

TRAFFIC CONTROL PLAN GUIDELINES
707 & 723 Marine Drive, West Vancouver
Current construction site, 752 Marine Drive

****EXCAVATION AND SHORING PERMIT PHASE****

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1. General

1.1 Introduction

This Traffic Management Plan has been developed for the Excavation and Shoring Permit Phase of the following project. The project is a 203 unit 11 & 14 storey residential/commercial development located at 707 & 723 Marine Drive, West Vancouver (752 Marine Drive currently).

1.2 Duration and Hours of Operations

The Excavation and Shoring Permit Phase of the project commenced August 24, 2018 immediately following receipt of a foundation permit from the District of West Vancouver.

Project hours of operations are determined by the District of West Vancouver's Noise Control Bylaw No. 4404, 2005. These hours are as follows:

Monday to Friday – 7:30 am to 5:30 pm
Saturday – 8:00 am to 5:00 pm
Sunday / Statutory Holiday – No work permitted

If, for any reason, works are required outside the allowable hours of operation, Park Royal SC Ltd will apply to the District of West Vancouver's Bylaw Department, for an exemption to the Noise Control Bylaw, 45 days in advance of the scheduled works.

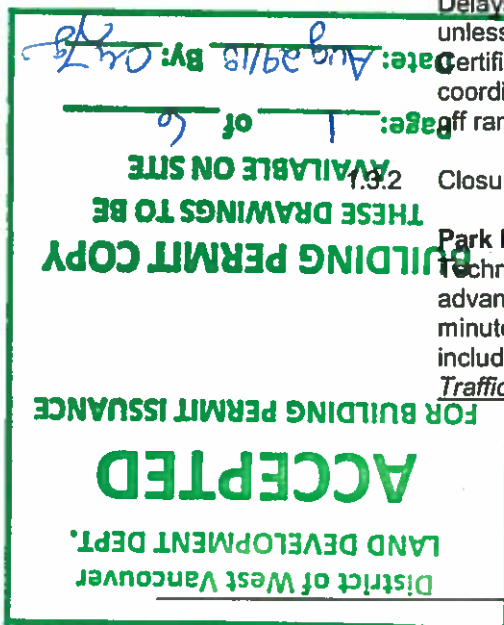
1.3 Permissible Delays / Closures

1.3.1 Delays

Delays of no more than ten (10) minutes are acceptable to the District unless traffic remains operating in a single lane-alternating capacity, with Certified Traffic Control Personnel on site to assist. Delays will be coordinated with available breaks in traffic flow. This clause excludes the off ramp from Upper Levels Highway (Hwy 1) to Taylor Way.

1.3.2 Closures

Park Royal SC Ltd will make application to Stephen Wells, Traffic Technologist at the District of West Vancouver, five (5) working days in advance of any road or lane closures resulting in delays over ten (10) minutes in length. A Lane Closure Request / Work Notification Form, including a traffic control diagram as per the Ministry of Transportation's Traffic Control Manual for Work on Roadways will be submitted.



Park Royal SC Ltd will provide to the District of West Vancouver the following documents should a lane closure be required:

- Traffic Report/Study completed by licensed Traffic Engineer/Planner (ie. Bunt & Associates).
- DoWV Traffic Management Plan Application Form
- Truck Access Route Map
- Site Layout/Parking Plan Map

1.3.3 Construction Schedule

Description	Duration	Traffic Control Requirements
Excavation and Shoring	8 Months	Marshalling (as per Section 2.2) / Trucking (as per Section 2.3)
Construction	18 Months	

2 Trucking / Delivery Considerations

2.1 Routes

In compliance with the District of West Vancouver's Traffic and Parking Bylaw No. 4370, 2004, section 8.16.4, heavy vehicles are prohibited on restricted routes.

Park Royal SC Ltd will ensure that any over-weight, over-sized truck traffic utilizes the assigned truck routes to and from the site as per the District of West Vancouver's Heavy Vehicle Regulations Document (Restricted Routes and Regulations for Heavy Vehicles).

Park Royal SC Ltd proposed Trucking Access Route Map is attached.

During Excavation and Shoring Phase – Refer to Bunt & Associates Construction Traffic Management Plan – Excavation Phase

2.2 Marshalling

Marshalling Location: Off-ramp from Upper levels Highway (Hwy 1) to Taylor Way.

Per the District of West Vancouver's Traffic Management Plan Application Form, the District does not allow any marshalling on District Roads. Considering this, Park Royal SC Ltd assumes that any required marshalling will occur on the off-ramp from Upper levels Highway (Hwy 1) to Taylor Way. Park Royal SC Ltd will contact the MoT directly regarding the approval of this procedure.

Trucks travelling to the site will adhere to the following procedures:

No truck traffic may be on District streets, including the marshalling area, prior to 7:30 am on weekdays and 8:00 am on Saturdays.

Park Royal SC Ltd will stagger arrival times for truck traffic to ensure that marshalling area capacity is not over-extended.

At 7:30 am on weekdays and 8:00 am on Saturdays, one (1) truck will be permitted to leave the marshalling area and proceed to the site. The remainder of trucks will wait for radio or phone authorization to proceed.

This process will continue as long as there is more than one (1) truck available to arrive on site.

Restrictions: (Truck traffic may be prohibited from marshalling on some District streets. If so, this requirement must be included in your Traffic Management Plan.)

2.3 Truck Requirements

Due to the steep roads in West Vancouver, the District of West Vancouver has adopted regulations for the safe operation of trucks, trailers or truck-trailer combinations in excess of 10,000 kg LGVW. As a result, all truck traffic over 10,000 LGVW will be restricted to using an approved route as per the Traffic and Parking Bylaw No. 4370, 2006, Schedule B.

The District of West Vancouver will not permit any vehicle in excess of its licensed gross vehicle weight to travel on any city streets.

All vehicles are to be in compliance with the load limits applicable to or posted on any bridge or elevated structure.

Park Royal SC Ltd will comply with all District of West Vancouver Traffic and Parking Bylaw requirements.

Park Royal SC Ltd will ensure that any over-weight, over-sized truck traffic utilizes the assigned truck routes to and from the site as per the District of West Vancouver's Heavy Vehicle Regulations Document (Restricted Routes and Regulations for Heavy Vehicles).

Park Royal SC Ltd Proposed Trucking Access Route Map is attached.

2.4 Oversize Requirements

Unless a permit is issued, oversize vehicles will not be permitted to travel within the District of West Vancouver.

Park Royal SC Ltd will obtain all necessary permits and approvals from Mercedes Suarez, Traffic Technologist, at the District of West Vancouver, throughout the duration of the project, five (5) working days in advance of works. This includes permits and approvals for over-weight and/or over-size loads.

2.5 Certification Requirements

As per the ICBC Compliance regulations, all trucks over 17,500 kg GVW must have a current Commercial Vehicle Inspection Report.

2.6 Tarping Requirements

Park Royal SC Ltd will ensure that all loads of dirt, rocks and other loose material is covered while in transit.

TRAFFIC CONTROL PLAN GUIDELINES

Park Royal SC Ltd will ensure that all loads of dirt, rocks and other loose material is covered while in transit.

3 Construction Considerations

3.1 Access and Egress Points

3.2 Dust and Dirt Control

Park Royal SC Ltd will ensure that adjacent streets and haul routes are kept clean and free of dust and debris on a daily basis.

3.3 Parking Control

Park Royal SC Ltd, their staff and subcontractors are subject to the District's Traffic and Parking Bylaw No. 4370, 2004, at all times. Throughout the duration of construction **Park Royal SC Ltd**, their staff and subcontractors will abide with the District of West Vancouver's parking regulations. Any vehicles not in compliance with the approved permitted parking radius plan [refer to 'Parking Radius Dec/2017', attached], or the District's parking regulations will be enforced. Vehicles in violation may be ticketed and towed. During construction, contractor parking will not be permitted within the area highlighted in bolded red within this plan, included as attachment. All sub-trades and labourers will be responsible for complying with the parking regulations. The developer is responsible for all contractors, sub-contractors, trades and workers, suppliers, etc. associated with the site. Fines and fees are issued to the Developer.

3.4 Material and Equipment

All materials and equipment will be stored within the fencing of the construction area, unless protected by traffic control devices and / or concrete barrier. No materials and / or equipment are permitted within the traveled lanes of any highway at any time, unless the permission of Mercedes Suarez, Traffic Technologist, District of West Vancouver, is gained.

