

MAP-21 Comprehensive Truck Size and Weight Limits Study

Alternative Truck Size and Weight Configurations for Consideration in the Study

A key focus of the May 29, 2013 USDOT Comprehensive Truck Size and Weight Limits Study Public Input Session is for USDOT to solicit comments on "alternative truck configurations" to be evaluated in the Study. To assist in facilitating this discussion, USDOT has prepared several worksheets that participants may fill out. Participants interested in filling out worksheets may send them to CTSWStudy@dot.gov by 5pm ET Wednesday, June 5, 2013.

To submit other written comments prior to or up to one week following the meeting, click here: CTSWStudy@dot.gov

Instructions for Completing the Worksheets:

Worksheet #1 Alternative Configurations Matrix

This worksheet is intended to provide input on the technical parameters of different alternative configurations. In this worksheet USDOT is looking for information from you on the type of configurations to be studied as well as information pertaining to the details of each configuration.

(Note: As an example, USDOT completed the first line of the Worksheet)

Alternative Configurations

The worksheet breaks the Alternative Configurations into two categories:

- Confirmed Configurations for Study
- Other Single Trailer and Longer Combination Vehicles for Consideration in Study

In Column #1, the worksheet provides a description of possible truck configurations as well as "Other" for you as a participant to offer configurations not included on the worksheet.

Please review the alternative configurations and add additional configurations you would like to see included in the study.

Technical Categories

The worksheet breaks down the types of technical information USDOT seeks input on into four categories:

- Trailer Lengths
- On what networks would operation be permitted
- Number of Axles
- Gross vehicle Weight (GVW)

Please review each alternative configuration you are interested in and provide details regarding:

Trailer Lengths (Columns 2 and 3) – Two columns are provided for this category, numeric values representing the length, in feet, of the semitrailer on “Control Access Network” (roadways with grade separated interchanges) and “Non-Control Access Network” (roadways with at-grade intersections). Semitrailer length values may vary depending on the “access control” characteristic of the roadway facility. **Numerical values for lengths of trailers are sought;**

“Operation Permitted on Networks” (Columns 4 through 6) – **“Yes” or “No” is sought for each of the four roadway system designations shown.** A description of each of these roadway system designations is included with the Worksheet;

Number of Axles (Columns 7 and 8) – **a numeric value representing the total number of axles, including the “steer axle” on the tractor, is sought;** note, there may be differences in the number of axles input depending on the weight characteristics or “density” of the payload being transported;

Gross Vehicle Weight (GVW) (Columns 9 and 10) – **the “gross vehicle weight”, including the weight of the tractor, semitrailer(s) and trailer(s) in pounds is sought.**

Worksheet #2 of Alternative Configurations Advantages, Disadvantages and Notes

This worksheet is intended to provide input on the advantages and disadvantages you see for each alternative configuration. In addition, there is a section under each alternative configuration where you as a participant can add additional thoughts not captured in either Worksheet #1 or #2. As with Worksheet #1, this worksheet breaks the alternative configurations into two categories :

- Confirmed Configurations for Study
- Other Configurations for Consideration in Study

In Column #1, the worksheet provides a description of possible truck configurations as well as “Other” for you as a participant to offer configurations not included on the worksheet.

Please fill in the advantages, disadvantages and notes as you see fit.

Worksheet 1: Alternative Configurations to be considered for Inclusion in the CTSW Study

Truck Configurations	Trailer Lengths (ft)		Operation Permitted on Networks			Number of Axles		GVW (lb)	
	Control Access Network	Non-Control Access Network	Interstate	PAS (Non-Interstate)	National Truck Network	Low Density Freight	High Density Freight	Low Density Freight	High Density Freight
Confirmed Configurations for Study									
5-axle tractor 53' semitrailer	53	53	yes	yes	yes	5	5	80,000	80,000
5-axle tractor 53' semitrailer	53	53				5	5	88,000	88,000
6-axle tractor 53' semitrailer *	53	53				6	6	97,000	97,000
Other Configurations for Consideration in Study									
Twin 33'									
Rocky Mountain Doubles									
Turnpike Doubles									
Triples									
Other _____									
Other _____									
Column # 1	2	3	4	5	6	7	8	9	10

Notes: “Worksheet 1: Alternative Configurations to be considered for Inclusion in the CTSW Study”

Column 1 contains a list of the generic configurations for consideration. Four configurations were finalized in the RFP. 3S2 at 80,000 lbs, 3S2 at 88,000lbs, * 3S3 at 97,000 lbs with two different axle weights, (i) tandem 34,000 lb, tridem 51,000 lbs (ii) tandem 38,000 lbs, tridem 47,000 lbs.

Columns 2 and 3 indicate vehicle length by divided and undivided highways. Some longer vehicle combinations are incompatible with the “non-control access network”.

Columns 4, 5, 6 indicate where the particular configurations would operate.

