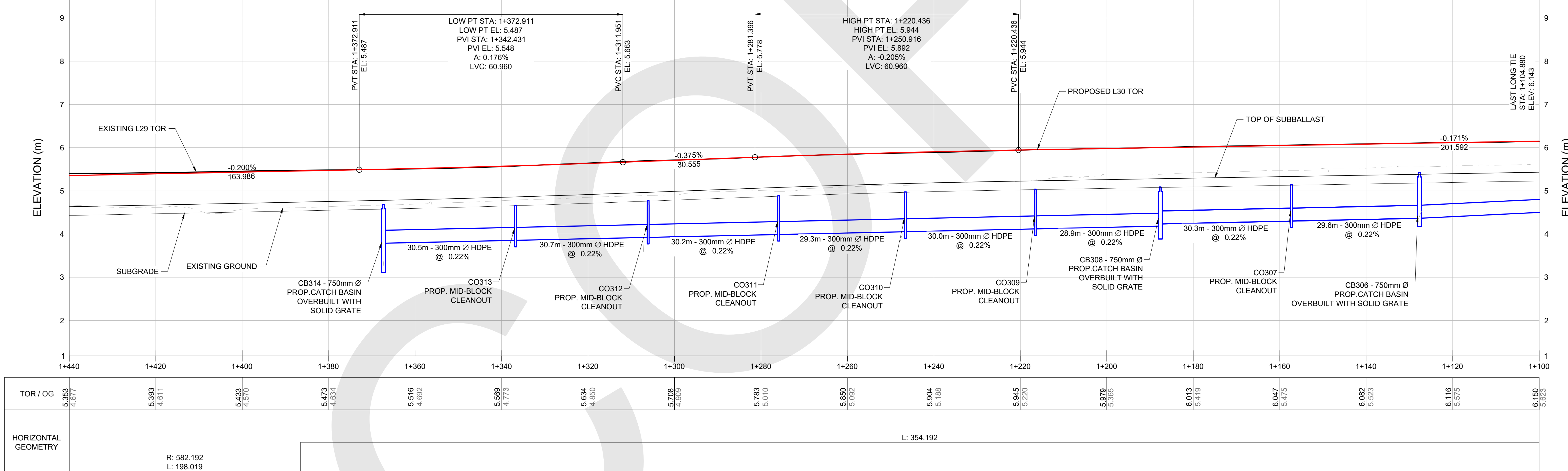
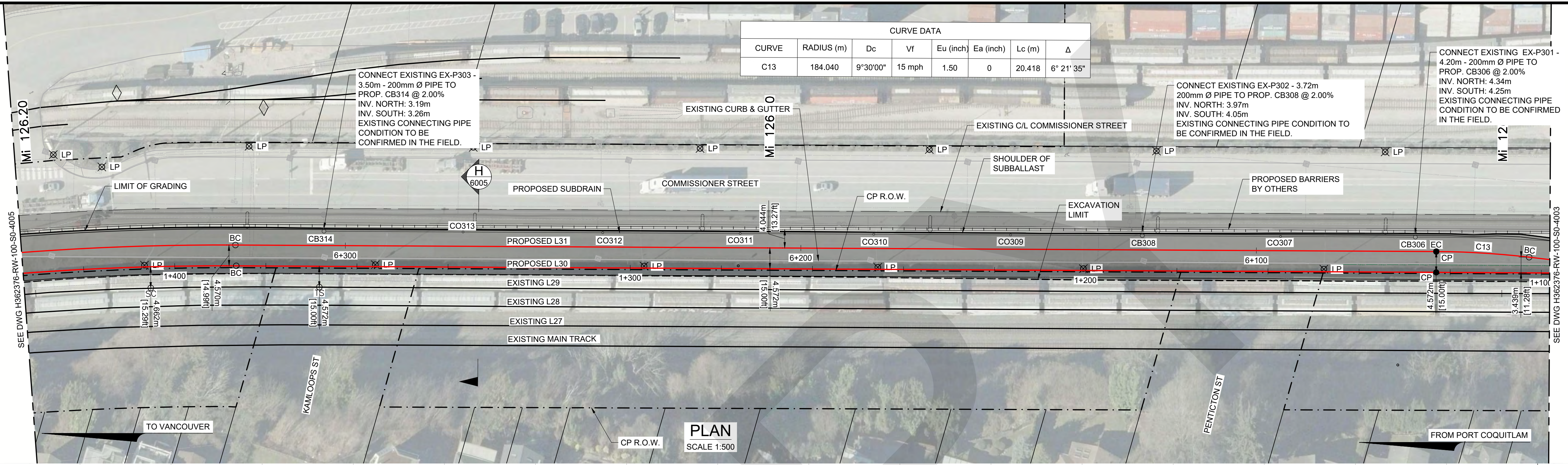
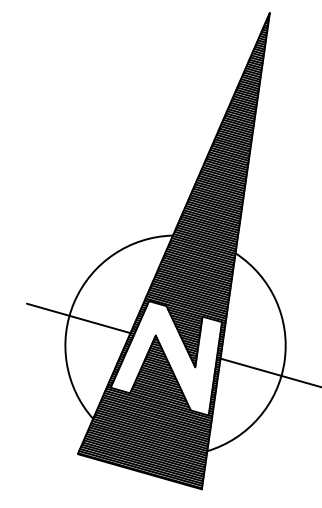
DESIGNED BY: F.D.	DRAWN BY: A.S.
DATE: 11-09-20	DATE: 11-09-20
CHECKED BY: V.C.	PROJECT MANAGER: M.M.
DATE: 11-09-20	DATE: 11-09-20
HATCH PROJECT No: H362376	DWG SCALE(FULL SIZE): AS SHOWN

PROFESSIONAL SEALS

No.	DATE	REVISION	BY
C	03-08-21	ISSUED FOR 90% DESIGN	F.D.
B	31-05-21	REISSUED FOR 30% DESIGN	F.D.
A	11-09-20	ISSUED FOR 30% DESIGN	L.C.

