



**PORT of  
vancouver**

Vancouver Fraser  
Port Authority

**VANCOUVER FRASER PORT AUTHORITY  
PROJECT AND ENVIRONMENTAL REVIEW  
REPORT AND PERMIT**

<b>PER No.:</b>	<b>19-210</b>
<b>Tenant:</b>	<b>Vancouver Fraser Port Authority</b>
<b>Project:</b>	<b>Portside Road Extension and Bridge</b>
<b>Project Location:</b>	<b>Portside Road between the existing Richmond Terminal across No. 7 Road Canal into Area IV</b>
<b>Vancouver Fraser Port Authority SID No.:</b>	<b>RIC 356</b>
<b>Land Use Designation:</b>	<b>Industrial</b>
<b>Applicant/Permit Holder:</b>	<b>Vancouver Fraser Port Authority</b>
<b>Category of Review:</b>	<b>B</b>
<b>Date of Approval:</b>	<b>November 19, 2021</b>
<b>Date of Expiry:</b>	<b>November 30, 2026</b>

## 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 and project permit (the “Permit”) documents the Port Authority’s project and environmental review of PER No. 19-210: Portside Road Extension and Bridge (the “Project”) proposed by Stantec Consulting Ltd. working on behalf of the Vancouver Fraser Port Authority (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 considered 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. This review provides 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 the following pages of this report.

This Permit is the authorizing document allowing the Applicant to proceed with the Project subject to the listed project and environmental conditions.

## 2 PROJECT DESCRIPTION

The Applicant proposes to extend the existing Portside Road in Richmond through the provision of a new three-way intersection and the construction of a two-span bridge structure over the No. 7 Road canal and access road,

connecting to Port Authority lands located on the west side. The No. 7 Road canal lies within a 20 metre-wide City of Richmond right-of-way, which runs north-south, separating the west side, commonly known as Area IV, and the Richmond Logistics Hub on the east side of the canal.

Area IV is located to the west of No. 7 Road Canal and is currently being preloaded, with no formal roadway access or utility infrastructure except for the Vancouver Airport Fuel Delivery tank farm site, which is accessed and serviced from Williams Road on the west.

The purpose of the Project is to provide dedicated roadway access, which includes a bridge, and the allowance of future utility service connections to Area IV. The bridge elevation necessitates regrading and reconstruction of the end of Portside Road, and the construction of a 3-way intersection. The road and utility stub connections are proposed to extend approximately 40 metres into Area IV, with the expectation that the road and utilities will be extended further as part of the future development of Area IV (schedule not yet confirmed).

As bat species have been observed in the area, the installation of “bat-boxes” is proposed within the bridge structure to enhance roosting and hibernation habitats for bats.

The Project area primarily comprises Portside Road to the east of No. 7 Road right-of-way, and a small portion of land at the north east corner of Area IV. The at-grade Project area will be contained within lands owned by the Port Authority and will span over the access road, the canal, and the 20-metre wide City of Richmond right-of-way.

In this project permit, the Project means the physical activities authorized by the Port Authority to be carried out pursuant to **PER No. 19-210**, as described below.

## 2.1 Proposed Works

The reference concept, which is the current concept design (the project is a Design Build), of the proposed Project includes the following works:

### 2.1.1 Road

The lane configuration of the proposed intersection has been developed to provide:

- On the west arm, one 3.7 metre wide lane in each direction across the bridge, with a 3.7 metre wide central median to safeguard future flexibility (total width of bridge is 17 metres)
  - The west arm is to be extended approximately 40 metres into Area IV
- On the east arm, one eastbound lane and two westbound lanes (left turn and straight ahead)
  - East arm to be regraded over approximately 95 metres
- On the south arm, three southbound lanes and one northbound lane (as existing)
  - South arm to be regraded over approximately 80 metres
- A 3.0 metre-wide Multi-Use Path (MUP) has been allowed for along the south side of Portside Road from the east extent of the project across the bridge, to Area IV with a crosswalk over the south arm of the intersection

To accommodate required vertical clearances under the bridge structure, the intersection is proposed to be raised by up to 1.5 metres above the existing pavement elevation, and the eastern and southern arms regraded to suit. Retaining walls will be required along the bridge approaches to limit the footprint and volume of embankment fills. These retaining walls will vary in height from 0.5 metres (where the approaches tie-in to existing grade on the south and east leg of the intersection) up to 5.0 metres around the east abutment.

### 2.1.2 Bridge structure

The reference bridge design comprises a two-span bridge structure with a west span of 35.0 metres long across the canal and an east span of 16.5 metres long across the access road. The proposed works for the bridge structure includes steel pile foundations to support the bridge abutments and piers as follows:

- The west abutment setback approximately 10 metres from the City of Richmond (CoR) right-of-way (ROW), supported by 6 steel piles (between 614 and 900 mm diameter) installed to an elevation of -27 metres Geodetic Survey of Canada (GSC) datum
- The east abutment setback approximately 18 metres from the CoR ROW, supported by 6 steel piles (between 614 and 900 mm diameter) installed to an elevation of -24 metres GSC
- A supporting pier will be located to the east of the canal and setback approximately 2.1 metres from the CoR ROW, supported by 6 steel pier piles (between 614 and 900 mm diameter) installed to an elevation of -50 metres GSC

A vibro-replacement stone column method is proposed for ground improvements at the location of the bridge foundations and approach embankments, to an elevation of -15 metres GSC, over approximately a 10-metre wide envelope. No ground improvements are proposed within 3 metres of existing water mains.

Retaining walls will be required around the east approach and abutment to minimize impacts to adjacent property.

### **2.1.3 Utility infrastructure**

The Project includes the following infrastructure or provisions:

- An allowance for a future 150 mm sanitary force main and 168 mm maximum distribution pressure gas line under the bridge
- Approximately 100 metres of 3-125 and 3-75 millimetre electrical ducts extending from the existing BC Hydro duct bank, under the proposed intersection
- Approximately 100 metres of 6-100 millimetre communications ducts extending from the existing TELUS duct bank, under the proposed intersection
- Road and bridge storm water drainage infrastructure in the form of catch basins temporarily discharging to infiltration ditches in Area IV west of the canal, and connecting to the future Area IV drainage (when available), and connection to existing or relocated catch basis using infiltration galleries on the east side

The utilities noted above will comprise the installation of the civil, duct and pipe works only, with any cabling, mechanical, electrical and commissioning works being undertaken at a later date at the time of ultimate development of Area IV.

To facilitate the construction of the proposed works, the relocation of an existing 350 millimetre watermain along the north side of the proposed road regrading is expected.

### **2.1.4 Staging areas and temporary roads**

The Project will require three staging areas for construction: a staging area on the west side of the canal would be located north east of Area IV and would be accessed via Williams Road, Dyke Road, and a temporary construction road and ramp along the east edge of Area IV. The other two staging areas on the east side of the canal would be located next to Portside Road, and next to the No. 7 Road ROW. The existing emergency road that connects Portside to the access road will be temporarily realigned during construction, and ultimately removed at a future date pending completion of grade separation at No. 8 Road and Blundell.

During construction, a temporary vehicle exit is required from the Westran terminal to the north-east of the property throughout the construction schedule. This will enable the implementation of one-way traffic restriction along the stretch of Portside Road impacted by project works. This is further described in Section 3 below.

The piles required for bridge construction are proposed to be installed using an impact hammer.

All construction activities are expected to take place during regular construction hours of Monday to Saturday between 7:00 a.m. and 8:00 p.m. The anticipated construction timeline is approximately 18 months, from Q4 2022 to Q3 2024.

### 3 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS

The following Port Authority departments have undertaken and completed a review of these works and confirm that the proposal meets their requirements, subject to the listed project and environmental conditions.

Planning

Environmental Programs

Engineering

Project Consultation

Transportation

Air, dust, noise and light emissions are expected during project construction activities, however are expected to have minimal impacts as the work is in an existing industrial area. The nearest residence or recreational facility is approximately 750 metres away.

Construction of the Project is expected to increase local traffic volumes. Effects will be localized and temporary in nature, occurring only through the construction phase of the Project. Potential effects on local traffic will be managed by the development and implementation of a Traffic Management Plan to minimize disturbances to businesses in the surrounding area.

A stormwater management plan has been developed to mitigate the Project's impact on local drainage systems. Run-off from the Project is anticipated to occur on both sides of the bridge (i.e., east and west) and is handled differently on either side. On the east side of the bridge, flow control measures will be provided to existing stormwater infrastructure (i.e., catch basins utilizing drain rock infiltration) to capture potential pollutants prior to discharge. On the west side of the bridge, run-off and discharge will be directed overland to swales for natural infiltration. As requested by the City of Richmond during early project municipal engagement, no run-off or discharge will occur directly to No. 7 Road Canal.

The submission and acceptance of an erosion and sediment control plan as part of the construction of the Project is a condition of the Permit. The erosion and sediment control plan is required to include discharge locations, details of proposed monitoring to confirm that water quality meets applicable guidelines, and details of stormwater storage, expected discharge rate, duration, and treatment (e.g., for cementitious materials and suspended solids), if any.

Invasive plant species, including Japanese knotweed, Scotch broom and Himalayan blackberry are present, or have been present, in the Project area. An invasive species management plan will be implemented to appropriately contain, collect and dispose of invasive species and prevent further introduction or transport of invasive plants.

As the No.7 Road Canal and ROW is owned by the City of Richmond, and as per their feedback to the applicant during pre-application municipal consultation, no construction activities are proposed within the wetted perimeter of the No. 7 Road Canal.

### 4 INDIGENOUS CONSULTATION

The port authority has reviewed the proposed works and determined that the project may have the potential to adversely impact Aboriginal or Treaty rights.

Every reasonable effort was made to consult with the following Indigenous groups on the proposed project:

- a) Cowichan Tribes
- b) Halalt First Nation
- c) Katzie First Nation
- d) Kwantlen First Nation
- e) Kwikwetlem First Nation

- f) Lyackson First Nation
- g) Musqueam Indian Band
- h) Penelakut Tribe
- i) Semiahmoo First Nation
- j) S'ólhTéméxw Stewardship Alliance, through the People of the River Referrals Office (PRRO)
- k) Stz'uminus First Nation
- l) Tsawwassen First Nation
- m) Tsleil-Waututh Nation
- n) Ts'uubaa-asatx First Nation (formerly Lake Cowichan First Nation)

The following consultation activities were conducted:

- Referral package provided for review including consultation letter and application package with appendices
- Reminder email for the close of the comment window for the application
- Response table provided to Indigenous groups who provided comments on the referral package

A table summarizing comments received by the port authority throughout the course of consultation is provided below. The table provides information on how the comments were considered as part of the project and environmental review.

