

Industry Forum: Permitting of Overweight Loads

October 2, 2013



House Enrolled Act 1481

- Set gross vehicle weights based on commodities
- Gave INDOT emergency rule making authority for:
 - Divisible load permit fees, permit issuance and enforcement
 - Extra Heavy Duty Highway permit fees
 - Overweight permit fees
- Requires a study on impact of overweight fees to the General Assembly by 12/2014



Timeline for Implementation

- Industry Forum – 10/2/2013
- Comments – 10/16/2013
- Analysis & Integration of Comments
- Rulemaking – Draft & Final Versions
- DOR Implementation – 12/31/2013
- Independent Study



Goals For Proposed Rules

- Help Indiana's businesses and taxpayers by modernizing the freight policy to become more compatible with neighboring states
- Be equitable to industry and taxpayers alike: Customers should only pay for the quantity of infrastructure resources they consume
- Be customer friendly; may include multi-trip or annual permitting options
- Have fee structures that make sense
- Encourage business decisions that will help preserve Indiana's infrastructure



Background - Reasoning

- Why did Indiana change the permitting policies and begin to allow the permitting certain divisible loads?
 - Regional Competitiveness & Consistency: Ohio, Kentucky and Michigan have special permits for various commodities



Background – Other States

- How are other states addressing the same issues?
 - Kentucky and Ohio allow 2 or 3 steel coils
 - Michigan allows 164,000 lbs, 11 axles, axle weight of 13000 lbs



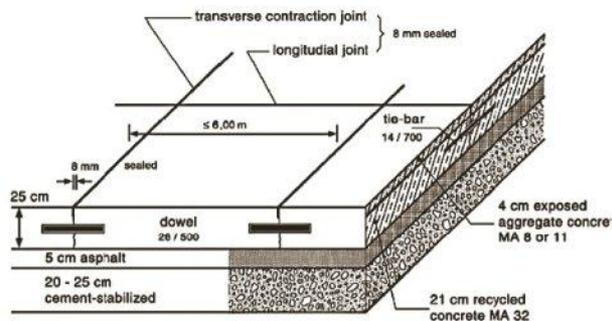
Background - Commodities

- What types of divisible loads are eligible for these types of permits in Indiana?
 - Metal Commodities
 - Agriculture Commodities
 - Consistent Commodities with surrounding state policies



Background – Commodities

- Why not everything? Why does Indiana limit these permits to specific commodities?
 - Design of Roads, Bridges and Safety Devices
 - Permits for Nonconforming loads
 - Permits for Regional Compatibility



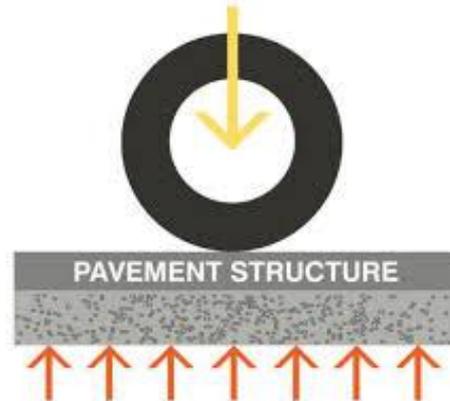
Background – Old Permits

- What about the old permits? How will this change what can be hauled in Indiana?
 - Non-Divisible 108K, 120K
 - Heavy Duty Highway Michigan Train
 - Agricultural