ENGINEERING PROJECTS - WEST	

VANCOUVER DIVISION MILE 125.37 TO 127.00 CASCADE SUBDIVISION	
EAST L YARD EXPANSION RAIL - PLAN & PROFILE TRACK L30 - STA 0+760 TO 1+100	
DWG. BY:	CHK BY:
MANAGER - DESIGN:	DATE:
M.FAVREAU DIR. PROJECT SERVICES WEST	H362376-RW-100-S0-4003
OFFICE FILE:	SCALE:
PLAN No.	Rev.
	C



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

DESIGNED BY: F.D. DATE: 11-09-20	DRAWN BY: A.S. DATE: 11-09-20
CHECKED BY: V.C. DATE: 11-09-20	PROJECT MANAGER: M.M. DATE: 11-09-20
HATCH PROJECT No: H362376	DWG SCALE(FULL SIZE): AS SHOWN

PROFESSIONAL SEALS

No.	DATE	REVISION	BY
C	03-08-21	ISSUED FOR 90% DESIGN	F.D.
B	31-05-21	REISSUED FOR 30% DESIGN	F.D.
A	11-09-20	ISSUED FOR 30% DESIGN	L.C.

No.	DATE	REVISION	BY
C	03-08-21	ISSUED FOR 90% DESIGN	F.D.
B	31-05-21	REISSUED FOR 30% DESIGN	F.D.
A	11-09-20	ISSUED FOR 30% DESIGN	L.C.

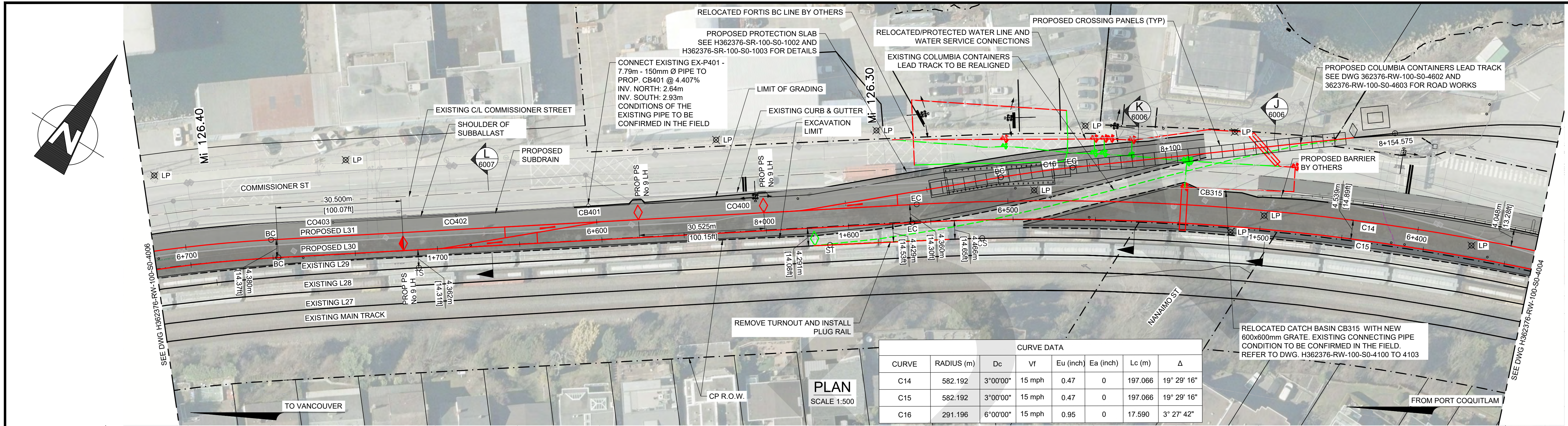
CP
ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION MILE 125.37 TO 127.00 CASCADE SUBDIVISION

**EAST L YARD EXPANSION
RAIL - PLAN & PROFILE
TRACK L30 - STA 1+100 TO 1+440**

DWG. BY:	CHK BY:	OFFICE FILE:
MANAGER - DESIGN:	DATE:	SCALE:
M.FAVREAU DIR. PROJECT SERVICES WEST	H362376-RW-100-S0-4004	Rev. C