3.5 Access to Existing Facilities

Park Royal SC Ltd will maintain access to fire hydrants in the vicinity of the construction site, as well as ensuring that entrances and exits to adjacent properties are clear and unimpeded.

The use of District road right of way requires a street occupancy permit.

3.6 Signs

Construction and Warning signs will be erected daily in accordance with the Ministry of Transportations, *Traffic Control Manual for Work on Roadways*, Manual. All signage will meet Transportation Association of Canada or Ministry of Transportation signing specifications.

3.7 Traffic Control Supervisor

The site Traffic Control Supervisor is: Ron Westlake Certified Safety Officer 22(1) [REDACTED]. In the event that Ron Westlake is unable to perform their duties, Carlos Perdomo 22(1) [REDACTED] will act as an alternate.

TRAFFIC CONTROL PLAN GUIDELINES

The Traffic Control Supervisor will:

- Ensure that emergency traffic control operations are carried out in accordance with Park Royal SC Ltd Site Safety Plan.
- Direct the implementation of the Traffic Control Plan and installation, maintenance and inspection of all traffic control measures.
- Be responsible for updating and notifying the District of West Vancouver, emergency services, transit operators and affected property owners of any lane closures, five (5) working days in advance of the closure.

4 Drawings

- Site Layout/Parking Plan Map
- Truck Access Route Map
- Traffic Report/Study completed by licensed Traffic Engineer/Planner (ie. Bunt & Associates).

5 Communication Considerations

5.1 Day-to-Day Communications

Park Royal SC Ltd site superintendent and/or project manager will be handling day-to-day issues which may arise regarding traffic control related and/or general public inquiries.

Neil Adamson

Carlos Perdomo

Project Manager

Site Superintendent

Phone: 22(1) [REDACTED]

Phone: 22(1) [REDACTED]

5.2 Contact List

Neil Adamson, Project Manager – 22(1) [REDACTED]

Carlos Perdomo, Superintendent – 22(1) [REDACTED]

5.3 Full Closure

Five (5) working days in advance of any lane/road closure, Park Royal SC Ltd will hand deliver advisories to: **AFFECTED PROPERTY OWNERS.**

6 Incident Management Considerations

6.1 General Procedures

Park Royal SC Ltd (Developers Occupational Health and Safety Program is in place should an incident occur).

TRAFFIC CONTROL PLAN GUIDELINES

6.2 Incidents on Marine Drive & Taylor Way

Should an unscheduled traffic obstruction take place, Park Royal SC Ltd will notify Mercedes Suarez of the District of West Vancouver of the delay and the estimated time for re-opening the lane(s).

6.3 Emergency Phone List

Martyn Williams
Park Royal SC Ltd - Project Manager
Ph 22(1) [REDACTED]

Carlos Perdomo
Syncra Construction – Superintendent
Ph 22(1) [REDACTED]

7 Amendments

7.1 TMP Amendments

If, during the course of construction for the Excavation and Shoring Permit Phase of the project, the District identifies traffic management requirements change to reflect unanticipated construction activities and/or impacts, the District may request an amendment to the TMP.

District of West Vancouver
LAND DEVELOPMENT DEPT.

ACCEPTED
FOR BUILDING PERMIT ISSUANCE

BUILDING PERMIT COPY
THESE DRAWINGS TO BE
AVAILABLE ON SITE

Page: 1 of 24

Date: Aug 29/18 By: [Signature]



752 Marine Drive, West Vancouver
Construction Traffic Management Plan
Excavation Phase

Draft Report

Prepared for
Larco Investments Ltd.

Date
August 27, 2018

Project No.
04-18-0233

August 27, 2018
04-18-0233

Noel Richardson
Senior Director of Construction
Larco Investments Ltd.
100 Park Royal South
West Vancouver, BC
V7T 1A2

Re: **752 Marine Drive
Construction Traffic Management Plan**

Dear Noel,

As directed by you and in consultation with District of West Vancouver staff, we have prepared the attached Construction Traffic Management Plan (CTMP) for the excavation phase of the 752 Marine Drive development project at Park Royal in the District of West Vancouver. Subsequent CTMP submissions are to be prepared for the subsequent construction stages of the project.

Yours truly,
Bunt & Associates



Simon Button, P.Eng.
Transportation Engineer

cc: Peter Rosenrauch, Syncra Construction

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1. BACKGROUND

Rezoning and Development Permit approval by District of West Vancouver Council for the proposed mixed-use residential and commercial development at 752 Marine Drive on the Park Royal South shopping centre site was obtained in June 2018. The development site is located at the southwest corner of the intersection of Marine Drive and Taylor Way.

The construction at 752 Marine Drive is anticipated to begin in August 2018. This Construction Traffic Management Plan (CTMP) has been prepared in consultation with Larco Investments Ltd. (Larco) and Syncra Construction (Syncra) to meet the scope agreed upon with the District of West Vancouver.

The purpose of this plan is to document the quantity of trucks accessing the site during the excavation phase, the routing that construction trucks will use for access to Park Royal South, and will present the construction site traffic management plan showing the truck routing on/off the site and deployment locations for the certified Traffic Control Personnel (TCP) or 'flaggers' who will be directing the mix of construction and general purpose traffic during construction hours. The CTMP also identifies the planned location for construction trades parking.

The District of West Vancouver requires that construction be limited to the following hours of the day:

- Monday – Friday: 7:30am to 5:30pm
- Saturday: 8:00am to 5:00pm
- Sundays & Holidays: Not permitted

The construction includes three primary phases; each phase along with their duration, worker count and truck details are summarized below in Table 1.

Table 1: Construction Phases, On-Site Trade Workers and Construction Truck Traffic

PHASE	DURATION	WORKER COUNT	TRUCKS PER PEAK HOUR
Excavation	7.5 months	30	11 entering, 6 exiting SU-9 trucks (some with ponies)
Foundation	7 months	80	8 concrete trucks entering and exiting 1 WB-20 sized truck (rebar)
Construction/ Finishing	14 months	200	5 concrete trucks entering and exiting 1 WB-20 truck 5 SU-9 trucks

As stated previously, the CTMP provided in this document specifically addresses the excavation component of the construction process. Any reference in this document to the future permitted construction phases is for information purposes only.

2. CONSTRUCTION TRUCK TRAFFIC – EXCAVATION PERIOD

Exhibit 1 illustrates the construction vehicle routing plan for the 752 Marine Drive project. As discussed with West Vancouver staff, Taylor Way connecting to the Upper Levels Highway (Highway 1) will be the designated construction access route. South of Marine Drive, trucks will use Taylor Way for access the site via construction gates on the south side of the construction site, via the east-west drive aisle on the Park Royal South site.

The location that the excavation material will be dumped has yet to be confirmed; however, based on the available options, trucks will leave the site travelling northbound on Taylor Way to Highway 1 where they will either travel eastbound or westbound.

The intersection of the Park Royal South access road to Taylor Way (south of Marine Drive and opposite the West Royal Towers access driveway) will be converted to right-turn in/out only access to Park Royal prior to occupancy of the 752 Marine Drive development. The existing left-turn movement from Park Royal South onto northbound Taylor Way at this intersection will remain as is (i.e., left-turns allowed except on weekdays between 3-6pm) through the 752 Marine Drive construction period as this provides the most direct access for construction traffic to depart the area via northbound Taylor Way toward Highway 1.

A Certified Traffic Control Personnel (TCP) will be at the Taylor Way & Park Royal South intersection to assist trucks make the left-turning movement. A TCP will also be present at Gate 2 assisting trucks exit the site. The site logistics plan prepared by Syncra Construction is provided as **Appendix A**. Additional comment regarding construction period traffic operation at this intersection and the role of the TCP is provided later in Section 3.2.

During the 7.5 month duration of the excavation phase of the construction process, Syncra has advised that typically 100 trucks per day (50 inbound and 50 outbound dump trucks, some with pony trailers) will service the site. This activity will be generally spread out through the 10 hour construction day, with typically 10 trucks per hour (5 inbound, 5 outbound), or about one truck every 6 minutes. The first hour of the day around 7:30am is anticipated to be slightly more active with 11 inbound and 6 outbound trucks. Section 3.1 provides a summary of the anticipated impact of this added construction truck traffic and construction worker traffic at the Taylor/Marine intersection.

