



Commercial Vehicle Safety & Enforcement

Commercial Transport Department

NOTICE

To All Permit Issuers, Industry and the General Public

Subject: Pacific Gateway

To Whom It May Concern:

The dimensions and weights for oversize-overweight (OS-OW) vehicles and commodities described in CVSE Reference Document – Pacific Gateway OS-OW Vehicle Envelopes dated Aug 12, 2013 are based on a review of permit approval data as of May 2013 by the Ministry of Transportation and Infrastructure (MoTI), Commercial Vehicle Safety and Enforcement (CVSE) Branch.

While the information provided in this document has been reviewed by CVSE, it should not be construed as a guarantee that permit requests for the dimensions and weights shown will be approved. The intended use of this information is to illustrate current capabilities for the movement of oversize-overweight cargo from the Lower Mainland (Metro Vancouver) and Prince Rupert to the BC-AB Border (i.e., through the Pacific Gateway) under what is considered to be a *standard* permit approval request.

Yours truly,

A handwritten signature in black ink, appearing to read "Bmg".

Brian G. Murray, Director
Commercial Vehicle Safety and Enforcement Branch
Ministry of Transportation and Infrastructure



Ministry of
Transportation
and Infrastructure

~ CVSE REFERENCE DOCUMENT ~
Pacific Gateway OS-OW Vehicle Envelopes

October 18, 2013

DISCLAIMER

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COMMERCIAL TRANSPORT, CVSE

For additional information about BC's permit policy, permit vehicle weight and dimension limits, and up-to-date data of past permit approvals, please follow the links to CVSE's website, the Commercial Transport Procedures Manual (CTPM), and the Extraordinary Load Spreadsheet Planning Tool provided below, or direct your inquiries to the points of contact listed below.

CVSE Commercial Transport Website:

http://www.cvse.ca/commercial_transport.htm

BC Commercial Transport Procedures Manual (CTPM):

http://www.th.gov.bc.ca/cvse/commercial_transport.htm

Extraordinary Loads - Spreadsheet Planning Tool (past permit approvals)

<http://www.cvse.ca/extraordinary/spreadsheet.html>

CVSE Commercial Transport Program - General Inquiries:

Preferred contact:	Commercial.Transport@gov.bc.ca
Jeffrey Monty, Manager Commercial Transport:	(250) 953-4017
Jan Lansing, Commercial Transport Advisor:	(250) 953-4026

CVSE Commercial Transport Program - Extraordinary Load Approvals:

Preferred contact:	ExtraOrdLoads.DC@gov.bc.ca
Secondary contact (Fax):	(250) 784-2280
Phil Folz, Commercial Transport Advisor:	(250) 784-2251
Hank Glover, Commercial Transport Advisor:	(250) 261-5745
Samuel Lam, P.Eng. Senior Vehicle Engineer:	(250) 953-4025

LOWER MAINLAND CORRIDOR

Route Example: Port Metro Vancouver to BC-AB Border via River Road (South Fraser Perimeter Road), Highways 91, 10, 1A, 13, 8TH AVE, 11, 1, 3, 5, 1, 5, 16.

Weight

A. Gross Combination Vehicle Weight (GCVW): 105.6 to 115.5 metric tons

Note: Maximum GCVW is a function of interaxle spacings, tire loading limit (100 kg/cm of tire width), BC's Bridge Formula, and other permit conditions specified by the Ministry's engineers. Furthermore, GCVW greater than 85 metric tons is subject to extraordinary load approval.

The GCVW range identified above has been reviewed by the Ministry's Bridge Engineering Section using the following axle combinations and spacings:

Axle No.	1	2	3	4	5	6	7	8	9	10	11	12	GCVW
Axle Description	Steer	Tandem Drive		Tridem Jeep			Low Weight Tridem			Low Weight Tridem			
Axle Weight (kg)	5,600	22,000		26,000			26,000			26,000			105,600
Axle Spacing (m)		5.49	1.37	5.33	1.52	1.52	10.52	1.52	1.52	4.42	1.52	1.52	
No. of Tires	2	8		12			12			12			

Axle No.	1	2	3	4	5	6	7	8	9	10	11	12	13	GCVW
Axle Description	Steer	Tandem Drive		Jeep	Tridem Jeep			Tridem Trailer			Tridem Booster			
Axle Weight (kg)	7,500	19,000		8,000	27,000			27,000			27,000			115,500
Axle Spacing (m)		4.83	1.40	1.82	4.42	1.52	1.52	14.50	1.52	1.52	4.42	1.52	1.52	
No. of Tires	2	8		4	12			12			12			

Approvals for GCVW greater than 115.5 metric tons and for vehicle configurations significantly different than shown on these diagrams are possible, but subject detailed bridge engineering review under the extraordinary load approval process.

