

CONSTRUCTION IMPACT MITIGATION STRATEGY GUIDELINES

The District of Squamish is committed to ensuring the safety of pedestrians, cyclists, and motorists, and that the disruptions to the community and traffic associated with construction activity are minimized. Mitigating the disruptive impact of construction-related traffic on District streets and boulevards is an important part of the development and construction process. This document provides guidelines for developing a Construction Impact Mitigation Strategy (CIMS) that will be acceptable to the District. A Construction Impact Mitigation Strategy will be required when a development or construction project is expected to have an impact on:

- The mobility or safety of pedestrians, cyclists, transit, and vehicular traffic
- The typical functioning of the neighbourhood including interruptions and impacts to surrounding residents, businesses, and institutions from construction activity and worker/trades parking needs.

Expect wind! The name “Squamish” is an English adaptation of the First Nation word Skwxwu7mesh, meaning “Mother of Wind”. Indeed Squamish’s unique location where valley meets sea results in consistent and sustained strong winds throughout all seasons and especially the driest months of the year and during winter storms. As the District does not allow the use of potable water for dust control, your dust control measures may require unique or alternative solutions to what you are accustomed to. Tarping, tents, and material storage will also require robust protection and securing from extreme wind events to prevent flying debris hazards.

The objective of a CIMS is to provide safe passage for pedestrians, cyclists and vehicular traffic around a construction site with as little inconvenience, impact and delay as possible and with minimal on-street footprint. As such, every effort is to be taken to:

- Maximize protection of the public from construction related hazards including from weather-related impacts.
- Minimize interference or obstruction of pedestrian, bicycle, or vehicular traffic on all municipal roads, sidewalks and trails.
- Accommodate pedestrians with routing and signage.
- Accommodate cyclists with routing and signage.
- Make provisions for transit impact.
- Address silt/dust control and cleaning from adjacent streets.
- Make provisions for litter cleanup / street sweeping adjacent to site.
- Mitigate construction impacts such as noise and odour.
- Provide effective communication with affected stakeholders.

Note: the CIMS is required prior to issuing the Permission to Construct certificate under Servicing Agreements (off-site works), Site Alteration Permits (onsite soil removal/fill), and Building Permits.

The applicant should use these guidelines to ensure that all required basic elements are included in the plan. The level of detail for each basic element will be determined by the District and will be based on the complexity of the project, the context in which the project is taking place, and the volume and variety of

traffic being affected.

A plan that does not include the required information and/or does not include any additional data requested will be deemed incomplete and returned for revision and re-submittal. If, during the course of construction, the traffic management requirements change to reflect unanticipated construction activities, the applicant will submit an amendment to the CIMS. As the details of how the project will be constructed become clearer, the more detailed the Construction Impact Mitigation Strategy will become; **however considering and addressing the general requirements and impacts early will facilitate the process and lead to a successful construction period.**

At every step of the permitting and construction process the applicant must consider how to mitigate the effect of construction traffic and construction activities on the neighbourhood in which the project is taking place and the larger transportation network of the District.

The CIMS must be developed with the following principles in mind:

Safety:

- Minimize risk for those around and near the project site as well as those entering or exiting the site. Pedestrians and cyclists and/or other vulnerable road users may require special attention.

Roadway efficiency:

- Avoid or minimize delays on all roads especially during peak travel times. Major routes, bike lanes, sidewalks should remain open and allow for freely moving traffic.
- Transit routes require special attention and may allow for fewer options than streets without transit routes.
- The CIMS should take into account traffic volumes generated by the project and provisions for truck traffic being restricted during peak times if applicable (generally 7am – 9am & 3pm – 6pm).
- Plan to minimize impacts to the boulevards, sidewalks, and roads surrounding the project.
- Develop plans for employee/trades parking, materials delivery and storage, and truck staging that optimize usage of the available space on site or other private property as applicable. Staging or queueing along District roadways in front of the construction site is typically not acceptable.
- Contain construction works, materials, and equipment on site.

Communicate Early and Broadly throughout the Project:

- Develop plans to communicate effectively with stakeholders including the neighbourhood, the travelling public, and other appropriate jurisdictions. For larger projects, a website and other social media tools are encouraged as effective communication tools.

Coordination:

- Coordinate activity with other major projects and events affecting the neighbourhood and the District transportation network including roadways, transit and bike routes, highways and bridges.