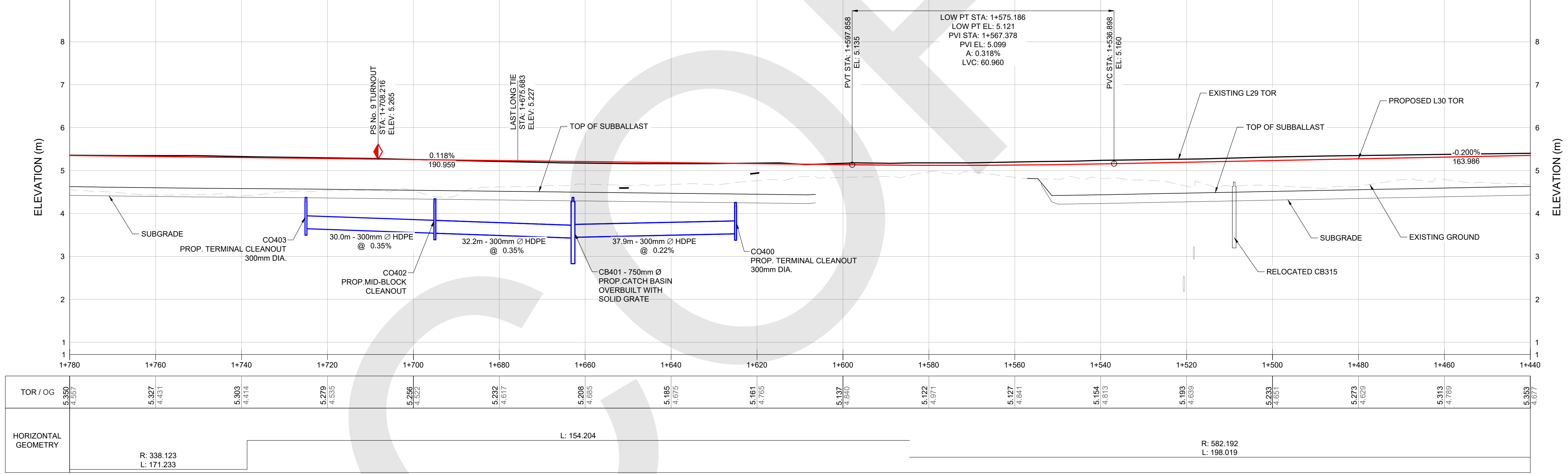
Aug 03, 2021, 5:01 pm Login name: shob11128 Drawing Name: C:\pwworking\hatch.com\06694048\H362376-RW-100-S0-4001 to 4008.dwg



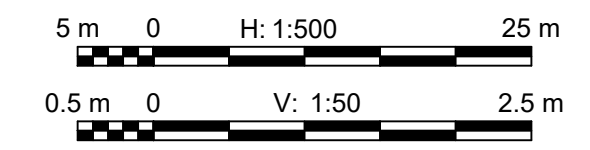
CURVE DATA

CURVE	RADIUS (m)	Dc	Vf	Eu (inch)	Ea (inch)	Lc (m)	Δ
C14	582.192	3°00'00"	15 mph	0.47	0	197.066	19° 29' 16"
C15	582.192	3°00'00"	15 mph	0.47	0	197.066	19° 29' 16"
C16	291.196	6°00'00"	15 mph	0.95	0	17.590	3° 27' 42"

PLAN
SCALE 1:500



PROFILE
SCALE H 1:500
V 1:50



NOT FOR CONSTRUCTION

Aug 03, 2021, 6:56pm Login name: mck692314
 Drawing Name: C:\pwworking\mck692314\00694048\H362376-RW-100-S0-4001 to 4008.dwg

VANCOUVER FRASER PORT AUTHORITY
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HATCH
 METRIC
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DESIGNED BY: F.D. DATE: 11-09-20	DRAWN BY: A.S. DATE: 11-09-20
CHECKED BY: V.C. DATE: 11-09-20	PROJECT MANAGER: I.M. DATE: 11-09-20
HATCH PROJECT No: H362376	DWG SCALE(FULL SIZE): AS SHOWN

PROFESSIONAL SEALS

No.	DATE	REVISION	BY
C	03-08-21	ISSUED FOR 90% DESIGN	F.D.
B	31-05-21	REISSUED FOR 30% DESIGN	F.D.
A	11-09-20	ISSUED FOR 30% DESIGN	L.C.