Issue	Mitigations and Permit Conditions	Rationale
Impacts of project on archaeological resources	The permit holder will be required to follow the recommendations made in the project's Archaeological Overview Assessment (AOA). Permit conditions will include archaeological monitoring for any ground disturbance in native soils. An Archaeological Impact Assessment is planned to run concurrently with construction.	<p>Conditions #17 and #35 of the Project Permit have been included to address this concern:</p> <p>The permit holder shall ensure that an appropriately qualified archaeological monitor be on the Project site at all times during ground disturbing activities with the potential to intrude into native soils</p> <p>The permit holder shall submit an Archaeological Chance Find Procedure for the Project site to the port authority's satisfaction and/or confirm the adoption of the Vancouver Fraser Port Authority's Archaeological Chance Find Procedure. The permit holder shall carry out the Project in accordance with this procedure, and any subsequent updates made to the port authority's satisfaction.</p>
Inclusion of Indigenous monitors for archaeological assessment work	A permit condition regarding Indigenous monitoring of ground disturbing with the potential to impact native soils will be included.	<p>Condition #36 of the Project Permit has been included to address this concern:</p> <p>The permit holder shall provide opportunities for interested Indigenous groups to monitor and be present on the Project site at all times during ground disturbing activities with the potential to intrude into native soils.</p>

Issue	Mitigations and Permit Conditions	Rationale
Disturbances to nesting birds by project construction	If vegetation clearing is planned to occur during the breeding period for migratory birds, the Environmental Monitor (EM) will be notified without undue delay prior to vegetation removal. Bird nest searches will be completed by a Qualified Environmental Professional (QEP) one to seven days before commencement of construction during the breeding season.	Condition #23 of the Project Permit has been included to address this concern:  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.
Environmental monitoring of any pile driving	A QEP will be on-site, full time for all pile driving works. On-site mitigation measures in relation to noise would be assessed by the QEP, as required	Condition #29 of the Project Permit has been included to address this concern:  The Permit Holder 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, provided that monitoring will be full time when works are underway that have the potential to adversely affect fish or fish habitat.
Mitigation if deleterious substances are detected in the project area throughout the course of project work	A permit condition in relation to the mitigation of deleterious substances will be included	Condition #25 of the Project Permit has been included to address this concern:  Without limiting the generality of permit condition #2, if suspect contaminated materials are encountered, the Permit Holder shall contain, test and dispose of such materials at appropriate licensed off-site facilities and maintain records of off-site disposal. The port authority shall be notified of such activities and provided relevant documentation upon completion.

Based on the record of consultation, the Port Authority is of the view that the duty to consult has been met.

## 5 EXISTING POLICIES OR GUIDELINES

The proposed Project spans two land use designations; the east side of the bridge is designated “Industrial” and the west side is designated “Port Terminal” within the Port Authority’s Land Use Plan. Given that transportation

infrastructure and utility uses are permitted in all designations where compatible with the primary uses on the site, the Project is considered to be in conformance with the land use plan.

## 6 NOTIFICATIONS

### 6.1 Municipal Notification

During the Project's preliminary design process, the Applicant sought input from impacted stakeholders, as noted in the Application submission. A primary stakeholder is the City of Richmond, due to the bridge proposing to span the No. 7 Road ROW and canal. In addition, a watermain exists along the access road alignment, on the east side of the canal. The City of Richmond had concerns about settlement affecting the existing watermain, environmental impacts to the canal, any additional stormwater that might be directed to the canal, and several other comments on the project. Impacts to the City of Richmond were reviewed by the Applicant as part of the preliminary design process and are summarized below:

- A volumetric air space parcel will be required with the City of Richmond for the permanent structure that will be required through the CoR's ROW, which will be the subject of a Project Agreement that will include the required 3 metre vertical clearance above the No. 7 Road.
- Impacts to the No. 7 Canal Riparian Management Area (RMA) will need to be compensated through habitat enhancements works as discussed in Stantec's Invasive Species and Vegetation Management Plan.
- Requirements for proximal and relocation works associated with City of Richmond watermains are the subject of the No. 7 Road watermain technical memo.
- Access permissions through the City of Richmond-owned 'Lot K' will need to be agreed with City of Richmond to secure the necessary construction access to the staging area in the north-east of Area IV.

The proposed Project was assessed by the Port Authority to have potential impacts to municipal interests. A notification letter was sent to the City of Richmond on June 28, 2021, notifying them of the proposed Project. The City of Richmond had no additional comments.

### 6.2 Adjacent Tenant Notification

During preliminary design, the Applicant conducted extensive engagement with the adjacent tenants, who are expected to be impacted by construction of the east side bridge approach. These tenants, include Westran and Coast 2000, have had input into the preliminary construction parking and traffic management plan, as described in the application materials. In addition, the port authority is preparing to enter into agreements with some of these tenants to address construction impacts. For these reasons, additional tenant notification or consultation was not deemed to be required.

### 6.3 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.

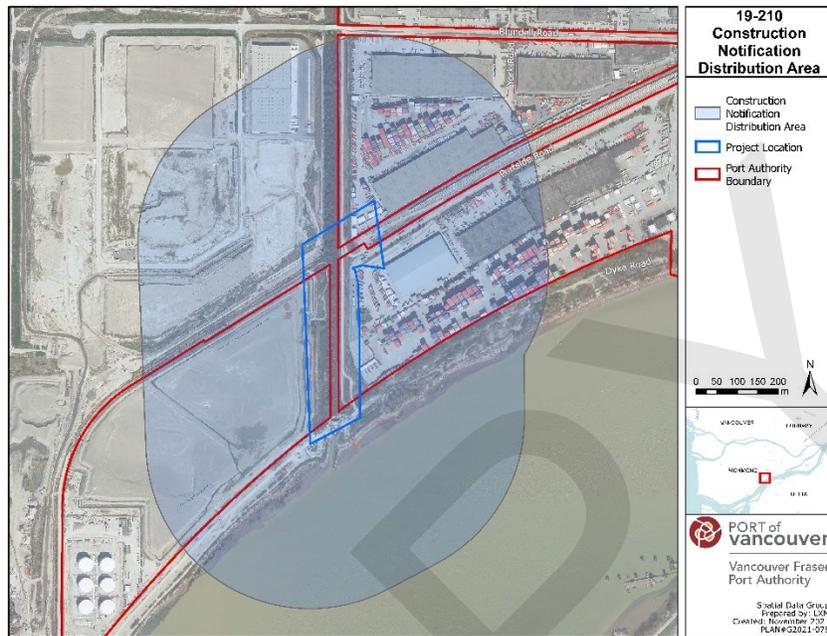
### 6.4 Summary of Public Engagement

The comment period ran from June 23 to July 22, 2021. At the close of the 30 calendar day public comment period, no comments were received.

The proposed Project was assessed by the Port Authority to have potential impacts to community interests during construction. These include potential impacts such as access and egress from adjacent business, traffic flow and noise associated from pile driving from the proposed construction activities. As a result, the Permit Holder is required to send a construction notification to adjacent businesses. The construction notification shall be

distributed by the Permit Holder at least 10 business days prior to the start of the works. This is condition No. 15 in the permit.

Map of notification area



## 7 INFORMATION SOURCES

The Port Authority has relied upon the following sources of information in its review of the Project.

- Application form and materials submitted by the Applicant on June 10, 2021.
- All Project correspondence from December, 3, 2019 to month, day year
- All plans and drawings labelled PER No. 19-210-A to G
- “Project and Environmental Review: Category B Application Submission”, June 3, 2021, Stantec Consulting Ltd.

## 8 ENVIRONMENTAL REVIEW DECISION

In completing the project and environmental 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 conditions described in the project and environmental conditions section below, the Project is not likely to cause significant adverse environmental effects.

ORIGINAL COPY SIGNED

**LISA McCUAIG**  
MANAGER, ENVIRONMENTAL PROGRAMS

November 16, 2021

**DATE OF DECISION**

## 9 CONCLUSION

In completing the project and environmental review, the Port Authority concludes that with the implementation of proposed mitigation measures and conditions described in the project and environmental conditions section below, the Project has appropriately addressed all identified concerns.

## PROJECT AND ENVIRONMENTAL REVIEW DECISION

Project Permit PER No. 19-210 is approved by:

ORIGINAL COPY SIGNED

November 18, 2021

**CHRIS BISHOP**  
MANAGER, PROJECT AND ENVIRONMENTAL  
REVIEW

DATE OF APPROVAL

## 10 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 Vancouver Fraser Port Authority (the "Permit Holder") fails to comply with any of the project and environmental conditions set out in the project permit (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 minimum 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 would include Project agreements required for temporary construction access and detours. 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 (available at: <a href="https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/guidelines/vfpa-record-drawing-standards/">https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/guidelines/vfpa-record-drawing-standards/</a> ). 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 <b>PER No. 19-210-A to G</b> . 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 all plans, documents, and notices required under this Permit to the following email address: <b>per@portvancouver.com</b> and referencing <b>PER No.19-210</b> .
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 Port Authority shall have unfettered access to environmental compliance documentation and the Project site at all times during construction without notice.
13.	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.

	<b>CONDITIONS – PRIOR TO COMMENCING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES</b>	<b>SUBMISSION TIMING (business days)</b>
14.	The Permit Holder shall provide IFC drawings in accordance with the Port Authority's Record Drawing Standards (available at: <a href="https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/guidelines/vfpa-record-drawing-standards/">https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/guidelines/vfpa-record-drawing-standards/</a> ), in both AutoCAD and PDF format. Both CAD & PDF file names must correspond to the Port Authority's record drawing index number (Section 2.10 –VFPA Record Drawing Standards). These are to be signed and sealed drawings for proposed works approved for construction by a professional engineer licensed to practice in the Province of British Columbia.	5 business days before commencing construction or any physical activities
15.	The Permit Holder shall distribute a construction notification to adjacent businesses. 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
16.	The Permit Holder shall submit an updated construction parking and traffic management plan to the Port Authority's satisfaction. The Permit Holder shall carry out the Project in accordance with the construction parking and traffic management plan, and any subsequent updates made to the Port Authority's satisfaction. Measures shall be taken to address and incorporate the access/egress requirements of adjacent and affected tenants, as noted in the project application documents.	20 business days before commencing construction or any physical activities
17.	The Permit Holder shall submit an Archaeological Chance Find Procedure for the Project site to the Port Authority's satisfaction and/or confirm the adoption of the Vancouver Fraser Port Authority's Archaeological Chance Find Procedure. The Permit Holder shall carry out the Project in accordance with this Procedure, and any subsequent updates made to the Port Authority's satisfaction.	10 business days before commencing construction or any physical activities
18.	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
19.	Sediment and erosion control measures shall be implemented prior to the start of ground disturbance activities. The Permit Holder shall submit an erosion and sediment control plan to the Port Authority's satisfaction. The erosion and sediment control plan must include discharge locations, details of the proposed monitoring to confirm that water quality meets applicable guidelines, and details of stormwater storage, expected discharge rate, duration, and treatment (if any). 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.	30 business days prior to commencing ground disturbing activities
<b>CONDITIONS – DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES</b>		
20.	The Permit Holder shall notify the Port Authority upon commencement of construction, or any physical activities (e.g., mobilization to the Project site).	

21.	All general construction and physical activities related to the Project shall be conducted from <b>Monday to Saturday</b> between the hours of <b>7:00 a.m. and 8:00 p.m.</b> No construction and physical activities shall take place on Sundays or holidays. These hours shall not be modified without prior approval of the Port Authority. To request permission to conduct activities outside these hours, the Permit Holder must submit a written request no less than 30 business days prior to the desired start date.
22.	The Permit Holder shall carry out the Project in accordance with the construction environmental management plan provided by the Permit Holder, and any subsequent updates made to the Port Authority's satisfaction.
23.	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.
24.	<p>The Permit Holder shall manage invasive plants in a manner that prevents their spread. An invasive species management plan shall be implemented to prevent the introduction of invasive vegetation species into the project area and transport of invasive plant material out of the project area, including appropriate containment, collection and disposal of invasive plant material.</p> <p>The Permit Holder shall use reasonable efforts to retain existing native riparian vegetation and native soil. Disturbance or clearing of vegetation shall be staged and strictly limited to that required for the Project.</p>
25.	Without limiting the generality of permit condition #2, if suspect contaminated materials are encountered, the Permit Holder shall contain, test and dispose of such materials at appropriate licensed off-site facilities and maintain records of off-site disposal. The Port Authority shall be notified of such activities and provided relevant documentation upon completion.
26.	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.
27.	Without limiting the generality of permit condition #2, materials brought onto the Project site to be used for backfilling, site preparation, or other uses shall be from sources demonstrated to be clean and free of environmental contamination, invasive species and noxious weeds. The Permit Holder shall maintain records to verify this.
28.	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.
29.	The Permit Holder 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, provided that monitoring will be full time when works are under way that have the potential to adversely affect fish or fish habitat.