New ESAL Based Permitting

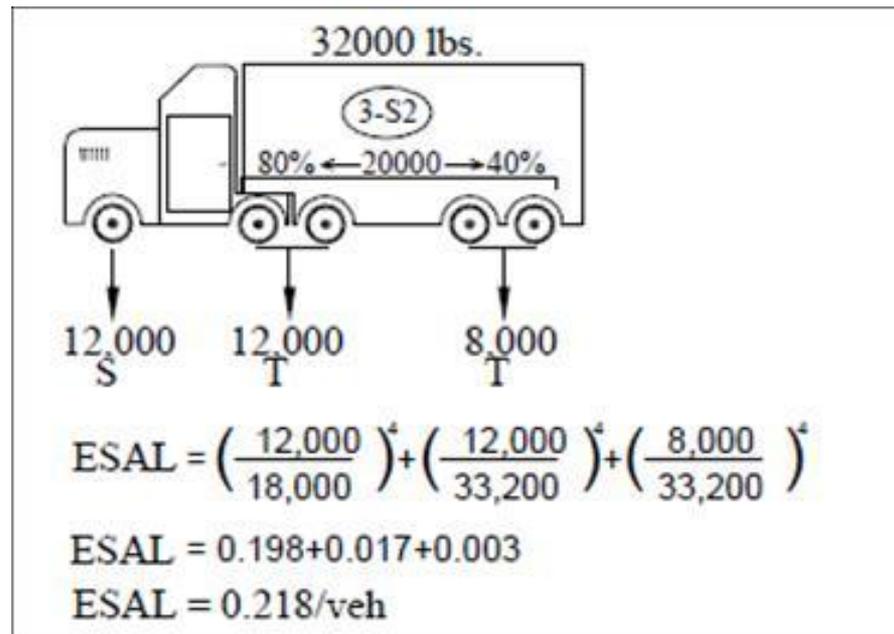
- ESAL (Equivalent Single Axle Load) based; customers pay only for the quantity of infrastructure resource consumed
- Loads and Pavement Life measured in ESALs