CP
 ENGINEERING PROJECTS - WEST

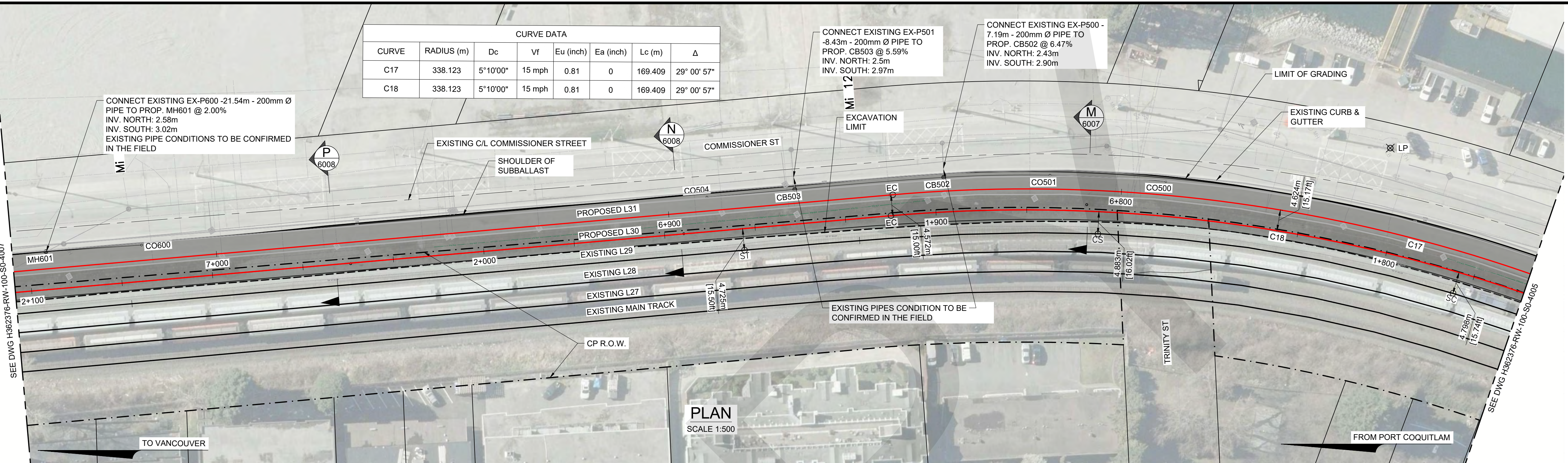
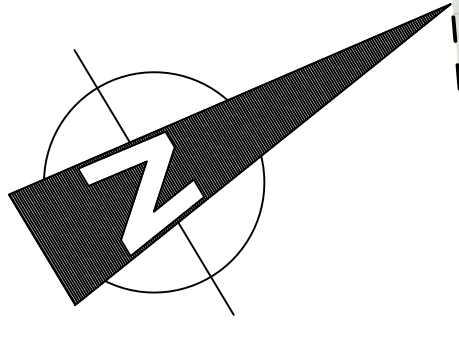
VANCOUVER DIVISION MILE 125.37 TO 127.00 CASCADE SUBDIVISION

**EAST L YARD EXPANSION
 RAIL - PLAN & PROFILE
 TRACK L30 - STA 1+440 TO 1+780**

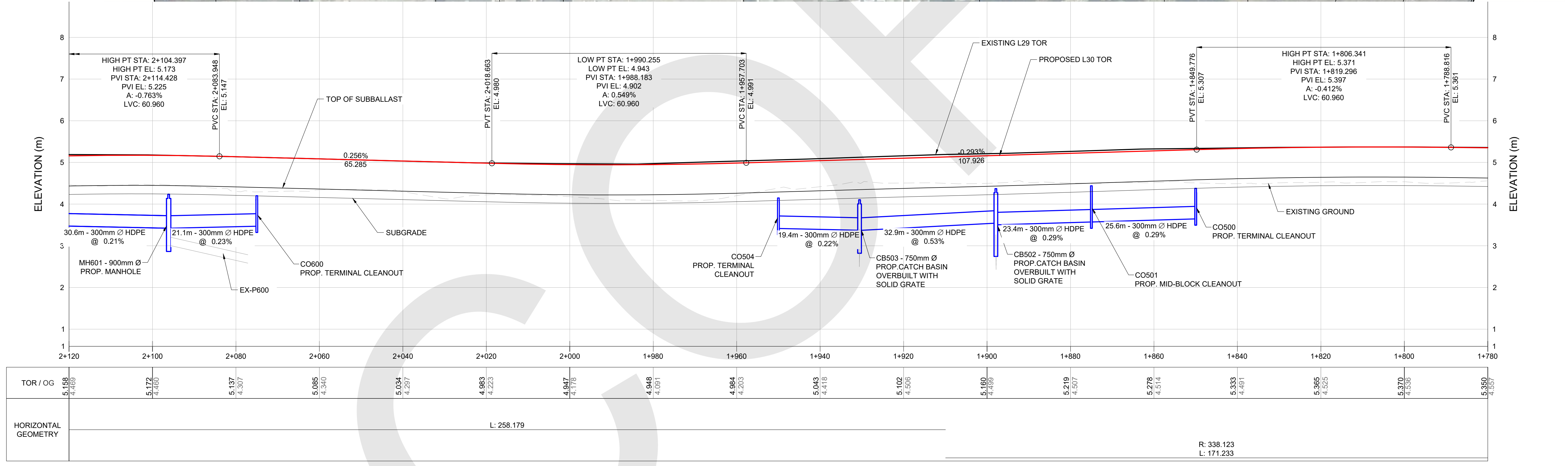
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MANAGER - DESIGN:	DATE:	SCALE:
M.FAVREAU DIR. PROJECT SERVICES WEST	H362376-RW-100-S0-4005	

Rev. **C**

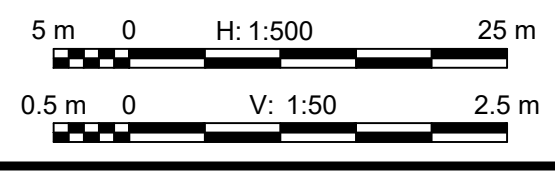
CURVE DATA							
CURVE	RADIUS (m)	Dc	Vf	Eu (inch)	Ea (inch)	Lc (m)	Δ
C17	338.123	5°10'00"	15 mph	0.81	0	169.409	29° 00' 57"
C18	338.123	5°10'00"	15 mph	0.81	0	169.409	29° 00' 57"



PLAN
SCALE 1:500



PROFILE
SCALE H 1:500
V 1:50



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HATCH
METRIC
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DESIGNED BY: F.D. DATE: 11-09-20	DRAWN BY: A.S. DATE: 11-09-20
CHECKED BY: V.C. DATE: 11-09-20	PROJECT MANAGER: J.M. DATE: 11-09-20
HATCH PROJECT No: H362376	DWG SCALE(FULL SIZE): AS SHOWN

PROFESSIONAL SEALS

No.	DATE	REVISION	BY
C	03-08-21	ISSUED FOR 90% DESIGN	F.D.
B	31-05-21	REISSUED FOR 30% DESIGN	F.D.
A	11-09-20	ISSUED FOR 30% DESIGN	L.C.

