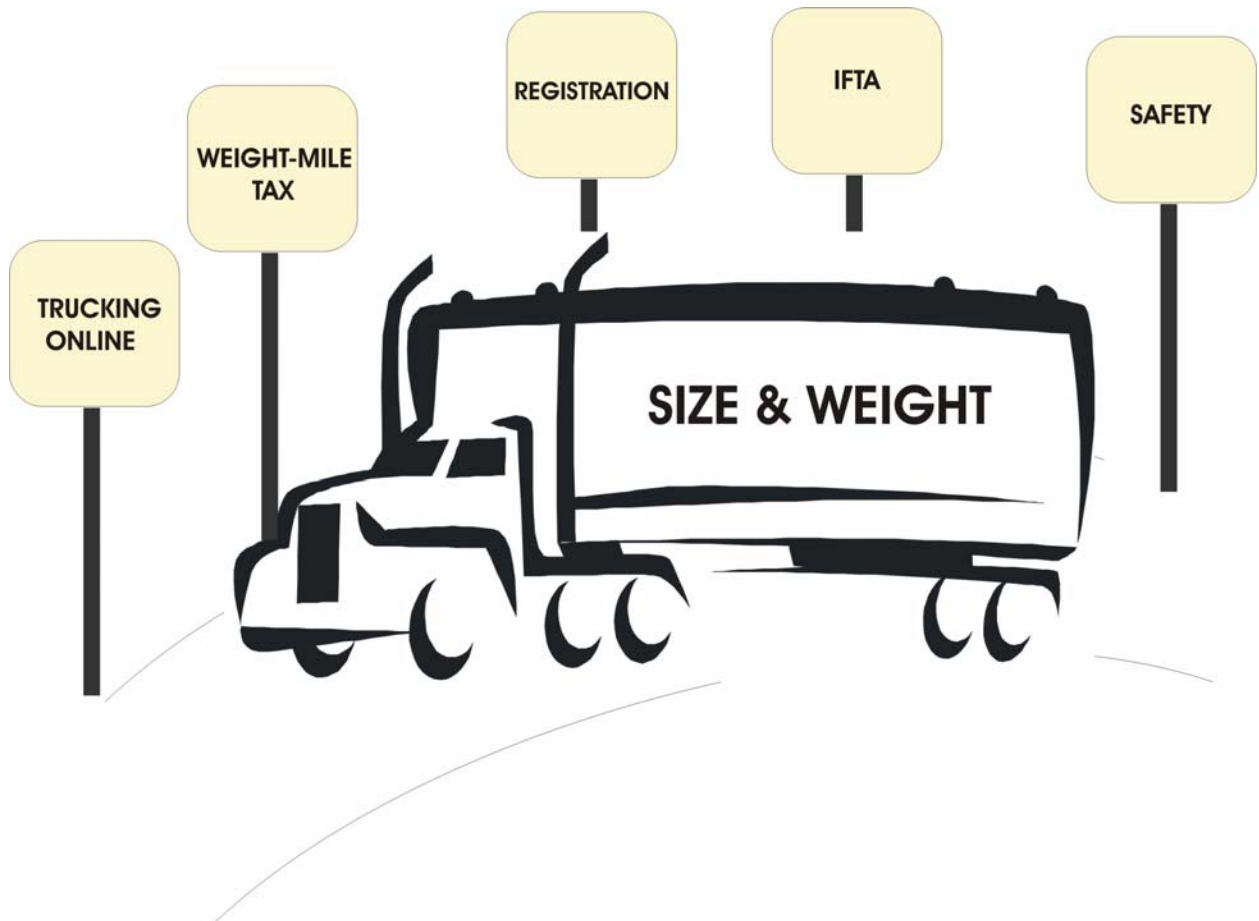


# OREGON DEPARTMENT OF TRANSPORTATION

## MOTOR CARRIER EDUCATION MANUAL



Trucking companies must have knowledge in all areas of regulations in order to fulfill their regulatory requirements. This material provides concise and relevant information to your business and is provided to you by the Oregon Department of Transportation, Motor Carrier Transportation Division.

This section describes requirements of **Size & Weight**.

## Size & Weight Laws

The mission of the Motor Carrier Transportation Division is to promote a safe, efficient, and responsible commercial transportation industry by simplifying compliance, reducing regulatory requirements, wherever appropriate, preserving the infrastructure, enhancing the private/public partnership, fostering effective two-way communication, and delivering superior customer service while recognizing the vital economic interests of the commercial transportation industry.

To help achieve this goal the Motor Carrier Enforcement Unit has:

8 Enforcement Districts which include:

- 6 Ports of Entry Scales – Ashland, Cascade Locks, Klamath Falls, Farewell Bend, Umatilla, and Woodburn
- 4 Registration Field Offices – Portland Bridge, Ashland, Umatilla and Farewell Bend (open Monday – Friday, 8am to 5pm, Farewell Bend is on Mountain Time)
- 101 field Motor Carrier Enforcement staff
- 84 fixed scale locations
- Numerous portable weighing sites

For answers to specific questions, call any of the Field Motor Carrier Enforcement Offices listed on the next page.