30.	The Permit Holder shall provide environmental monitoring reports to the Port Authority's satisfaction 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 six weeks of the conclusion of the monitoring period.
31.	All non-road diesel equipment in use within Port Authority jurisdiction shall be reported as required under the Non-Road Diesel Equipment Program ( <a href="http://www.portvancouver.com/environment/air-energy-climate-action/cargo-handling-equipment/nrde/">http://www.portvancouver.com/environment/air-energy-climate-action/cargo-handling-equipment/nrde/</a> ).
32.	Air emissions from vehicle/equipment exhaust, dust and vapours shall be minimized and managed to avoid effects on and off the Project site. More detailed guidance is available in Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities prepared for Environment Canada (Cheminfo Services Inc. March 2005).
33.	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.
34.	The Permit Holder shall remove all abandoned utilities from the project site, both underground and aboveground. At locations of connection to municipal work (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 VFPA's Record Drawing Standards (available at: <a href="https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/guidelines/vfpa-record-drawing-standards/">https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/guidelines/vfpa-record-drawing-standards/</a> ).
35.	The Permit Holder shall ensure that an appropriately qualified archaeological monitor be on the Project site at all times during ground disturbing activities with the potential to intrude into native soils.
36.	The Permit Holder shall provide opportunities for interested Indigenous groups to monitor and be present on the Project site at all times during ground disturbing activities with the potential to intrude into native soils.
37.	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: <a href="https://www.portvancouver.com/permitting-and-reviews/building-permits/">https://www.portvancouver.com/permitting-and-reviews/building-permits/</a> . Should one or more of the criteria not be met, a Port Authority Building Permit is required.
38.	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> .
39.	The Permit Holder shall ensure that no construction activities will take place within the wetted perimeter of the No. 7 Road Canal.
40.	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.
41.	The Permit Holder shall maintain equipment in good mechanical condition and free of fluid leaks, invasive species, and noxious weeds.

	CONDITIONS – UPON COMPLETION	SUBMISSION TIMING (Business Days)
42.	The Permit Holder shall notify the Port Authority upon completion of the Project.	Upon substantial completion
43.	The Permit Holder shall provide record drawings in both AutoCAD and PDF format (with an Engineers stamp where applicable) in accordance with the Port Authority’s Record Drawing Standards (available at: <a href="https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/guidelines/vfpa-record-drawing-standards/">https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/guidelines/vfpa-record-drawing-standards/</a> ), These are to include a Project site plan that clearly identifies the location of works. Both CAD & PDF file names must correspond to VFPA’s record drawing index number (Section 2.10 –VFPA Record Drawing Standards)..	Within 40 business days of completion
<b>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.</b>		
LENGTH OF PERMIT VALIDITY		
The Project must be completed no later than <b>November 30, 2026</b> (the Expiry Date).		
AMENDMENTS		
<ul style="list-style-type: none"> <li>• 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.</li> <li>• For an extension to the Expiry Date, the Permit Holder must apply in writing to the Port Authority no later than 40 business prior to that date.</li> </ul> <p><b>Failure to apply for an extension as required may, at the sole discretion of the Port Authority, result in termination of this Permit.</b></p>		

## 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](mailto:PER@portvancouver.com)  
 Website: [www.portvancouver.com](http://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.



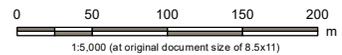
S:\1122\projects\115820041\drawings\title\_location\_map\fig\_115820041\_001\_Location\_Plan.mxd Revised: 2020-11-08 By: ghumph



**Notes**  
 1. Coordinate System: NAD 1983 UTM Zone 10N  
 2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada

- Railway
- Watercourse
- Waterbody
- Municipal Boundary
- Roadwork Limit
- 15m Riparian Management Area (RMA)
- Parcel Boundary
- Port of Vancouver Industrial Lands
- City of Richmond Right of Way

**VANCOUVER FRASER PORT AUTHORITY**  
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Project Location:  
 Richmond, BC

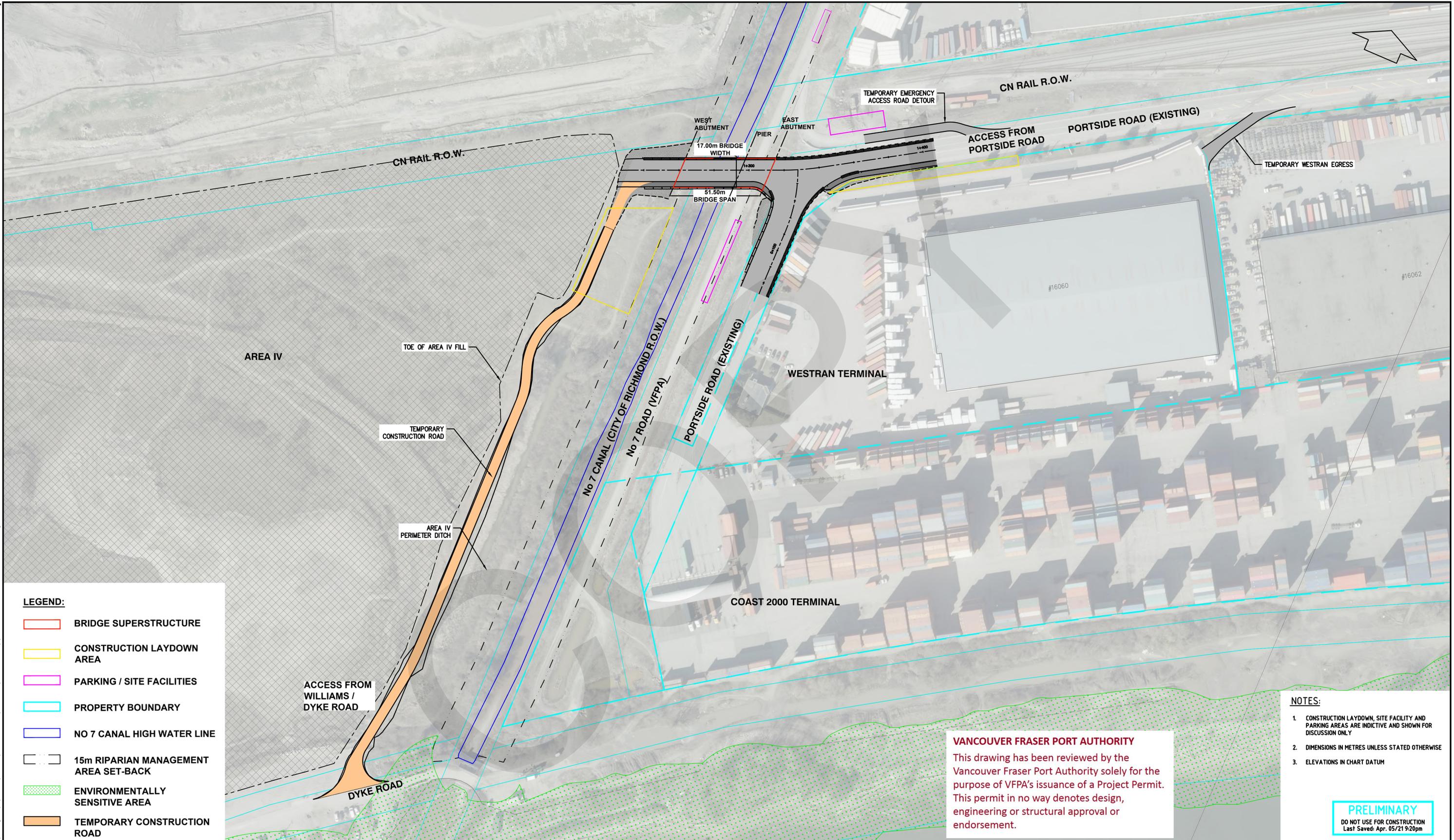
Project Number: 115820041  
 Prepared by SFRELAND on 20201106  
 Requested by JMINFORD on 20201106  
 Checked by SPARKER on 20201106

Client/Project/Report  
 Vancouver Fraser Port Authority (VFPA)  
 Portside Road Extension and Bridge Project

Figure No.  
**1**  
 Title  
**Project Location**

TITLE BLOCK: DL-TR.dwg

DATE: 2021/04/09 - 10:52am  
 PATH: \\C:\183-pf\1158\active\115820041\02\_cad\03\_sheets\ID020C-STNT-DWG-AM-0003.dwg



**LEGEND:**

- BRIDGE SUPERSTRUCTURE
- CONSTRUCTION LAYDOWN AREA
- PARKING / SITE FACILITIES
- PROPERTY BOUNDARY
- NO 7 CANAL HIGH WATER LINE
- 15m RIPARIAN MANAGEMENT AREA SET-BACK
- ENVIRONMENTALLY SENSITIVE AREA
- TEMPORARY CONSTRUCTION ROAD

- NOTES:**
1. CONSTRUCTION LAYDOWN, SITE FACILITY AND PARKING AREAS ARE INDICATIVE AND SHOWN FOR DISCUSSION ONLY
  2. DIMENSIONS IN METRES UNLESS STATED OTHERWISE
  3. ELEVATIONS IN CHART DATUM

**VANCOUVER FRASER PORT AUTHORITY**  
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**PRELIMINARY**  
 DO NOT USE FOR CONSTRUCTION  
 Last Saved: Apr. 05/21 9:20pm

