



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

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Michael R. Pence, Governor
Karl B. Browning, Commissioner

Wednesday, October 2, 2013

Dear Industry Stakeholder:

Welcome to the Indiana Department of Transportation's (INDOT) Industry Forum regarding permitting for overweight loads in Indiana. The purpose of this industry forum is to present INDOT's considerations for rulemaking regarding permitting of overweight loads. The forum also allows INDOT the opportunity to solicit public comments on the draft policies.

There are several ways your comments may be presented this afternoon. You may submit comments in the following manner:

1. **Complete** one of the comment forms and return it to any of the INDOT representatives attending the public hearing. The comment forms are attached to this packet and extra copies are available on the table with the other handout materials.
2. **Mail** your comments to the Indiana Department of Transportation's Office of Public Involvement, 100 North Senate Avenue, Room N642 Indianapolis, IN 46204-2216. All comments submitted during the meeting or during the comment period will be reviewed, evaluated, and given full consideration by INDOT officials during the decision making process. **INDOT respectfully request comments be submitted by Wednesday, October 16, 2013 (two weeks from today).**
3. **Participate** during the Public Comment Session and have your comments recorded for inclusion into the transcript.
4. **E-mail** comments to the INDOT Office of Public Involvement at: publicinvolvement@indot.in.gov.
5. A copy of this presentation is available on-line at the INDOT Multimodal page:
<http://www.in.gov/indot/3198.htm>.

Indiana's goals for implementing the new divisible and non-divisible load permits

- 1. Should help Indiana's businesses and taxpayers by modernizing the freight policy to become more compatible with neighboring states**
- 2. Should be equitable to industry and taxpayers alike: Customers should only pay for the quantity of infrastructure resources they consume**
- 3. Should be customer friendly; may include multi-trip or annual permitting options**
- 4. Should have fee structures that makes sense**
- 5. Should encourage business decisions that will help preserve Indiana's infrastructure**

Divisible Load permitting: Questions, issues, and proposed solutions* to be addressed by rulemaking

*Note: The proposed solutions outlined in this document are subject to change and based on the best information currently available. Final rulemaking will consider analysis currently underway as well as feedback from Industry.

Why did Indiana change the permitting policies and begin to allow the permitting certain divisible loads?

- The purpose of the Overweight Divisible load legislation was to help Indiana's freight policy become more compatible with neighboring states that have special weight and divisibility permits for various commodities. The Department of Transportation is in the process of establishing rules and implementing the law in the spirit that it was created.

How are other states addressing the same issues?

- KY and OH presently have special divisible load permits, but only for selected commodities. Both neighboring states allow the permitting of metal, but only in the form of 2 or 3 steel coils. Ohio also has special divisible load permits for bulk milk.
- Michigan allows high limit GVW loads up to 164,000 lbs for a variety of commodities, but requires special equipment with up to 11 axles, each with maximum axle weight of 13000 lbs.

What types of divisible loads are eligible for these types of permits in Indiana?

- 1) Metal commodities in their most basic form: Metal coils, rods or plates going from a mill to the first customer, but not manufactured parts going from a manufacturer or a supplier to another customer. Not material used in the production of metal coils such as ore or scrap metal.
- 2) Agriculture Commodities in their most basic form: Products going from the farm to the first market, but not processed items such as corn syrup, oils or flour. Not items used in the production of agriculture products such as fertilizer or seed.

