



ROAD INSTRUCTIONS – OPENING#W15

ACCESS ROAD: AS12

CUTTING PERMIT: NO. 4

TIMBERMARK: K2D 0R1

RAINFALL SHUTDOWN CRITERIA

Cutblock W15 is within Rainfall Shutdown Area "5"

Shutdown Criteria: Activities must shut down if: The total rainfall reaches 36 mm in 24 hours. Onsite rain gages should be used and monitored daily.

Start-Up Criteria: Activities may start-up when: The total rainfall is equal to or less than 30 mm in 24 hours. Refer to the Return to work guide in the tender document for more information.

Adequate recovery time should be given before building operations commence after a shutdown.

ROAD NAME	START STATION	END STATION	TYPE OF WORK/COMMENTS
Weiner Connector	0+000	0+518	New Construction. Located on old grade that has mature timber. Grubbing and stripping required. Re-build a new subgrade. Re-establish ditch-line and install new drainage structures.
Weiner Connector	0+518	1+1371	New Construction. Cut and fill construction.
Weiner Connector	1+371	1+691	New Construction. Located on old grade that has mature timber. Grubbing and stripping required. Re-build a new subgrade. Re-establish ditch-line and install new drainage structures.
Weiner Connector	1+691	1+745	New Construction. Cut and fill construction.
Weiner Connector	1+745	1+764	New Construction. Located on old grade that has mature timber. Grubbing and stripping required. Re-build a new subgrade. Re-establish ditch-line and install new drainage structures.
W15-S1	0+000	0+218	New Construction. Located on old grade that has mature timber. Grubbing and stripping required. Re-build a new subgrade. Re-establish ditch-line and install new drainage structures.
W15-S2	0+000	0+064	New Construction. Cut and fill construction.
W15-S3	0+000	0+213	New Construction. Located on old grade that has mature timber. Grubbing and stripping required. Re-build a new subgrade. Re-establish ditch-line and install new drainage structures.
W15-S4	0+000	0+440	New Construction. Located on old grade that has mature timber. Grubbing and stripping required. Re-build a new subgrade. Re-establish ditch-line and install new drainage structures.
W15-S5	0+000	0+145	New Construction. Cut and fill construction.

ROAD NAME	STATION	RIPARIAN ID	RIPARIAN CLASS	DEBRIS TRANSPORT POTENTIAL	CULVERT / BRIDGE SIZE	DESIGNED PEAK FLOW	Special instructions for operations within or adjacent to RMA
Weiner Connector	0+051	-	S4	Low	600	Q-100	<p>OPENING W15 LIES WITHIN THE SPROAT LAKE COMMUNITY WATERSHED. ALL STREAM CROSSINGS ARE TO BE ARMORED WITH COARSE ROCK MATERIAL TO MINIMIZE THE TRANSPORT OF FINES DOWN STREAM.</p> <p>IF ANY IN STREAM WORKS ARE REQUIRED DURING INSTALLATION OF THE 1x3 AND 1x5 WBC THEN THE FISHERIES WORK WINDOW FROM JULY 15TH – SEPT. 15TH IS TO BE FOLLOWED. LOG CULVERT SIZING TABLE SEEN BELOW IS TO BE USED.</p>
Weiner Connector	0+290	-	-	Low	600	X-Drain	
Weiner Connector	0+358	-	NCD	Low	600	Q-100	
Weiner Connector	0+429	-	S4	Low	800	Q100	
Weiner Connector	0+701	-	-	-	600	X-Drain	
Weiner Connector	0+947	-	NCD	Low	600	Q-100	
Weiner Connector	1+098	-	NCD	Low	600	Q-100	
Weiner Connector	1+221	-	-	-	600	X-Drain	
Weiner Connector	1+442	-	-	-	600	X-Drain	
Weiner Connector	1+550	-	-	-	600	X-Drain	
Weiner Connector	1+690	-	-	-	600	X-Drain	
Weiner Connector	1+745	-	-	-	600	X-Drain	
W15-S1	0+102	-	-	-	600	X-Drain	
W15-S2	0+025	-	NCD	Low	600	Q-100	
W15-S2	0+056	-	-	-	600	X-Drain	
W15-S3	0+010	-	-	-	600	X-Drain	
W15-S3	0+034	3	S3	Low	1x3	Q-100	
W15-S4	0+096	2R1	S3	Low/Mod	1x5	Q-100	
W15-S5	0+010	-	-	-	600	X-Drain	

GENERAL INSTRUCTIONS

All employees, supervisors and contractors associated with these Road Instructions shall be fully advised of their contents and requirements.

All litter including cable, oil buckets, grease tubes, newspapers, and lunch garbage is to be placed in appropriate garbage containers and removed from the site for proper disposal concurrent with all operations.

ADDITIONAL INSTRUCTIONS

[1] R/W clearing widths to be 25 meters unless a larger width is required for safety or otherwise prescribed.

[2] Prior approval must be obtained from AVCF if falling beyond right-of-way clearing is required for spoil sites or quarries.

[3] Proposed cross-drain culvert locations are approximate. Site specific installation to within ±25m is acceptable. Installation beyond this distance constitutes a 'change of plan' and requires prior approval from AVCF.

[4] Equipment must not be fuelled or serviced within the riparian management area (RMA) of a stream, lake or wetland. Do not park any equipment within an RMA overnight.

[5] Ensure that licensed water works are notified of road activities 48 hours prior to activity.

RMA distances: STREAMS: S1 - 70 meters, S2 - 50 meters, S3 - 40 meters, S4 - 30 meters, S5 - 30 meters, S6 - 20 meters, LAKES: L1 - 10 meters, L3 - 30 meters, WETLANDS: W1, W5 - 50meters, W3 - 30 meters.