Stewardship:

- Develop maintenance plan for temporary traffic control devices on impacted roads as well as to ensure affected roads are maintained to District standards.
- Develop silt/dust control implementation plans
- Make provisions for litter clean up and street sweeping adjacent to the site.
- Commit to responding to neighbourhood concerns and to resolving any reasonable complaints in a timely manner.

Components of a Complete Construction Impact Mitigation Strategy (CIMS)	
Project Summary Sheet	See Schedule A for a sample Project Summary template. Alter this template as required to meet the requirements of your CIMS.
Project Details/Site Plans	<p>Describe the project from demolition to completion.</p> <ul style="list-style-type: none"> • The 24-hour contact for the person who has decision making authority representing the applicant (enter in schedule A). • Describe work to be performed at each stage (in case of multi-phases projects, describe each phase) including civil works and 3rd party utility works. • For larger projects, provide a plan of how the site will be developed (i.e. east to west, north to south, etc.) • Provide schematic site plans that: <ol style="list-style-type: none"> a. Show the surrounding streets, sidewalks, bike routes, transit routes, etc. and show location of construction-related equipment and activities: i.e. trailers and sediment control system, site access/egress points, cranes, concrete pumping, deliveries, contractor parking etc. b. Show fencing, boarding or barricades. c. When applicable, show covered way (hoarding). Note that a drawing of the hoarding must be submitted for approval by a building inspector. See example in schedule D. d. Provide sequence of construction operations (multiple site plans if there are multiple phases). e. Describe the required off-site civil works including location and estimated duration. f. Describe the location and length of any proposed on-street building zone. g. Identify construction delivery and receiving area. h. Identify off-street location for employee/trade parking. i. Identify all areas that will be affected by construction activities.

	<ul style="list-style-type: none"> • These plans should show distances of property line to excavation limits, road edge, and any other dimension needed to demonstrate constructability. • Schematic site plans must be completed by a qualified professional and comply with Part 8 of the BC Building Code, Safety Measures at Construction and Demolition Sites.
Schedule	<ul style="list-style-type: none"> • Provide an estimated schedule in the Project Summary table. • Submit two week look-ahead construction schedules every two weeks, unless directed otherwise by the District.
Traffic Management Plans & Works Schedule	<p>Submit for review and approval by the District detailed traffic management plans (TMPs) for each phase of the project and for each activity for which the highway will be occupied if traffic (vehicle, pedestrian, cyclist) will have to be disrupted to accommodate construction and off-site civil works. These plans will be developed by the primary contractor responsible for the works and will not be submitted for acceptance by the District until two weeks (ten working days) prior to the proposed commencement date.</p> <p>TMPs must be completed by a certified professional and in accordance with the BC MoTI Traffic Control Manual for Work on Roadway, latest edition, and Section 18 of the Workers Compensation Board Act.</p> <p>Each TMP must also:</p> <ul style="list-style-type: none"> • Provide primary contractor’s name, address, and phone number including 24-hour contact information. • Provide the company name that will perform traffic control and their main contact information. • Describe the works being undertaken. • State the proposed dates for which it will be in effect and the total number of days the work is expected to take, and the hours of work for each day. • Describe the manner in which the neighbourhood and other stakeholders will be notified of the works. <p>Full road closures require written District approval. For construction activities that require a full road closure and require transit service and/or emergency vehicle service to be rerouted, the applicant must provide written approval from the appropriate agencies on the proposed plan and mitigation measures.</p>

<p>Mobility Impact</p>	<p>Describe how the project will impact road users, and what measures will be provided to mitigate these impacts.</p> <p>Complete the necessary components of the Project Summary table adding rows or columns as required.</p> <p>Provide details on snow management as it relates to access (i.e. sidewalk clearing, removal of plowed windrow).</p> <p>Provide specific details about the number of trucks (inbound and outbound) that will be accommodated for queuing on-site, or evidence of agreements with other land owners if queuing is proposed at off-site locations, including information on ease of site access for trucks. Queuing on public property (including roads) is not permitted without written approval from the District.</p> <p>Identify the times of day truck traffic is expected – heavy truck traffic should be outside peak hours</p> <p>Identify major activities (i.e. major concrete pours, etc.) and identify the estimated number of truck trips required.</p> <p>Describe truck routing and communication plan for instructing contractors and subcontractors of truck routing.</p> <p>Describe any unusual or oversized equipment expected and their parking and turning requirements associated with this equipment.</p>
<p>Community Impacts</p>	<p>Describe the impact of the construction on the neighbourhood</p> <ul style="list-style-type: none"> • Using the table in the Project Summary, for each phase of construction, provide an estimate of how many construction worker vehicles (including personal vehicles) will be generated by site activity and describe how that parking demand will be met. Off-site parking require written approval from property owners. • The applicant may be required to participate in and contribute to area transportation programs, and should undertake a review of nearby private parking lots that may be leased, provision of a vanpool/carpool program for construction workers, shuttle service to off-site parking, etc. Any expense resulting from parking arrangements will be borne by applicant.