**Oregon Department of Transportation**  
**Motor Carrier Enforcement**  
**Ports of Entry (POE) and Field Offices**

**Ashland District**

*Manager – Sven Johnson*

**Ashland POE** . . . . . 541-776-6004  
I-5 NB Milepost 18  
PO Box 666, Ashland 97520-0023  
(Curry, Jackson, & Josephine Counties)

**Cascade Locks District**

*Manager – Terry Cook*

**Cascade Locks POE**. . . . . 541-374-8980  
I-84 EB Milepost 44  
550 SE Frontage Rd., Cascade Locks 97014  
(Hood River, Sherman, Wasco, & parts of  
Clackamas & Multnomah Counties)

**Portland Office** . . . . . 503-731-3238  
3700 SE 92<sup>nd</sup>, Portland 97266  
(Clatsop, Columbia, & parts of  
Clackamas, Multnomah, & Washington Counties)

**Central Oregon District**

*Manager – Bruce Ward*

**Bend Office** . . . . . 541-388-6217  
20340 Empire Ave. Ste E5  
PO Box 5309, Bend 97708  
(Crook, Deschutes, Jefferson, & Wheeler  
Counties)

**Coast Valley District**

*Manager – David Gaffney*

**Springfield Office** . . . . . 541-736-2314  
640 A St, Springfield, 97477  
(Benton, Lane, & Linn Counties)

**Roseburg Office** . . . . . 541-957-3605  
3500 NW Stewart Parkway, Roseburg 97470  
(Coos & Douglas Counties)

**Farewell Bend District**

*Manager – Lloyd Pratt*

**Farewell Bend POE** . . . . . 541-869-2474  
I-84 WB Milepost 353  
5920 HWY 30, Huntington 97907  
( Baker, Malheur & parts of Grant Counties)

**Burns Office** . . . . . 541-573-2261  
252 S Date St., Burns 97720  
(Harney & parts of Grant Counties)

**Klamath Falls District**

*Manager – Phil Grant*

**Klamath Falls POE** . . . . . 541-883-5701  
US HWY 97 NB Milepost 271  
4647 HWY 97 N., Klamath Falls 97601  
(Klamath & Lake Counties)

**Umatilla District**

*Manager – Ben Derby*

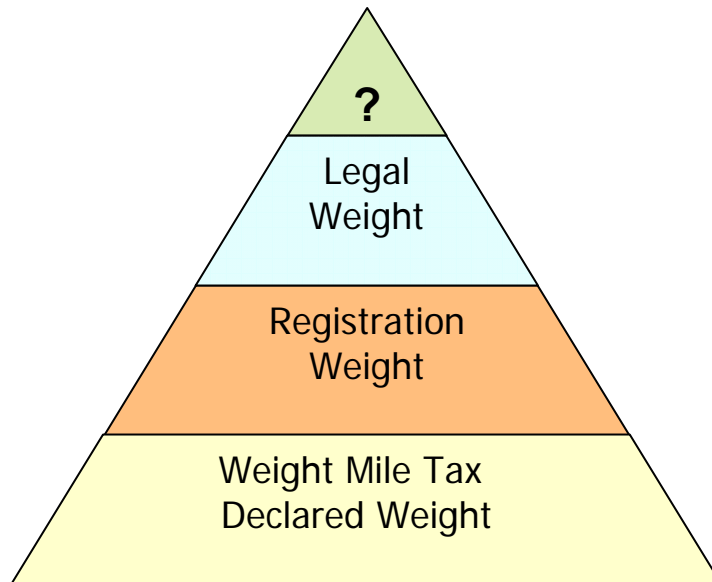
**Umatilla POE** . . . . . 541-922-5183  
1801 SW HWY 730 E  
PO Box 250, Umatilla 97882  
(Gilliam, Morrow, & Umatilla Counties)

**La Grande Office**. . . . . 541-963-3170  
3012 Island Ave., La Grande 97850  
(Union & Wallowa Counties)

**Woodburn District**

*Manager – Don Shinpaugh*

**Woodburn POE** . . . . . 503-982-0804  
I-5 SB Milepost 274  
PO Box 245, Woodburn 97071  
(Lincoln, Marion, Polk, Tillamook, Yamhill, & parts  
of Clackamas & Washington Counties)



### Legal Weight vs. Registration Weight vs. Tax Declared Weight

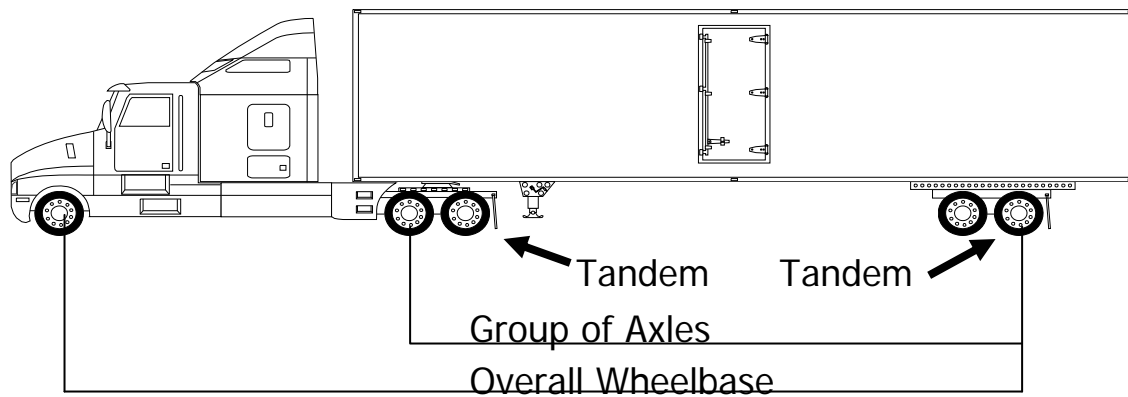
Legal Weight Laws are designed to:

- ❖ Prevent premature highway surface breakdown
- ❖ Reduce highway wear by the use of more axles and longer wheelbases
- ❖ Protect bridges and structures that have restrictions

### Legal weight may be different than the Registered or Declared Weight

Legal weight is limited by Oregon Revised Statute (ORS) and Oregon Administrative Rule (OAR). Registered and declared weights are determined by the carrier.

