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Traffic Management Plan

Sterling Shipyard Remediation and Infill Project

Prepared for:

Vancouver Fraser Port Authority

July 23, 2021

VFPA Project #20-191, VFPA Site Number VAN 070

Revision Index

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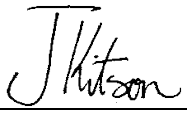

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1 Introduction

This Traffic Management Plan (TMP) outlines the traffic control procedures and requirements for the work outlined in this TMP and in other project-related documents. The TMP must be executed by qualified Traffic Control Company and any field adjustments to the plan shall be made by qualified personnel. Details outlined in this TMP shall be reviewed and updated by the prime contractor (Contractor), to be selected by Vancouver Fraser Port Authority (Port Authority), per contract requirements once the construction contract is awarded.

The Traffic Control Company shall implement the plan in accordance with the following guidelines and standards:

- BC Ministry of Transportation and Infrastructure (MoTI) 2020 Traffic Management Manual for Work on Roadways (2020 TMM).
- MoTI Manual of Standard Traffic Signs and Pavement Markings.
- MoTI Standard Specifications – Section 194.

1.1 Project Location

The Project site (Site) of the Sterling Shipyard Remediation and Infill Project (Project) is located within the boundaries of the Port Authority, at 2089 to 2095 Commissioner Street, Vancouver, BC, with a size of approximately 1.1 ha. The Site is located off the Burrard Inlet South Shore line; it is to the north side of Commissioner Street and east of Victoria Drive N, between the existing Lafarge Ready Mix concrete plant and former Marco Marine Container Inc. (Marco), with Pacific Elevators Terminal located further to the west. See Figure 1 below for the Site location. The Site is approximately 0.8 km east of the Clark Drive and Stewart Street intersection or 1.8 km west of the Commissioner Street/New Brighton Road Port of Vancouver gate. The only land access to The Site is by Commissioner Street. The entire Commissioner Street runs east-west and is within the boundaries of the Port Authority. Access to the Commissioner Street is restricted for general public traffic through access security pass and gated control.

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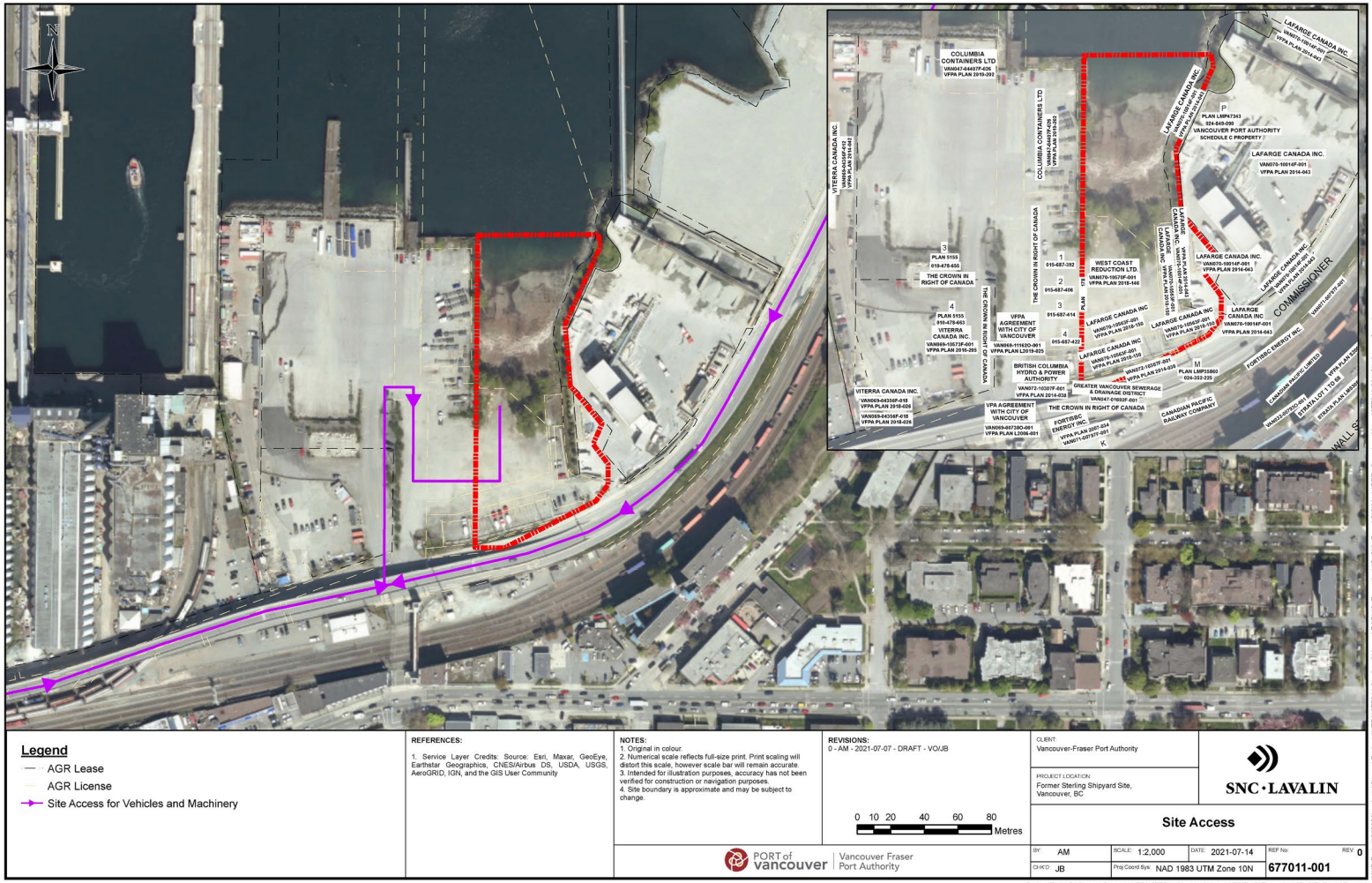

