

Idaho Transportation Board

129,000 Pound Truck Route Subcommittee

October 11, 2017

Idaho Transportation Board (ITB) 129,000 Pound Truck Route Subcommittee Chairman Jim Kempton called the meeting to order at 1:30 PM on Wednesday, October 11, 2017 at the Idaho Transportation Department in Boise, Idaho. ITB Members Jim Coleman and Dwight Horsch were also present.

Principal Subcommittee staff members and advisors present or participating via video conference from the District 5 Office in Pocatello included Deputy Attorney General Larry Allen, Freight Program Manager (FPM) Jeff Marker, Public Involvement Coordinator (PIC) Adam Rush, Bridge Engineer (BE) Dan Gorley, Engineering Services Manager/Acting Chief Engineer Blake Rindlisbacher, Executive Assistant to the Board Sue Higgins, Idaho State Police Lieutenant Scott Hanson, District 5 Engineer (DE) Ed Bala, and Local Highway Technical Assistance Council Deputy Administrator Laila Kral.

ITB Chairman Jerry Whitehead was also present at Headquarters.

Chairman Kempton said that because the Subcommittee is comprised of three members, motions will not require a second.

May 25, 2017 Meeting Minutes. Member Horsch made a motion to approve the minutes of the May 25, 2017 meeting as distributed. The motion passed unanimously.

Public Comments on District 5 Route Requests. PIC Rush said 6 comments were received on the 11 route requests in District 5. All supported designating the routes for vehicle combinations up to 129,000 pounds. Some comments mentioned specific routes while others were general in nature.

Some discussion was held on the map showing the approved 129,000 pound truck routes. Chairman Kempton recommended presenting the updated map to the Subcommittee and then to the full board. He suggested there may be an opportunity to streamline the process.

Member Coleman asked about bridge inspections. BE Gorley explained the bridge load rating analysis. (His explanation is included as an addendum to the minutes.)

NOTE: During the following individual route presentations, FPM Marker reported that 10 of the 11 requestors indicated that a designation of 129,000 pound truck route would result in a minimum 15% fewer truck trips.

Case #201616: US-26, Milepost (MP) 276.53 to 306.104. FPM Marker said the Division of Motor Vehicles (DMV) confirmed that this section of US-26 falls under the red route category allowing 115-foot overall vehicle length and a 6.5-foot off-track. The bridge analysis determined that the five bridges on the route will safely support vehicle combinations up to 129,000 pounds,

assuming the axle configuration conforms to the legal requirements. The pavement is in good to fair condition. There are no major safety concerns and the Chief Engineer's analysis recommends approving the route.

It was noted that a portion of US-26 in District 6 has been requested as a 129,000 pound truck route. That section is being considered separately. Staff intends to schedule a public hearing soon on that route request.

MILEPOST	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDITION STATE
276.53 – 287.00	Flexible	No	Fair
287.00 – 300.712	Flexible	No	Good
300.712 – 303.70	Flexible	No	Fair
303.70 – 304.090	Flexible	No	Good
304.090 – 306.104	Flexible	No	Fair

Member Coleman made a motion to recommend that the Transportation Board approve the 129,000 pound truck route request for US-26, milepost 276.53 to 306.104. The motion passed unopposed.

Case #201617: SH-34, MP 78.07 to 113.6. FPM Marker said DMV confirmed that SH-34 from MP 78.07 to 93.716 is designated as a red route, allowing 115-foot overall vehicle length and a 6.5-foot off-track, and the section from MP 93.716 to 113.6 is designated as a blue route where trucks must adhere to the 5.5-foot off-track and 95-foot overall vehicle length criteria. The bridge analysis determined that the 13 bridges on the route will safely support vehicle combinations up to 129,000 pounds, assuming the axle configuration conforms to the legal requirements. The pavement is generally in good to fair condition with a small section deficient in cracking. A sealcoat was applied in 2017, which should help prevent the cracks from getting worse. There are no major safety concerns and the Chief Engineer's analysis recommends approving the route.