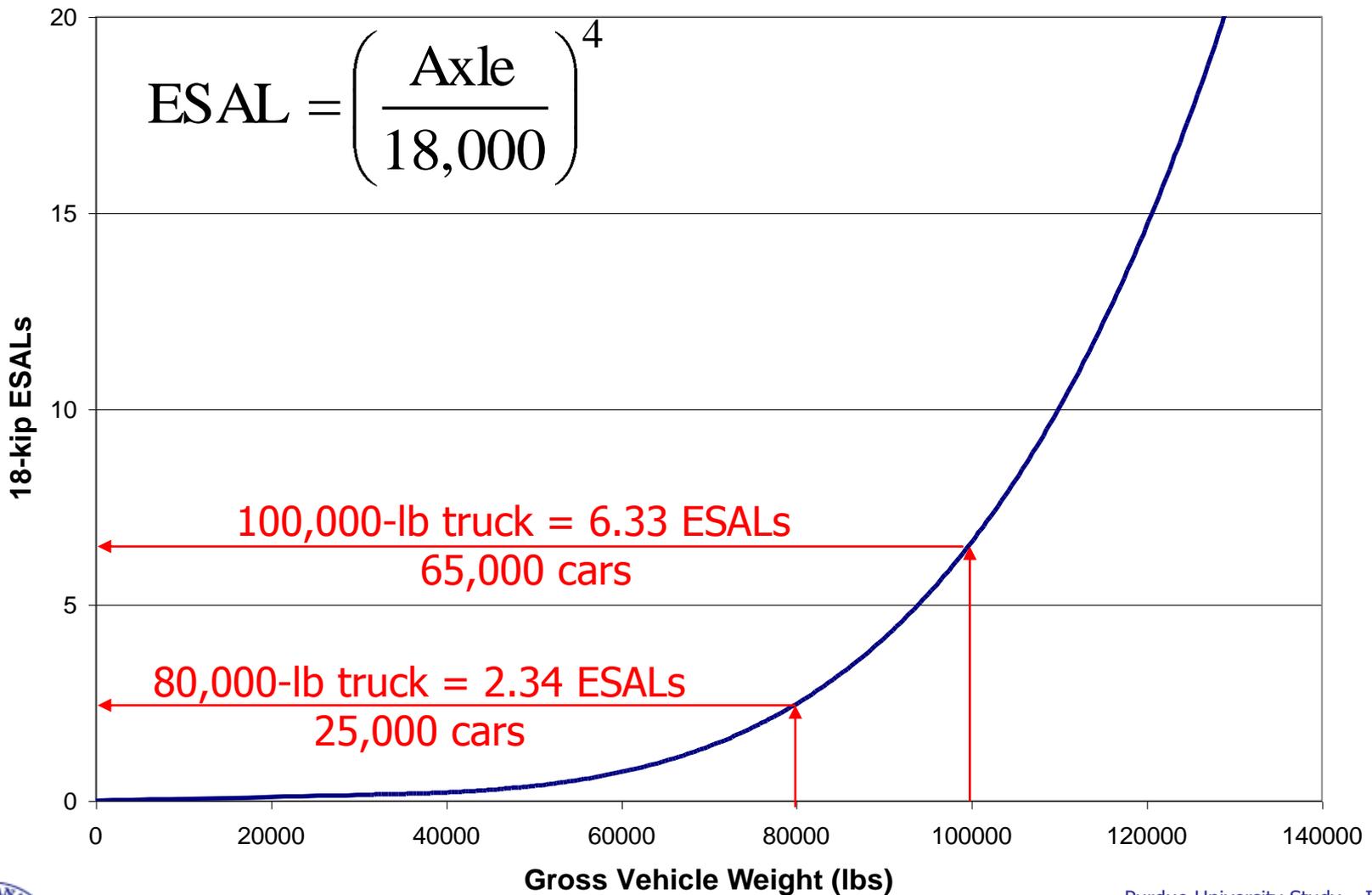
ESAL Calculation

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

$$ESAL_{\text{TANDEM AXLE}} = \left(\frac{W_{\text{TANDEM AXLE}}}{32,200 \text{ lbs.}} \right)^4$$

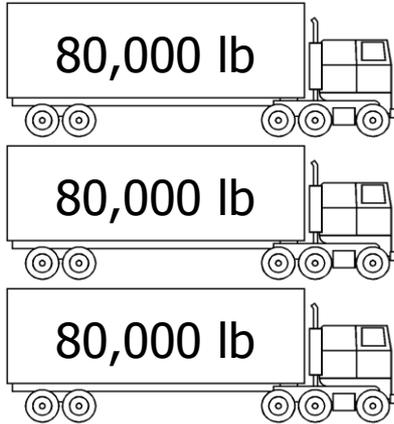


Weight vs ESALs

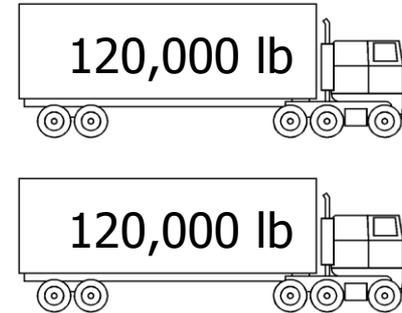


3 Trucks vs 2 Trucks Annually

Same Weight: 240,000 lbs



Each 80,000 truck has 5 axles
Each 120,000 truck has 6 axles
Each truck travel 150 miles per day in IN
Operates 5 days per week for 1 year
Diesel Fuel tax is \$.74 per gallon
Truck operates at 7 mpg
Cost calculated at \$.05/ ESAL*Mile



3 x 80,000 lbs = **240,000 lbs**
3 x 37,500 miles driven = 112,500 miles driven
3 x \$3,964 fuel tax paid = \$11,892
3 x \$4,495 road damage caused = **\$13,010**
Permitted annual damage (3 trucks) = \$1,118

2 x 120,000 lbs = **240,000 lbs**
2 x 37,500 miles driven = 75,000 miles driven
2 x \$3,964 fuel tax paid = \$7,928
2 x \$15,008 road damage caused = **\$30,016**
Permitted annual damage (2 trucks) = \$22,088