Columns 7 and 8 indicates the total number of vehicle axles for a low density (volume limited loads) and high density freight (mass limited loads)

Columns 9 and 10 indicates the vehicle Gross Vehicle Weight (GVW) for a low density (volume limited loads) and high density freight (mass limited loads)

Road Classifications

Control Access Network - is a highway designed exclusively for high-speed vehicular traffic, with all traffic flow and ingress/egress regulated. They are known by term “Freeway”.

Non-Control Access Network – Is a non-divided roadway with unregulated ingress/egress and can include intersections and access to other roads, public driveways, and business points of entry.

Interstate - Interstates are the highest classification of arterials and were designed and constructed with mobility and long-distance travel in mind. Since their inception in the 1950’s, the Interstate System has provided a superior network of limited access, divided highways offering high levels of mobility while linking the major urban areas of the United States.

Principal Arterial System (PAS) – These roadways serve major centers of metropolitan areas, provide a high degree of mobility and can also provide mobility through rural areas. Unlike their access-controlled counterparts, abutting land uses can be served directly. Forms of access for Other Principal Arterial roadways include driveways to specific parcels and at-grade intersections with other roadways.

National Truck Network - The Surface Transportation Assistance Act of 1982 authorized the establishment of a national network of highways designated for use by large trucks. On these highways, Federal width and length limits apply. The National Network (NN) includes almost all of the Interstate Highway System and other, specified non-Interstate highways. The network comprises more than 200,000 miles of highways.

Source: Highway Functional Classification Concepts, Criteria and Procedures 2012 Edition. FHWA

Worksheet 2: Alternative Configurations: Advantages and Disadvantages

Truck Configurations	Advantages	Disadvantages	Notes
Confirmed Configurations for Study			
5-axle tractor 53' semitrailer 80k lbs			
5-axle tractor 53' semitrailer 88k lbs			
6-axle tractor 53' semitrailer 97k lbs			
Other Configurations for Consideration in Study			
Twin 33'			
Rocky Mountain Doubles			
Turnpike Doubles			
Triples			
Other_____			
Other_____			
Column # 1	2	3	4

Notes: "Worksheet 2: Alternative Configurations: Advantages and Disadvantages"

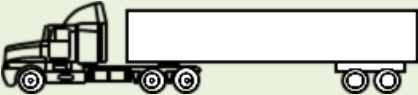
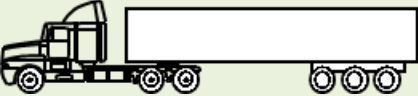
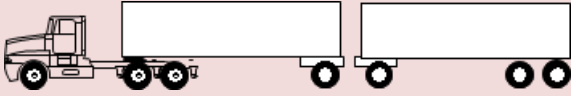



Column 1 contains a list of the generic configurations for consideration.

- Four configurations are currently part of the Study:
 - 3S2 at 80,000 lbs,
 - 3S2 at 88,000 lbs,
 - 3S3 at 97,000 lbs with two different axle weights
 - (i) tandem 34,000 lbs, tridem 51,000 lbs
 - (ii) tandem 38,000 lbs, tridem 47,000 lbs.

Columns 2 and 3 provide space for you to indicate the advantages and disadvantages of the particular vehicle.

Column 4 is for you to include other information you think USDOT should know about the configuration

Generic Renderings of Truck Configurations

Truck Configurations	Generic Renderings (not to scale)
Confirmed Configurations for Study	
5-axle tractor 53' semitrailer [80k and 88k lbs.]	
6-axle tractor 53' semitrailer [97k lbs.]	
Other Configurations for Consideration in Study	
Twin 33'	
Rocky Mountain Doubles	
Turnpike Doubles	
Triples	
Other	

The Generic Renderings of Truck Configurations Matrix shows six different truck configurations and is provided as a reference for informational purposes.

From top to bottom the illustrations are –

1st – a tractor-semitrailer with five axles

(Option (i) 53 ft trailer: GVW 80,000 lb. Axle weights: 12,000 lb steer, 34,000 lb tandem, 34,000 lb tandem; Option (ii) 53 ft trailer: GVW 88,000 lb. Axle weights: 12,000 lb steer, 38,000 lb tandem, 38,000 lb tandem);

2nd – a tractor-semitrailer with six axles

(Option (i) 53 ft trailer: GVW 97,000 lb. Axle weights: 12,000 lb steer, 34,000 lb tandem, 51,000 lb tridem; Option (ii) 53 ft trailer: GVW 97,000 lb. Axle weights: 12,000 lb steer, 38,000 lb tandem, 47,000 lb tridem);

3rd – a tractor-trailer-trailer configuration with seven axles and trailer lengths of thirty-three feet each;

4th – a tractor-semitrailer-trailer configuration, known as the “Rocky Mountain Double”, with eight axles and semitrailer length of forty-eight or fifty-three feet coupled with a trailer of twenty-eight feet;

5th – a tractor-semitrailer-semitrailer configuration, known as “Turnpike Doubles”, with nine axles and two semitrailers of forty-eight or fifty-three feet each; and,

6th – a tractor-semitrailer-semitrailer-semitrailer configuration, known as “Triples”, with seven axles and semitrailer lengths of 28 feet each.