Figure 1: Site Location and Land Access/Egress Route

Commissioner Street has flat terrain with medium to small radius curves and posted speed limit of 30 km/hr. Commissioner Street at Clark Drive is an undivided four-lane two-way roadway. As traffic moves east, two-lane two-way traffic is separated onto the Stewart Street Overpass, leaving two-lane two-way at-grade level lanes on Commissioner Street with sections of Commissioner Street becoming a divided roadway. Immediately west of the Site, the Stewart Street Overpass reaches back to grade and Commissioner Street becomes a roadway with two westbound lanes and one eastbound lane. There are four at-grade railway crossing locations present on Commissioner Street between Clark Drive and New Brighton Road, with three (a total of ten tracks) located west of the Site and one (a total of one track) located east of the Site.

Adjacent to the Site on Commissioner Street at Victoria Drive N is an unsignalized intersection which consists of one westbound lane and one eastbound lane with an eastbound to northbound left-turn lane. Victoria Drive N is a non-marked minor access road which terminates in the unoccupied former Sterling Shipyard facility to the north and a fenced off area leading to a pedestrian overpass structure connected to Powell Street to the south. Access into the Port Authority boundary area from the pedestrian overpass is restricted by access security pass at the entry point of the structure. Current traffic on Victoria Drive N should be minimal. Marked sidewalk/pedestrian walkway is provided on the north side of Commissioner Street and a pedestrian crosswalk is located across Commissioner Street west of Victoria Drive N.

2 Work Activity

The Contractor will perform all construction work for this remediation and infill project for the redevelopment of the upland area and undeveloped intertidal area of the Site for future port activities. The Site will be approximately 70 metres in length, located off and away from the travelled roadway north of Commissioner Street. An estimate of 12-person crew is anticipated for the construction.

The construction activities will involve the excavation of approximately 11,300 m^3 of contaminated fill within the intertidal area and dredge of approximately 5,500 m^3 within the subtidal area, following which the Site will be infilled, creating approximately 5,000 m^2 of new land. See Figure 2 below for the Project Site plan.