MILEPOST	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDITION STATE	CRACKING INDEX (CI)	ROUGHNESS INDEX (RI)	RUT AVERAGE (IN)
78.07 - 82.0	Flexible	No	Fair	3.3	2.92	0.12
82.0 - 85.19	Flexible	Yes – CI	Poor	1.7	2.35	0.07
85.19 – 93.30	Flexible	Yes - CI	Poor	1.7	2.57	0.07
93.3 – 98.71	Flexible	No	Good	3.3	3.64	0.15
99.0 – 99.79	Flexible	No	Fair	3.3	2.59	0.14
99.79 – 102.46	Flexible	No	Fair	2.3	2.50	0.15
102.46 – 103.90	Flexible	No	Fair	2.3	2.66	0.14
103.90 – 113.60	Flexible	No	Good	2.3	3.51	0.15

Member Horsch made a motion to recommend that the Transportation Board approve the 129,000 pound truck route request for SH-34, milepost 78.07 to 113.6. The motion passed unanimously.

Case #201702 and #201618: US-89, MP 0.0 to 44.24. FPM Marker said there were two requests to designate a portion of or all of US-89 as a 129,000 pound truck route; thus the two case numbers. He said DMV confirmed that US-89 from the Utah border to the Wyoming border

falls under the red route category. The bridge analysis determined that the 19 bridges on the route will safely support vehicle combinations up to 129,000 pounds, assuming the axle configuration conforms to the legal requirements. The pavement is in good to poor condition with some deficiencies. A seal coat was scheduled this year. There are no safety concerns and the Chief Engineer's analysis recommends approving the route.

In response to a question on the lack of shoulders, FPM Marker said that there are sections in the Cities of Montpelier and Paris that have no shoulders; however, the rest of the route has shoulders varying in width from one to five feet.

MILEPOST	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDITION STATE	CRACKING INDEX (CI)	ROUGHNESS INDEX (RI)	RUT AVERAGE (IN)
0.00 – 2.62	Flexible	No	Good	4.00	3.09	0.11
2.62 – 2.82	Flexible	No	Good	5.00	3.11	0.10
2.82 – 7.80	Flexible	No	Good	4.00	3.45	0.08
7.80 – 8.61	Flexible	No	Good	3.50	3.04	0.09
8.61 – 9.04	Flexible	No	Fair	5.00	2.83	0.10
9.04 – 15.65	Flexible	No	Good	3.50	3.38	0.08
15.65 – 16.24	Flexible	No	Fair	3.90	2.94	0.07
16.24 – 19.75	Flexible	No	Good	3.50	3.54	0.10
19.75 – 25.29	Flexible	No	Good	4.00	3.09	0.18
25.29 – 25.98	Flexible	Yes (RI)	Poor	3.00	2.49	0.14
26.28 – 26.70	Flexible	No	Fair	5.00	2.63	0.11
26.70 – 29.70	Flexible	Yes (CI)	Poor	2.00	3.14	0.06
29.70 – 31.12	Flexible	No	Fair	5.00	2.86	0.09
31.12 – 34.00	Flexible	No	Good	4.00	3.21	0.09
34.00 – 35.5	Flexible	No	Good	3.50	3.06	0.15
35.5 – 37.66	Flexible	No	Fair	3.50	2.84	0.12
37.96 – 38.37	Flexible	No	Good	4.40	3.27	0.07
38.37 – 40.20	Flexible	No	Good	4.00	3.72	0.09
40.20 – 40.92	Flexible	No	Good	4.00	3.09	0.05
40.92 – 41.40	Flexible	No	Good	4.50	2.58	0.12
41.17 – 42.91	Flexible	No	Good	4.8	3.12	0.12
42.91 – 43.42	Flexible	No	Fair	4.7	2.79	0.11
43.42 – 44.24	Flexible	No	Fair	4.8	2.85	0.07

Member Coleman made a motion to recommend that the Transportation Board approve the 129,000 pound truck route request for US-89, milepost 0.0 to 44.24. The motion passed unopposed.

Case #201619: SH-61, MP 0.0 to 0.74. FPM Marker said DMV confirmed that this section of SH-61 is designated as a red route. There are no bridges on this section, nor any safety concerns. The asphalt pavement is in fair condition. The Chief Engineer's analysis recommends approving the route.

MILEPOST	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDITION STATE	CRACKING INDEX	ROUGHNESS INDEX	RUT AVERAGE (IN)
0-0.74	Flexible	No	Fair	4.3	2.88	0.16

Member Horsch made a motion to recommend that the Transportation Board approve the 129,000 pound truck route request for SH-61, milepost 0.0 to 0.74. The motion passed unanimously.