Pavement damage per truck = \$372

Pavement damage per truck = \$11,004

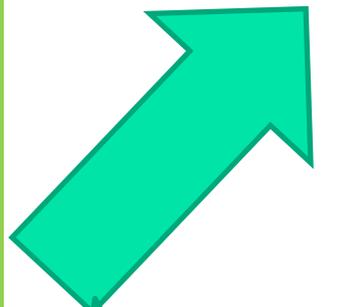
Permit fees cover
damage cost



ESALs: Axles vs Weight

GVW	ESAL 5 Axle	ESAL 6 Axle	ESAL 7 Axle	ESAL 8 Axle	ESAL 9 Axle	ESAL 10 Axle
78000	2.14977182	1.2863737	0.77597263	0.58504174	0.44156098	0.37742729
80000	2.39738218	1.4244759	0.84933866	0.63419126	0.47251228	0.40024426
82000	2.66783166	1.57531638	0.92947184	0.68787424	0.50631846	0.42516582
84000	2.96248329	1.73965538	1.01677603	0.74636124	0.54314992	0.45231758
86000	3.28273963	1.91827514	1.1116668	0.80993065	0.58318196	0.48182878
88000	3.63004273	2.11197997	1.21457142	0.87886873	0.62659485	0.5138323
90000	4.00587415	2.32159618	1.32592887	0.95346954	0.67357377	0.54846467
92000	4.41175496	2.54797213	1.44618986	1.03403502	0.72430888	0.58586605
94000	4.84924575	2.79197823	1.57581676	1.12087493	0.77899522	0.62618025
96000	5.31994659	3.05450692	1.71528367	1.21430689	0.83783283	0.66955471
98000	5.8254971	3.33647264	1.86507642	1.31465635	0.90102664	0.71614052
100000	6.36757637	3.63881192	2.02569249	1.4222566	0.96878655	0.76609241
102000		3.96248329	2.19764113	1.53744877	1.04132738	0.81956875
104000		4.30846733	2.38144325	1.66058186	1.1188689	0.87673153
106000		4.67776664	2.57763147	1.79201267	1.20163581	0.93774642
108000		5.07140588	2.78675015	1.93210588	1.28985775	1.00278271
110000		5.49043171	3.00935532	2.08123399	1.38376931	1.07201331
112000		5.93591286	3.24601473	2.23977734	1.48361	1.14561482
114000		6.40894009	3.49730784	2.40812412	1.58962428	1.22376742
116000		6.91062617	3.76382581	2.58667038	1.70206154	1.30665499
118000		7.44210593	4.0517151	2.77581998	1.82117614	1.39446501
120000		8.00453622	4.3411151	2.97598464	1.94722732	1.48738861

More Damage, higher cost of permits



Less Damage, lower cost or free permits

- Free Permits under 2.4 ESALs
- Permittable for fee 120K GVW
- Not permittable (Over axle or Over GVW)