Ref.No.	REFERENCE



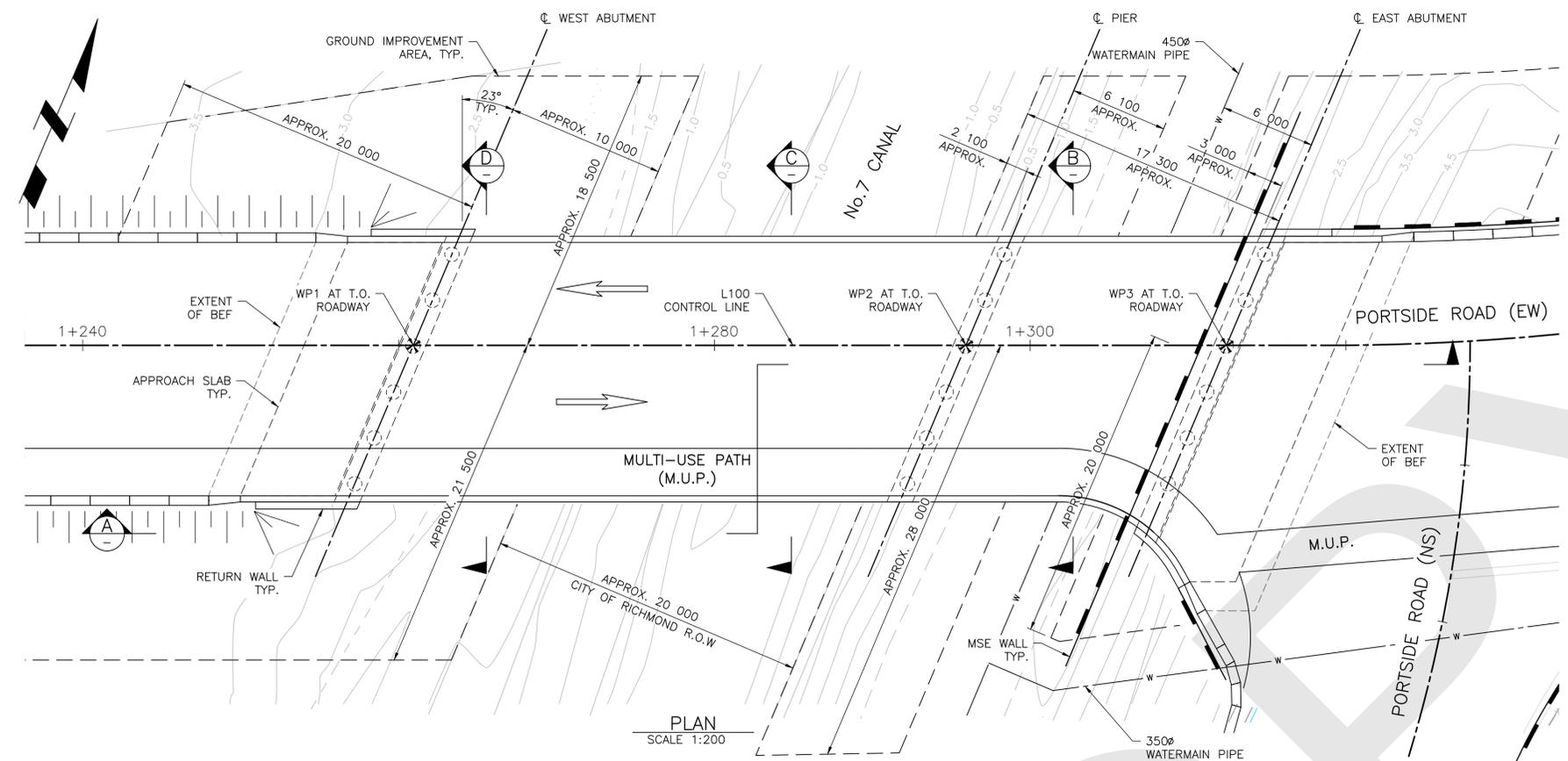
C	2021.04.09	ISSUED FOR 30% REFERENCE DESIGN - DRAFT	JF	BH
B	2021.01.22	ISSUED FOR 20% REFERENCE DESIGN	SF	BH
A	2020.10.20	ISSUED WITH DRAFT EOA REPORT	SF	BH
No.	Date	REVISION	Dr'n	Ch'd



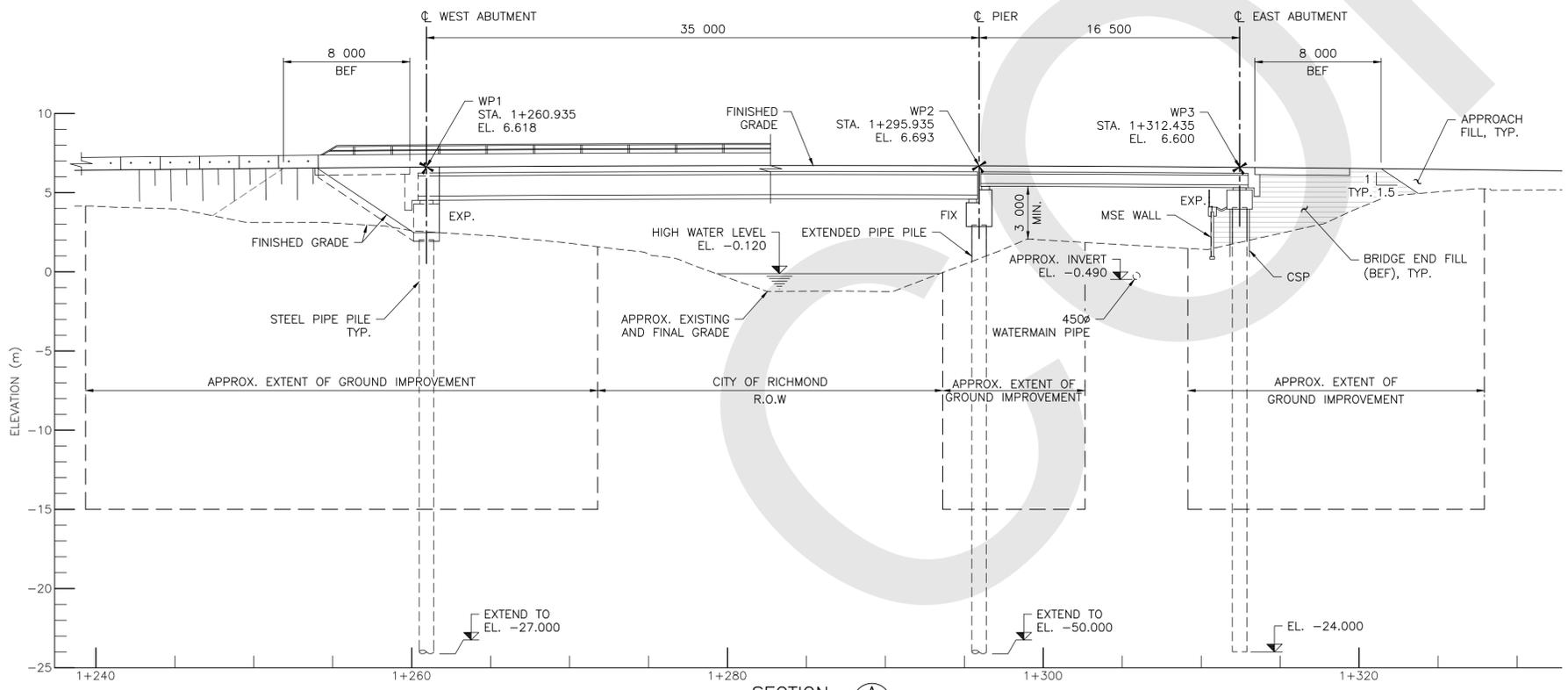
VANCOUVER FRASER PORT AUTHORITY  
 GREATER VANCOUVER GATEWAY

DESIGN BY	BH
DRAWN BY	SF
APPROVED	MN
DATE	4/5/2021
SCALE	SHOWN
PMV SITE	

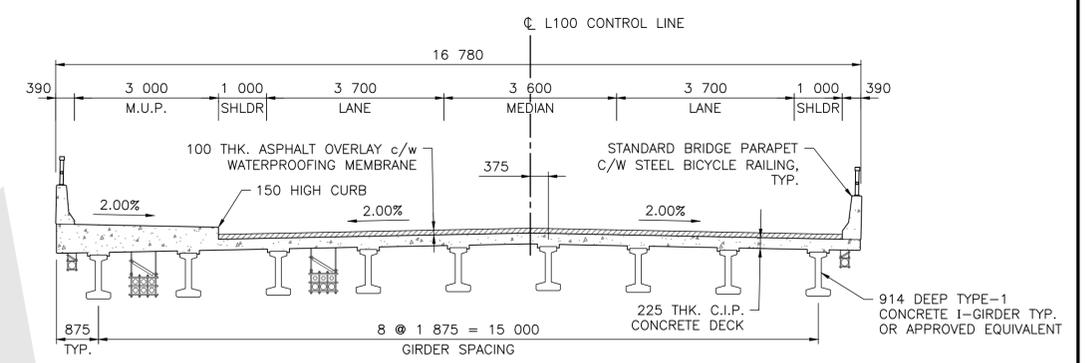
<b>PORTSIDE ROAD EXTENSION AND BRIDGE PROPOSED SITE PLAN</b>			
SIZE	DWA	ID020C-STNT-DWG-AM-0003	SHEET
D			1 OF 1
			REV. C



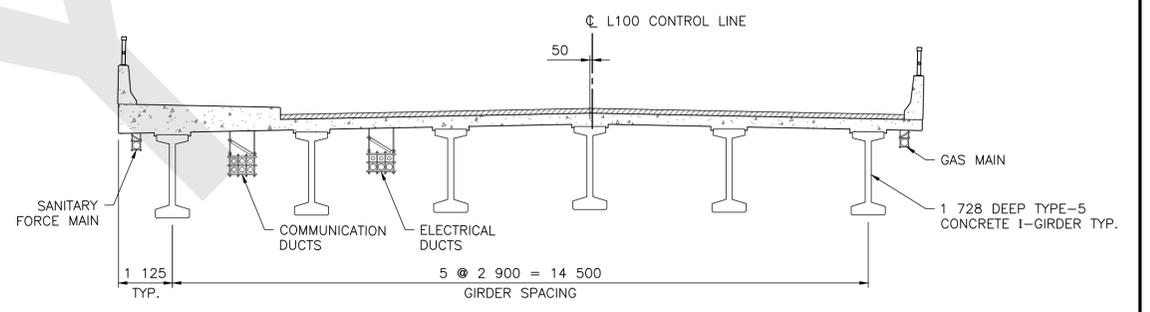
PLAN  
SCALE 1:200



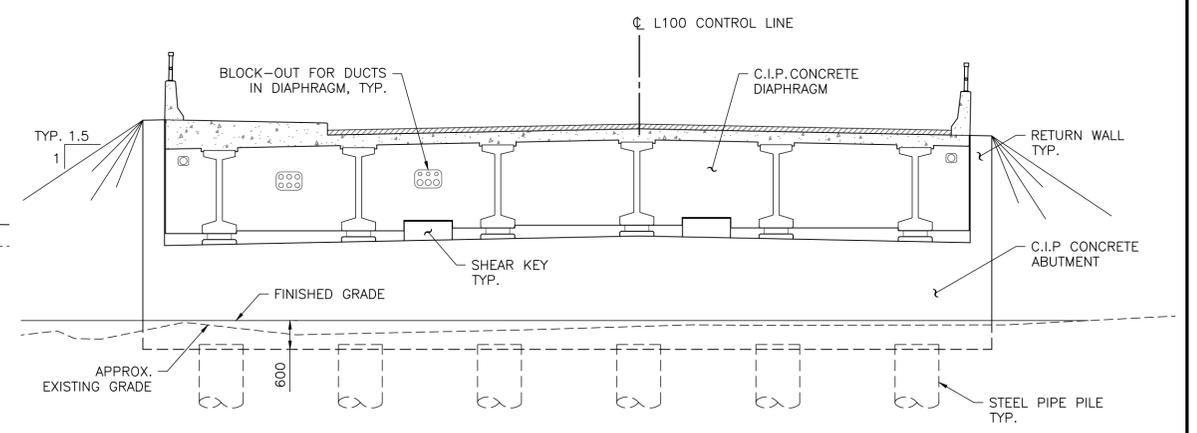
SECTION A  
SCALE 1:200



SECTION B  
SCALE 1:75



SECTION C  
SCALE 1:75



SECTION D  
SCALE 1:75

**VANCOUVER FRASER PORT AUTHORITY**  
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**PRELIMINARY**  
NOT FOR CONSTRUCTION  
FOR DISCUSSION ONLY

- NOTES:**
- FOR DESIGN CRITERIA, REFER PROJECT TECHNICAL DESIGN CRITERIA DOCUMENT ID020C-STNT-BOD-AM-0001.

