



Addition of Extended Length B-Train Configurations & Tri-Drive Tractors to the Memorandum of Understanding

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National Weights and Dimensions Task Force Meeting

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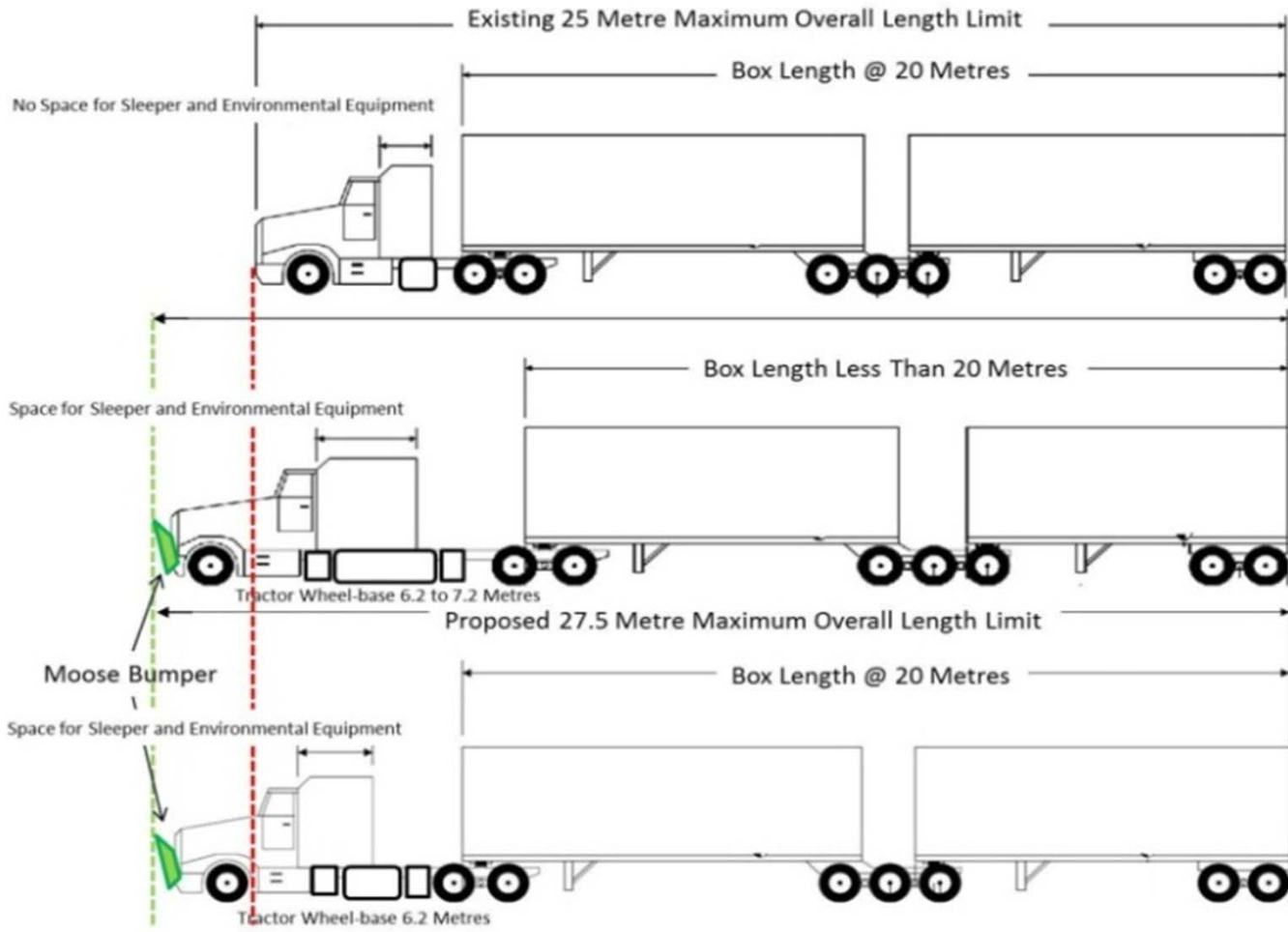
Overview of CTA B-Train Position

- CTA position has 3 fundamental principles:
 1. **Reduce emissions** --- by allowing flexibility in the use of tractors with emission reduction technologies;
 2. **Improve driver comfort and reduce fatigue** – by allowing flexibility in the use of larger sleeper berths;
 3. **Improve highway safety and driver protection** – by allowing flexibility for the use of moose bumpers.