- ❖ Vehicle/Combination limited to **legal weights** allowed by ORS or OAR.
- ❖ Vehicle **registered weight** represents the heaviest weight the vehicle/combination will be for the registration period up to a maximum of 105,500 lbs.
- ❖ Vehicle tax **declared weight** represents the heaviest weight the vehicle/combination will be in a given configuration for the reporting period.



## Definitions

1. **AXLE WEIGHT** - The weight placed on the road by all the wheels of one axle.
2. **DIVISIBLE LOAD** – A load that is reducible by nature or can be readily dismantled.
3. **GROSS WEIGHT** - The total weight placed on the road by a vehicle or combination of vehicles and the load.
4. **GROUP OF AXLES WEIGHT** - The total weight placed on the road by two or more axles spaced more than 8' apart. (Also known as an Inner Bridge)
5. **HIGHWAY VARIANCE PERMIT** – Also known as “variance permit” issued by a road authority allowing vehicles to vary from regulations required by Oregon Revised Statute (ORS) or Oregon Administrative Rule (OAR). The two most common highway variance permits issued by Oregon are:
  - ✓ Extended Weight-Issued to allow weights over 80,000 lbs. with a Divisible Load.
  - ✓ Heavy Haul-Issued to allow greater weights on a Non-Divisible Load.
6. **LEGAL AXLE LIMIT** – Maximum allowable weights in Oregon, according to Oregon Revised Statute (ORS) 818.010, are allowed the **lower weight** produced by using Table 1, Table 2 or Table 3 Method A or B.
7. **NON-DIVISIBLE LOAD** – A load or vehicle exceeding dimensional or weight limits allowed by ORS or OAR that if separated into smaller loads would compromise the intended use, destroy the value, or make it unusable for its intended purpose.
8. **SUM OF AXLES** – Addition of axle weights allowed by ORS 818.010 Table I and/or Table II.
9. **TANDEM AXLE WEIGHT** - The weight placed on the road by all the wheels of two or more consecutive axles spaced more than 40" but no more than 96" (8 feet) apart (measured from center of axle).
10. **WHEELBASE** - The distance in feet and inches between two or more axles, measured to the nearest foot, 6" being the next larger foot (for determining weight).

# MAXIMUM ALLOWABLE WEIGHT OREGON REVISED STATUTES

WITHOUT A HIGHWAY VARIANCE PERMIT

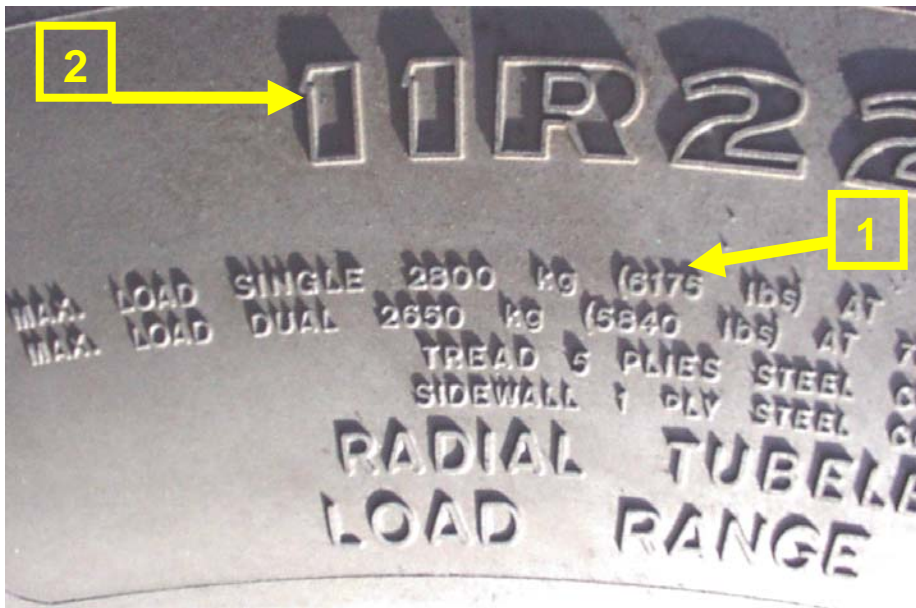
Maximum allowable weights in Oregon, according to Oregon Revised Statute (ORS) 818.010, are allowed the **lower weight** produced by using:

- Table I,
- Table II,
- Table III Method A or B.

## TABLE I

Table I has two provisions. **\*\* Allow the lower (lesser) weight of the two. \*\***

1. Limits legal weight to the manufacturer's side wall tire rating.
2. Limits legal weight to 600 lbs. for the sum of tire width.



**1** Steer Axle Example: Side Wall Rating = 6,175 lbs. x 2 Tires = 12,350 lbs.

**2** Steer Axle Example: 11" Wide Tire x 600 lbs. x 2 Tires = 13,200 lbs.

**\*\* Only the Side Wall Rating applies when traveling on an Interstate Highway \*\***

**Legal Weight = 12,350 lbs. for an axle with two of these tires.**

**METRIC CONVERSION:** Divide the metric number by 25.4 and round up to get the equivalent in inches or refer to the chart below.