No.	DATE	REVISION	BY
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B	31-05-21	REISSUED FOR 30% DESIGN	F.D.
A	11-09-20	ISSUED FOR 30% DESIGN	L.C.

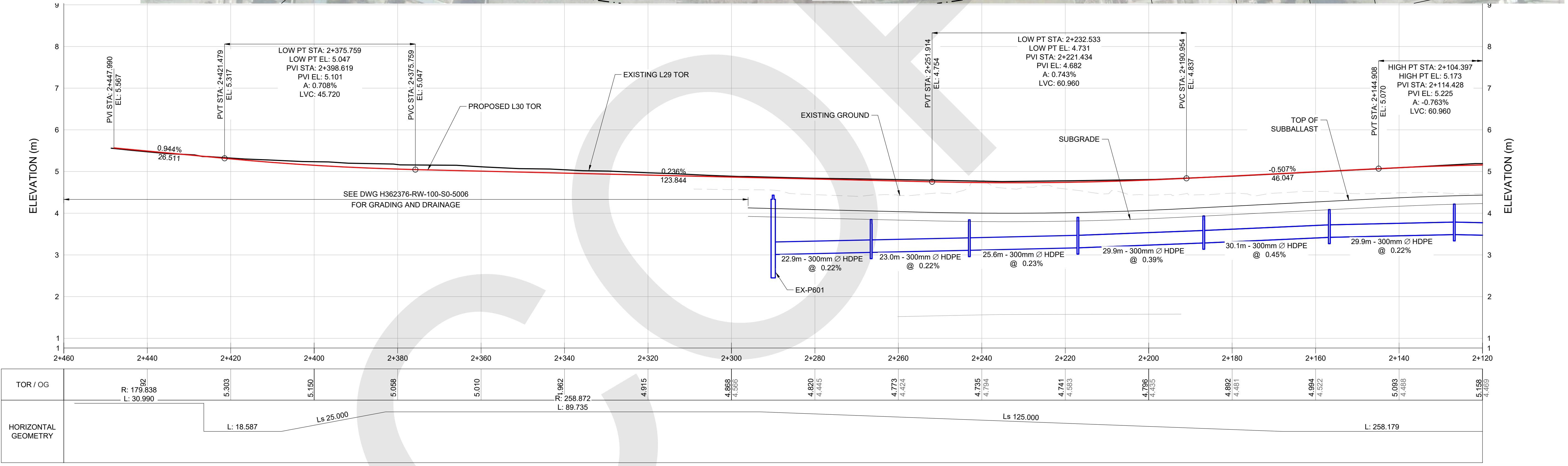
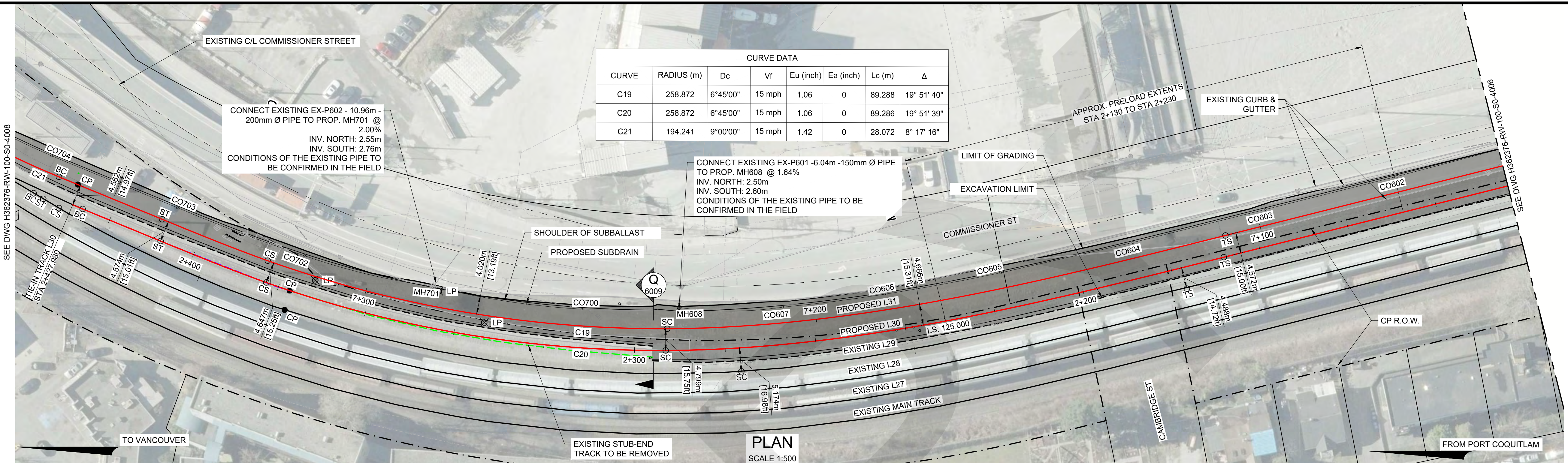
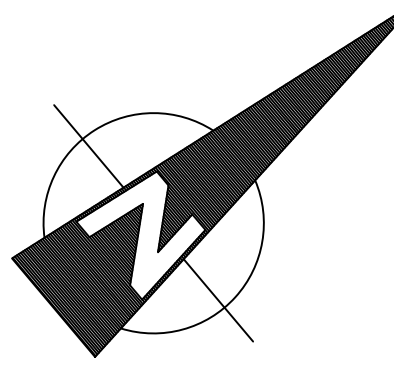
CP
ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION MILE 125.37 TO 127.00 CASCADE SUBDIVISION