Details of CTA “ask” to Task Force

- CTA is seeking 27.5 metre overall length (including moose bumpers) providing tractor w/b does not exceed 6.2 metres and box length does not exceed 20 metres;
- CTA is also seeking allowance for 27.5 metres overall length with tractor wheelbases greater than 6.2 metres, but not to exceed 7.2 metres when combined with a box length of less than 20 metres;



Work to Date

- CTA completed a full dynamic performance analysis of the proposed configurations and submitted to Task Force in March 2013;
- CTA completed additional work in late summer 2013 to define potential sum of wheel-base offsets that has been submitted to Task Force;
- Ontario Ministry of Transportation (MTO) elected to champion issue amongst government representatives and has dedicated staff resources to move the issue forward;
- MTO internal analysis is now complete

Results of Analysis

- Two areas were initially areas of concern – high speed off-track and low speed off-track;
- Results showed the tractor wheel-base to be main factor, not box length, therefore it has been possible to simplify box lengths at 20 metres;
- Concerns with both low speed and high speed off-track were mitigated by reducing overall tractor length slightly from 7.2 metres to 6.8 metres and by reducing sum of wheel base on trailers slightly for tractors over 6.2 metres.

Simplifying the Issue

- Proposed dimensions alleviate all issues with performance measures compared to vehicles operating today and allow a go forward on this issue:

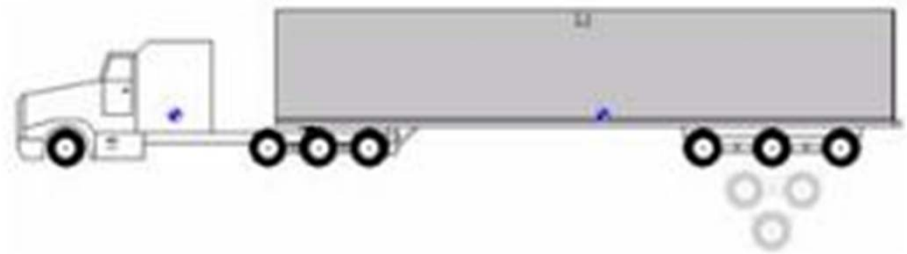
Overall	(1)	Overall Length	Max 27.5m
Tractor	(6)	Wheelbase – Long Combination	Max 6.8m
Combination	(11)+(25)	Sum of Trailer Wheelbases:	
		i. 6.2 m or less	≤ 17.00m
		ii. > 6.2m to 6.3m	≤ 16.53m
		iii. > 6.3m to 6.4m	≤ 16.44m
		iv. > 6.4m to 6.5m	≤ 16.36m
		v. > 6.5m to 6.6m	≤ 16.27m
		vi. > 6.6m to 6.7m	≤ 16.19m
		vii. > 6.7m to 6.8m	≤ 16.10m

Go Forward

- CTA requests that the Task Force immediately accept 27.5m B-trains with the current 6.2m w/b tractors, 20m box length and 17m sum of trailer w/b.
- CTA also requests that the Task Force accept the concept of 27.5m B-trains with tractors up to 6.8m w/b, 20m box length and an offset table gradually reducing the 17m sum of trailer w/b as tractor length increases to address low speed offtracking concerns.