Metric Tire Size	Tire Width in Inches (rounded to nearest 1/2 inch)	Weight Allowed on 2 Tires
235	9 1/2	11400
245	10	12000
255	10	12000
265	10 1/2	12600
275	11	13200
285	11 1/2	13800
295	12	14400
305	12	14400
315	12 1/2	15000
325	13	15600
335	13 1/2	16200
345	14	16800
355	14	16800
365	14 1/2	17400
375	15	18000
385	15 1/2	18600
395	16	19200
405	16	19200
415	16 1/2	19800
425	17	20400
435	17 1/2	21000
445	18	21600

## TABLE II

Table II has three provisions. Maximum allowable weight cannot exceed:

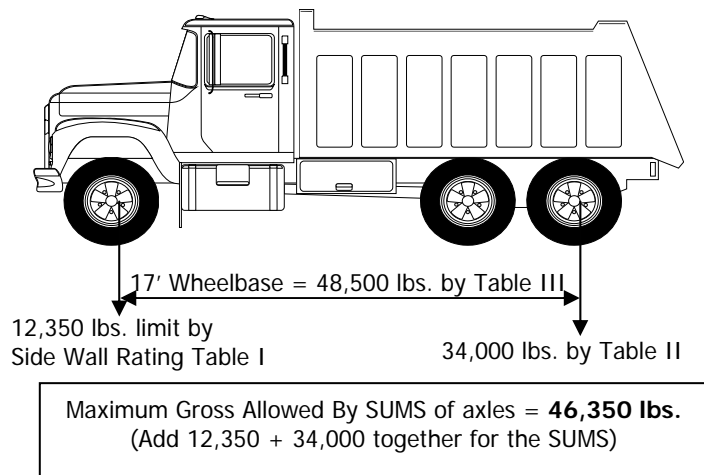
1. 10,000 lbs. on any individual wheel
2. 20,000 lbs. on any axle
3. 34,000 lbs. on any tandem axles

# TABLE III

Table III has two provisions. Maximum allowable weight cannot exceed either:

1. Method A: The **SUMS** of weight allowed on axles, tandems, or groups of axles using Table I or II, or
2. Method B: The group or gross weights allowed using the wheelbase chart listed as "Method B" in ORS 818.010 (3).
  - ✓ This is also known as Permit Weight Table 1, (Limited to 80,000 lbs.)
  - ✓ It can be found on the reverse side of ODOT's Group Map 1 and Route Map 7 or at this web site:  
<http://www.odot.state.or.us/forms/motcarr/od/8110.pdf>

## Example



1. In this example the gross weight for this vehicle is **limited to 46,350 lbs.** by the sum of the permissible axles.
2. Compare this total to Table III Method B. In this example the gross weight allowed by the wheelbase chart is 48,500 lbs. The legal weight is the lowest weight.

***This vehicle's legal gross weight cannot exceed 46,350 lbs. The steer axle cannot weigh more than 12,350 lbs. and the tandem drive axle cannot exceed 34,000 lbs.***

**ORS 818.010(3)** This statute allows the measurement to increase to the next whole number when the measurement results in a fractional measurement of 6" or more.

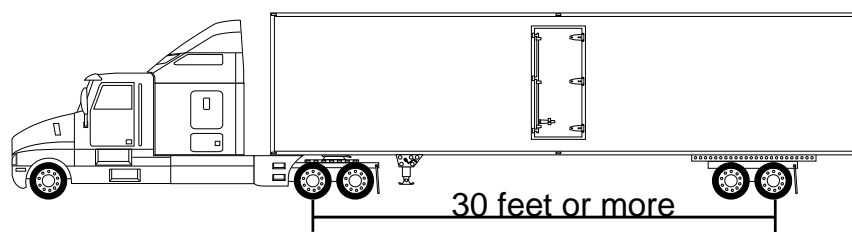
**Example: 29' 6" becomes 30'**



# TWO EXCEPTIONS TO ODOT'S PERMIT WEIGHT TABLE 1

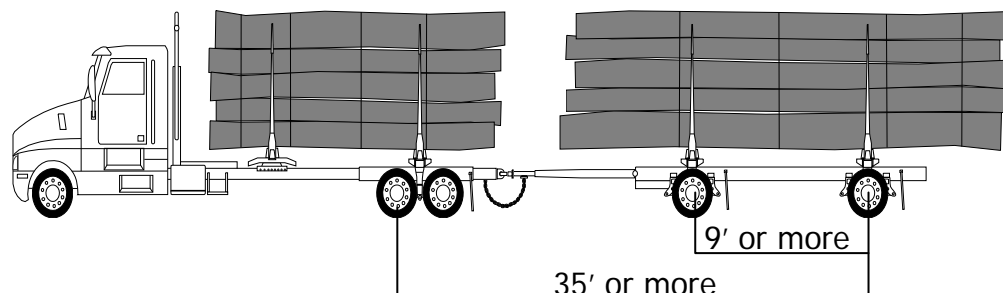
**Exception 1: ORS 818.030(8)(a) & (b):** “. . . two consecutive sets of tandem axles may have a loaded weight of 34,000 lbs. each . . . providing the distance between the first and last axles of the two sets of tandems axles is at least 30 feet . . .”

- Non-Interstate Highway - No Extended Weight Highway Variance Permit required.
- Interstate Highway – Extended Weight Highway Variance Permit required.
- Any Highway - If wheelbase spacing is 36 feet or more, no Extended Weight Highway Variance Permit required.



**Exception 2: ORS 818.030(9):** “. . . a group of four axles consisting of a set of tandem axles and two axles spaced nine feet or more apart may have a loaded weight of more than 65,500 lbs. and up to 70,000 lbs. . . . providing the distance between the first and last axles of the group is 35 feet or more.”

- Non-Interstate Highway - No Extended Weight Highway Variance Permit required.
- Interstate Highway – Extended Weight Highway Variance Permit required.
- Any Highway - If wheelbase spacing is 43 feet or more, no Extended Weight Highway Variance Permit required.