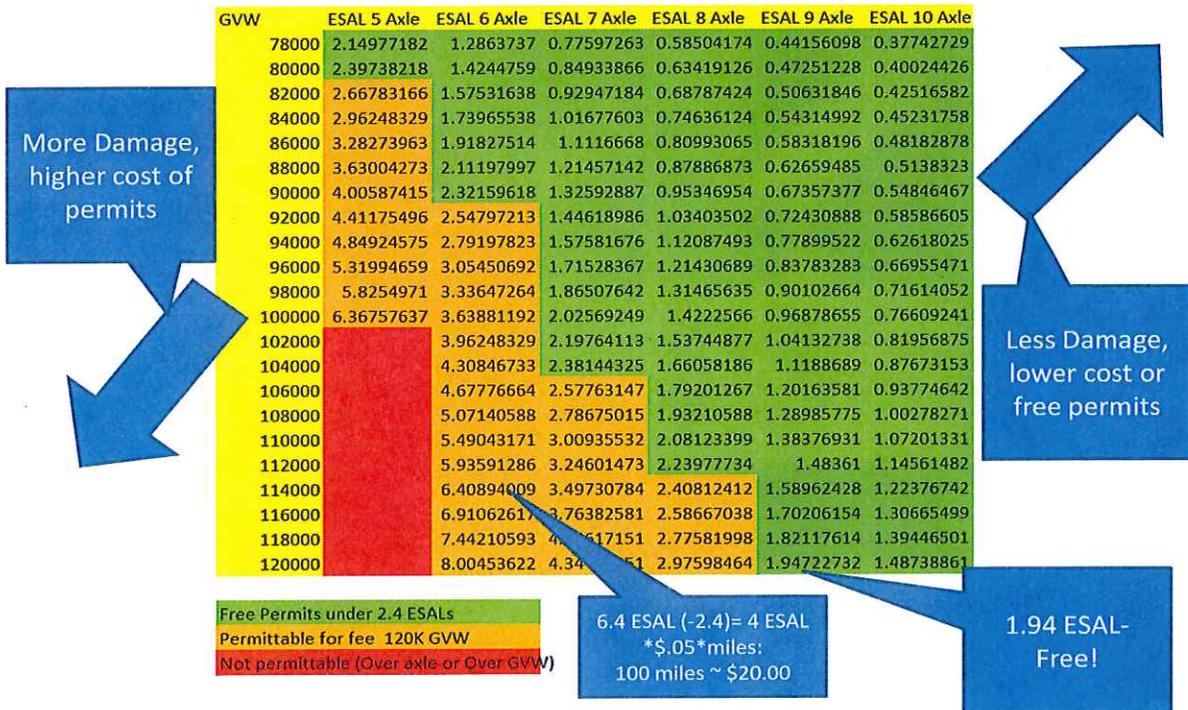
How will this change what can be hauled in Indiana?

- Metal Commodities: Divisible load for metal commodities were previously restricted to special "Michigan Train" permits that required special equipment and could only operate on designated "Extra Heavy-Duty Highways" in NW Indiana. The new permits will expand that network to include interstates and other routes capable of carrying the increased weight of 120,000 pounds. Extra Heavy-Duty Highways will continue to accommodate vehicles with a GVW of 134,000 pounds with a permit.
- Agricultural Commodities: Agricultural commodities were previously capped at 88,000 lbs (80,000 lbs + 10%). The new permits will increase existing limit from 88,000 lbs to 97,000 lbs. The new limit of 97,000 lbs does require a permit, and the new 97,000 lbs is a hard limit and does not provide an additional 10% tolerance.

How will the new permit system be a fair, user-fee based system that will be cost effective for Indiana business and taxpayers alike?

- The Department of Transportation proposes using an Equivalent Single Axle Load (ESAL) based permit so that customers pay only for the quantity of infrastructure resource consumed. ESAL based permits are fair because any load, regardless of configuration, can be measured in ESALs. Pavement life can also be measured in ESALs so the pavement life consumed by each load can be measured directly.

ESALs: Axles vs Weight



Are there any special routes or time limitations with the new permits?

- New permits will apply to specified Interstate, US and state routes only. Local routes are to be permitted separately through local governments.
- A single trip permit is assigned to the truck/tractor power unit, per trip, per configuration, per route.
- For loads greater than 80,000 lbs and less than 2.4 ESALS, a multi-trip permit fee is being considered to be assigned to the truck/tractor power unit with a specified trailer configuration, per route, on multiple days up to some expiration date.

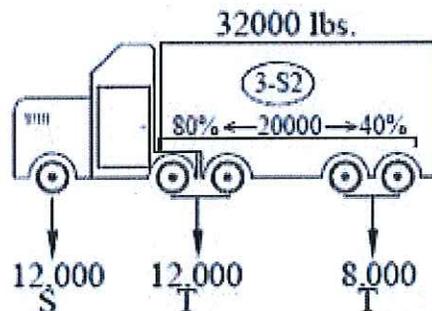
What specific parameters are used in the ESAL calculation?