Ref. No.	REFERENCE
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C	APR. 09	ISSUED FOR 30% PRELIMINARY DESIGN - DRAFT	SZ	VV
B	JAN. 22	ISSUED FOR 20% PRELIMINARY DESIGN - DRAFT	SZ	VV
A	OCT. 30	ISSUED FOR 10% PRELIMINARY DESIGN - DRAFT	SZ	VV
No.	Date	REVISION	Dr'n	Ch'd

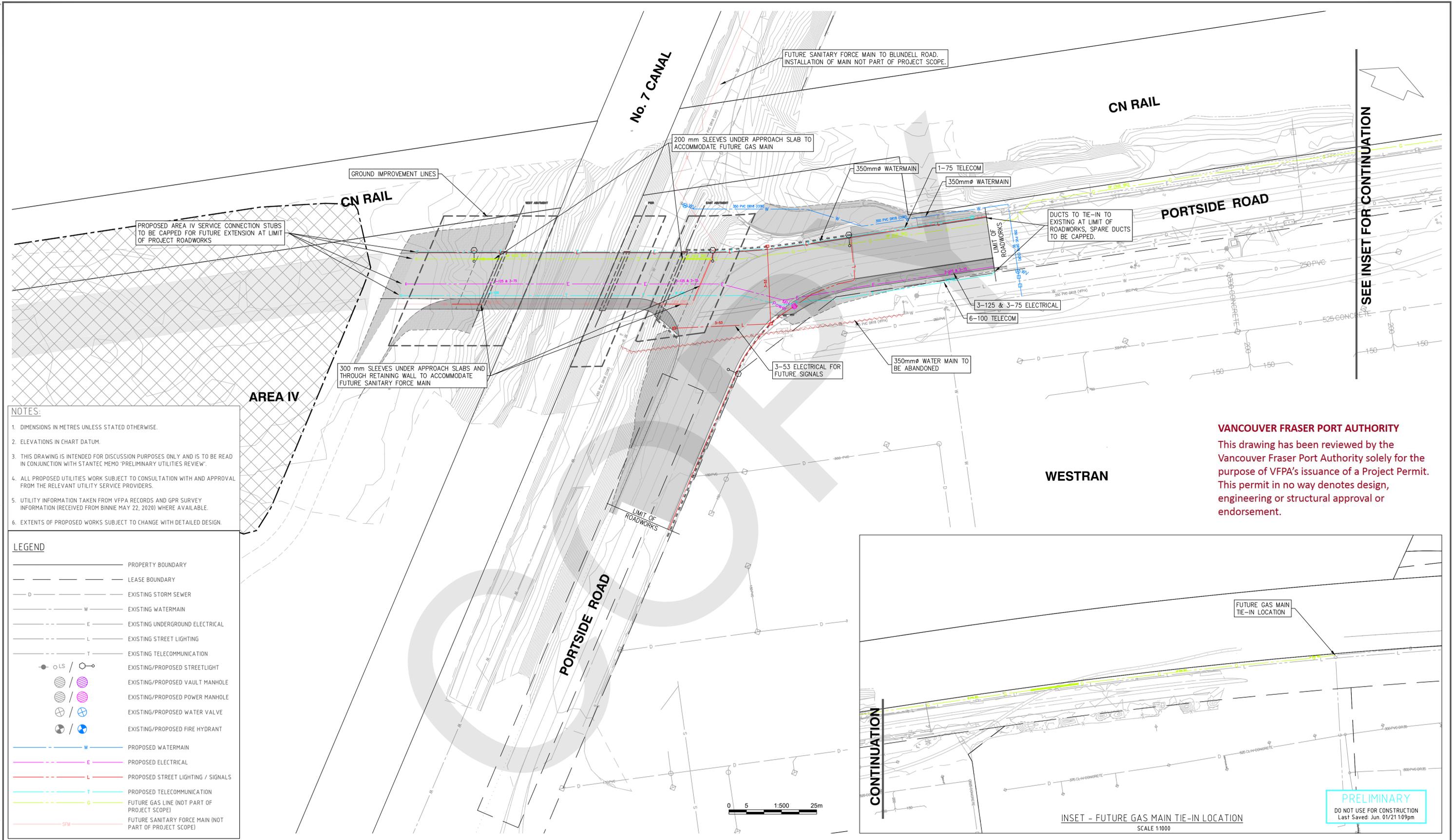


**VANCOUVER FRASER PORT AUTHORITY**  
ENGINEERING DEPARTMENT

DESIGN BY	VV
DRAWN BY	SZ
APPROVED	JP
DATE	2021-04-09
SCALE	SHOWN
VFPA SITE	

<b>No. 7 CANAL BRIDGE</b>	
<b>PORTSIDE ROAD EXTENSION AND BRIDGE</b>	
<b>GENERAL ARRANGEMENT - SHEET 1</b>	
SIZE	DWG.
<b>D</b>	<b>ID020C-STNT-DWG-ST-0001</b>
SHEET	REV.
<b>1 OF 2</b>	<b>C</b>

TITLE BLOCK: DL-TE.dwg



PROPOSED AREA IV SERVICE CONNECTION STUBS TO BE CAPPED FOR FUTURE EXTENSION AT LIMIT OF PROJECT ROADWORKS

FUTURE SANITARY FORCE MAIN TO BLUNDELL ROAD. INSTALLATION OF MAIN NOT PART OF PROJECT SCOPE.

200 mm SLEEVES UNDER APPROACH SLAB TO ACCOMMODATE FUTURE GAS MAIN

350mmØ WATERMAIN

1-75 TELECOM

DUCTS TO TIE-IN TO EXISTING AT LIMIT OF ROADWORKS, SPARE DUCTS TO BE CAPPED.

3-125 & 3-75 ELECTRICAL

6-100 TELECOM

300 mm SLEEVES UNDER APPROACH SLABS AND THROUGH RETAINING WALL TO ACCOMMODATE FUTURE SANITARY FORCE MAIN

3-53 ELECTRICAL FOR FUTURE SIGNALS

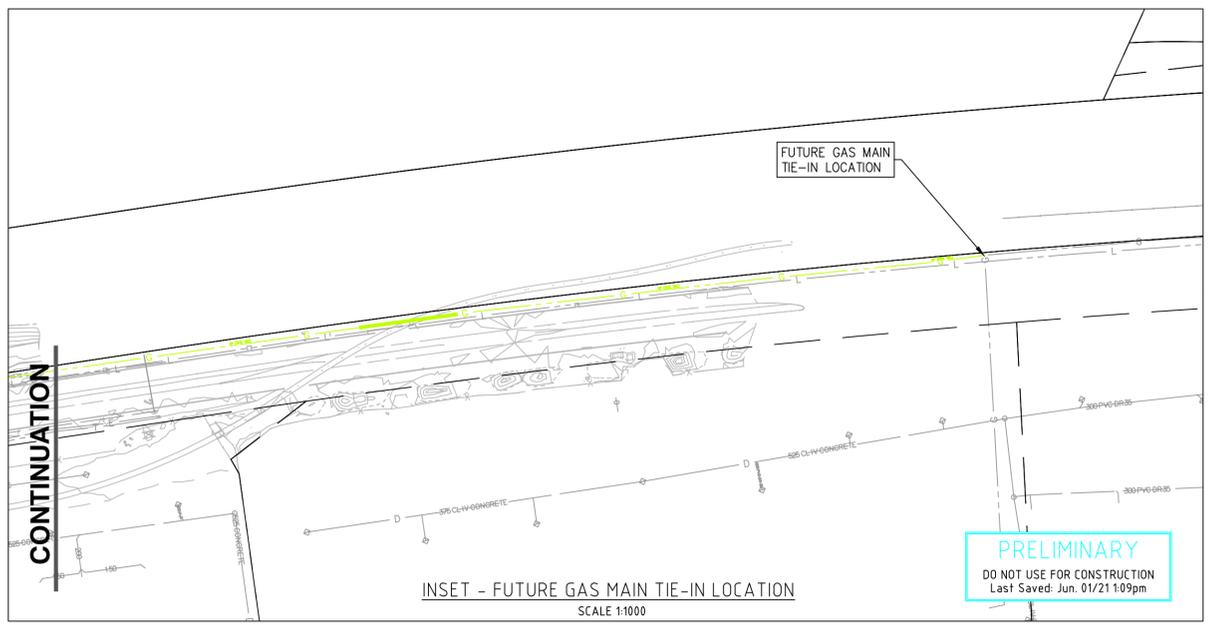
350mmØ WATER MAIN TO BE ABANDONED

- NOTES:**
1. DIMENSIONS IN METRES UNLESS STATED OTHERWISE.
  2. ELEVATIONS IN CHART DATUM.
  3. THIS DRAWING IS INTENDED FOR DISCUSSION PURPOSES ONLY AND IS TO BE READ IN CONJUNCTION WITH STANTEC MEMO 'PRELIMINARY UTILITIES REVIEW'.
  4. ALL PROPOSED UTILITIES WORK SUBJECT TO CONSULTATION WITH AND APPROVAL FROM THE RELEVANT UTILITY SERVICE PROVIDERS.
  5. UTILITY INFORMATION TAKEN FROM VFPA RECORDS AND GPR SURVEY INFORMATION (RECEIVED FROM BINNIE MAY 22, 2020) WHERE AVAILABLE.
  6. EXTENTS OF PROPOSED WORKS SUBJECT TO CHANGE WITH DETAILED DESIGN.

**LEGEND**

—	PROPERTY BOUNDARY
- - -	LEASE BOUNDARY
D	EXISTING STORM SEWER
W	EXISTING WATERMAIN
E	EXISTING UNDERGROUND ELECTRICAL
L	EXISTING STREET LIGHTING
T	EXISTING TELECOMMUNICATION
○ LS / ○	EXISTING/PROPOSED STREETLIGHT
⊗	EXISTING/PROPOSED VAULT MANHOLE
⊗	EXISTING/PROPOSED POWER MANHOLE
⊗	EXISTING/PROPOSED WATER VALVE
⊗	EXISTING/PROPOSED FIRE HYDRANT
W	PROPOSED WATERMAIN
E	PROPOSED ELECTRICAL
L	PROPOSED STREET LIGHTING / SIGNALS
T	PROPOSED TELECOMMUNICATION
G	FUTURE GAS LINE (NOT PART OF PROJECT SCOPE)
SFM	FUTURE SANITARY FORCE MAIN (NOT PART OF PROJECT SCOPE)

**VANCOUVER FRASER PORT AUTHORITY**  
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Ref.No.	REFERENCE



No.	Date	REVISION	Dr'n	Ch'd
D	2021.06.03	ISSUED FOR PER APPLICATION UPDATE	JW	BH
C	2021.04.09	ISSUED FOR 30% REFERENCE DESIGN - DRAFT	JW	BH
B	2021.01.22	ISSUED FOR 20% REFERENCE DESIGN	JW	BH
A	2020.10.30	10% PRELIMINARY DESIGN DRAFT - FOR DISCUSSION	JS	BH



VANCOUVER FRASER PORT AUTHORITY  
 ENGINEERING DEPARTMENT

DESIGN BY	SF
DRAWN BY	SF
APPROVED	BH
DATE	2021.06.01
SCALE	SHOWN
PMV SITE	

PORTSIDE ROAD EXTENSION  
 AND BRIDGE  
 PROPOSED COMBINED UTILITIES PLAN

SIZE	D	DWG.	ID020C-STNT-DWG-UT-0002	SHEET	1 OF 1	REV.	D
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DATE: 2021/04/09 - 8:30am  
 PATH: \\Cd1222-f01\shared\_projects\115820041\10\_drawings\02\_sheets\04\_electrical\ID020C-STNT-DWG-EL-0001.dwg