# Calculating Maximum Weight Limits

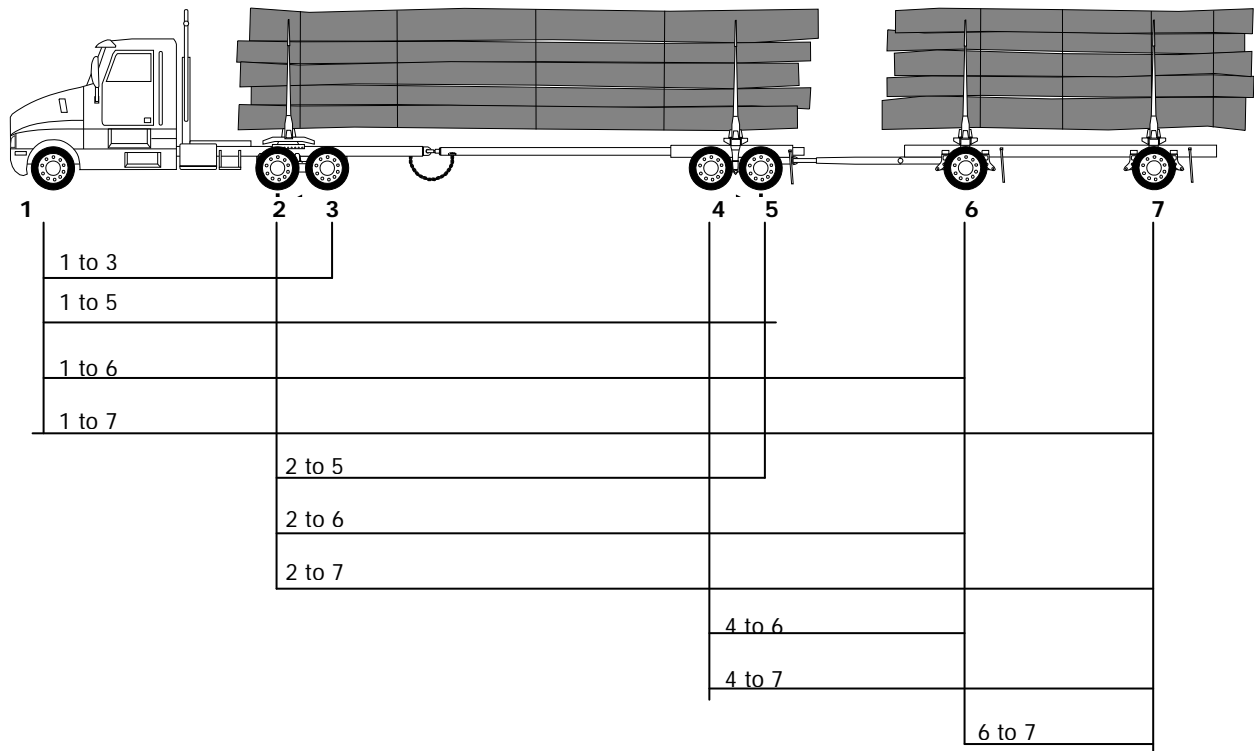
Practice using the worksheet on the next page for calculating maximum weight limits:

- If vehicles are using ORS 818.010 weights, the maximum gross weight is limited to 80,000 lbs.
- If vehicles are using an Extended Weight Highway Variance Permit the load can be reducible, such as lumber, hay, gravel, or logs. The maximum gross weight is limited to 105,500 lbs.

Instructional hints for using the worksheet:

1. List all axle spacing. (Remember - Measurements of 6" and greater go to next higher foot).
2. List weights by SUMS OF AXLES.
3. List weights by Permit Weight Table 1 or 2 WHEELBASE CHART.
4. Legal weight is the lowest.

## WORKSHEET FOR DETERMINING LEGAL WEIGHTS



\*\*Steer axle is an 11" wide tire with a sidewall rating of 6,600 lbs. = Allowed 13,200 lbs.

Axle Group	Axle Spacing	Weight By Sums of Axles	Weight by Wheelbase Chart	Legal Weight Allowed
1 to 3	18'	47,200 (13,200 + 34,000)	49,500	<b>47,200</b>
1 to 5	50' 6"	81,200 (13,200 + 68,000)	80,000	<b>80,000</b>
1 to 6	60' 6"	101,200 (81,200 + 20,000)	90,500	<b>90,500</b>
1 to 7	75' 6"	121,200(101,200 + 20,000)	104,500	<b>104,500 **</b>
2 to 5	36' 6"	68,000 (34,000 + 34,000)	68,000 *Exception	<b>68,000</b>
2 to 6	46' 6"	88,000 (68,000 + 20,000)	77,500	<b>77,500</b>
2 to 7	61' 6"	108,000 (68,000 + 40,000)	91,000	<b>91,000 **</b>
4 to 6	14'	54,000 (34,000 + 20,000)	46,500	<b>46,500</b>
4 to 7	29'	74,000 (34,000 + 40,000)	61,500	<b>61,500</b>
6 to 7	15'	40,000 (20,000 + 20,000)	40,000	<b>40,000</b>

**\*\*Hint: Maximum Gross is really 104,200 lbs. Use Steer of 13,200 + 91,000 on group 2 to 7.**

To load to the maximum of 104,500 lbs. you would need a larger steer axle tire size.

## Maximum Vehicle and Combination Size Limits

### HOW LONG CAN MY VEHICLE(S) BE?

Oregon's highway system is divided into three classifications based on the curve radius of the highway, lane width, shoulder width, and the longest vehicle combination that can safely negotiate these curves.