**EAST L YARD EXPANSION
RAIL - PLAN & PROFILE
TRACK L30 - STA 1+780 TO 2+120**

DWG. BY:	CHK BY:	OFFICE FILE:
MANAGER - DESIGN:	DATE:	SCALE:
M.FAVREAU DIR. PROJECT SERVICES WEST	H362376-RW-100-S0-4006	Rev. C

Aug 03, 2021, 5:02pm Login name: shob11128
 Drawing Name: C:\pwworking\hatch.com\06694048\H362376-RW-100-S0-4001 to 4008.dwg



NOT FOR CONSTRUCTION

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HATCH
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DESIGNED BY: F.D. DATE: 11-09-20	DRAWN BY: A.S. DATE: 11-09-20
CHECKED BY: V.C. DATE: 11-09-20	PROJECT MANAGER: I.M. DATE: 11-09-20
HATCH PROJECT No: H362376	DWG SCALE(FULL SIZE): AS SHOWN

No.	DATE	REVISION	BY
C	03-08-21	ISSUED FOR 90% DESIGN	F.D.
B	31-05-21	REISSUED FOR 30% DESIGN	F.D.
A	11-09-20	ISSUED FOR 30% DESIGN	L.C.

No.	DATE	REVISION	BY

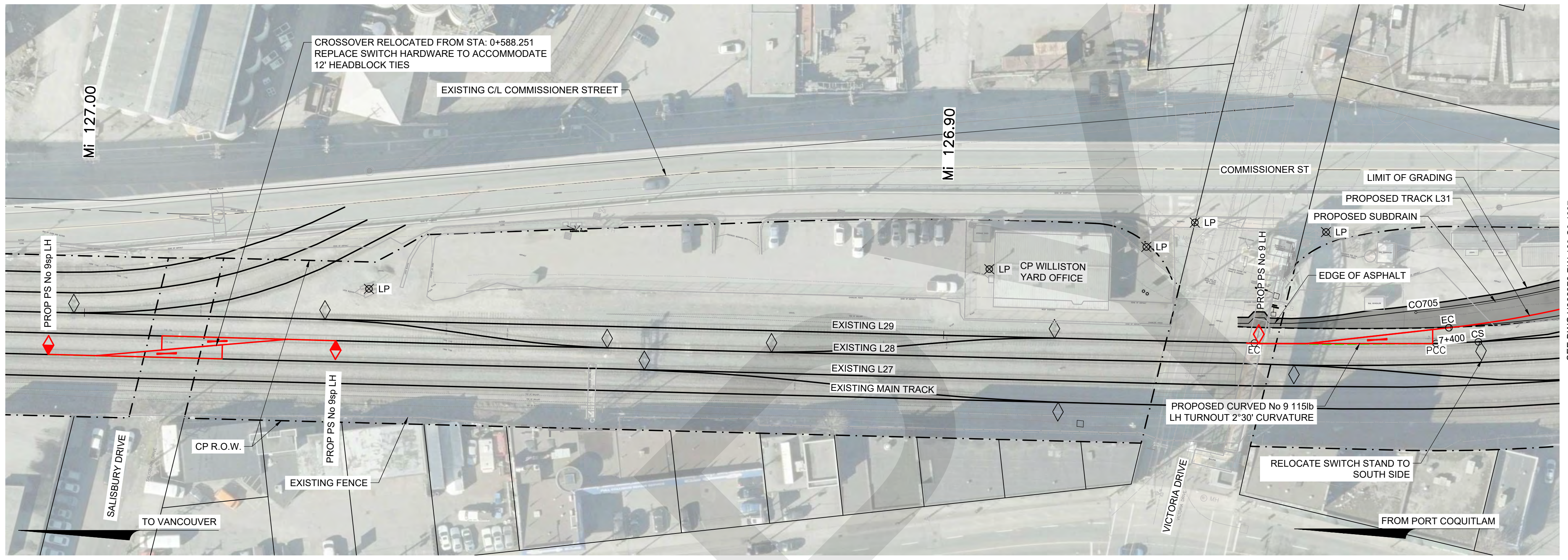
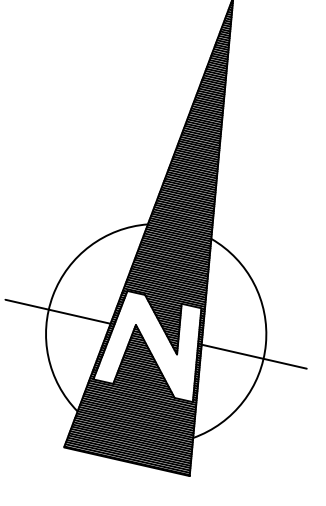
CP
ENGINEERING PROJECTS - WEST

