



129,000 Pound Evaluation of US-95 M.P. 311.92 to M.P 371.69 (Case #201623US95D2)

Executive Summary

Doug Andrus Distributing submitted a request for 129,000 pound trucking approval on US-95 between milepost (MP) 311.92 and MP 522.0 for transportation of road salt for the Idaho Transportation Department plus fertilizer and lumber. This request covers the District 2 portion of the request from MP 311.92 to MP 371.69. The northern portion of the request, from MP 371.69 to MP 430.56, is being evaluated under case #201623US95D1, and MP 430.56 to MP 522.0 is being evaluated under request 201622US95 submitted by Pocock Trucking. Doug Andrus Distributing projects up to 916 trips annually which is a 15-25% reduction from current operations. This section of US-95 is coded a "Red Route," where vehicles with 115-foot overall length and 6.5-foot off-track are authorized. ITD Bridge Section confirms the 16 bridges on the route will safely support 129,000 pound vehicles. The Department's Materials Section evaluation shows that the increased vehicle weight with a corresponding increased number of axles will reduce loads per axle compared to 80,000 or 105,500 pound vehicles and thereby produce lower loads on the road surface and subsurface resulting in equal or lesser damage. The Office of Highway Safety analysis shows this section of US-95 has 12 Non-Interstate High Accident Intersection Locations (HAL) and has 12 HAL Clusters with details provided below. Department of Motor Vehicles, Materials Section, Highway Safety and Bridge Asset Management all recommend proceeding with this request.

Detailed Analysis

Department of Motor Vehicles (DMV) Review

All Idaho Transportation Department routes are currently categorized by their ability to handle various extra-length vehicle combinations and their off-tracking allowances. The categories used when considering allowing vehicle combinations to carry increased axle weights above 105,500 pounds and up to 129,000 pounds are:

- Blue routes at 95 foot overall vehicle length and a 5.50-foot off-track
- Red routes at 115 foot overall vehicle length and a 6.50-foot off-track.

Off-tracking is the turning radius of the vehicle combination, which assists in keeping them safely in their lane of travel. Off-tracking occurs because the rear wheels of trailer trucks do not pivot, and therefore will not follow the same path as the front wheels. The greater the distance between the front wheels and the rear wheels of the vehicle, the greater the amount of off-track. The DMV confirms that the requested routes falls under one of the above categories and meets all length and off-tracking requirements for that route. **More specifically, the requested section of US-95 from milepost 311.92 to 371.69 is designated as a red route and as such all trucks must adhere to the 6.5-foot off-track and 115-foot overall vehicle length criteria.**

Bridge Review

Bridges on all publicly owned routes in Idaho, with the exception of those meeting specific criteria, are inspected every two years at a minimum to ensure they can safely accommodate vehicles. A variety of inspections may be performed including routine inspections, in-depth inspections, underwater inspections, and complex bridge inspections. All are done to track the current condition of a bridge and make repairs if needed.

When determining the truck-carrying capacity of a bridge, consideration is given to the types of vehicles that routinely use the bridge and the condition of the bridge. Load limits may be placed on a bridge if, through engineering analysis, it is determined the bridge cannot carry legal truck loads.

ITD Bridge Asset Management has reviewed the **16 bridges** pertaining to this request and has determined they will safely support the 129,000-pound truck load, provided the truck's axle configuration conforms to legal requirements. To review load rating data for each of the bridges, see the Bridge Data chart below.

Materials Section Review

The Idaho Transportation Department's 129,000 pound pilot project report to the Idaho State Legislature in 2013 states, "For pavements, axle weight is a more significant determinant of pavement damage than gross vehicle weight. Truck weight limits that allow a higher GVW distributed over more axles do not necessarily lead to higher pavement costs and can even produce savings." Based on the increased number of axles required for 129,000 pound vehicles to maintain legal axle weights, the equivalent single axle loads (ESAL) for 129,000 pound vehicles are lower than for 80,000 pound and 105,500 pound vehicles. The implementation of the 129,000 pound configuration also reduces the number of truck trips compared to performing the same work with 80,000 or 105,000 pound trucks. The reduction in truck traffic further reduces the pavement wear. Therefore, for this section of roadway, our assessment is the increased vehicle weight with a corresponding increased number of axles will reduce loads per axle compared to 80,000 or 105,500 pound vehicles and thereby produce lower loads on the road surface and subsurface resulting in equal or lesser damage.

Highway Safety Evaluation

This US-95 segment has 12 Non-Interstate High Accident Intersection Locations (HAL) and has 12 HAL Clusters. The locations are shown in the table below with their statewide ranking.

Analyses of the 5-year accident data (2011-2015) shows there were a total of 795 crashes involving 1,211 units (6 fatalities and 365 injuries) on US-95 between MP 311.92 and 371.689 of which 42 crashes involved tractor-trailer combinations. Of the crashes involving tractor trailers, the most prevalent contributing circumstances were inattention and improper lane change. Eighteen injuries and one of the fatalities were due to crashes with tractor trailers. Implementation of 129,000 pound trucking is projected to reduce truck traffic on this route.

Table of HAL Segments US 95:

Route	Statewide Rank	Milepost Range	Length (miles)	County
US 95	62	345.349	Intersection	Latah
US 95	228	(001547) 0.347	Intersection	Latah
US 95	237	360.554	Intersection	Latah
US 95	258	(001547) 0.186	Intersection	Latah
US 95	270	(001553) 345.196	Intersection	Latah
US 95	308	(001553) 345.256	Intersection	Latah
US 95	329	297.042	Intersection	Nez Perce
US 95	358	(001547) 0.500	Intersection	Latah
US 95	406	344.767	Intersection	Latah
US 95	455	344.568	Intersection	Latah
US 95	522	344.116	Intersection	Latah
US 95	580	346.122	Intersection	Latah
US 95	15	337.668-339.620	1.952	Latah
US 95	18	349.863-352.363	2.5	Latah
US 95	103	360.554-361.554	1	Latah
US 95	170	344.568-344.767	0.199	Latah
US 95	189	355.930-359.430	3.5	Latah
US 95	280	345.349-345.436	0.087	Latah
US 95	285	339.620-342.620	3	Latah
US 95	291	323.733-324.457	0.724	Nez Perce
US 95	294	364.380-366.236	1.856	Latah
US 95	303.5	(001547) 0.186-0.347	0.161	Latah
US 95	311	324.360-326.360	2	Nez Perce
US 95	338	345.798-346.082	0.284	Latah

Additional Data:***Bridge Data:***

Route Number: US 95
Department: Bridge Asset Management
Date: 11/8/2016

Route	From:	North Lewiston
	Milepost:	311.92
	To:	D-1/2 Boundary
	Milepost:	371.69

Highway Number	Milepost Marker	Bridge Key	121 Rating ^a (lbs)
95	312.24	18805	OK EJ
95	319.06	18480	OK EJ
95	329.48	18487	226,000
95	330.40	18491	912,000
95	332.37	18496	512,000
95	332.99	18501	918,000
95	334.05	18506	916,000
95	344.00	18511	198,000
95	344.79	18518	390,000
95	352.86	18520	168,000
95	357.50	18525	252,000
95	360.29	18531	336,000
95	360.46	18535	182,000
95	361.28	18540	316,000
95	361.54	18545	186,000
95	362.79	18547	OK EJ

^a: The bridge is adequate if it has a rating value greater than 121,000 pounds or is designated as "OK EJ" (okay by engineering judgment).