

1.1.7.2 Live Loads – (continued)

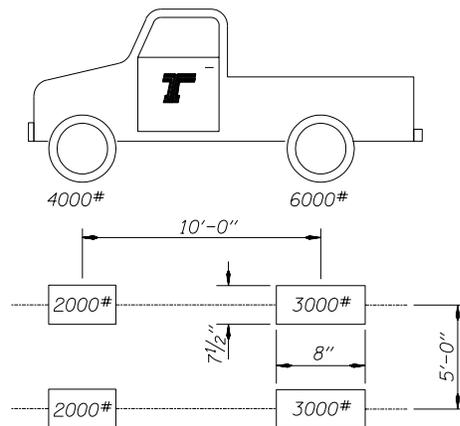
- (2) **Pedestrian Structures** - For bridges designed for only pedestrian and/or bicycle traffic, use a live load of 85 psf. If an Agency design vehicle is not specified, use alternate live load of 10,000 lb., or AASHTO Standard (H-10 Truck) loading as shown in Figures 1.1.7.2F and 1.1.7.2.G below to check the longitudinal beams. A vehicle impact allowance is not required. For a pedestrian and/or bikeway bridge with less than 6' do not consider the maintenance truck. See also the AASHTO "Guide Specifications for Design of Pedestrian Bridges
- (3) **Widening of Vehicular Traffic Structures** – When widening an existing structure, the widening will generally be designed using the loading given in 1.1.7.2(1). Designs using a lesser design live load will require an exception letter from the State Bridge Engineer. Live loading will never be less than the design live load for the existing structure.
- (4) **Structure Repair and/or Strengthening** – When repairing or strengthening an existing structure it is not necessary to meet the loading given in 1.1.7.2(1). Design repair or strengthening projects for the maximum load effect from the following permit trucks using the Strength II Limit State (see Figure 1.1.7.2A):

- ODOT OR-STP-5B
- ODOT OR-STP-5BW
- ODOT OR-STP-5C

For single-span bridges with prismatic girders, Figures 1.1.7.2B to 1.1.7.2E are provided to help determine the controlling permit truck for various span lengths.

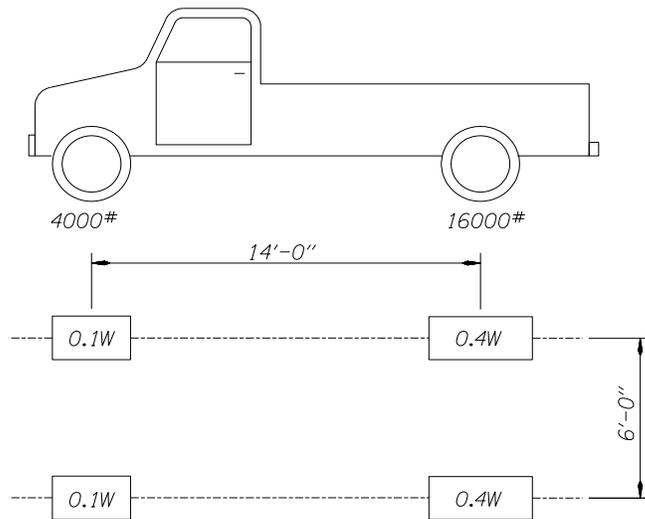
For repair and/or strengthening of prestressed concrete structures, ensure the requirements of Service I and III Limit States are satisfied using HL-93 loading.

For repair and/or strengthening of steel structures, ensure the requirements of Service II and Fatigue Limit States are satisfied using the applicable design loading as applied to new structures.



Alternate 10,000 lb. Live Load
Figure 1.1.7.2F

6'-0" < Clear deck width < 10'-0" 10,000 lb. (alternate live load)
10'-0" < Clear deck width < 12'-0" 20,000 lb. (H-10 Truck)



H-10 Truck
Figure 1.1.7.2G

1.1.7.3 Thermal Forces

Use the following temperature ranges:

	<u>Metal Structures</u>	<u>Concrete Structures</u>
Section I Mild Climate	+10 ⁰ F. to +110 ⁰ F.	+22 ⁰ F. to +72 ⁰ F.
Section II Moderate Climate	-10 ⁰ F. to +120 ⁰ F.	+12 ⁰ F. to +82 ⁰ F.
Section III Rigorous Climate	-30 ⁰ F. to +120 ⁰ F.	0 ⁰ F. to +82 ⁰ F.

Section I designates that portion of the state west of the Coast Range, Section II the valley region between the Coast Range and Cascade Mountains, and Section III the Cascade Mountains and all of eastern Oregon. For structures in the Columbia River Gorge, use Section III.

Figure the rise and fall in temperature from an assumed temperature at time of erection. The annual mean temperature for Sections I and II is 52⁰ F. and for Section III is 47⁰ F.