

# Evaluation of Idaho 55, Milepost 10.61 to Milepost 16.76

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## 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 in the consideration of 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 ft off-track
- Red routes at 115 foot overall vehicle length and a 6.50 ft 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 route falls under one of the above categories and meet all length and off-tracking requirements for that route.

## Bridge Review

Bridges on all publicly owned routes in Idaho 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 four 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.

## ITD District 3 Review

Idaho Transportation Department districts review the route request and take external factors into consideration when providing a recommendation. Some factors that are considered include: spring breakup concerns, existing and needed chain-up areas, compatibility of runaway truck escape ramps, the pavement condition, current and future roadway improvement projects, port of entry compliance and safety concerns.

To review the technical data on the condition of the highway, please see the TAMS (Transportation Asset Management System) chart on the last page.

The requested route is an east-west portion of Idaho 55, running from the intersection of Farmway Road (Milepost 10.61) to the intersection of I-84 at Exit 33 (Milepost 16.76, Also known as the Karcher Interchange), known locally as Karcher Road and Midland Boulevard.

The highway is predominantly a two-lane roadway with 12-foot lanes, and minimal paved shoulders (commonly 1-2 feet). Turn bays and turn lanes have been added at some intersection locations in recent years. The east end (approximately 0.75 mile portion) of the requested section has been expanded to a multi-lane highway consisting of 4 to 7 lanes (4 through lanes) where the highway intersects with I-84B (Also known as Nampa-Caldwell Boulevard) and I-84 (Exit 33, Karcher Interchange).

The Annual Average Daily Traffic is high to very high, and Commercial Annual Average Daily Traffic is moderate. The roadway is geometrically sufficient. The posted speed is predominantly 55 miles per hour, dropping to 35 miles per hour on the east end. All bridges of concern have been examined and cleared by the bridge section.

Local Port of Entry staff was contacted and has no concerns.

The requester indicates that 33,000,000 pounds (16,500 tons) of sugar beets are moved annually from the Marsing Piling Ground to the Amalgamated Sugar Beet Factory along this route. This condition exists whether or not the 129,000-pound route is approved. At present, this quantity of sugar beets is being moved in approximately 500 loads on 105.5K trucks. Permitting 129,000-pound trucks could lower this trip count to approximately 384 loads.

It may seem counter-intuitive, but an individual 129,000-pound truck imparts approximately 7-8 percent less damage to the roadway than a 105.5K combination. Coupled with a 23 percent lower load count, moving to 129,000-pound trucks for this 33,000,000 pounds of sugar beets would result in approximately 29 percent less pavement stress than moving the same beets in their current 105.5K configuration.

The fewer trips with 129,000-pound trucks also decreases the number of potential conflicts when considering highway safety, particularly for crossing-type accidents, and may contribute to lower congestion due to the fewer total vehicles in the traffic stream.

Finally, this route is the logical extension of a previously-approved 129,000-pound truck route along Idaho 55 from its origin at U.S. 95, west of Marsing, to Farmway Road (Milepoint 10.61). Adding this route will allow sugar beets to travel from the beet piler to the Amalgamated Sugar Beet Factory in the same truck-trailer combination units. This route segment is the last portion of state highway immediately south or west of Nampa (except interstates and urban business loops) which is not currently approved for 129,000-pound trucks. Approving its inclusion will complete a consistent network of state highway routes throughout this important agricultural, economic region.

The District recommends proceeding.

**Bridge Data:**

**Route Number:** Idaho 55  
**Department:** Bridge Asset Management  
**Date:** 4/7/2014

<b>Route</b>	<b>From:</b>	Farmway Road, Caldwell
	<b>Milepost:</b>	10.61
	<b>To:</b>	I-84, Exit 33
	<b>Milepost:</b>	16.76

<b>Highway Number</b>	<b>Milepost Marker</b>	<b>Bridge Key</b>	<b>129 Rating<sup>a</sup> (pounds)</b>
55	16.37	14722	298,000
55	16.47	14724	216,000
55	16.59	14729	332,000

<sup>a</sup>: The bridge is adequate if it has a rating value greater than 129,000 pounds.

**Crash History:**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	<b>TOTAL</b>
Number of Crashes	94	81	138	122	95	88	114	108	114	954
Number of Fatalities	1	2		3	3	1		1	1	12

*TAMS Data:*

Year	Route	Milepoint Range			Segment Length	Number Lanes	Lane Width	Pavement Type	Pavement Deficient	Cracking Index	Roughness Index	Rut Depth	Condition	AADT	CAADT	Speed Limit
2013	SH055	7.110	to	11.100	3.990	2	12'	Flexible	Yes	1.8	2.3	0.25"	Very Poor	6993	612	55
2013	SH055	11.100	to	11.600	0.500	2	12'	Flexible	Yes	1.8	2.2	0.35"	Very Poor	8400	650	55
2013	SH055	11.600	to	15.818	4.218	2	12'	Flexible	Yes	2.2	2.2	0.39"	Poor	14509	732	55
2013	SH055	15.818	to	16.154	0.336	4	12'	Flexible	No	5.0	3.0	0.14"	Good	18000	946	35
2013	SH055	16.154	to	16.766	0.612	4	12'	Flexible	No	4.8	2.7	0.13"	Fair	34453	1334	35