**ELECTRICAL LEGEND**

- DAVIT STREETLIGHT POLE (9m SINGLE PIECE POLE) LED ROADWAY LUMINAIRE (LED ROADWAY LIGHTING STOCK CODE Nxt72m0s2es7gy3uls2h (C))
- EXISTING LED ROADWAY LUMINAIRE POLE TO BE REMOVED
- EXISTING LED ROADWAY LUMINAIRE POLE
- PROPOSED ROUND PLASTIC JUNCTION BOX C/W GALVANIZED LD BONDED TO GROUND
- PROPOSED 120V RPVC CONDUIT
- EXISTING 120V RPVC CONDUIT

**LUMINANCE DESIGN CRITERIA**

ITEM	DESIGN REQUIREMENTS	DESIGN ACHIEVED
STREET NAME(S)	PORTSIDE ROAD (EXISTING)	
PEDESTRIAN CONFLICT AREA	LOW/MEDIUM	
ROAD CLASSIFICATION	COLLECTOR	
ILLUMINATION TYPE	LED LUMINAIRES - TYPE 3 IES DISTRIBUTION	
SPACING (MAX)	VARIES	
LUMINANCE LEVEL LEVEL (CD/m <sup>2</sup> )	0.6	1.06
UNIFORMITY RATIO (AVG:MIN)	3.5:1	2.12:1
UNIFORMITY RATIO (MAX:MIN)	6:1	3.18:1
VEILING LUMINANCE RATIO	0.4	.01

IESNA RP-8 TABLE 3

**LUMINANCE DESIGN CRITERIA**

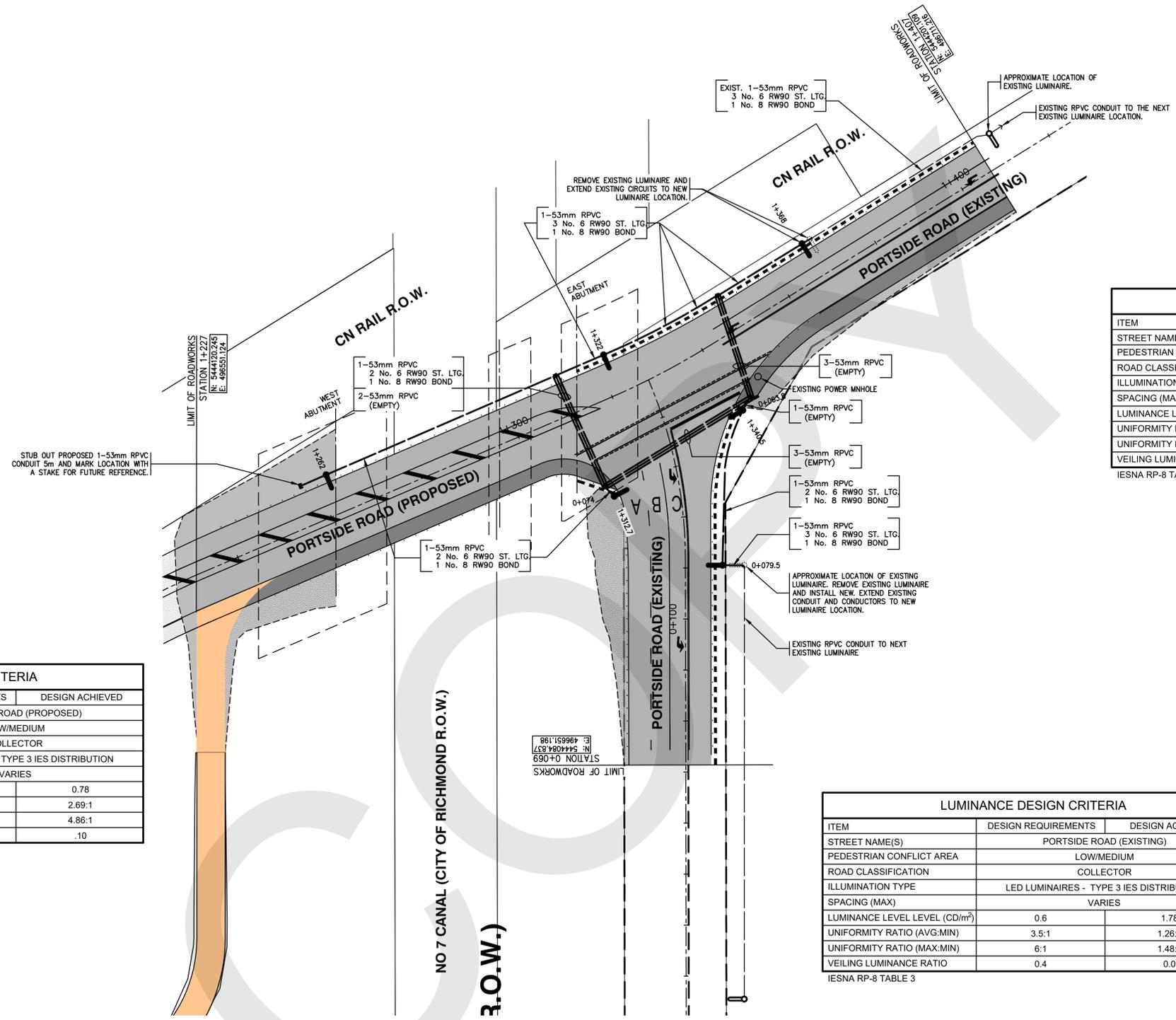
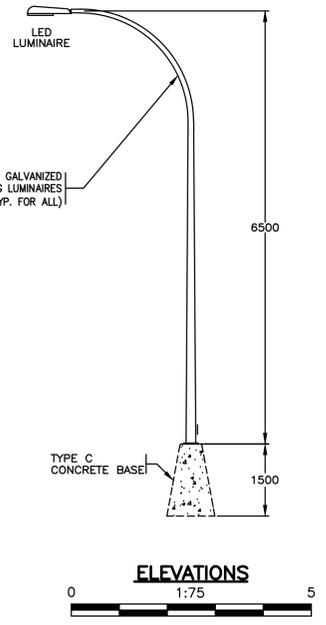
ITEM	DESIGN REQUIREMENTS	DESIGN ACHIEVED
STREET NAME(S)	PORTSIDE ROAD (PROPOSED)	
PEDESTRIAN CONFLICT AREA	LOW/MEDIUM	
ROAD CLASSIFICATION	COLLECTOR	
ILLUMINATION TYPE	LED LUMINAIRES - TYPE 3 IES DISTRIBUTION	
SPACING (MAX)	VARIES	
LUMINANCE LEVEL LEVEL (CD/m <sup>2</sup> )	0.6	0.78
UNIFORMITY RATIO (AVG:MIN)	3.5:1	2.69:1
UNIFORMITY RATIO (MAX:MIN)	6:1	4.86:1
VEILING LUMINANCE RATIO	0.4	.10

IESNA RP-8 TABLE 3

**LUMINANCE DESIGN CRITERIA**

ITEM	DESIGN REQUIREMENTS	DESIGN ACHIEVED
STREET NAME(S)	PORTSIDE ROAD (EXISTING)	
PEDESTRIAN CONFLICT AREA	LOW/MEDIUM	
ROAD CLASSIFICATION	COLLECTOR	
ILLUMINATION TYPE	LED LUMINAIRES - TYPE 3 IES DISTRIBUTION	
SPACING (MAX)	VARIES	
LUMINANCE LEVEL LEVEL (CD/m <sup>2</sup> )	0.6	1.78
UNIFORMITY RATIO (AVG:MIN)	3.5:1	1.26:1
UNIFORMITY RATIO (MAX:MIN)	6:1	1.48:1
VEILING LUMINANCE RATIO	0.4	0.0

IESNA RP-8 TABLE 3



**VANCOUVER FRASER PORT AUTHORITY**  
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**ALL EQUIPMENT IS PROPOSED UNLESS OTHERWISE NOTED**



**30% REVIEW**  
 DO NOT USE FOR CONSTRUCTION  
 Last Saved: Apr. 09/21 8:28am



DESIGN BY	CC
DRAWN BY	TS
APPROVED	TF
DATE	2020.03.26
SCALE	SHOWN
PMV SITE	

No. 7 CANAL BRIDGE  
 PORTSIDE ROAD EXTENSION  
 LIGHTING ARRANGEMENT

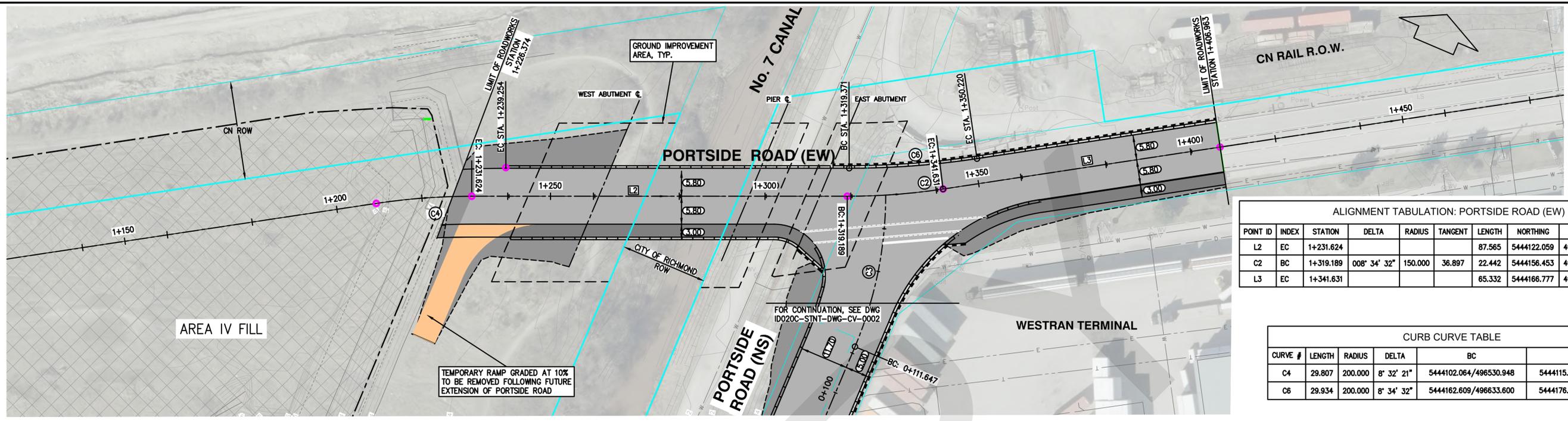
Ref.No.	REFERENCE

No.	Date	REVISION	Dr'n	Ch'd
C	2021.04.01	ISSUED FOR DRAFT 30% REFERENCE DESIGN	TS	TF
B	2021.01.22	ISSUED FOR 20% REFERENCE DESIGN	TS	TF
A	2020.10.23	ISSUED FOR 10% PRELIMINARY DESIGN-DRAFT	TS	TF

VANCOUVER FRASER PORT AUTHORITY  
 ENGINEERING DEPARTMENT

SIZE	DWG.	ID020C-STNT-DWG-EL-0001	SHEET	1 OF 1	REV.	C
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TITLE BLOCK: DL-TR.dwg