**GROUP MAP 1** shows these classifications, listed as Group 1, 2 and 3.

- ♣ Group 1 highways allow the longest combinations and Group 3 the shortest.
- ♣ Back of Group Map 1 lists the different vehicle/combinations legal in Oregon and the length limit each is allowed on Group 1, 2, or 3 highways.
- ♣ <http://www.odot.state.or.us/forms/motcarr/od/8100.pdf> Web site for a copy of the map. Maps are also available at the Ports of Entry.

ORS 818.080(1) contains information on the legal length for a **solo vehicle**, including any load. It is limited to 40 feet overall length.

*An exception is located in ORS 818.100 (15) & (16) allowing 45 feet overall length for Recreational Vehicles and Motor Vehicle Transporters*

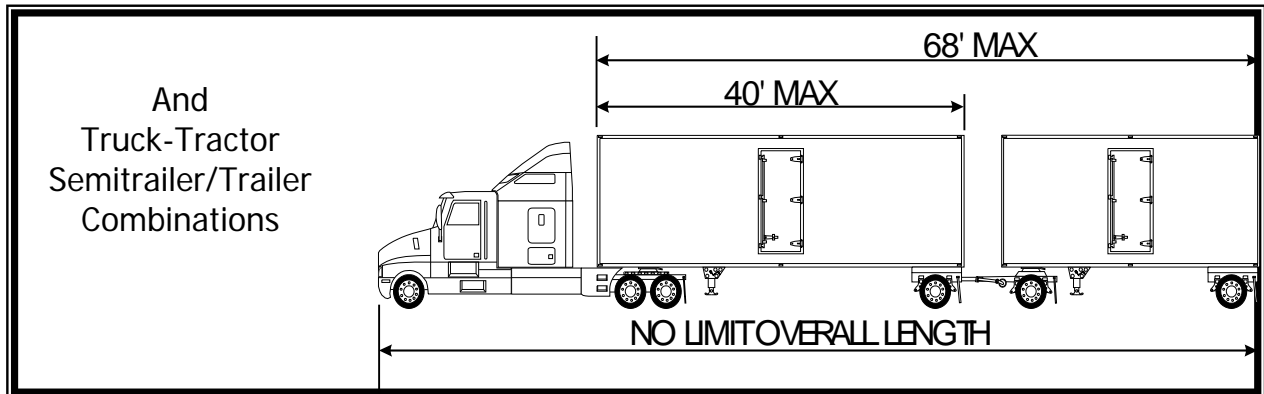
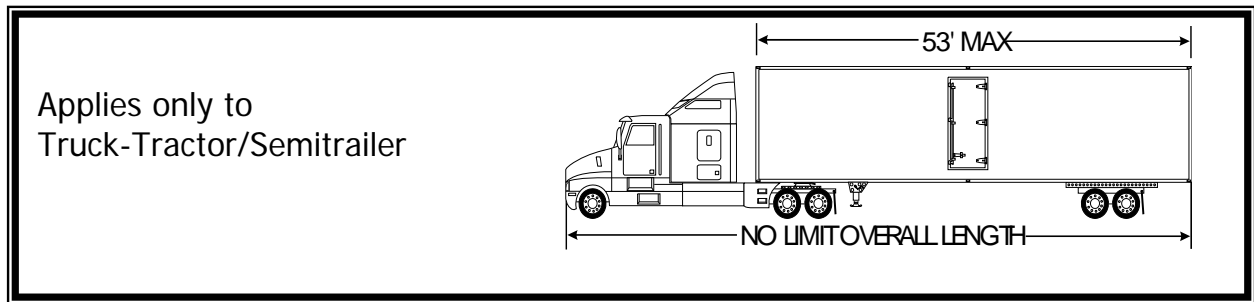
OAR 734-071-0005 through 734-071-0060 contains information on legal lengths for **combinations of vehicles**. Group Map 1 reflects these limits.

[http://arcweb.sos.state.or.us/rules/OARS\\_700/OAR\\_734/734\\_071.html](http://arcweb.sos.state.or.us/rules/OARS_700/OAR_734/734_071.html)

By OAR, the Department of Transportation has the authority to modify some laws and make exceptions that are less restrictive if they find the vehicle can travel safely without endangering others.

# Surface Transportation Assistance Act of 1982 (STAA) Route Map 7

OAR 734-073-0050 through 734-073-0140 (Division 73)



The Federal Surface Transportation Assistance Act of 1982 (STAA), passed by the US Congress, mandated:

- ✓ States cannot have an overall length restriction on truck-tractor semitrailer or sets of doubles on certain federally funded national network highways.

Limitations:

- ✓ Maximum semitrailer length in Oregon, not to exceed 53 feet. Other states have grandfathered in longer lengths for semitrailers.
- ✓ Trailer length in a set of doubles not to exceed 40 feet.
- ✓ Maximum combined length for two trailers in a set of doubles is 68 feet.
- ✓ There are NO permits and NO exceptions on STAA National Network Highways.

ODOT adopted Administrative Rules and developed ROUTE MAP 7 to address these federal allowances.

## Route Map 7 (Continued)

<http://www.odot.state.or.us/forms/motcarr/od/8104.pdf>

**Green Routes:** Highways included in the STAA National Network. Truck-tractor semitrailer or doubles combinations can travel these routes without any restriction on overall length! Trailer lengths are restricted.

**Brown Routes:** State routes that have the same allowances as Green Routes.

**Purple, Black, and Blue Routes:** Truck-tractor semitrailer or doubles combinations can travel these routes, but there is a restriction on the legal overall length allowed and the trailer length.