Exhibits 2a and 2b illustrate the swept-path analysis of a 9-metre single unit truck with an attached pony trailer turning from Taylor Way onto Park Royal South Road and vice versa. The TCP stationed at this intersection will direct the turning of this vehicle from southbound Taylor Way onto Park Royal South Road as it will track over the opposing eastbound traffic lane on Park Royal South Road.

3. TRAFFIC OPERATIONS

3.1 Taylor Way / Marine Drive Intersection

Exhibit 3 illustrates the hourly traffic volume profile for a typical weekday condition at the Taylor Way / Marine Drive intersection and represents the total vehicle traffic approaching the intersection from all four legs (Marine Drive both eastbound and westbound and Taylor Way both northbound and southbound). As indicated, the traffic profile indicated was taken directly from Ministry of Transportation & Infrastructure (MoTI) traffic count data from Wednesday, January 18, 2017.

The traffic profile shows that the highest volume condition is during the weekday afternoon period with up to approximately 4,300 vehicles per hour (vph), with the weekday morning commuter traffic generally in the range of 3,000 to 3,500 vph or about 20% less than the afternoon condition.

3.1.1 Base Traffic Volumes (Without Construction Traffic)

Exhibit 3 identifies both the weekday morning period from 7:30am to 8:30am coinciding with the start of construction for the day and the 5:00pm to 6:00pm coinciding with the close of construction for the day. For this 7:30-8:30am morning period, the hourly traffic volume approaching the Taylor/Marine intersection reaches approximately 3,225 vph as noted and for the 5-6pm period the volume from the profile is approximately 3,850 vph (just down from the 4,260 vph peak from 3:30 to 4:30pm on the profile).

For the purposes of assessing the incremental impact to traffic operations at this intersection associated with construction vehicle and construction worker parking, we've assumed an existing base condition of 3,225 vph for the morning peak hour, and the higher 4,260 vph condition for the afternoon peak hour, consistent with the base traffic condition assumed for the 752 Marine Drive traffic impact assessment (TIA) report in April 2018.

3.1.2 Construction Traffic

For the Phase 1 excavation period (next 7.5 months) of the 752 Marine Drive construction process, the incremental traffic using the Taylor Way / Marine Drive intersection is assumed to include the construction vehicle traffic plus the passenger vehicle trips inbound in the morning and outbound in the afternoon associated with the construction workers arriving to the site in the morning and departing in the afternoon.

For the construction vehicle traffic, the morning peak hour analysis assumes 17 vehicles (11 inbound and 6 outbound as noted in Section 2) travelling through the Taylor/Marine intersection as a southbound through movement (inbound) and a northbound through movement (outbound). For the afternoon peak hour, the analysis assumes 5 inbound and 5 outbound vehicles as southbound through and northbound through trips respectively.

For construction worker vehicle trips, the analysis assumes that all 30 workers on site arrive by private vehicle (i.e., 30 incremental vehicle trips) and that all 30 vehicle trips pass through the Taylor/Marine intersection. This is a conservative assumption as the majority of workers are anticipated to arrive/depart via the Upper Levels Highway and use Taylor Way for access to/from Clyde Avenue and the Park Royal parkade (refer to Section 4 Parking Management) and as such not require travel through the Taylor/Marine intersection at all.

With this assumption of all construction vehicle and construction worker traffic using the Taylor/Marine intersection ($17+30 = 47$ added vehicle trips in the morning peak hour, $10+30 = 40$ added vehicle trips in the afternoon peak hour) the construction traffic component represents approximately a 1% increase in traffic at the intersection during the weekday morning and afternoon peak traffic periods. The Synchro traffic modeling and intersection traffic performance model was used to assess the incremental impact of this added construction traffic to weekday morning and afternoon traffic operation at the Taylor/Marine intersection. The results are presented in Tables 2 and 3.

Table 2: Taylor Way / Marine Drive Intersection: Weekday AM/PM Traffic Operation (Base Case)

INTERSECTION/ TRAFFIC CONTROL	MOVEMENT	AM			PM		
		LOS	V/C	DELAY (SEC/VEH)	LOS	V/C	DELAY (SEC/VEH)
Taylor Way & Marine Drive	OVERALL	C	0.75	33	D	0.83	44
	EBL	C	0.35	33	D	0.51	36
	EBT	D	0.72	40	E	0.89	59
	EBR	C	0.02	33	D	0.07	41
	WBL	C	0.52	25	D	0.77	43
	WBT	C	0.25	24	C	0.36	28
	WBR	C	0.31	25	C	0.42	29
	NBTL	D	0.47	41	E	0.69	60
	NBR	D	0.07	39	D	0.14	52
	SBL	D	0.78	36	E	0.84	60
	SBTR	C	0.77	32	D	0.70	46

Table 3: Taylor Way / Marine Drive Intersection: Weekday AM/PM Traffic Operation (With Construction Traffic)

INTERSECTION/ TRAFFIC CONTROL	MOVEMENT	AM			PM		
		LOS	V/C	DELAY (SEC/VEH)	LOS	V/C	DELAY (SEC/VEH)
Taylor Way & Marine Drive	OVERALL	<i>D</i>	<i>0.75</i>	<i>34</i>	<i>D</i>	<i>0.84</i>	<i>44</i>
	EBL	C	0.34	33	D	0.52	36
	EBT	D	0.70	41	E	0.89	60
	EBR	C	0.02	34	D	0.07	41
	WBL	C	0.48	23	D	0.77	44
	WBT	C	0.24	24	C	0.36	28
	WBR	C	0.30	25	C	0.42	29
	NBTL	D	0.53	45	E	0.73	62
	NBR	D	0.07	41	D	0.15	52
	SBL	D	0.80	39	E	0.84	60
	SBTR	C	0.79	34	D	0.71	46

Comparing the intersection traffic capacity analysis results between Table 2 and Table 3, the impact to traffic operations at the Taylor/Marine intersection associated with the 752 Marine Drive construction traffic during the excavation phase of construction is negligible with incremental vehicle delays of no more than 1 second per vehicle to certain traffic movements and for intersection operation overall. These results are consistent with the incremental traffic volume addition to the intersection attributed to the construction of 752 Marine Drive of approximately 1% over existing weekday AM and PM peak hour base traffic conditions.

3.2 Park Royal South / Taylor Way South Intersection

The intersection of the Park Royal South east-west driveway with Taylor Way south of the Marine Drive intersection can at times during peak traffic conditions (typically the weekday afternoon peak traffic period) experience northbound vehicle queues on Taylor Way extending back from the Marine Drive traffic signal. Existing traffic signage on the Park Royal east-west driveway restricts left-turns from Park Royal onto northbound Taylor Way (except transit buses) during the weekday afternoon peak traffic period (i.e., no left-turns, Monday to Friday, between 3-6pm).

To improve traffic operations at this location in the future, the access to Park Royal South will be modified with a channelizing island to accommodate only right-turn in/out traffic movements at all times as was described in the 752 Marine Drive Traffic Impact Assessment report from April 2018.

For the 752 Marine Drive construction period, the intersection is proposed to operate as is (as described in Section 2) with left-turns from Park Royal onto northbound Taylor Way permitted during "off peak" times, and restricted on weekday afternoons between 3-6pm. The existing weekday afternoon left-turn restriction will apply to all traffic, including construction vehicles, with the only exception being transit buses.

The certified TCP stationed at this location during construction hours will actively monitor vehicle queue conditions on the northbound Taylor Way approach to the Marine Drive intersection and for those times when queues become an issue outside of the 3-6pm restriction period, the TCP will direct outbound construction trucks to instead turn right onto southbound Taylor Way and to route along the back of the Park Royal South for access back onto eastbound Marine Drive via a right-turn at the traffic signal on Marine Drive near the Village of Park Royal.

4. PARKING MANAGEMENT

4.1 Construction Parking

Park Royal Shopping Centre's existing parking structure located off the northeast corner of the intersection of Marine Drive and Taylor (accessed both from Clyde Avenue to the north and via the elevated Park Royal driveway system) has approximately 450 parking spaces and most of this supply is unused both weekday and on weekends. Spot observations of existing parking demand activity in this parkade this past week identified 53 parked vehicles during the weekday mid morning period and 78 parked vehicles during the weekday mid afternoon period, with over 370 unused parking spaces available.

During the pre-Christmas peak retail period at Park Royal, shopping centre employees are directed to use this parkade to free up customer parking spaces on the Park Royal South and North sites. Park Royal Shopping Centre administrative staff report that during the pre-Christmas period the parkade is approximately 75% utilized, leaving approximately 115 spaces available for construction worker parking.