	<ul style="list-style-type: none"> • Describe how noise, dust, litter, odour and other nuisances will be controlled in compliance with relevant District bylaws. This should include communication and mitigation plans to address any environmental concerns, for example odours and visual impacts of dewatering work (organics in the ground often cause nuisance odours and the negative optics of pumping water into ditches and ponds result in inquiries that take up time of both the District and the Developer). • Provide the expected hours of work. Identify any works that are likely to be so disruptive to traffic that they may need to be scheduled outside the hours of work permitted by the District’s Noise Bylaw. Any works that may need to be scheduled outside of the permitted hours will require a variance to the noise bylaw.
Communication	<p>Communication about construction activities and impacts is important to the District. Describe how you propose to inform neighbours and other stakeholders of anticipated project impacts.</p> <ul style="list-style-type: none"> • Include a list and/or map identifying affected agencies, businesses, residents and property owners that will be contacted and informed about the project. • Plan a communication strategy that will proactively provide up-to-date information to neighbours and other interested parties about construction and related traffic impacts. For example: e-newsletter for subscribers. • Provide plans to install traveler information signage sufficiently in advance of the construction area to enable travelers to choose alternative routes. Changeable message signs may be required for detours or traffic pattern changes. • Provide on-site signage displaying emergency contact information for the project (see Building Department for template). • Provide plan to notify the neighbourhood and the following agencies of traffic disruptions or other activities that may disturb the community: <ul style="list-style-type: none"> a) Transit (BC Transit) , emergency services (Police, Fire, Ambulance), garbage and recycling collection (GFL) b) Appropriate adjacent jurisdictions (i.e. Ministry of Transportation and Infrastructure, District of Squamish, Squamish Nation, etc.)

	<ul style="list-style-type: none"> • Include the District of Squamish Engineering Department on all communications sent to the public and agencies.
Coordination	Projects that are taking place in close proximity to other developments and/or major infrastructure works must detail how their works will be coordinated with the other project(s) with the goal of minimizing impacts to the community and travelling public. It is up to the applicant to coordinate with other projects.
Work Permit	<p>Work Permits are required for all projects that require use of the District right of way. For most projects, Work Permits must be obtained before work may begin. More than one phase or one activity that will impact the right of way (including road, sidewalk, and boulevard) may be permitted under a single Work Permit.</p> <p>Work Permit must be submitted by the Prime Contractor and must include a \$5M liability insurance naming the District as co-insured (including a 30 days' cancellation notice clause), WorkSafe BC clearance letter and DOS business licence.</p> <p>An approved CIMS is required to receive a Work Permit. CIMS must be attached to the work permit and will be referenced by enforcement officers.</p>

Compliance and Enforcement:

The developer is ultimately responsible for all contractors, sub-contractors, trades and workers, suppliers, etc. associated with the site. The Developer should require from these parties compliance with all municipal bylaws and regulations. Should violations be brought to the attention of the developer or their on-site representative by municipal staff, voluntary compliance is expected. Cases of non-compliance will be forwarded to the Bylaw Department and escalating enforcement measures may be employed until either compliance is achieved or all work on the site is stopped by way of a Stop Work Order or Court Order. For up to date information on fines please refer to the District of Squamish Notice Enforcement Bylaw and Municipal Ticket Information Bylaw.

Schedule A

Sample Project Summary Sheet:

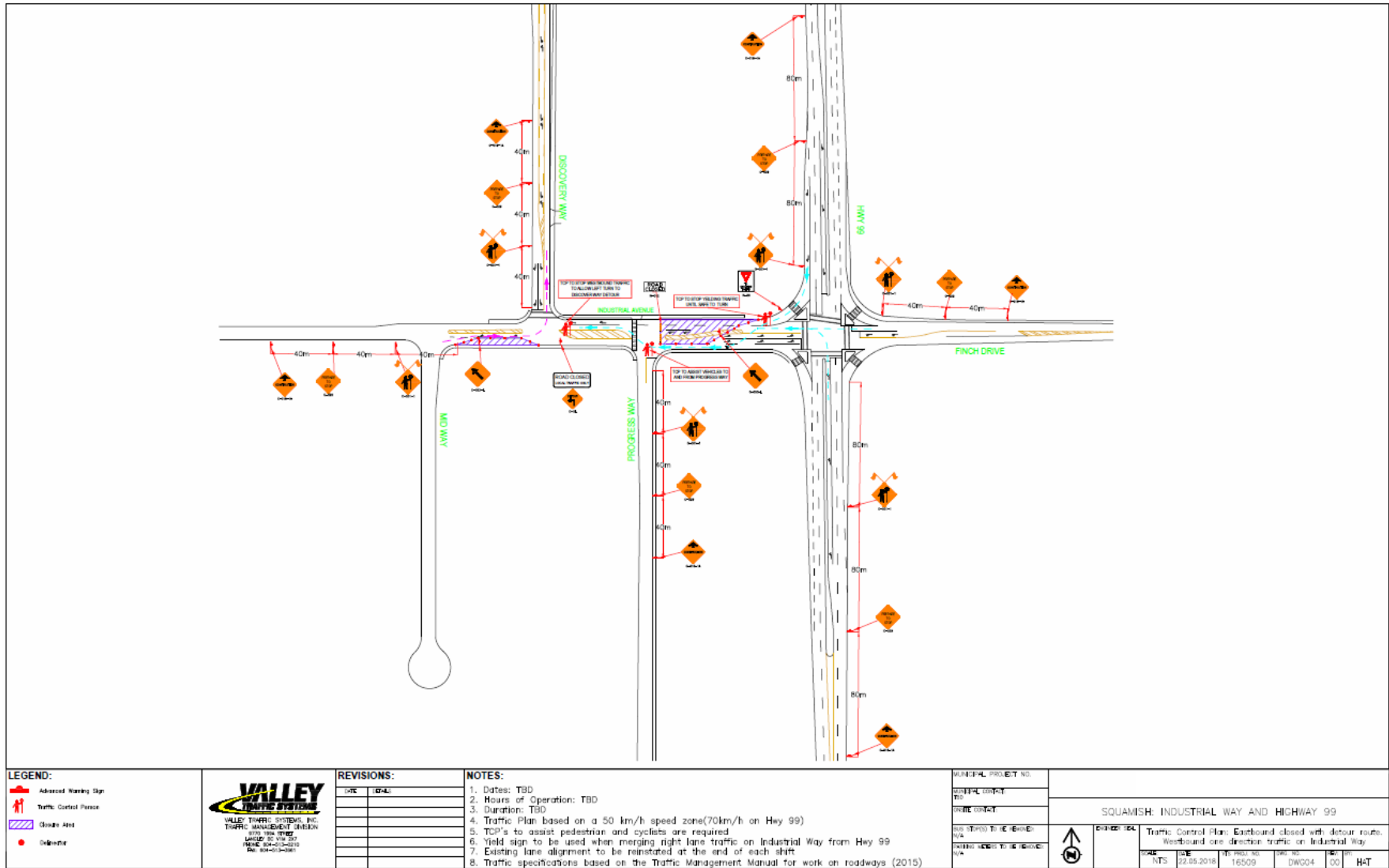
Building site address		
# of storeys below grade		
# of storeys above grade		
Type of construction (i.e. concrete/woodframe)		
Total number of months to complete		
Contractor		
Project Manager	Name	
	E-mail	
	Phone	
On-site contact	Name:	
	Cell	
	E-mail	
Emergency contact (after hours)	Cell	
	E-mail	

Site Generated Traffic

Phase	Dates/ Duration in months		# of Trucks/ day	# of Workers
Demolition				
Excavation		m ³ removed:		
Foundation/ Parkade		m ³ concrete:		
Above Grade		m ³ concrete:		
Landscape				
Off-site Civil				

Schedule B

Sample Traffic Management Plan



LEGEND:

- Advanced Warning Sign
- Traffic Control Person
- Closure Area
- Obstacle



REVISIONS:

DATE	TOTAL

- NOTES:**
1. Dates: TBD
 2. Hours of Operation: TBD
 3. Duration: TBD
 4. Traffic Plan based on a 50 km/h speed zone (70km/h on Hwy 99)
 5. TSP's to assist pedestrian and cyclists are required.
 6. Yield sign to be used when merging right lane traffic on Industrial Way from Hwy 99
 7. Existing lane alignment to be reinstated at the end of each shift
 8. Traffic specifications based on the Traffic Management Manual for work on roadways (2015)