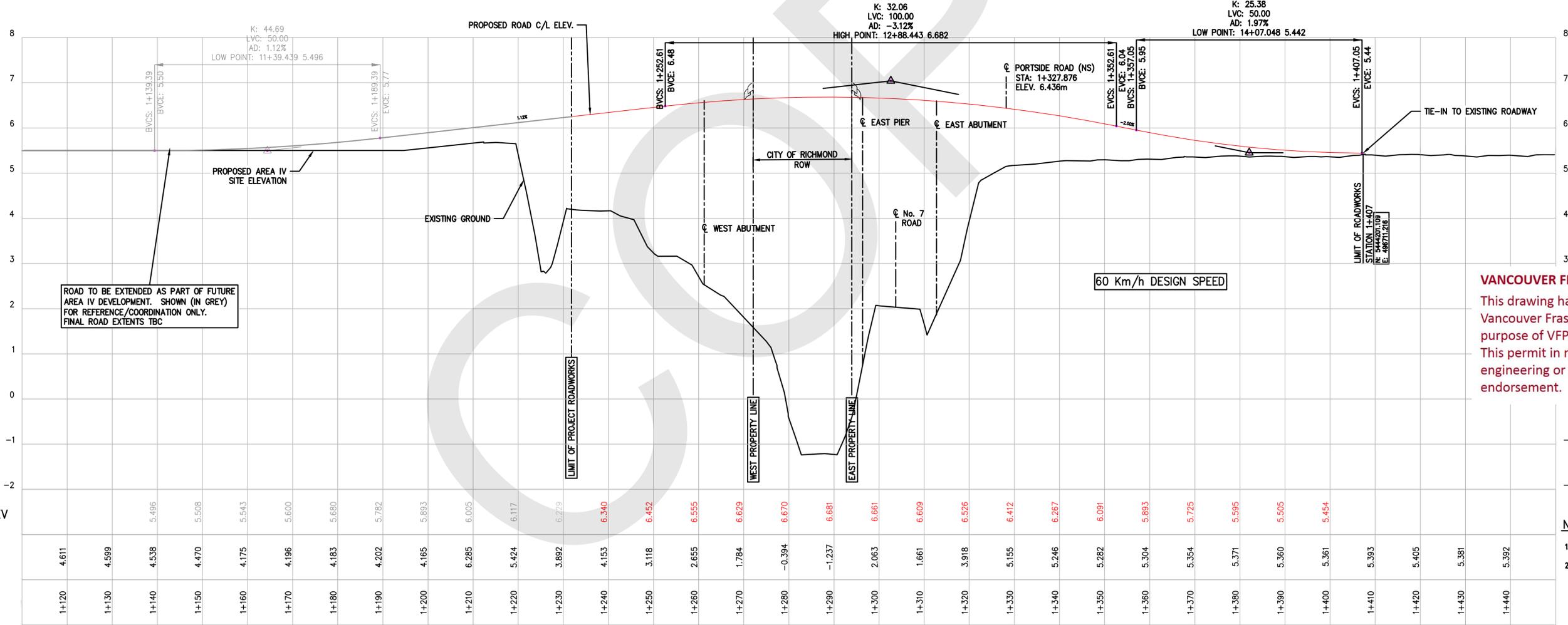


ALIGNMENT TABULATION: PORTSIDE ROAD (EW)

POINT ID	INDEX	STATION	DELTA	RADIUS	TANGENT	LENGTH	NORTHING	EASTING	BEARING
L2	EC	1+231.624				87.565	5444122.059	496555.203	066° 52' 20"
C2	BC	1+319.189	008° 34' 32"	150.000	36.897	22.442	5444156.453	496635.731	
L3	EC	1+341.631				65.332	5444166.777	496655.634	058° 17' 49"

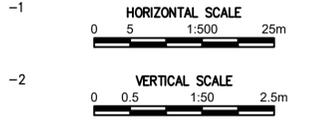
CURB CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA	BC	EC
C4	29.807	200.000	8° 32' 21"	5444102.064/496530.948	5444115.751/496557.357
C6	29.934	200.000	8° 34' 32"	5444162.609/496633.600	5444176.380/496660.144



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- NOTES:
- DIMENSIONS IN METRES UNLESS STATED OTHERWISE
  - ELEVATIONS IN CHART DATUM

**PRELIMINARY**  
DO NOT USE FOR CONSTRUCTION  
Last Saved: Apr. 07/21 2:05pm

DATE: 2021/04/09 - 9:41am  
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Ref.No.	REFERENCE



No.	Date	REVISION	Dr'n	Ch'd
C	2021.04.09	ISSUED FOR 30% REFERENCE DESIGN - DRAFT	JF	BH
B	2021.01.22	ISSUED FOR 20% REFERENCE DESIGN	SF	BH
A	2020.10.30	ISSUED FOR 10% PRELIMINARY DESIGN - DRAFT	SF	BH

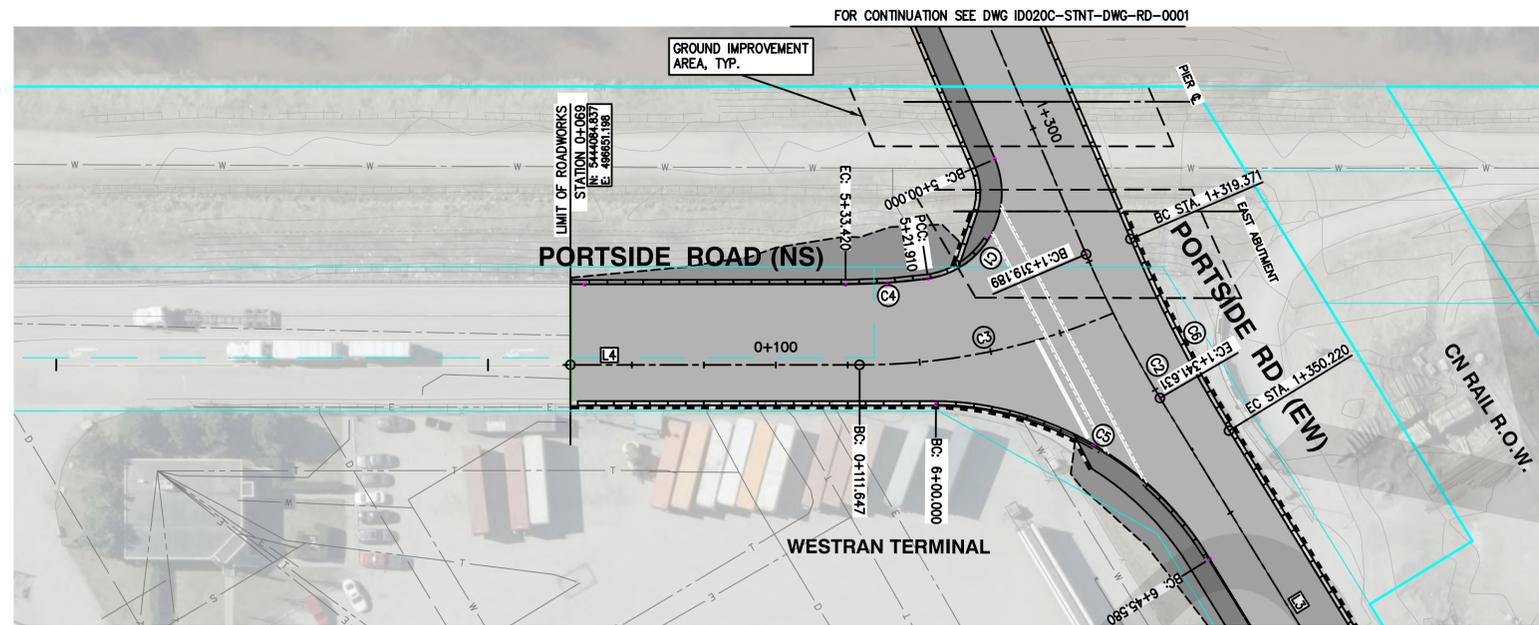


VANCOUVER FRASER PORT AUTHORITY  
GREATER VANCOUVER GATEWAY

DESIGN BY	BH
DRAWN BY	SF
APPROVED	MN
DATE	4/7/2021
SCALE	SHOWN
PMV SITE	

PORTSIDE ROAD EXTENSION AND BRIDGE  
PORTSIDE ROAD (EW)  
PLAN AND PROFILE

SIZE	DWG.	ID020C-STNT-DWG-RD-0001	SHEET	1 OF 2	REV.	C
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ALIGNMENT TABULATION: PORTSIDE NS

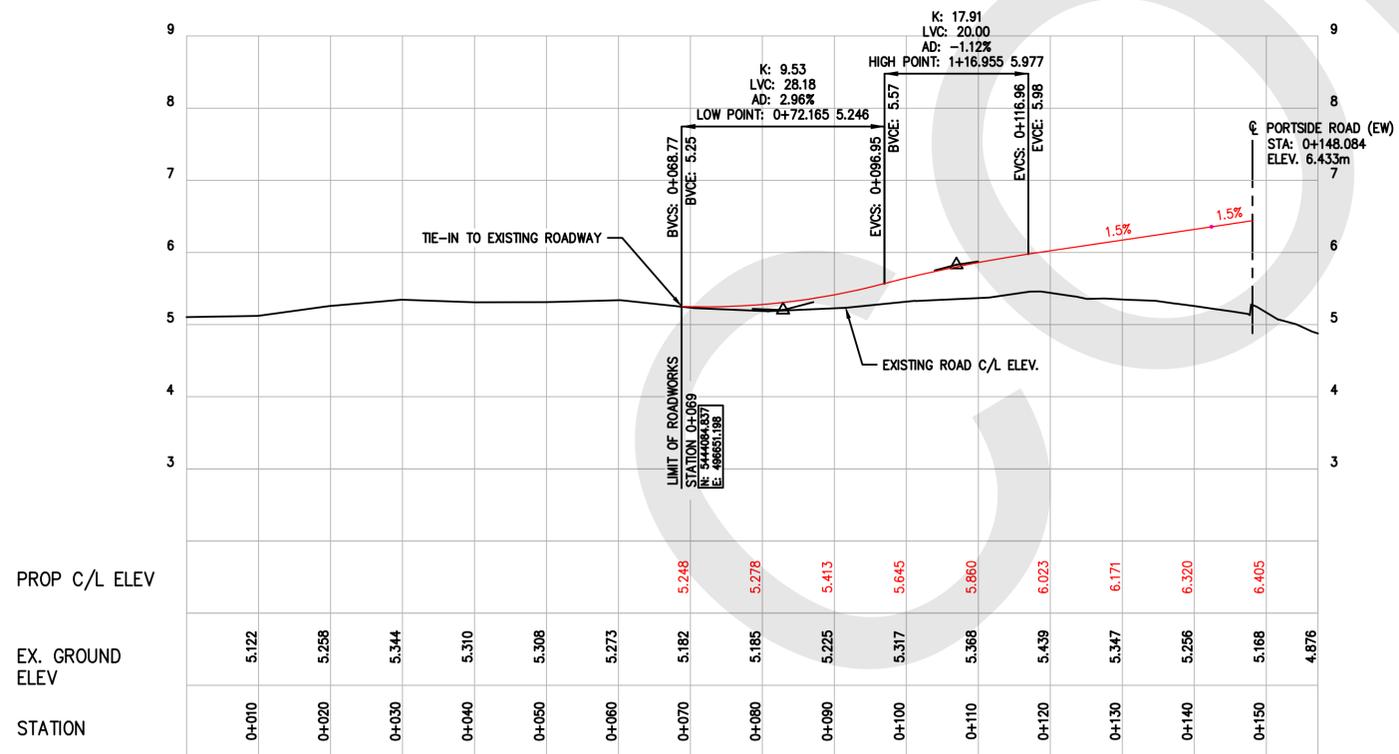
POINT ID	INDEX	STATION	DELTA	RADIUS	TANGENT	LENGTH	NORTHING	EASTING	BEARING
L4	PI	0+000.000				111.647	5444013.416	496651.341	359° 53' 17"
C3	BC	0+111.647	023° 02' 48"	90.000	60.200	36.202	5444125.018	496651.123	