As has been the case with other recent construction projects on the Park Royal South and North sites, construction trades parking will be directed to use this parkade which is conveniently located within convenient walking distance of the 752 Marine Drive construction site. As noted above, this parkade has sufficient surplus parking to accommodate the anticipated level of construction workers through all three major stages of the construction process, though some additional construction parking management may be required during the pre-Christmas period at the later Phase 3 Construction/Finishing stage when at times up to 200 workers could be on site.

Park Royal Shopping Centre's existing parking structure located off the northeast corner of the intersection of Marine Drive and Taylor (accessed both from Clyde Avenue to the north and via the elevated Park Royal driveway system) has approximately 450 parking spaces and most of this supply is unused both weekday and on weekends. Spot observations of existing parking demand activity in this parkade this past week identified 53 parked vehicles during the weekday mid morning period and 78 parked vehicles during the weekday mid afternoon period, with over 370 unused parking spaces available.

4.2 Loss of Customer Parking on 752 Marine Drive Site

The 752 Marine Drive construction site presently provides approximately 175 surface parking spaces. These spaces will be eliminated with the commencement of construction. With the removal of this surface parking lot there remain approximately 2,700 parking spaces at Park Royal South and approximately 1,700 parking spaces at Park Royal North providing a parking supply ratio just over 4 spaces per 1,000 square feet of commercial gross leasable floor area. The majority of the parking activity displaced from the 752 Marine construction site is anticipated to locate to the other parking areas at Park Royal South; the Park Royal parkade on Clyde Avenue is not expected to experience any significant increase in customer parking activity.

There are presently 10 parking spaces (6 parallel and 4 angled stalls) on the north side of the east-west drive aisle adjacent the 752 Marine Drive construction site. These spaces will be temporarily removed during the construction process as this edge of the site will be required for construction access.

* * * * *

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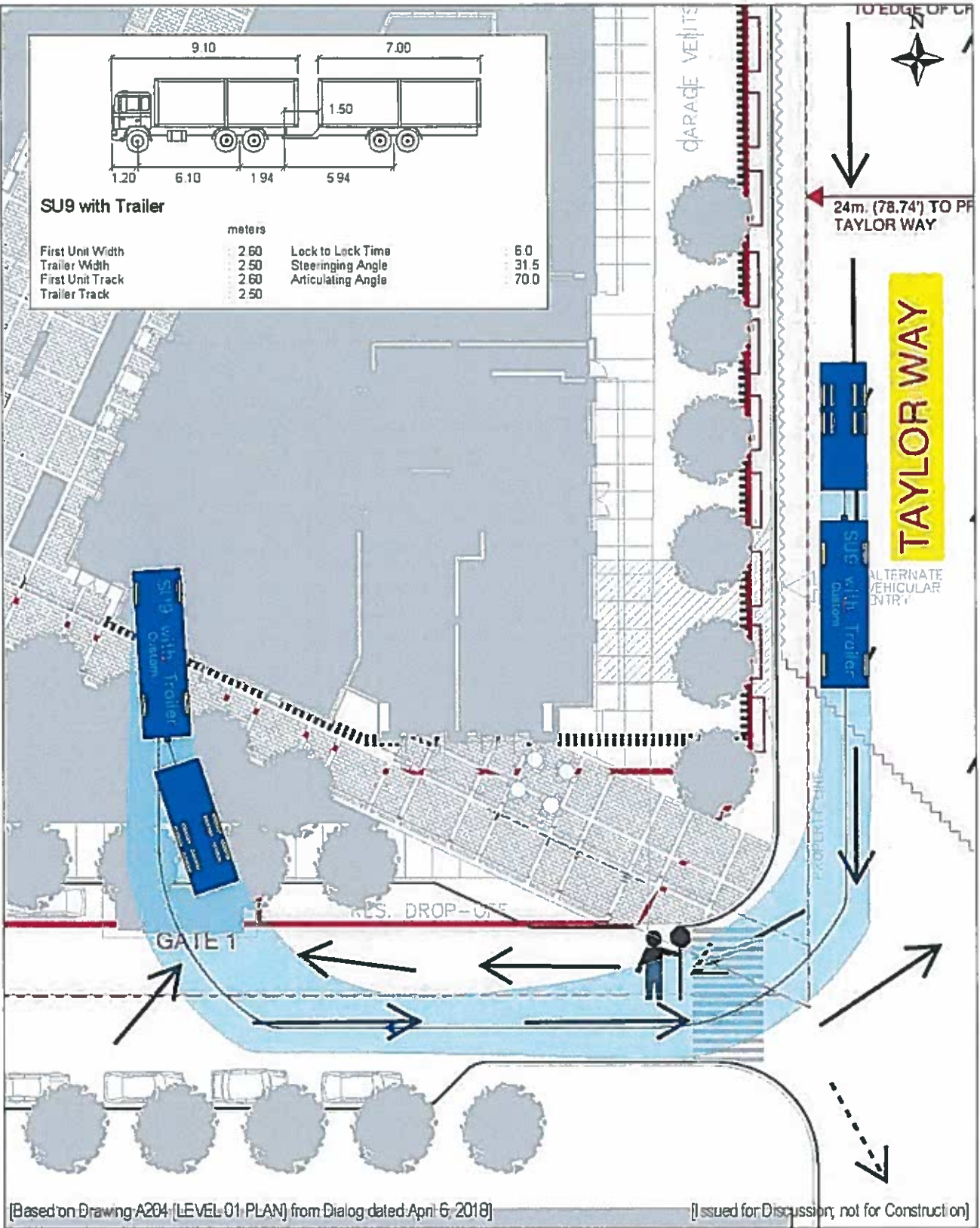


Exhibit 1 Construction Truck Routing

752 Marine Drive CTMP
04-18-0323 July 2018



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[Based on Drawing A204 (LEVEL 01 PLAN) from Dialog dated April 6, 2018]

[Issued for Discussion, not for Construction]

Exhibit 2a SU9-Sized Truck with Attached Pony - Inbound

04.18.0323 July 2018

752 Marine Drive CTMP
 Scale 1:300 on Letter Prepared by HS



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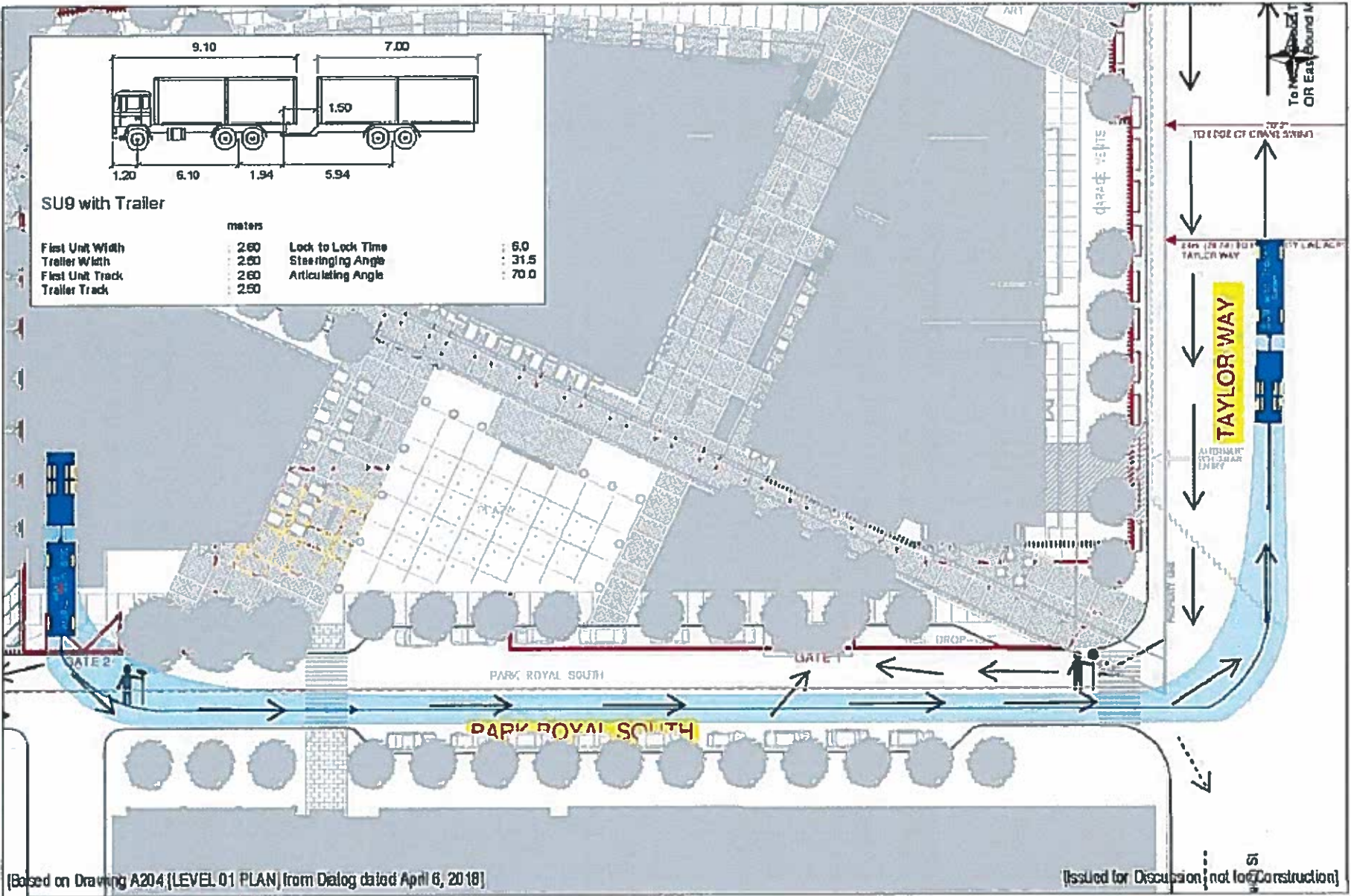