VANCOUVER DIVISION MILE 125.37 TO 127.00 CASCADE SUBDIVISION

**EAST L YARD EXPANSION
RAIL - PLAN & PROFILE
TRACK L30 - STA 2+120 TO 2+460**

DWG. BY:	CHK BY:	OFFICE FILE:
MANAGER - DESIGN:	DATE:	SCALE:
M.FAVREAU DIR. PROJECT SERVICES WEST	H362376-RW-100-S0-4007	Rev. C

Aug 03, 2021, 5:03pm Login name: shob11128
Drawing Name: C:\pwworking\hatch.com\06694048\H362376-RW-100-S0-4001 to 4008.dwg



PLAN
SCALE 1:500
5 m 0 1:500 25 m

SEE DWG H362376-RW-100-S0-5006 FOR L31 PROFILE AND DRAINAGE

SEE DWG H362376-RW-100-S0-4007

NOT FOR CONSTRUCTION

Aug 03, 2021, 5:03pm Login name: shob11128 Drawing Name: C:\pwworking\hatch.com\06694048\H362376-RW-100-S0-4001 to 4008.dwg

VANCOUVER FRASER PORT AUTHORITY
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METRIC
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DESIGNED BY: F.D. DATE: 11-09-20	DRAWN BY: A.S. DATE: 11-09-20
CHECKED BY: V.C. DATE: 11-09-20	PROJECT MANAGER: I.M. DATE: 11-09-20
HATCH PROJECT No: H362376	DWG SCALE(FULL SIZE): 1:500

PROFESSIONAL SEALS

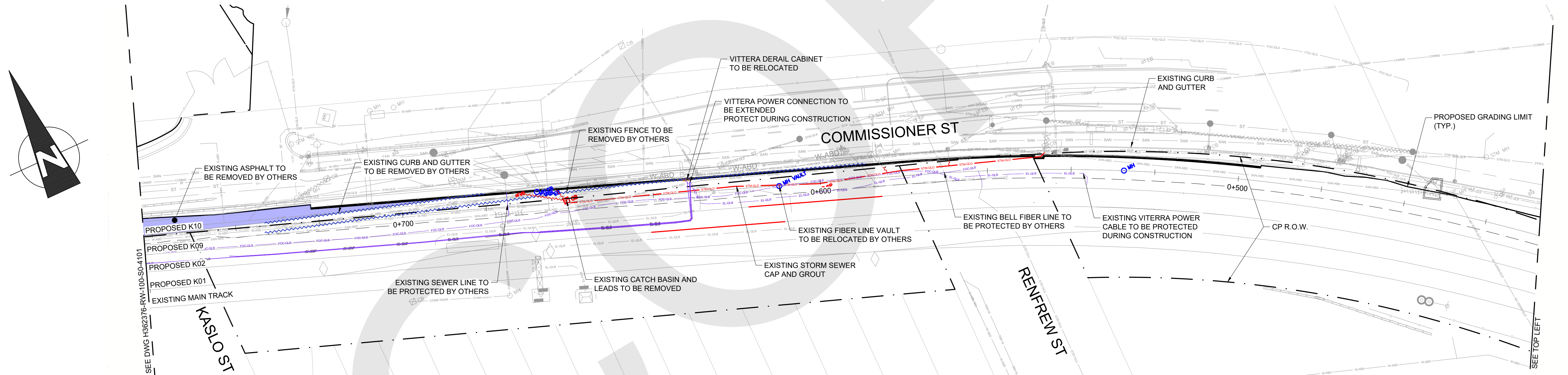
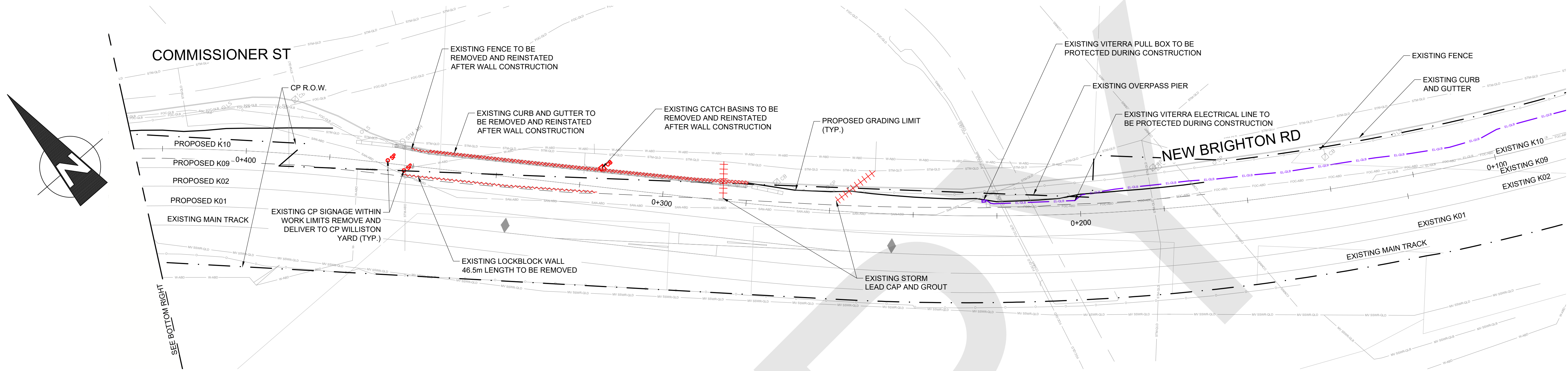
No.	DATE	REVISION	BY
C	03-08-21	ISSUED FOR 90% DESIGN	F.D.
B	31-05-21	REISSUED FOR 30% DESIGN	F.D.
A	11-09-20	ISSUED FOR 30% DESIGN	L.C.