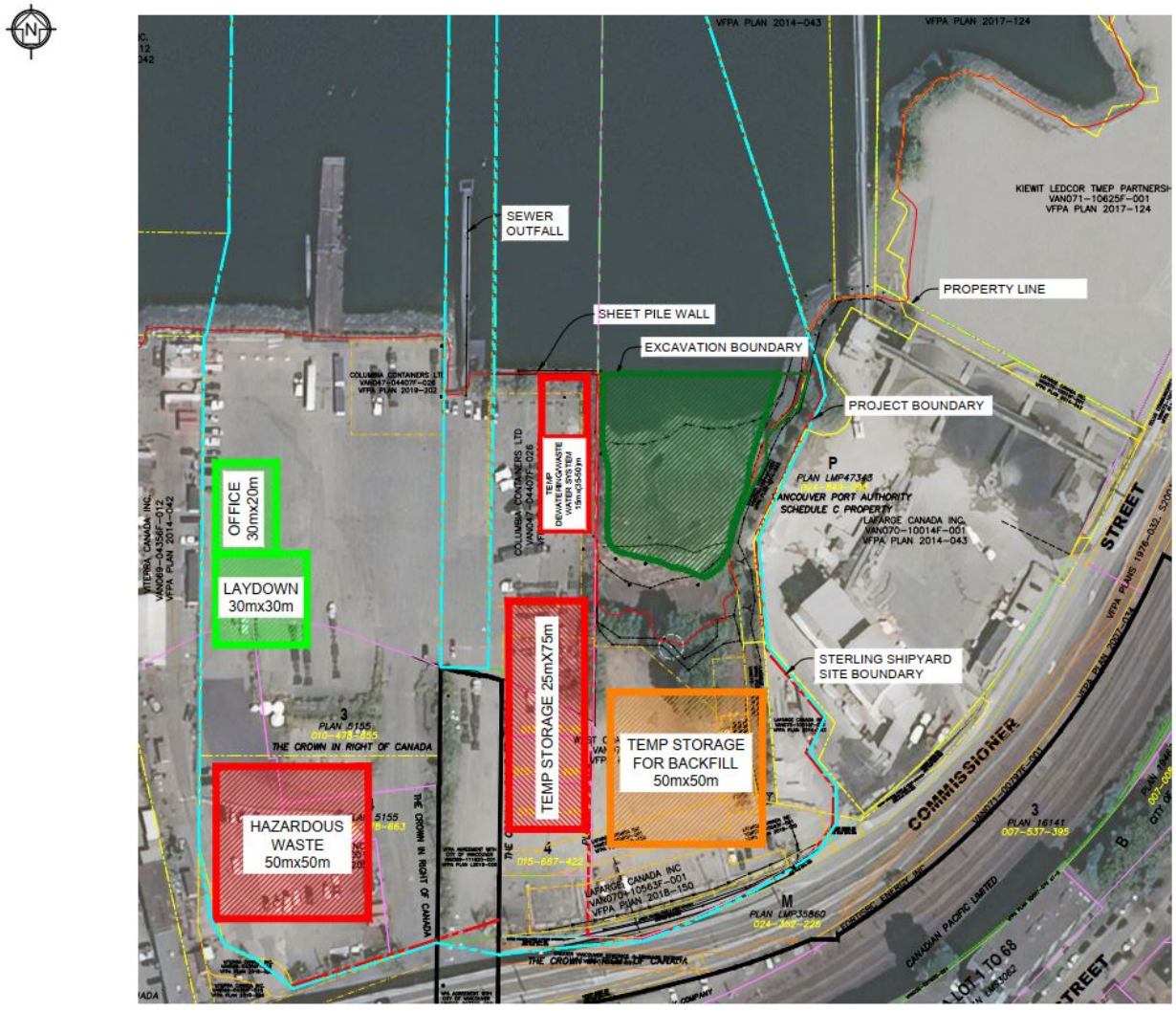

Figure 2: Project Site Plan

Start/end date: The following dates are estimated and to be updated by the Contractor:

› April 2022 to March 2023.

Hours of work: It is recognized that construction activity will need to occur when the tidal conditions are appropriate. Where possible, all construction activity is anticipated to take place during Port Authority's standard construction hours:

› Between 7:00 AM and 8:00 PM Monday to Saturday, excluding holidays; and

› Construction is not anticipated to occur on Sundays or during holidays.