B. Approximate Commodity Weight: 75 to 95 metric tons

Note: Net of 20 to 30 metric tons vehicle combination tare weight.

Height

A. Overall Vehicle Height (OAH): 4.85 m

Note: The pre-approved OAH for this corridor is 4.87 m (Form CVSE1010). The permit holder (i.e., carrier) is responsible for checking all road clearances on the selected route.

B. Approximate Commodity Height: 4.25 m

Note: Net of the trailer's above-grade deck height (approximately 60 cm). The commodity height can be greater depending on the type of equipment used and route selected. For example, the maximum commodity height with a Schnabel trailer, which is commonly used to transport windmill tower sections, would be 4.55 m (assuming a 30 cm ground clearance).

↔ Width

A. Overall Vehicle Width (OAW): 5.50 m

Note: The pre-approved OAW for this corridor is 5.0 m (see Form CVSE1001 and a map of 5.0 m wide routes in the Appendix). However, while width greater than 5.0 m can be accommodated as suggested by the permit data, it would involve a more demanding and complicated Traffic Management Plan (TMP). As such, OAW 5.0 m is a more reasonable/safe limit to use as a general statement about maximum dimensions for a standard permit approval request.

B. Approximate Commodity Width: 5.50 m (subject to the note above)

↔ Length

A. Overall Vehicle Length (OAL): 56.1 m

Note: OAL greater than 40.0 m is subject to extraordinary load approval and may require a detailed route survey and Traffic Management Plan (TMP). While not specified in policy, a general upper bound cut-off would be 60.0 m. Approval for length greater than 50.0 m is possible, but not guaranteed, and will depend on the proposed route, type of equipment, and TMP.

Furthermore, OS-OW vehicle combinations over 40.0 m in length require steerable trailers (manned steering trailers are required if hauling bridge beams, structural steel, processed poles, and pilings with OAL greater than 36 m). Some routes will in some cases also require the use of lift towers to lift the load/lowbed over road obstacles.

B. Approximate Commodity Length: 9.3 m to 29.0 m

Note: For a typical lowbed trailer, the maximum commodity length is 9.3 m (inside the trailer deck well). The commodity length can be greater than 9.3 m if the commodity is placed so that it extends over the trailer's gooseneck and the trailer's axles (approximate commodity length 20.0 m, OAL 33.5 m). The maximum commodity height will be reduced by approximately 1.0 to 1.2 m (from 4.25 m to 3.05 m/3.25 m).

However, depending on the type of trailer, the commodity length can be up to 29 m while accommodating a loaded height of up to 4.55 m. For example, a Schnabel trailer with a commodity length of 29 m and height of 4.55 m would result in an OAL of just under 60 m and OAH of 4.85 m assuming 30 cm ground clearance. A lowbed trailer with steerable axles, for example, can have a deck well length of 21 m resulting in an OAL of approximately 53 m. Assuming an above grade deck height of 60 cm, the commodity length and height would be 21.0 m and 4.25 m.

PRINCE RUPERT CORRIDOR

Route Example: Port of Prince Rupert to BC-AB Border via Highway 16.

Weight

A. Gross Combination Vehicle Weight (GCVW): 100,000 kg

Note: Maximum GCVW is a function of interaxle spacings, tire loading limit (100 kg/cm of tire width), BC's Bridge Formula, and other permit conditions specified by the Ministry's engineers. Furthermore, GCVW greater than 85 metric tons is subject to extraordinary load approval between the BC/AB Border and 20 km west of the junction of Highway 16/97 (Prince George). GCVW greater than 64 metric tons is subject to extraordinary load approval between Prince George and Prince Rupert.