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 DERIVATIVE OF THIS DRAWING BY CLIENT, AND BY THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS RESERVED OR REFERENCED IN THIS DRAWING REMAIN THE PROPERTY OF HATCH.



VANCOUVER DIVISION		MILE 125.37 TO 127.00 CASCADE SUBDIVISION	
EAST L YARD EXPANSION RAIL - PLAN & PROFILE L31 CONNECTION AND SALISBURY DRIVE CROSSOVER			
DWG. BY:	CHK BY:	OFFICE FILE:	
MANAGER - DESIGN:		SCALE:	
M.FAVREAU DIR. PROJECT SERVICES WEST		DATE: PLAN No.	Rev. C
		H362376-RW-100-S0-4008	

NOT FOR CONSTRUCTION



REMOVAL LEGEND:

- | | | | |
|--|--|--|--|
| EXISTING LINEAR FEATURES TO BE REMOVED | | EXISTING LINEAR FEATURES TO BE REMOVED BY OTHERS | |
| EXISTING AREA FEATURES TO BE REMOVED | | EXISTING AREA FEATURES TO BE REMOVED BY OTHERS | |
| EXISTING LINEAR FEATURES TO BE ABANDONED | | EXISTING FEATURES TO BE ABANDONED BY OTHERS | |
| EXISTING FEATURES TO BE REMOVED | | EXISTING FEATURES TO BE REMOVED BY OTHERS | |
| EXISTING FEATURES TO BE RELOCATED | | EXISTING FEATURES TO BE PROTECTED | |

NOTES:

- CONTRACTOR TO VERIFY PRESENCE AND LOCATION OF ALL UTILITIES BEFORE REMOVAL.
- VARIOUS ITEMS NOTED FOR REMOVAL MAY BE REMOVED PRIOR TO CONSTRUCTION BY CSRR ROADWAY CONTRACTOR

Aug 03, 2021, 9:04am Login name: shob11128 Drawing Name: C:\pwworking\hatch.com\06694048\H362376-RW-100-S0-4100 to 4103.dwg

<p>VANCOUVER FRASER PORT AUTHORITY</p> <p>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.</p>	<p>HATCH</p> <p>METRIC DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE NOTED</p> <p>DESIGNED BY: P.S. DATE: 03-08-21 DRAWN BY: P.S. DATE: 03-08-21 CHECKED BY: V.C. DATE: 03-08-21 PROJECT MANAGER: I.M. DATE: 03-08-21</p> <p>HATCH PROJECT No: H362376 DWG SCALE(FULL SIZE): 1:500</p>	<p>PROFESSIONAL SEALS</p> <table border="1" style="width: 100%; height: 100px;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>																							<p>ENGINEERING PROJECTS - WEST</p>	<p>VANCOUVER DIVISION MILE 125.37 TO 127.00 CASCADE SUBDIVISION</p> <p style="text-align: center;">EAST L YARD EXPANSION RAIL - REMOVAL PLAN SHEET 1 OF 4</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DWG. BY:</td> <td>CHK BY:</td> <td>OFFICE FILE:</td> </tr> <tr> <td>MANAGER - DESIGN:</td> <td>DATE:</td> <td>SCALE:</td> </tr> <tr> <td>M.FAVREAU DIR. PROJECT SERVICES WEST</td> <td>H362376-RW-100-S0-4100</td> <td>Rev. A</td> </tr> </table>	DWG. BY:	CHK BY:	OFFICE FILE:	MANAGER - DESIGN:	DATE:	SCALE:	M.FAVREAU DIR. PROJECT SERVICES WEST	H362376-RW-100-S0-4100	Rev. A
DWG. BY:	CHK BY:	OFFICE FILE:																																	
MANAGER - DESIGN:	DATE:	SCALE:																																	
M.FAVREAU DIR. PROJECT SERVICES WEST	H362376-RW-100-S0-4100	Rev. A																																	
<p>REVISIONS:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>ISSUED FOR 90% DESIGN</th> <th>REVISION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>03-08-21</td> <td>ISSUED FOR 90% DESIGN</td> <td> </td> <td>P.S.</td> </tr> </tbody> </table>		No.	DATE	ISSUED FOR 90% DESIGN	REVISION	BY	A	03-08-21	ISSUED FOR 90% DESIGN		P.S.	<p>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 REVISION OF THIS DRAWING BY CLIENT, AND IS THIS DRAWING IS CONFIDENTIAL AND ALL INTELLECTUAL PROPERTY RIGHTS RESERVED OR REFERENCED IN THIS DRAWING REMAIN THE PROPERTY OF HATCH.</p>																							
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