Access/egress route (see Figure 1): Details to be confirmed and updated by Contractor:

› All land access/egress to the Site is via Victoria Drive N through Commissioner Street and Clark Drive; and

› It is anticipated that excavated material and rock fill would be hauled off and hauled into the Site by sea (utilizing barge). The Contractor must utilize existing shipping lanes for transit within Vancouver Harbour and other navigational channels and abide by marine traffic control rules at all times during access and egress to and from the sea. Engineered fill delivery would be by land (utilizing trucks).

Lane affected and construction vehicle staging/parking:

› No lane closure and reduction in posted speed limit are anticipated;

› All construction vehicles to be staged and parked within the Site or designated area, away from travel lane, and drivers are expected to look for gaps from travel lane for egress to reduce impacts to existing traffic;

› Additional construction vehicle staging area to be provided utilizing unoccupied area within the Site boundary in the event that more staging spaces are needed due to delay in construction activities; and

› Temporary localized traffic stoppage (no more than two minutes each) by qualified Traffic Control Persons (TCPs) may occur in order to assist special deliveries with large load.

Maximum proposed delays: It is anticipated 40 vehicle trips per day will be generated by the Project during peak hauling period. Delay to vehicular traffic on Commissioner Street will not exceed 20 minutes.

Please refer to Construction Environmental Management Plan (CEMP) for additional details.

3 Implementation Plan

Implementation of this TMP will be carried out by the following individuals:

3.1 Site Supervisor

Details of the Site Supervisor will be provided by the Contractor once they become available. The Site Supervisor will perform all duties as listed in Section 1.2.3.4: Site Supervisor/Foreman/Superintendent of the 2020 TMM and also be responsible for the following:

- Scheduling coordination/sequencing with the relevant Port Authority Infrastructure Delivery team on other projects in the area that might be impacted by or will impact this Project, specific to the Commissioner Street Road Realignment Project that is anticipated to be under construction in 2022;
- Conducting daily toolbox meetings;
- Addressing issues as they occur;
- Leading the crew; and
- Being the point of contact.

3.2 Traffic Control Manager

Details of the Traffic Control Manager will be provided by the Contractor once they become available. The Traffic Control Manager will be responsible for updating, implementing, and managing the TMP in accordance with the responsibilities listed in Section 1.2.3.6: Traffic Control Manager of the 2020 TMM.

3.3 Traffic Control Supervisor (TCS)

Typically, there will only be one TCP on-Site as the Site is away from the travelled lane. In this case, the TCP will assume the role of, and be considered, the Traffic Control Supervisor.

However, if more than one TCP is on-Site, such as during busy periods or if an incident occurs, a TCS will be named on the day of. Their name will be recorded on the Daily Traffic Control Log. Details of the TCS will be provided by the Contractor once it become available. The TCS will be responsible for the duties listed in Section 5.1.1: Traffic Control Supervisor of the 2020 TMM.

The TCS should also responsible for the following:

- Conduct safety meeting with TCPs and coordinate with the Contractors on the traffic management requirements of the day before work begins;
- Place signs and traffic control devices according to the drawings found in the TMP and the 2020 TMM. Note any adjustments which may need to be made based on Site conditions;
- Periodically inspect and check all signs and devices and adjust as required;

- Monitor road surface conditions and ensure road surface is free from construction debris/spills. If needed, arrange for clean-up in a timely manner and ensure no Project-caused construction debris/spills in travel lane are left untreated in an inactive work zone;
- Monitor traffic operations and address if problems arise;
- Conduct a pre-close-down inspection, and fix traffic setup if needed at the end of the shift;
- Complete Daily Traffic Control Log; and
- Complete Incident Management Report as required.

3.4 Traffic Control Persons (TCPs)

The TCPs used on this Project will have current TCP certification and be adequately trained in a manner acceptable to WorkSafeBC. Their names will be recorded on the Daily Traffic Control Log. They will be responsible for the duties listed in Section 5.1.2: Traffic Control Persons (TCPs) of the 2020 TMM. TCPs will communicate with each other through radio communication and assist public and emergency services through work zone as required.

4 Traffic Control Plan

The Contractor shall review and update this section to include any traffic control plan required for the Project work when this information becomes available. The Project shall accommodate and ensure Project traffic/traffic control set-ups do not impact the Commissioner Street Road Realignment Project that is anticipated to be under construction in 2022, which will consist of "….".