- Each axle's ESAL value is calculated as the actual axle weight, divided by either the single or tandem axle divisor, all raised to the 4th power. $(\text{weight/divisor})^4$
 1. The numerator for each axle group is the permitted axle weight (W)
 2. The divisor for each axle group depends on the number of axles in the group.
 - If the axle is a single axle, the divisor is 18,000 lb
 - If the axle is a tandem axle group, the divisor is 33,200 lbs
 3. The resultant fraction quantity is raised to the fourth power

$$ESAL_{\text{SINGLE AXLE}} = \left(\frac{W_{\text{SINGLE AXLE}}}{18,000 \text{ lbs.}} \right)^4$$

$$ESAL_{\text{TANDEM AXLE}} = \left(\frac{W_{\text{TANDEM AXLE}}}{33,200 \text{ lbs.}} \right)^4$$

- The total vehicle ESAL value is the sum of all axle group ESAL values.
(ESAL=Axle1ESAL+Axle2ESAL+Axle3ESAL+...)



$$ESAL = \left(\frac{12,000}{18,000} \right)^4 + \left(\frac{12,000}{33,200} \right)^4 + \left(\frac{8,000}{33,200} \right)^4$$

$$ESAL = 0.198 + 0.017 + 0.003$$

$$ESAL = 0.218/\text{veh}$$

How will the ESAL calculation above be used in establishing permit fees for divisible and non-divisible loads?

- The permit fees will pay for the cost of the road and bridge infrastructure consumed plus the administrative cost to issue the permits.
- A legal 80,000 lb, 5 axle, tractor trailer is measured to be approximately 2.4 ESALs. Loads exceeding 80,000 lbs require permits and will be charged for those additional ESALs greater than 2.4.
- Permitted ESALs are the total vehicle ESAL minus the 2.4 ESALs allowed without a permit.(ESAL-2.4)
- ESAL Miles are the permitted ESAL value multiplied by the miles to be driven.[(ESAL-2.4) x miles]
- Individual trip permit fee will be an “at cost” administrative fee (currently estimated to be \$20) trip plus a cent per ESAL Mile fee (currently estimated to be between 5 and 7 cents).
[\$20+(between \$0.05 and \$0.07) x (ESAL-2.4) x miles]

How does the system differentiate from single, tandem and tridem axles?

- Single axles are defined as axles that are not within 8 ft of another axle
- Double or tandem axles are defined as 2 axles that are within 8 ft the other axle in the group and are configured to distribute load weight uniformly across the group
- Triple or tridem axles are defined as 3 axles that are all within 8 ft of another axle in the group and are configured to distribute load weight uniformly across the group

What equipment requirements are being considered to safeguard Indiana bridges?

- Minimum wheelbases to spread load, preferably with defined axle spacing for pre-calculated bridge compatibility
- Minimum inner-bridge spacing (Sum of all wheel bases except the steering axle): 36 feet
- Minimum outside wheelbase (Sum of all wheelbases): 51 feet
- Divisible-Over-Weight (DOW) Permit Vehicles shall have a minimum of 5 axles and a minimum of 6 axles for loads greater than 100,000 lbs

What equipment requirements are being considered to preserve Indiana pavement life?

- The Gross Axle Weight (GAW) of the steering axles shall not exceed 15,400 or 700 lbs per inch of tire width measured at the flanges, whichever is less.
- The GAW of the non steering axles shall not exceed 20,000 with the exception of one tandem axle group that may weigh 24,000 each or 48,000 total tandem, and 700 lbs of inch of tire width measured at the flanges, whichever is less.
- The individual axle weight in groups (tandems, tridems) shall not vary from others in same group by more than 2000 lbs.
- All tires shall be pneumatic and shall not be permitted to carry a weight greater than that marked on the sidewall of the tire.
- All non-steering wheels shall be dual wheel/tires.

What equipment requirements are being considered to preserve safety and mobility aspects of permitting the travel of these loads?

- The permitted load on any axle shall not exceed the individual GAWR specified by the equipment manufacturer or sum of all tire ratings on the axle.
- All axles shall have manufacturer's axle tags affixed and legible.
- All truck/tractor power units shall have tandem or tridem rear suspensions.
- Each axle shall have fully functional brakes manufacturer rated for loads at, or in excess of the permitted axle loads and perform in accordance with 49 CFR 393.52.
- The tractor shall be capable of pulling the permitted load at the legal speed limit of the route it is on.

What policies are being considered to ensure equitable enforcement and ability to apply for new permits?

- Indiana State Police and their Commercial Vehicle Enforcement Division will partner with the Indiana Department of Transportation to ensure criteria are in compliance and fairly enforced.
- Any permit violation will invalidate all privileges granted by the permit in its entirety and the load must be made legal prior to further movement.
- Permit violation(s) will disqualify the permittee from applying for a new permit for a specified period. Progressive measures are being considered to encourage uniform compliance.