Exhibit 2b SU9-Sized Truck with Attached Pony - Outbound

04.18.0323 July 2018

752 Marine Drive CTMP
 Scale 1:525 on Letter Prepared by HS



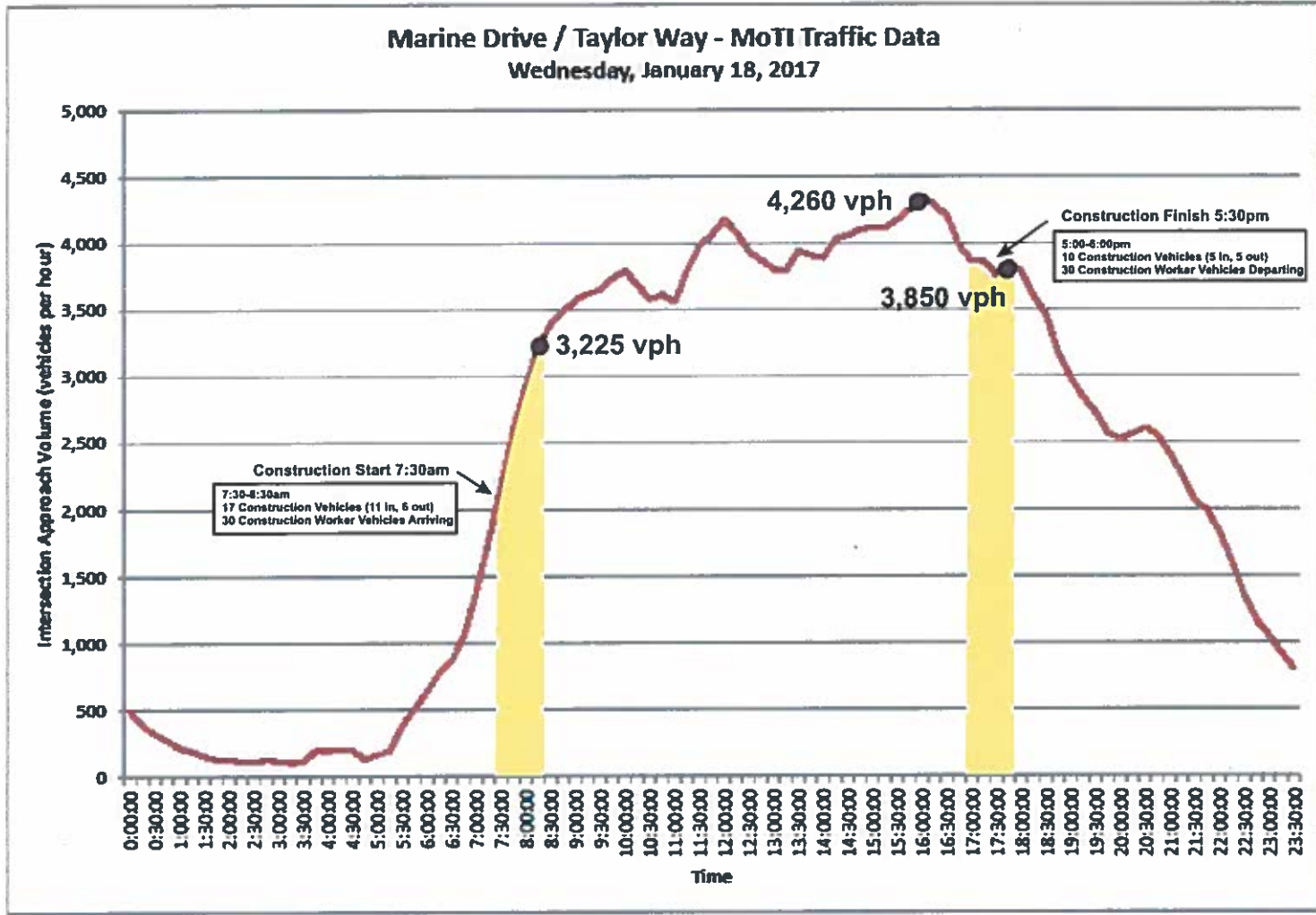


Exhibit 3 Taylor Way / Marine Drive Intersection Traffic Profile



APPENDIX A

SITE LOGISTICS PLAN

PARK ROYAL
752 MARINE DRIVE
WEST VANCOUVER, BC

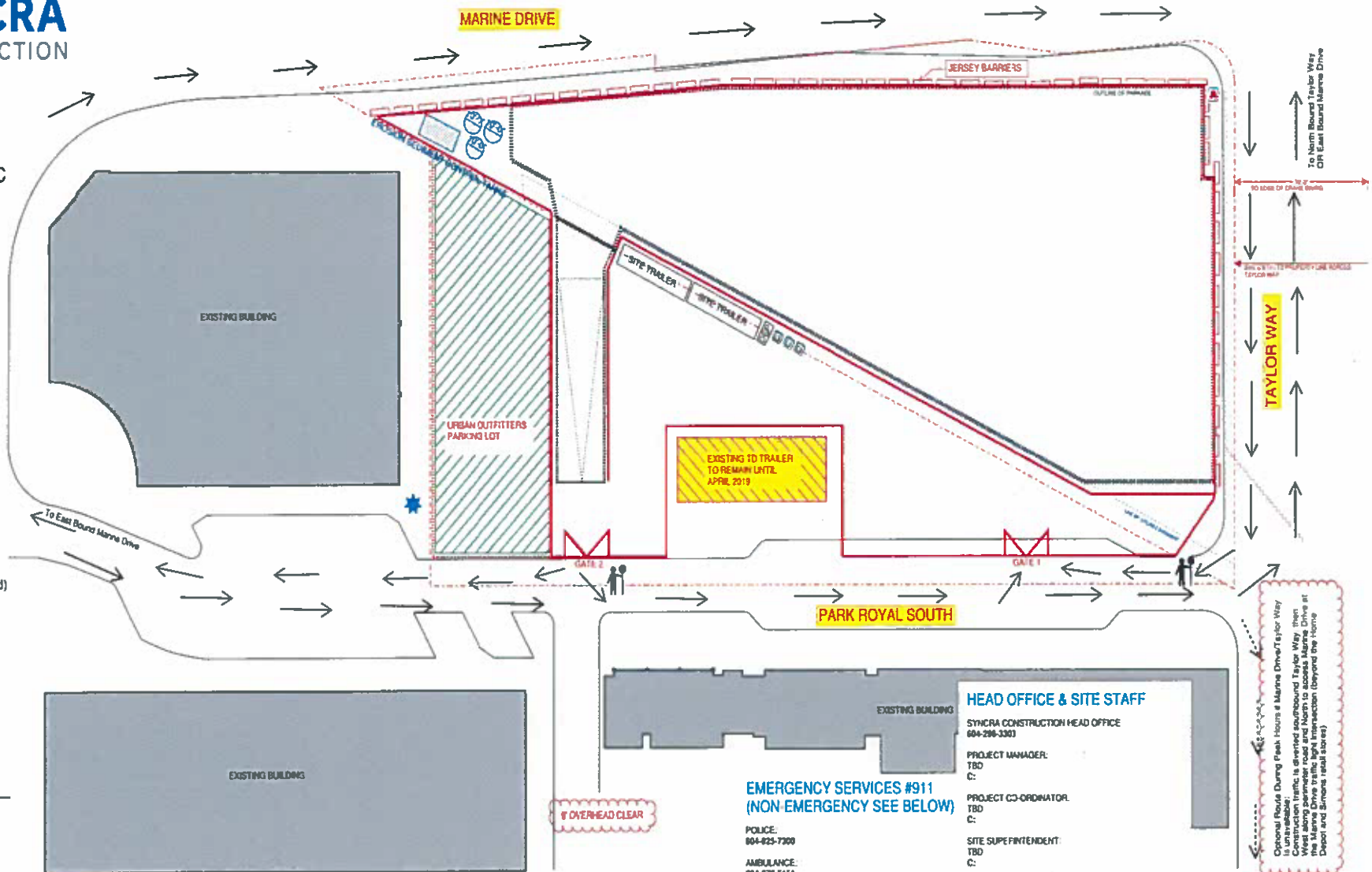
LEGEND

- Emergency Muster Point
- Fire Hydrant
- First Aid Room
- Fire Extinguisher
- Air Horn
- Portable Washrooms
- Site Gate (12 ft wide)
- Site Border Hoarding/Fencing (6ft high)
- Edge of Excavation
- Stairs
- No Parking
- Trucks Traffic
- Traffic Control Person (as required)
- DEP Box
- Crane
- Satellite Electrical Panel
- Gas & Sanitary Lines
- NO FLY ZONE

ESTIMATED TRAFFIC MOVEMENTS
EXCAVATION: 20-25 TRUCKS/HR
CONCRETE: 8 TRUCKS/HR



NO SMOKING ON SITE.



**PRELIMINARY SITE LOGISTICS PLAN
PHASE 1: EXCAVATION & SHORING
AUGUST 24, 2018**

**EMERGENCY SERVICES #911
(NON-EMERGENCY SEE BELOW)**

POLICE:
604-625-7200

AMBULANCE:
604-672-5151

FIRE:
604-625-7370

WORKSAFEBC:
604-276-3301 & 1-800-621-7233

POISON CONTROL CENTRE:
1-800-662-5050

FOR 115 BC, NATURAL GAS EMERGENCY:
1-800-663-8911

ENVIRONMENT BC