[6] Avoid quarry locations within the RMA of any stream; where avoidance is not practical, quarries may be located within the RMA of a S6 stream if no impacts (i.e. increased sedimentation) will occur to the stream. All other streams (i.e. S1 to S5) require prior approval from AVCF before a quarry may be located within its RMA. Do not deck or process wood within RMA's.

[7] **Cultural Resources:** If an unidentified cultural heritage resource is encountered within the cutblock during any harvesting phase, operations will cease in the immediate vicinity of the feature and AVCF shall be notified immediately.

[8] **Wildlife Resources:** In the event any unidentified bear dens or raptor nest trees are encountered during falling, but before the tree has been cut, the faller will go elsewhere for the day and report this potential wildlife tree to a AVCF Supervisor. Fallers are not to return to the vicinity of the wildlife tree until notification from AVCF has been given. If the discovery of a bear den or potential nest tree occurs while the tree is being felled, the decision to proceed is at the faller's discretion in regards to safety and Worksafe BC requirements. If it is unsafe to leave the tree partially cut, the faller will complete falling the tree and report the incident to AVCF.

[9] **Fish Streams:** Due to the close proximity of fish streams, ensure a high level of diligence is maintained regarding stream bank protection, in-stream woody debris disturbance and protection of stream banks at designated crossings.

[10] **Invasive Plants:** Broom occurs along sections of the highway on route to the block. Follow FSP measures for invasive plants. Cut and remove plants in association with road reactivation, clean machinery as required. Monitor and treat broom and other invasive species during early establishment. Grass seed exposed soil on or adjacent to roads, trails, and landing sites as soon as possible following harvest.

FALLING OF SNAGS AND DANGER TREES

In accordance with the Cutting Permit Authority and WorkSafe BC Regulations, all snags and danger trees that endanger workers within a distance of 50m outside the cutblock boundaries, or within one and a half tree lengths, (whichever is greater), are approved for falling under these harvest instructions. All danger trees and snags outside the cutblock boundaries that are required to be felled must be recorded on a map and provided to AVCF once falling has been completed. AVCF will be notified immediately if danger trees and/or snags are identified in groups and removal will result in the cutblock boundary being substantially impacted. Felled snags and danger trees up to 50m outside of the falling boundary meeting utilization specifications will be recovered.

EXCEPTION- Wildlife Tree Patch (WTP) areas - Snags or danger trees can be felled within a WTP for safety reasons although only the portion of the felled snags or danger trees that fall outside the WTP can be recovered.

CUTBLOCK BOUNDARY TREATMENTS

All marked boundary trees except snags and danger trees must remain standing during and after the completion of harvesting. Trees located along and adjacent to the cutblock edges (i.e. within the harvest boundary) that must be felled outside the harvest area must be recovered unless a physical, safety or environmental issue exists (e.g. deep gullies, steep breaks, fish creek, etc.). Trees that cannot be recovered may be left standing, if they are safe to leave, as wildlife trees. These trees must be recorded on a map and provided to AVCF once falling is complete; If unsure how to proceed, contact AVCF.

SAFETY

Road and in-block safety hazards associated with block W15 have been identified on the harvest and road instruction maps. In the event additional in-block safety hazards (temporary or permanent) are encountered or develop during road construction or harvesting phases, a plan must be developed to address the hazard. Any identified permanent hazards must be reported back to AVCF (using Hazard/Issue Report Form).

STEEP GRADES

Road segments with gradients > 18% have been identified on the Harvest and Road instruction Plan Map. Prior to commencing log hauling operations the contractor must perform a risk assessment of the current conditions and adjust hauling activities to suit the traction conditions. Hauling for W15 will not be permitted when ice and or snow is on the logging roads leading to or in the given setting (very low traction level). This has been determined using FERRIC step grade decent guidelines. The Ministry of Transportation guidelines are to be followed once on the highway.

Source: Forest Road Engineering Guidebook, Ministry of Forest 2002

Forest Road Engineering Guidebook

Table 8. Log culvert stringer sizing table—log diameters are mid-diameters, in millimetres.

Span (m)	Total Depth (m)	L60		L75		L100		L115		L145	
		D.Fu/Lav	Other	D.Fu/Lav	Other	D.Fu/Lav	Other	D.Fu/Lav	Other	D.Fu/Lav	Other
1.5	0.3	250	250	250	275	250	325	350	450		
	1.0	250	250	250	275	275	250	250	300		
	2.0	250	250	250	250	250	250	250	275		
3.0	0.3	350	425	375	475	400	475	650	800		
	1.0	250	300	275	300	275	325	350	400		
	2.0	250	325	275	325	300	350	375	450		
4.5	0.3	400	575	500	625	575	675	700	825		
	1.0	325	400	350	425	375	475	500	600		
	2.0	375	425	400	475	425	475	525	625		
6.0	0.3	550	675	600	725	650	775	800	950		
	1.0	425	525	450	550	500	575	600	750		
	2.0	475	575	500	625	575	650	675	825		

- Notes:
- Other refers to cedar, spruce, lodgepole pine, jack pine, and hemlock.
 - Sizes are based on sound logs, with no allowance for decay.
 - Logs should be free of cracks, excessive taper, sweep, damage, or large knots.
 - Reverse the type of adjacent logs.
 - Spans over 3 m should be lashed at mid-span.
 - Logging truck axle loads in accordance with B.C. Ministry of Forest standards.
 - Axle loads allow for unbalanced 60%-40% wheel loading.
 - Fill depths greater than 2 m should be designed by a professional engineer, or designed from tables prepared by a professional engineer.

PRIME CONTRACTOR – Workplace Area of Responsibility