The GCVW identified above has been reviewed by the Ministry's Bridge Engineering Section using the following axle combinations and spacings:

Axle No.	1	2	3	4	5	6	7	8	9	10	GVW
Axle Description	Steer	Tandem Drive		Tandem Jeep		Tridem Trailer			Tandem Booster		
Axle Weight (kg)	7,000	22,000		22,000		29,000			20,000		100,000
Axle Spacing (m)		5.54	1.43	4.25	1.38	9.92	1.55	1.55	4.27	1.38	
No. of Tires	2	8		8		12			8		

Highway 16 from the BC/AB Border to 20 km west of the junction of Highway 16/97 (Prince George) is a pre-approved 85 tons route. Work is underway to designate the segment of Highway 16 between Prince Rupert and Prince George as a pre-approved 85 tons route.

Approvals for GCVW greater than 100 metric tons and for vehicle configurations significantly different than shown on these diagrams are possible, but subject detailed bridge engineering review under the extraordinary load approval process.

B. Approximate Commodity Weight: 70 to 80 metric tons

Note: Net of 20 to 30 metric tons vehicle combination tare weight.

Height

A. Overall Vehicle Height (OAH): 4.63 m

Note: Approvals have been granted with OAH 4.83 m on Highway 16 to Terrace. However, there are road signs on Highway 16 with a clearance of only 4.63 m.

B. Approximate Commodity Height: 4.03 m

Note: Net of the trailer's above-grade deck height (approximately 60 cm). The commodity height can be greater depending on the type of equipment used. For example, the maximum commodity height with a Schnabel type trailer would be 4.33 m to 4.53 m (assuming a 30 cm ground clearance).

↔ Width

A. Overall Vehicle Width (OAW): 3.50 m

Note: Highway 16 from Terrace, which is 140 km east of Prince Rupert, to the BC-AB Border is an approved 5.0 m wide corridor (Form CVSE1001, BC 5.0 metre wide route map – see appendix). The segment from Prince Rupert to Terrace has been identified as a potential 5.0 m wide route. Demo/trial runs are scheduled for the late fall 2013 or early 2014 on Highway 16 from Prince Rupert to the BC/AB border with oversize loads to verify whether the entire corridor can be designated as a 5.0 m wide route.

B. Approximate Commodity Width: 3.50 m (subject to the note above)

↔ Length

A. Overall Vehicle Length (OAL): 31.19 m

Note: Past permit approval data shows one permit for OAL 36.0 m (OAW 3.1 m) and another for OAL 34.0 m (OAW 4.87 m) from Terrace to the BC/AB border. Demo/trial runs are scheduled for the late fall of 2013 or early 2014 on Highway 16 from Prince Rupert to the BC/AB border with oversize loads to verify OAL between Prince Rupert and Terrace.

B. Approximate Commodity Length: 9.30 m

Note: For a typical lowbed trailer, the maximum commodity length is 9.30 m (inside the trailer deck well). The commodity length can be greater than 9.30 m if the commodity is placed so that it extends over the trailer's gooseneck and the trailer's axles (approximate commodity length 20.0 m, OAL 33.5 m). The maximum commodity height will be reduced by approximately 1.0 to 1.2 m (from 4.0 m to 2.8 m/3.0 m).

APPENDIX

Extraordinary Loads - What is an Extraordinary Load?

<http://www.cvse.ca/extraordinary/index.html>

Extraordinary Loads - Frequently Asked Questions

<http://www.cvse.ca/extraordinary/faq.html>

Extraordinary Loads - Spreadsheet Planning Tool (past permit approvals)

<http://www.cvse.ca/extraordinary/spreadsheet.html>

Form CVSE 1001 - Routes Pre-Approved for 5.0 m OAW

<http://www.th.gov.bc.ca/forms/getForm.aspx?formId=1252>

BC 5.0 Metre Wide Route Map (PDF)

http://www.th.gov.bc.ca/cvse/CTPM/RouteMaps/5m_wide/overview.pdf

Form CVSE 1010 - East-West Overheight Corridors in the Lower Mainland

<http://www.th.gov.bc.ca/forms/getForm.aspx?formId=1257>