ALIGNMENT TABULATION: CURB RETURN SOUTH WEST

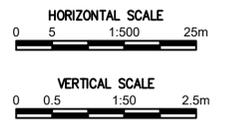
POINT ID	INDEX	STATION	DELTA	RADIUS	TANGENT	LENGTH	NORTHING	EASTING	BEARING
C1	BC	5+000.000	104° 39' 17"	12.000	50.989	21.919	5444143.768	496622.573	
C4	EC	5+21.910	008° 21' 40"	78.850	18.916	11.511	5444134.504	496639.149	

ALIGNMENT TABULATION: CURB RETURN SOUTH EAST

POINT ID	INDEX	STATION	DELTA	RADIUS	TANGENT	LENGTH	NORTHING	EASTING	BEARING
C5	BC	6+000.000	058° 03' 06"	45.000	81.924	45.594	5444135.648	496656.572	



**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.



- NOTES:**
- DIMENSIONS IN METRES UNLESS STATED OTHERWISE
  - ELEVATIONS IN CHART DATUM

**PRELIMINARY**  
 DO NOT USE FOR CONSTRUCTION  
 Last Saved: Apr. 07/21 2:05pm

DATE: 2021/04/09 - 9:33am  
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Ref.No.	REFERENCE



No.	Date	REVISION	Dr'n	Ch'd
C	2020.04.09	ISSUED FOR 30% REFERENCE DESIGN - DRAFT	JF	BH
B	2020.01.22	ISSUED FOR 20% REFERENCE DESIGN	SF	BH
A	2020.10.30	ISSUED FOR 10% PRELIMINARY DESIGN - DRAFT	SF	BH

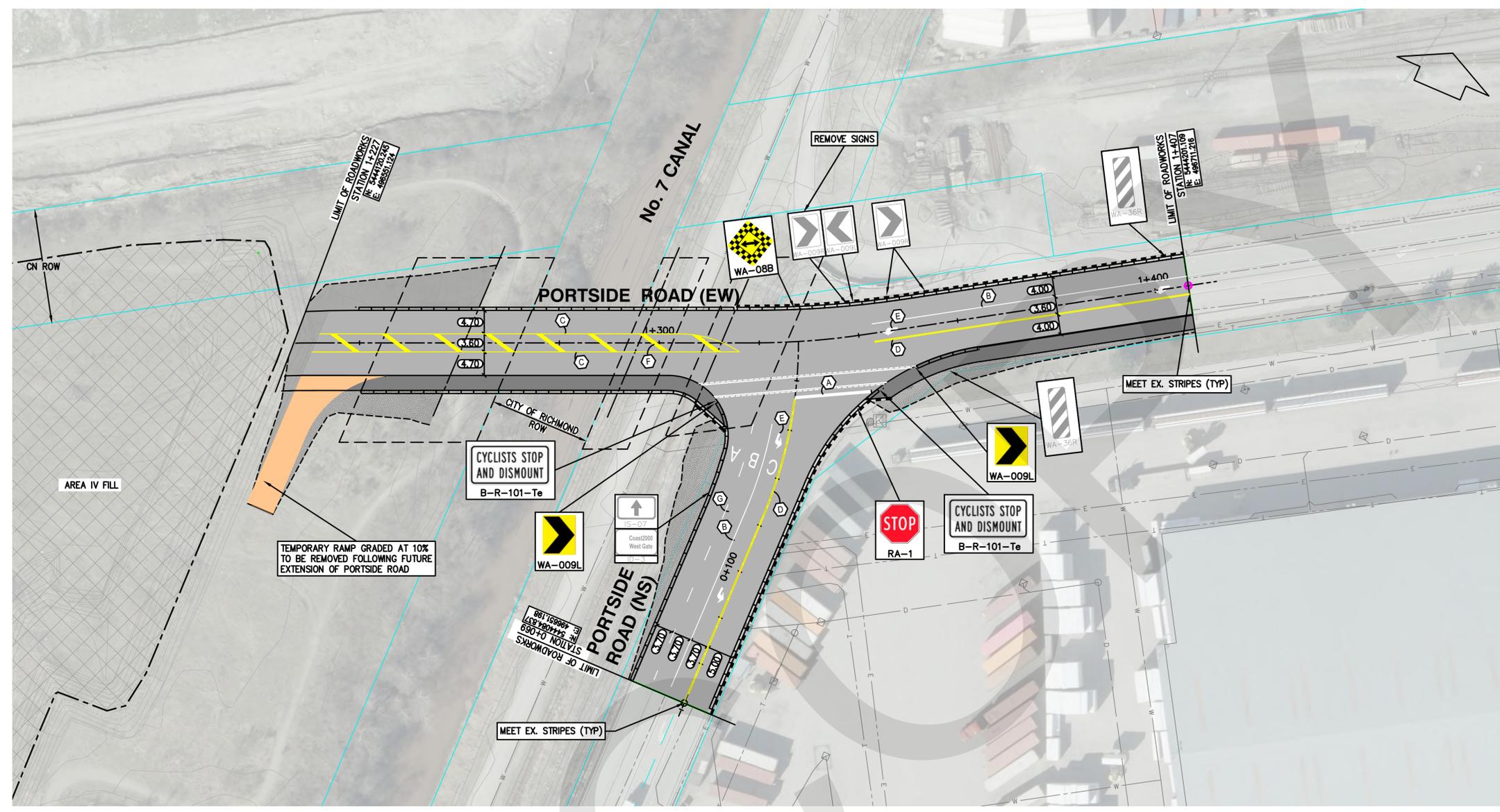
VANCOUVER FRASER PORT AUTHORITY  
 GREATER VANCOUVER GATEWAY

DESIGN BY	BH
DRAWN BY	SF
APPROVED	MN
DATE	4/7/2021
SCALE	SHOWN
PMV SITE	

**PORTSIDE ROAD EXTENSION AND BRIDGE**  
**PORTSIDE ROAD (NS)**  
**PLAN AND PROFILE**

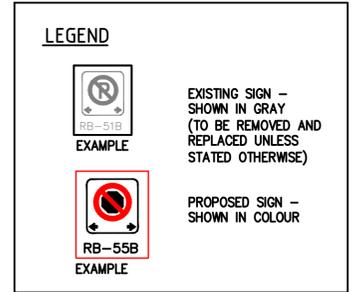
SIZE	DWG.	ID020C-STNT-DWG-RD-0002	SHEET	2 OF 2	REV.	C
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- General Notes**
1. ALL PAVEMENT MARKINGS AND SIGNAGE PER THE CURRENT EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR CANADA (MUTCD CANADA) AND PAVEMENT MARKINGS.
  2. REFER TO MUTCD CANADA C1-1 TO C1-4 FOR PAVEMENT MARKINGS WIDTHS, SPACING AND COLOUR.
  3. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
  4. EXISTING SIGNS TO BE REMOVED AND REINSTATED AS DIRECTED BY THE CONTRACT ADMINISTRATOR.

- Key Notes**
- (A) 600mm THICK STOP BAR AS PER MUTCD CANADA FIGURE C1-1
  - (B) 100mm THICK WHITE SOLID LINE AS PER MUTCD CANADA FIGURE C1-1
  - (C) 100mm THICK SINGLE SOLID YELLOW LINE AS PER MUTCD CANADA FIGURE C1-1
  - (D) DOUBLE 100mm THICK SOLID YELLOW LINE AS PER MUTCD CANADA FIGURE C1-1
  - (E) 300mm THICK LEFT/RIGHT ARROWS AS PER MUTCD CANADA FIGURE C1-3
  - (F) 600mm THICK YELLOW MEDIAN MARKING AS PER MUTCD CANADA FIGURE C2-20
  - (G) 100mm THICK WHITE BROKEN LINE (3:6) AS PER MUTCD CANADA FIGURE C1-1



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0 5 1:500 25m

**NOTES:**

1. DIMENSIONS IN METRES UNLESS STATED OTHERWISE
2. ELEVATIONS IN CHART DATUM

**PRELIMINARY**  
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DATE: 2021/04/09 - 10:58am  
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No.	Date	REVISION	Dr'n	Ch'd
C	2021.04.09	ISSUED FOR 30% REFERENCE DESIGN - DRAFT	SF	BH
B	2021.01.22	ISSUED FOR 20% REFERENCE DESIGN	SF	BH
A	2020.10.30	ISSUED FOR 10% PRELIMINARY DESIGN - DRAFT	SF	BH



VANCOUVER FRASER PORT AUTHORITY  
 GREATER VANCOUVER GATEWAY

DESIGN BY	BH
DRAWN BY	SF
APPROVED	MN
DATE	4/9/2021
SCALE	SHOWN
PMV SITE	

**PORTSIDE ROAD EXTENSION AND BRIDGE  
 PORTSIDE ROAD  
 PAVEMENT MARKINGS AND SIGNAGE (PERMANENT)**

Ref.No.	REFERENCE

SIZE	D	DWG.	ID020C-STNT-DWG-RD-0003	SHEET	1 OF 1	REV.	C
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**LEGEND**

- CLOSURE AREA
- DELINEATOR
- T TRAFFIC CONTROL PERSON
- SIGN
- ALL INGRESS TRAFFIC (CONSTRUCTION AND WESTRAN/COAST 2000)
- WESTRAN/COAST 2000 INGRESS TRAFFIC ONLY
- CONSTRUCTION EGRESS TRAFFIC ONLY
- ALL EGRESS TRAFFIC (CONSTRUCTION AND WESTRAN)

- NOTES:**
1. CLOSURE AREA TO ALTERNATE SIDES WITH CONSTRUCTION STAGING.
  2. DATES, DURATION AND HOURS OF OPERATION: TBD.
  3. TRAFFIC CONTROLS BASED ON 50 Km/h SPEED ZONE.
  4. TRAFFIC CONTROL PERSONNEL TO UTILIZE RADIO COMMUNICATION WHEN VISIBILITY RESTRICTED.

0 5 1500 25m

**PRELIMINARY**

DO NOT USE FOR CONSTRUCTION  
 Last Saved: Jun. 11/20 4:39pm



DESIGN BY SF  
 DRAWN BY SF  
 APPROVED BH  
 DATE 2020.06.11  
 SCALE SHOWN  
 PMV SITE

**No. 7 CANAL BRIDGE  
 TRAFFIC CONTROL PLAN:  
 PORTSIDE ROAD CONSTRUCTION STAGING**

Ref.No.	REFERENCE

No.	Date	REVISION	Dr'n	Ch'd
0.1	2020.06.12	DRAFT - FOR DISCUSSION	SF	BH

VANCOUVER FRASER PORT AUTHORITY  
 ENGINEERING DEPARTMENT

SIZE D	DWG. 356-122-TM-100	SHEET 1 OF 1	REV. 0.1
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