The TCS will implement traffic control plan based on the Implementation Plan outlined in this TMP. To maintain continuous, clear, and safe passage for all road users and traffic during construction, minor field adjustments following guidelines outlined in the 2020 TMM may be needed and will be documented in the Daily Traffic Control Log. Major adjustments that impact traffic operation will require a revision of the TMP and be re-submitted for approval prior to implementation.

It is anticipated that existing posted speed limit on Commissioner Street adjacent to the Project area shall be maintained and no lane closure on Commissioner Street is allowed with the exception of temporary stoppage of up to a maximum of two minutes utilizing TCPs needed for large load deliveries.

Active transportation road users (pedestrian and cyclist) volumes are expected to be minimal due to the nature of the Project location. The Project should not impact existing active transportation route. If road users are encountered, TCPs will direct them around the work site.

During active work if emergency vehicles are travelling through the work zone, TCPs may stop general traffic and hold active transportation users in order to assist emergency services to proceed through or around work zone if required.

To identify, address, and record potential road hazards caused by Project construction activities, such as fugitive dust and airborne particulates from excavation and construction equipment, gravel/earl materials left by haul trucks, and leaks/spills from construction equipment, the Contractor shall ensure TCS, Traffic Control Manager, and Site Supervisor are familiar with and follow the procedures and mitigation measures details listed in the CEMP.

5 Incident Management Plan

Prior to start of a work shift, the Site Supervisor shall direct a daily safety planning toolbox meeting to ensure all crew members are familiar with and will follow the incident management procedures found in the CEMP and in this TMP should an unplanned incident occurred.

The TCS will monitor the areas within and in the vicinity of the Site. If an incident is detected, the TCS will immediately respond. If any of the crew members or TCPs detect an incident, they shall relay all relevant information to the TCS. The TCS and Site Supervisor will work together to provide efficient response and coordination, including any changes that may need to be made to the traffic control layout.

TCPs will ensure emergency vehicles are given priority in travelling through or around the Site. If needed, TCPs may stop ongoing construction activities, general traffic, and hold active transportation road users to assist in emergency service operations.

Table 1 below shows an Emergency Contact List for the Project which will need to be updated by the Contractor.

Table 1: Emergency Contact List

	Department/Role	Phone Number
Emergency/Public Services	Emergency – Police, Fire, Ambulance	911
	RCMP – Vancouver (non-emergency)	604-717-3321
	Fire – Vancouver (non-emergency)	604-215-4842
	BC Ambulance (non-emergency)	604-872-5151
	St. Paul's Hospital	604-806-9090
	BC Hydro	1-800-224-9376
	Fortis BC Gas	1-800-663-9911
	Telus	TBD
	Shaw	TBD
	WorkSafeBC	1-888-621-7233
	Provincial Emergency Program	604-586-4390
Port Authority	Port Authority Representative – TBD	TBD
	More To Be Added	TBD
City of Vancouver	City Representative – TBD	TBD
Ministry of Transportation	Ministry Representative – TBD	TBD
Road Maintenance Contractor	TBD	TBD
Railway Company(ies)	TBD	TBD
Contractor	Site Supervisor – TBD	TBD
	Traffic Control Manager – TBD	TBD
	Traffic Control Supervisor – TBD	TBD

6 Public Information Plan

6.1 Communicate to Travel Public, Adjacent Operations, and the Road Authority

The Public Engagement Plan outlines methods and procedures required to engage, obtain, and respond to feedback from the affected public, stakeholders, and adjacent tenant operations regarding the Project during the planning stage. During the construction period, the Site Supervisor will provide advance notification to the Port Authority Representative prior to work starts and any major change affecting public road users or adjacent tenant operations. Information such as proposed schedule and anticipated traffic impacts will be communicated. The Port Authority Representative will post notification on their website.

Due to the minimal traffic operation impacts to be expected, static advance signs may be used instead of dynamic message signs.

6.2 Provide Work Updates to the Road Authority

The Site Supervisor will provide weekly work updates to the Port Authority Representative over the phone or by e-mail.

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