Overview of CTA – Tri-Drive Position

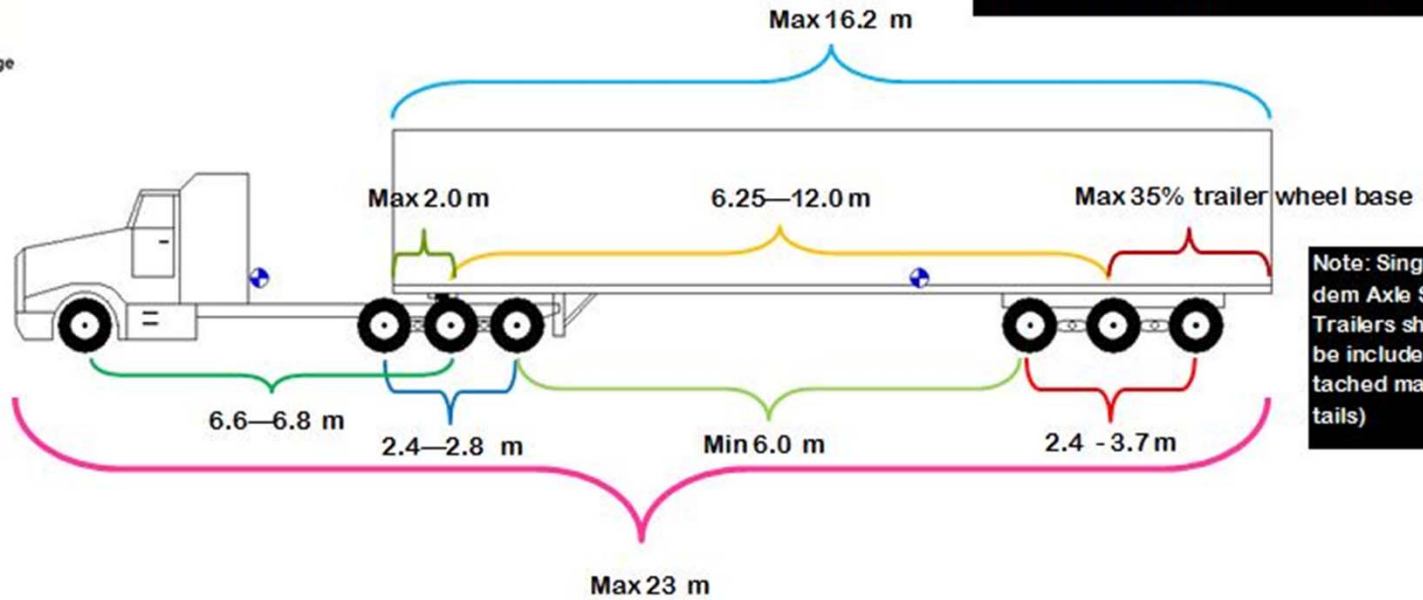
- CTA requesting tri-drive tractor single semi-trailer configuration be added to MoU – request made October 1, 2013;
- Benefits include increased traction and increased payload capacity over existing MoU configurations



Proposed Dimensions

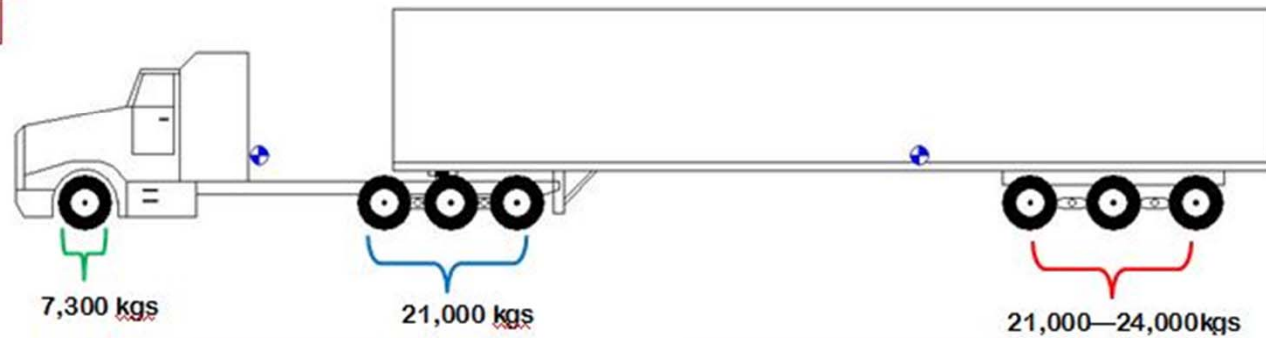
DIMENSION	LIMIT
Overall Length	Maximum 23 m
Overall Width	Maximum 2.6 m
Overall Height	Maximum 4.15 m
Tractor:	
Wheelbase	Minimum 6.6m/Maximum 6.8m
Tridem Drive Axle Spread	Minimum 2.4m/Maximum 2.8m
Semitrailer	
Length	Maximum 16.2 m
Wheelbase Single, Tandem or Tridem Axle	Minimum 6.25 m/Maximum 12.0 m
Kingpin Setback	Maximum 2.0 m radius
Effective Rear Overhang	Maximum 35% of wheelbase
Tandem Axle Spread	Minimum 1.2 m/Maximum 1.85 m
Tridem Axle Spread	Minimum 2.4 m/Maximum 3.7 m
Interaxle Spacings	
Tridem Drive Axle to Single Axle	Minimum 3.0 m
Tridem Drive Axle to Tandem Axle	Minimum 5.5 m
Tridem Drive Axle to Tridem Axle	Minimum 6.0 m

Proposed Dimensions



Note: Single and Tandem Axle Semi-Trailers should also be included (see attached matrix for details)

Proposed Weights



Axle Weights

Gross Vehicle Weight

Note — It should be recognized that each jurisdiction continues to retain authority to allow more liberal weights and dimensions for this configuration.

Next Steps

- Tri-drive combinations currently and successfully operate in a number of Canadian jurisdictions;
- CTA requests that the Task Force add the tri-drive / single semi-trailer combination to the MoU to encourage harmonization of its weights and dimensions;

Thank You