6.4 ESAL (-2.4) = 4 ESAL *\$.05*miles: 100 miles ~ \$20.00

1.94 ESAL-Free!



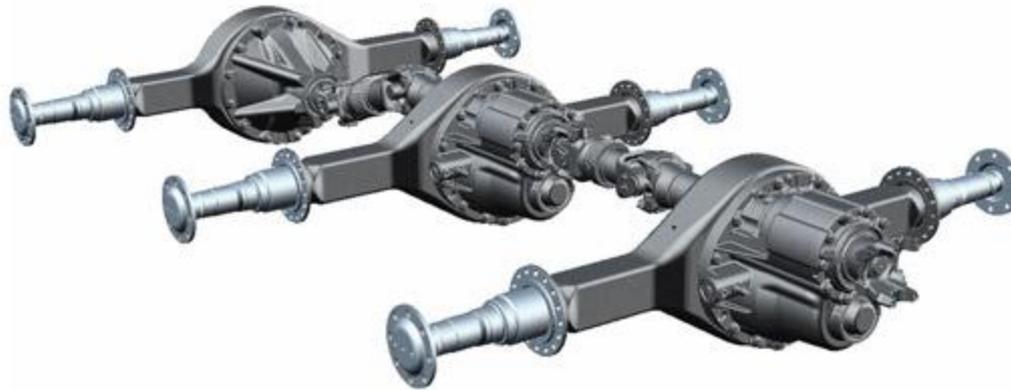
ESAL Calculation & Permit Fees

- The ESAL calculation will be used in establishing permit fees for divisible and non-divisible loads
 - 2.4 ESAL credit
 - 5-7 cents per ESAL per Mile
 - Permit administration fee



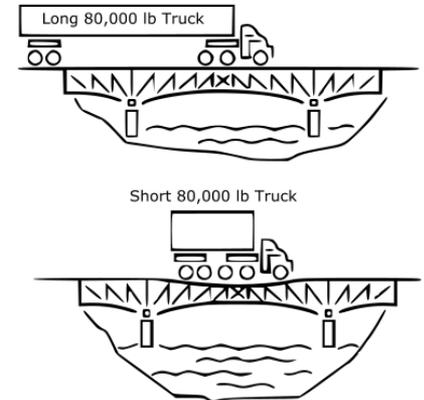
Axle Spacing

- How does the system differentiate from single, tandem and tridem axles?
 - Axles within 8 ft are considered part of the group



Equipment Requirements

- Equipment requirements being considered to safeguard Indiana bridges:
 - Defined axle spacing for pre-calculated bridge compatibility
 - Minimum inner-bridge spacing: 36' (Sum of all wheel bases except the steering axle)
 - Minimum outside wheelbase: 51' (Sum of all wheelbases)
 - Minimum of 5 axles



Equipment Requirements

- Equipment requirements being considered to preserve Indiana pavement life:
 - Steering Axles - Max 15,400 lbs or 700 lbs per inch of tire
 - Non-Steering Axles - Max 20,000 lbs, 700 lbs per inch of tire
 - One Tandem Axle Group - Max 24,000 each (48,000 total tandem), 700 lbs per of inch of tire



Equipment Requirements

- Equipment requirements being considered to preserve safety and mobility aspects of permitting the travel of these loads:
 - Cannot exceed manufacture's specifications
 - Axle tags affixed and legible



Special Routes & Time Limits

- Interstate, US and State Routes
- Local routes are to be permitted separately
- Truck/Tractor power unit, per trip, per configuration, per route



Enforcement

- Policies being considered to ensure equitable enforcement and ability to apply for new permits:
 - Permit Invalidation - divide prior to further movement
 - Progressive measures for repeat offenders



View the Presentation

This presentation and the handouts will be made available on INDOT's Multimodal Webpage:

<http://www.in.gov/indot/3198.htm>

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MULTIMODAL

With its historic role as a center for agriculture and manufacturing, and its strategic location serving regional, national, and international markets, Indiana's economy is heavily dependent on freight movement. These freight operations, in turn, have significant impact on Indiana's transportation system.

In addition to generating a significant volume of freight traffic, Indiana is also a major corridor for through traffic moving between the Western, Mountain and Midwestern states, and the Northeast. As much as one-third of the freight on Indiana's transportation network passes through the Indiana without stopping. This makes through carriers a significant stakeholder in the State's freight system.

Indiana enjoys a wide selection of freight movement choices due to its abundant transportation infrastructure and broad modal options.

Highways

Indiana has an extensive network of major roadways that provide truck access across the State. The truck freight network is composed of: Interstate highways; U.S. highways, state routes and other primary arterial roadways, county roads and other secondary and local arterials.

Indiana's 14 interstate highways – I-64, I-65, I-69, I-70, I-74, I-80, I-90, I-94, I-164, I-265, I-275, I-465, I-469 and I-865 – provide the major backbone for high-

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INDOT respectfully requests comments by
Wednesday, October 16, 2013



Thank you for your attendance.