HEAD OFFICE & SITE STAFF

SYNCRA CONSTRUCTION HEAD OFFICE
604-296-3303

PROJECT MANAGER:
TBD
C:

PROJECT CO-ORDINATOR:
TBD
C:

SITE SUPERINTENDENT:
TBD
C:

SITE SAFETY CO-ORDINATOR:
TBD
C:

SITE SAFETY MANAGER:
RON WESTLAKE
C: [REDACTED]
(AFTER HOURS: [REDACTED])

REGULAR HOURS OF OPERATION:
07:30 - 17:30 MONDAY TO FRIDAY

BC ONE CALL:
1-800-474-6886

Optional Route During Peak Hours: Marine Drive/Taylor Way to unobstructed, is directed southbound Taylor Way then West along perimeter road and North to access Marine Drive at the Marine Drive traffic light intersection (beyond the Home Depot and Smeets retail stores)



PARK ROYAL
752 MARINE DRIVE
WEST VANCOUVER, BC

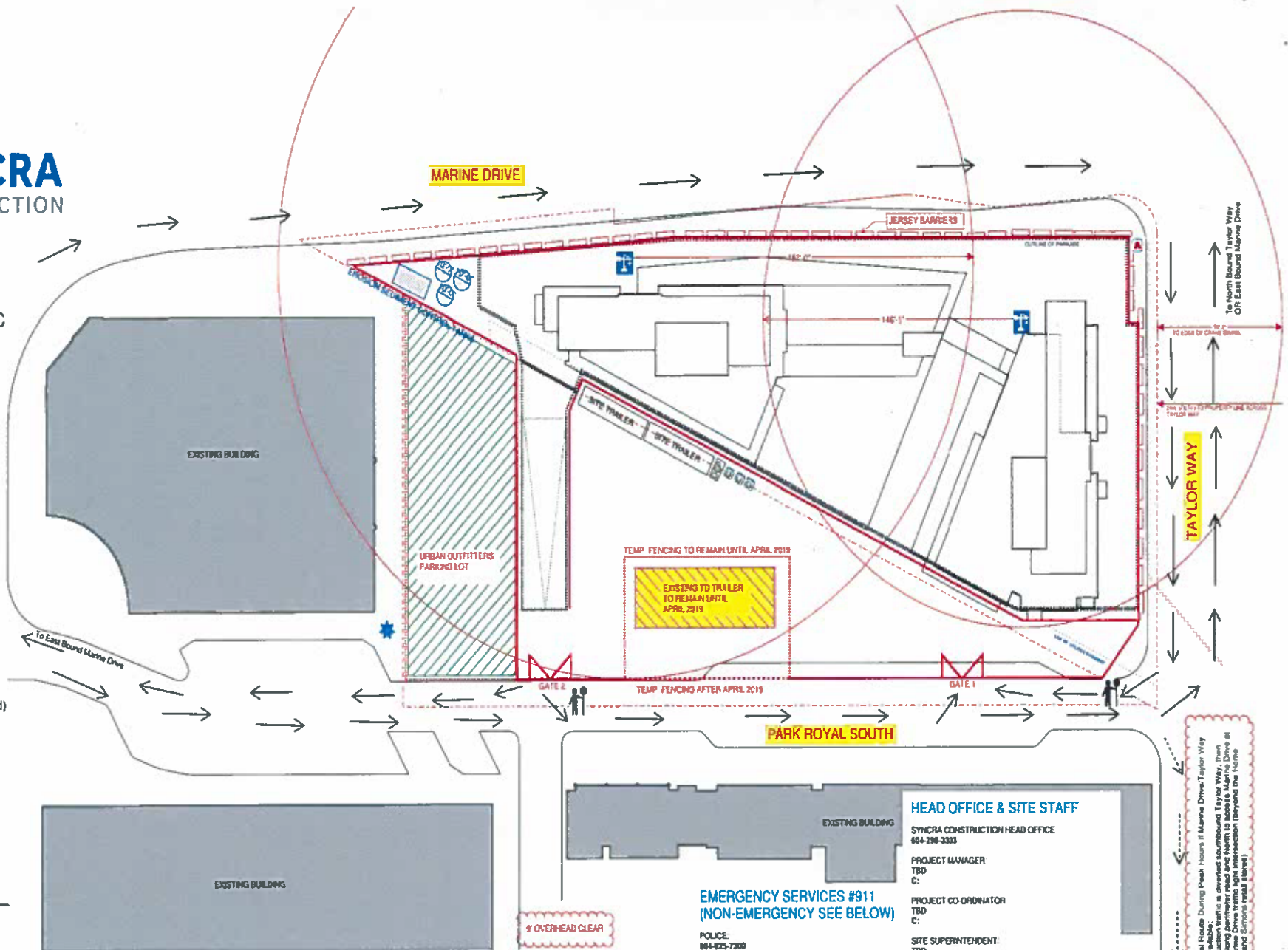
LEGEND

- Emergency Muster Point
- Fire Hydrant
- First Aid Room
- Fire Extinguisher
- Air Horn
- Portable Washrooms
- Site Gate (12 ft wide)
- Site Border Hoarding/Fencing (6ft high)
- Edge of Excavation
- Stairs
- No Parking
- Trucks Traffic
- Traffic Control Person (as required)
- DEP Box
- Crane
- Satellite Electrical Panel
- Gas & Sanitary Lines
- NO FLY ZONE

ESTIMATED TRAFFIC MOVEMENTS
EXCAVATION: 20-25 TRUCKS/HR
CONCRETE: 8 TRUCKS/HR



NO SMOKING ON SITE.