**Red Routes:** Truck-tractor semitrailer or doubles combinations can travel these routes, but you must use Group Map 1 to determine the overall and trailer lengths allowed.

**Pickup Truck & Trailer (excludes RV's):** Route Map 7 allows a greater overall length on Green, Brown, and Purple Routes. Refer to Group Map 1 for other routes.

## WHAT IS THE LEGAL WIDTH ALLOWED?

- ✓ 8' 6" Total Outside Width ORS 818.080 (1)

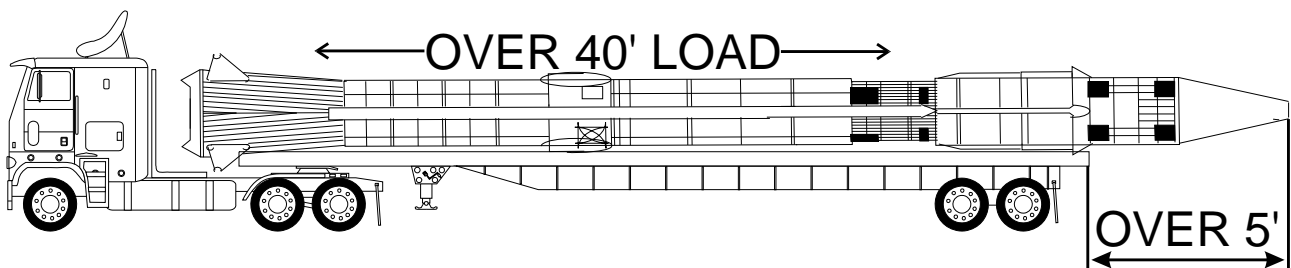
## WHAT IS THE LEGAL HEIGHT ALLOWED

- ✓ 14' High including load ORS 818.080 (1)

## WHAT IS THE LEGAL LOAD LENGTH ALLOWED

- ✓ 40' Load length ORS 818.080 (1)
- ✓ *An exception found in ORS 818.100 (10) allows a longer load length providing the load does not:*
  - ❖ *extend beyond the rear of the semi-trailer by more than five feet;*
  - ❖ *extend forward of the rear of the cab of the towing vehicle; or*
  - ❖ *exceed the length allowed by OAR 734-071-0005 through 734-071-0060.*

### Example of the load length exception

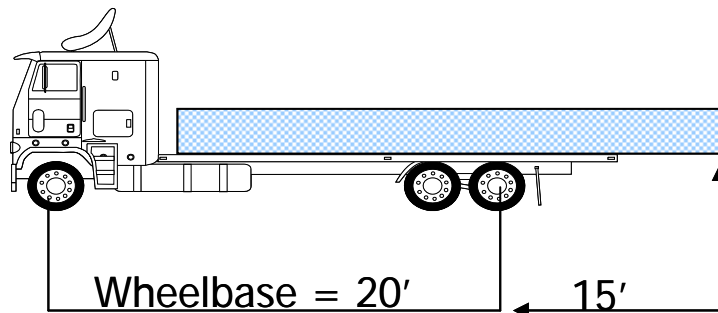


## WHAT IS THE LEGAL FRONT OVERHANG ALLOWED

- ✓ Front over hang is 4 feet beyond the front of the vehicle or combination.  
ORS 818.080 (2)

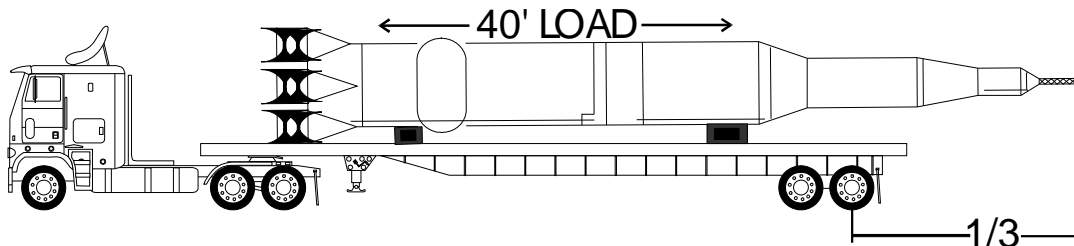
## WHAT IS THE LEGAL REAR OVERHANG ALLOWED ON A SOLO VEHICLE? ORS 818.080 (2)

- ✓ A solo vehicle may have up to  $\frac{3}{4}$  of its wheelbase as rear overhang.
  - ❖ Remember the 40' overall length for a solo vehicle includes any load.
  - ❖ Rear overhang can be either vehicle or load and is measured from the center of the last axle.



## WHAT IS THE LEGAL REAR OVERHANG ALLOWED ON A COMBINATION OF VEHICLES? ORS 818.080 (2)

- ✓ A combination of vehicles may have up to  $\frac{1}{3}$  of its wheelbase as rear overhang ORS 818.080 (2).
- ✓
  - ❖ Rear overhang measured from the center of the last axle
  - ❖ Legal load length of 40' or less
  - ❖ Overall length not to exceed OAR 734-071-0010 Table 1 or Table 2





## HIGHWAY VARIANCE PERMITS

Highway Variance Permits may allow a vehicle or combination of vehicles to:

- ❖ Exceed legal width, length, height, weight, or a combination of these.
- ❖ Be in a combination not otherwise allowed (i.e., Jeeps/Boosters)

**Two of the most commonly issued permits are for a (1) reducible load that exceeds 80,000 lbs. (Extended Weight Permit), or (2) for a non-reducible load that exceeds statute limits (Heavy Haul Permit).**

County and city permits may be required if the movement will be traveling on county or city roads. Permits for various jurisdictions may be able to be combined into one permit.