MUNICIPAL PROJECT NO. _____

DATE: _____

PROJECT: _____

SCALE: _____

DATE: _____

SQUAMISH: INDUSTRIAL WAY AND HIGHWAY 99					
Traffic Control Plan: Eastbound closed with detour route. Westbound one direction traffic on Industrial Way.					
DATE	TIME	BY PROJ. NO.	DATE	BY PROJ. NO.	DATE
NTS	22.05.2018	16509	DWG04	00	HAT

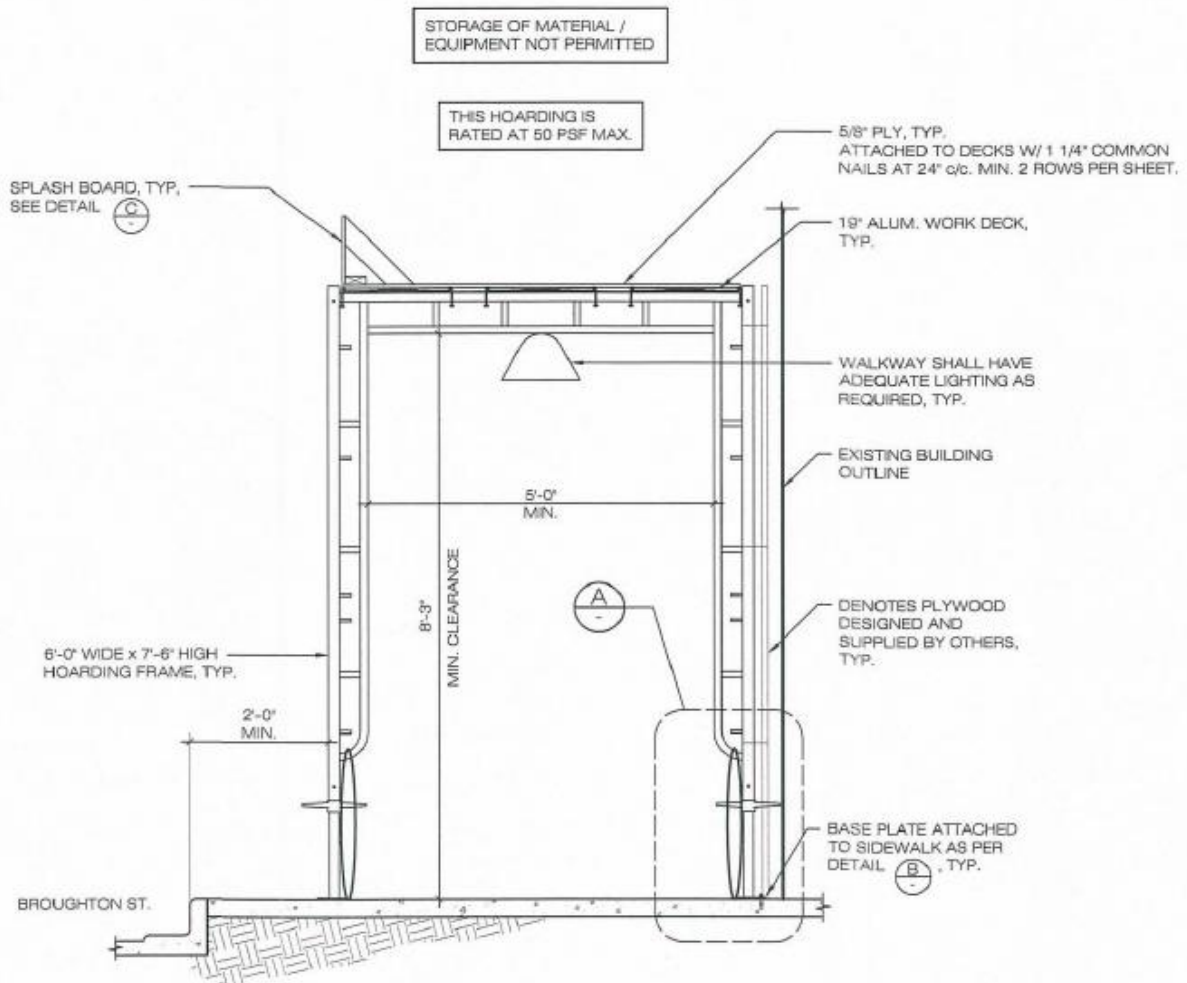
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Schedule C

Sample site map – Ask District staff for sample.

Schedule D

Hoarding drawing example



2 SECTION
1/2" = 1'-0"