**PRELIMINARY SITE LOGISTICS PLAN
PHASE 2: DURING CONSTRUCTION;
STRUCTURE W/ CRANE
AUGUST 24, 2018**

PARK ROYAL - 752 MARINE DRIVE, WEST VANCOUVER, BC

**EMERGENCY SERVICES #911
(NON-EMERGENCY SEE BELOW)**

- POLICE:
604-825-7300
- AMBULANCE:
604-872-5151
- FIRE:
604-825-7370
- WORKSAFEBC:
604-276-3321 & 1-800-621-7233
- POISON CONTROL CENTRE:
1-800-682-8050
- FORTIS BC, NATURAL GAS EMERGENCY:
1-800-683-8911
- ENVIRONMENT BC

HEAD OFFICE & SITE STAFF

- SYNCRA CONSTRUCTION HEAD OFFICE
604-298-3333
- PROJECT MANAGER
TBD
C:
- PROJECT CO-ORDINATOR
TBD
C:
- SITE SUPERINTENDENT
TBD
C:
- SITE SAFETY CO-ORDINATOR
TBD
C:
- SITE SAFETY MANAGER
RON WESTLAKE
C: [REDACTED]
(AFTER HOURS: [REDACTED])
- REGULAR HOURS OF OPERATION
07:30 - 17:30 MONDAY TO FRIDAY
- BC ONE CALL
1-800-474-6886

Optional Route: During Peak Hours if Marine Drive/Taylor Way is unavailable, Construction traffic is diverted southbound Taylor Way, then at the Marine Drive traffic light intersection (beyond the Home Depot and Simons retail street).

DATE: AUGUST 24, 2018
REVISION: 6



PARK ROYAL
752 MARINE DRIVE
WEST VANCOUVER, BC

LEGEND

- Emergency Muster Point
- Fire Hydrant
- First Aid Room
- Fire Extinguisher
- Air Horn
- Portable Washrooms
- Site Gate (12 ft wide)
- Site Border/Fencing/Hoarding (6ft high)
- Edge of Excavation
- Stairs
- No Parking
- Trucks Traffic
- Traffic Control Person (as required)
- DEP Box
- Crane
- Satellite Electrical Panel
- Gas & Sanitary Lines
- NO FLY ZONE

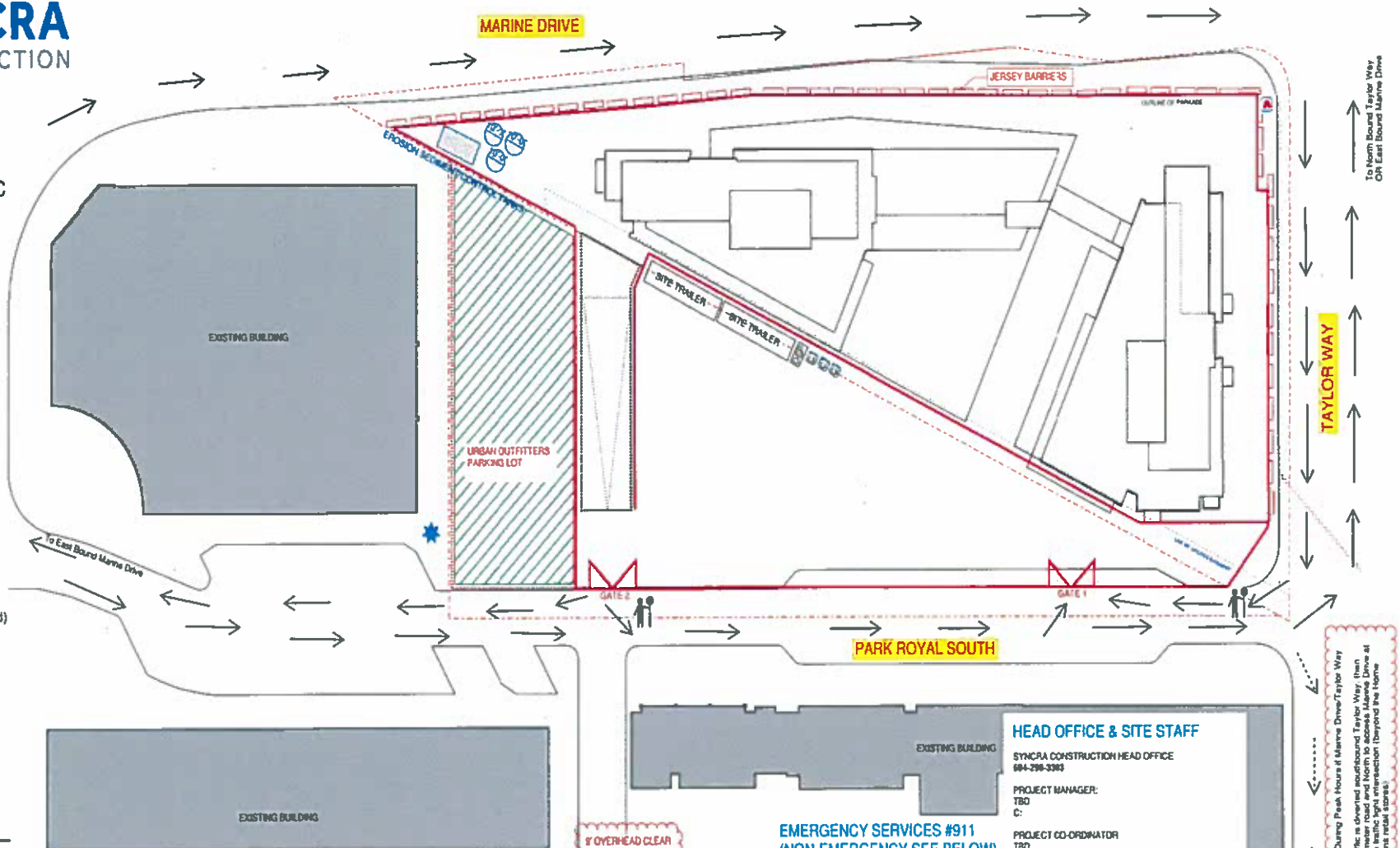
ESTIMATED TRAFFIC MOVEMENTS
EXCAVATION: 20-25 TRUCKS/HR
CONCRETE: 8 TRUCKS/HR



NO SMOKING ON SITE.

PRELIMINARY SITE LOGISTICS PLAN PHASE 3: DURING CONSTRUCTION; AFTER STRUCTURE COMPLETE/INT. & EXT. FINISHING/LANDSCAPE AUGUST 24, 2018

PARK ROYAL -752 MARINE DRIVE, WEST VANCOUVER, BC



**EMERGENCY SERVICES #911
(NON-EMERGENCY SEE BELOW)**

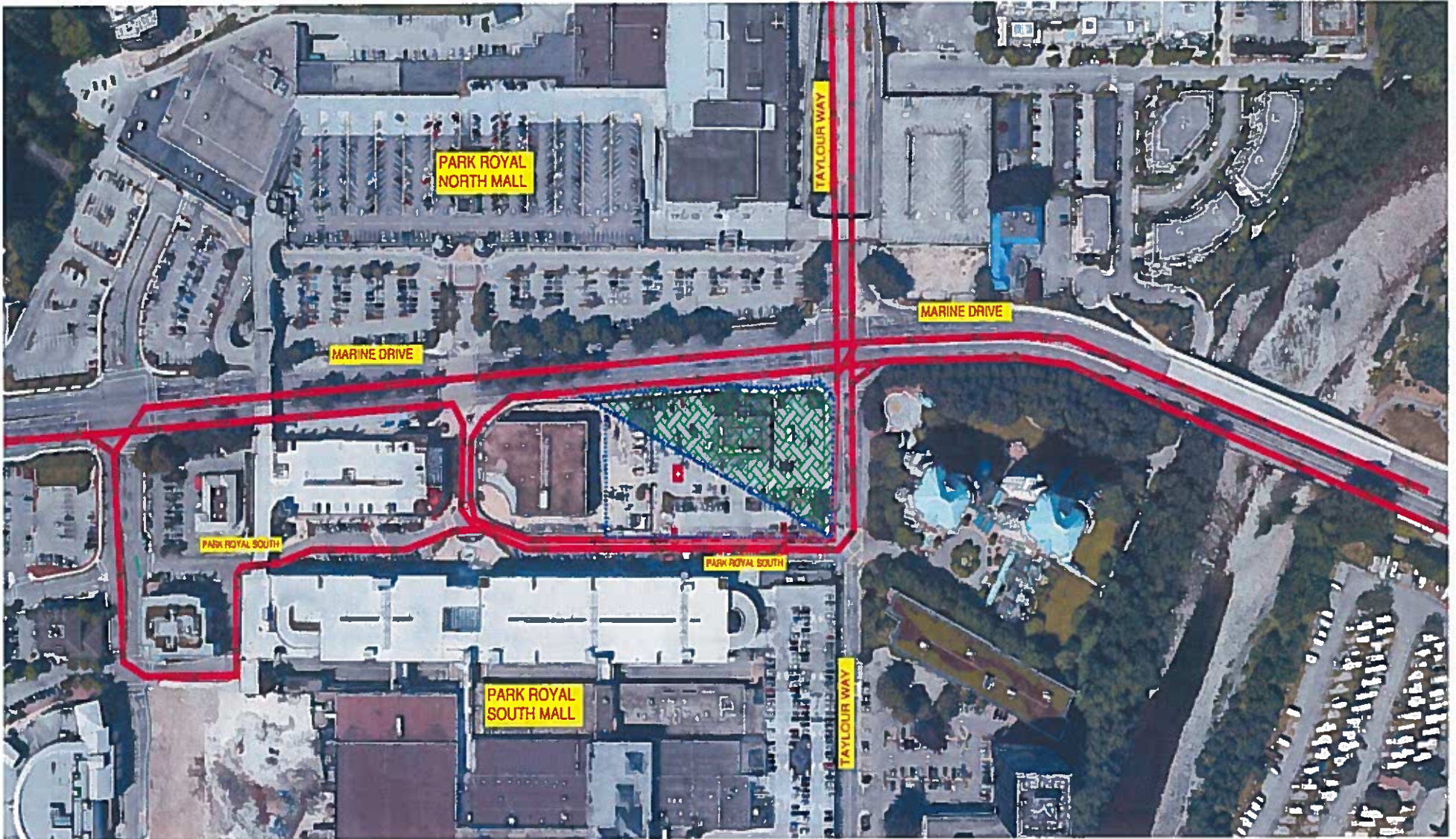
- POLICE:
604-825-7200
- AMBULANCE:
604-872-5151
- FIRE:
604-825-7378
- WORKSAFEBC:
604-276-3301 & 1-888-621-7223
- POISON CONTROL CENTRE:
1-888-682-6050
- FORTIS BC, NATURAL GAS EMERGENCY:
1-800-683-9911
- ENVIRONMENT BC:

HEAD OFFICE & SITE STAFF

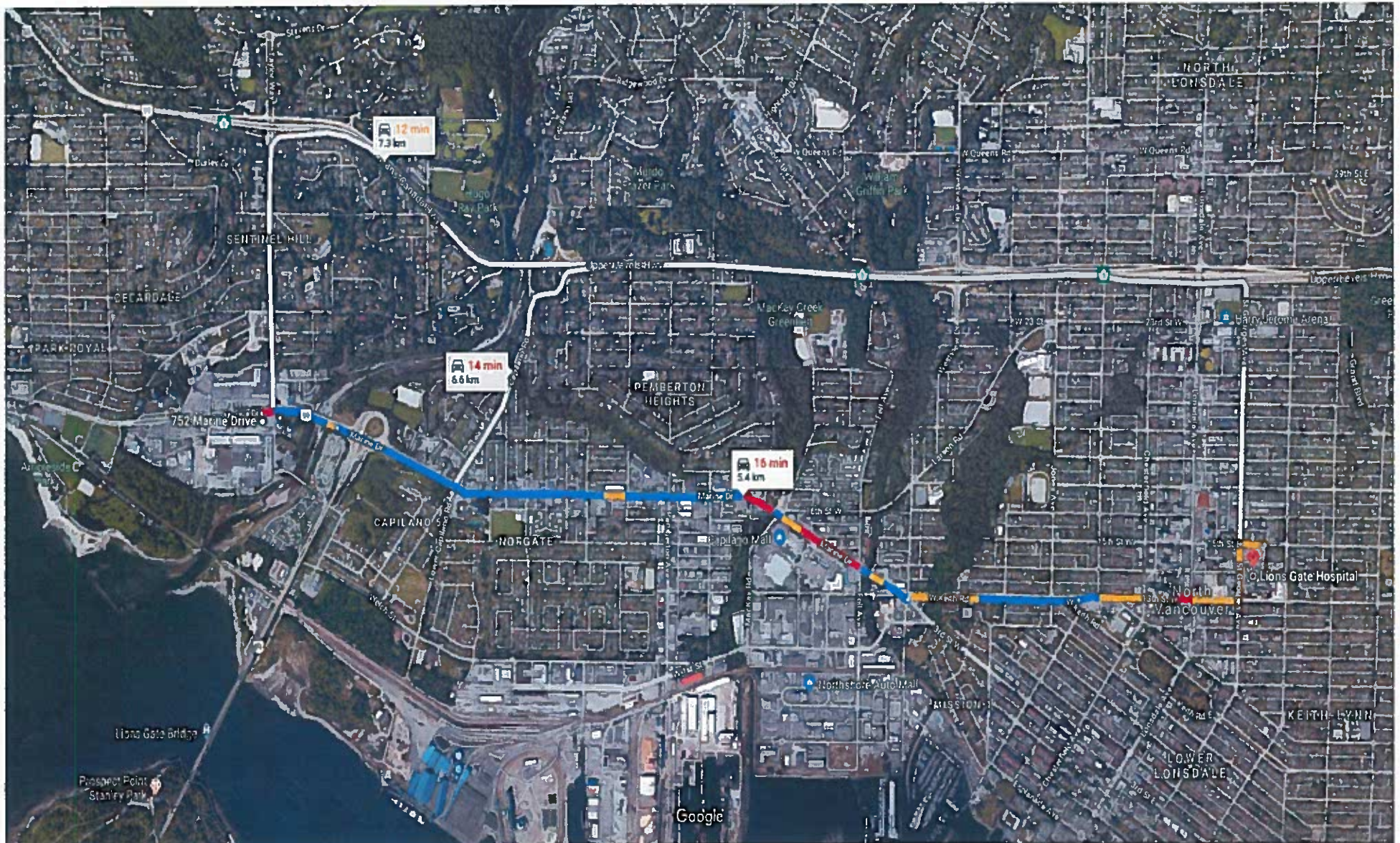
- SYNCRA CONSTRUCTION HEAD OFFICE
604-298-3393
- PROJECT MANAGER:
TBD
C:
- PROJECT CO-ORDINATOR
TBD
C:
- SITE SUPERINTENDENT
TBD
C:
- SITE SAFETY CO-ORDINATOR
TBD
C:
- SITE SAFETY MANAGER
RCW WESTLAKE
C: [REDACTED]
(AFTER HOURS: [REDACTED])
- REGULAR HOURS OF OPERATION
07:30 - 17:30 MONDAY TO FRIDAY
- BC ONE CALL
1-800-474-8898

Optional Route During Peak Hours of Marine Drive/Taylor Way
Construction traffic is diverted southbound Taylor Way, then
northbound Taylor Way, then eastbound Taylor Way at
the Marine Drive traffic light intersection (beyond the Home
Depot and Sirens metal stores).

EMERGENCY ROUTES ACCESS & EXIT OF 752 MARINE DRIVE, WEST VANCOUVER



HOSPITAL ROUTE FROM PARK ROYAL MALL TO LIONS GATE HOSPITAL (231-15TH STREET EAST, NORTH VANCOUVER, BC V7L 2I7)



PARK ROYAL - 752 MARINE DRIVE, WEST VANCOUVER, BC

DATE: AUGUST 24, 2018
REVISION: 6



DRIVING DIRECTIONS TO LIONS GATE HOSPITAL:

752 Marine Dr

West Vancouver, BC V7T 2W5

Get on Trans-Canada Hwy/BC-1 E

- 1. Head east on Marine Dr toward Taylor Way 3 min (1.7 km)
- 2. Turn left at the 1st cross street onto Taylor Way/BC-1A/BC-99 54 m
- 3. Turn right onto the Trans Canada Highway/BC-1 E ramp to North Vancouver 1.1 km
- 500 m

Continue on Trans-Canada Hwy/BC-1 E to North Vancouver. Take exit 18 from Trans-Canada Hwy/BC-1 E

- 4. Merge onto Trans Canada Hwy/BC-1 E 4 min (4.5 km)
- 5. Take exit 18 for Lonsdale Avenue N 3.8 km
- 650 m

Continue on St Georges Ave to your destination

- 6. Turn right onto St Georges Ave 3 min (1.2 km)
- 7. Turn left onto 15th St E 1.1 km
- 8. Turn right 120 m
- 5 m

Lions Gate Hospital

231 15th St E North Vancouver, BC V7L 2L7