It is the driver's responsibility to  
follow all provisions of the permit !

### DURATION OF PERMITS:

1. Continuous or Annual Trip Permit (CTP)
  - ❖ Issued for operations performed on a routine basis
  - ❖ Vehicle(s) and load conform to established width, height, length and weight requirements
  - ❖ Valid for up to one year from date of issuance
2. Single Trip Permits (STP)
  - ❖ Issued on a per trip basis
  - ❖ For one movement over a specified route
  - ❖ Load is **non-divisible** - weight or dimensions do not conform to legal weight or size limits
  - ❖ Valid for up to 10 days from date of issuance

# ASSISTANCE

## Transportation Permit Application Checklist.

For rapid processing of a highway variance permit application, complete the checklist on next page **BEFORE** calling the Over-Dimensional Permit Office.

Obtain your permit **BEFORE**  
you move the load.

Need more assistance?

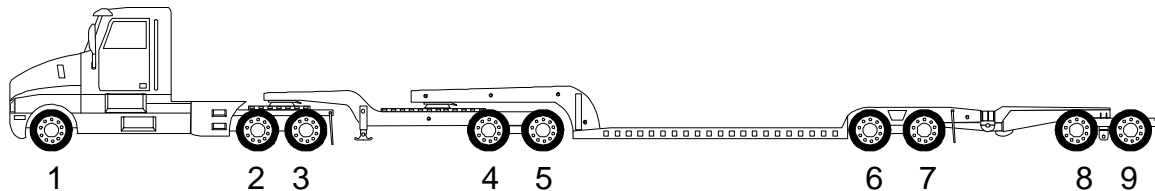
- ❖ Call the Over-Dimensional Permit Office (503-373-0000)
- ❖ Call any Motor Carrier Enforcement District
- ❖ Call any Registration Office

## HIGHWAY VARIANCE PERMIT APPLICATION CHECKLIST

When a Highway Variance Permit is required for a movement, the following information will be required by the Over-Dimensional Permit Unit before a permit can be issued.

When ready to order your permit, call (503) 373-0000

CARRIER INFORMATION				
COMPANY	ADDRESS		CITY, STATE, ZIP	
CONTACT PERSON	PHONE NUMBER	FILE (ODOT AUTHORITY) NUMBER		
VEHICLE INFORMATION {POWER UNIT}				
YEAR and MAKE	SERIAL or VIN NUMBER	BASE LICENSE PLATE & STATE		
	UNIT NUMBER			
LOAD INFORMATION				
DESCRIPTION of LOAD	LENGTH of LOAD	WIDTH of LOAD	FRONT OVERHANG	REAR OVERHANG
LOADED HEIGHT WHILE IN TRANSIT	OVERALL LENGTH {INCLUDING LOAD}	LENGTH of HAULING EQUIPMENT	LENGTH OF SEMITRAILER	
ROUTE INFORMATION		WEIGHT INFORMATION		
POINT OF ORIGIN		Required only when requesting weights from Permit Tables 3, 4, or 5		
DESTINATION		AXLE SPACING	LOADED WEIGHT PER AXLE, TANDEM AXLE, OR TRIDEM	
REQUESTED ROUTE		1-2		
		2-3		
		3-4		
		4-5		
		5-6		
		6-7		
		7-8		
		8-9		



NOTE: Measurements for weight are from center of axle to center of axle.

## COMPLIANCE

- ❖ Federal Regulations and Oregon law do not allow any weight tolerance.
- ❖ CITATIONS CAN BE ISSUED for ANY weight violation.
- ❖ Legalization may be required prior to allowing the load to proceed.
- ❖ Weight violation base fines are calculated by multiplying the per-pound penalty (as established by Oregon law) by the total number of lbs. overweight.
- ❖ Field Enforcement has two senior Motor Carrier Enforcement Officers dedicated to giving educational presentations at carriers' locations. Contact the Ashland POE (541-776-6004) or the Portland Enforcement Office (503-731-3238).

## SCALE PROTOCOL

Many agencies, including Oregon State Police and sheriffs enforce size and weight laws at state or county scales.

Tips for fewer delays at scales:

- ❖ Some locations have High-Speed Weigh-In-Motion sensors in highway pavement.
- ❖ Trucks participating in the Green Light Program and weighing legal are directed to bypass scale (**Exception: Vehicles operating with a Highway Variance Permit for a Non-Divisible Load must enter an open scale**). For more information, call 503-378-6054.
- ❖ Trucks missing sensors or not in right-hand lane are directed to static scale.

Weighing at static scales.

- ❖ Watch the traffic control light and message read boards.
- ❖ If the light is green, roll across slowly at 3 - 5 miles per hour.
- ❖ If the light is red, STOP and wait for further instructions.

## CHAIN LAWS

**Oregon does not have a designated time of year requiring the use of chains. Chains are only required to be carried or used when signs requiring them are posted.**

Please consult ODOT's Trip check website:

<http://www.tripcheck.com/> for Oregon's winter travel road conditions, chain laws and minimum chain placement requirements.

Please consult ODOT's website:

[http://arcweb.sos.state.or.us/rules/OARS\\_700/OAR\\_734/734\\_017.html](http://arcweb.sos.state.or.us/rules/OARS_700/OAR_734/734_017.html) for Oregon's Administrative Rules regarding chain laws. In 734-017-0012 it states: "When chains or traction tires are required to be carried and the appropriate signs are posted, chains or traction tires of sufficient size and number to comply with Division 17 rules must be in or on the vehicle."

## QUESTIONS!

If you have questions, please call before you move your freight. We want to help!