Case #201630: I-86 Business Loop, MP 4.08 to 4.61 and MP 100.26 to 101.87. FPM Marker said DMV confirmed that this Business Loop in American Falls is designated as a red route. The bridge analysis determined that the two bridges on the route will safely support vehicle combinations up to 129,000 pounds, assuming the axle configuration conforms to the legal requirements. The pavement is in good to fair condition. There are no major safety concerns and the Chief Engineer's analysis recommends approving the route.

MILEPOST	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDITION STATE	CRACKING INDEX	ROUGHNESS INDEX	RUT AVERAGE (IN)
100.26 – 101.81	Flexible	No	Fair	4.7	2.68	0.20
4.08 – 4.61	Flexible	No	Good	5.0	3.54	0.09

Member Coleman made a motion to recommend that the Transportation Board approve the 129,000 pound truck route request for I-86 Business Loop, milepost 4.08 to 4.61 and MP 100.26 to 101.87. The motion passed unanimously.

Member Horsch expressed safety concerns where the road curves and slopes. It can be slick in winter and is near a busy intersection. Discussions have been held to eliminate that cross street. Chairman Kempton questioned reducing the speed limit and added that the additional axles on commercial motor vehicles assist with braking. Member Horsch responded that if the speed limit is reduced, the truckers will likely travel on the city streets instead of the bypass.

Case #201638: US-91, MP 9.21 to 42.54. FPM Marker said the portion of US-91 from the Utah state line to Preston was approved previously. This section is from Preston to I-15, and the DMV confirmed that it falls under the red route category. The bridge analysis determined that the five bridges on the route will safely support vehicle combinations up to 129,000 pounds, assuming the axle configuration conforms to the legal requirements. The pavement is in good to fair condition. There are no safety concerns and the Chief Engineer's analysis recommends approving the route.

MP	MP	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDITION STATE	CRACKING INDEX	ROUGHNESS INDEX	RUT AVERAGE (IN)
9.215	13.283	Flexible	No	Fair	2.60	2.63	0.16
13.283	13.782	Flexible	No	Fair	3.00	3.53	0.07
13.782	14.406	Flexible	No	Good	4.90	3.37	0.10
14.406	14.652	Flexible	No	Good	4.70	3.68	0.12
14.746	14.971	Flexible	No	Fair	2.70	3.04	0.14
14.971	21.828	Flexible	No	Fair	2.60	3.50	0.13
21.828	29.697	Flexible	No	Good	3.60	3.62	0.11
29.697	30.078	Flexible	No	Fair	3.10	2.55	0.12
30.078	30.642	Flexible	No	Fair	3.10	2.53	0.10
30.642	34.668	Flexible	No	Good	3.10	3.70	0.12
34.668	37.075	Flexible	No	Fair	2.50	3.77	0.15
37.075	42.539	Flexible	No	Good	4.70	4.18	0.12

Member Horsch made a motion to recommend that the Transportation Board approve the 129,000 pound truck route request for US-91, milepost 9.21 to 42.54. The motion passed unopposed.

Case #201640: US-91, MP 77.89 to 80.00. FPM Marker said the DMV confirmed that this section of US-91 falls under the red route category. The bridge analysis determined that the three bridges on the route will safely support vehicle combinations up to 129,000 pounds, assuming the axle configuration conforms to the legal requirements. The road is asphalt and concrete pavement and is in good condition. There are no major safety concerns and the Chief Engineer's analysis recommends approving the route.

MP	MP	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDI- TION STATE	CRACKING INDEX	ROUGH- NESS INDEX	RUT AVERAGE (IN)
77.890	78.209	Flexible	No	Good	5.0	2.31	0.00
77.209	78.800	Flexible	No	Good	5.0	2.41	0.00
78.800	79.360	Rigid	No	Good	5.0	1.65	0.07
79.360	79.690	Flexible	No	Good	5.0	2.22	0.00
79.960	79.912	Flexible	No	Good	5.0	2.31	0.16
79.912	80.000	Rigid	No	Good	5.0	1.72	0.00

Member Coleman made a motion to recommend that the Transportation Board approve the 129,000 pound truck route request for US-91, milepost 77.89 to 80.00. The motion passed unopposed.

Case #201701: SH-38, MP 0.0 to 0.69 and MP 1.33 to 23.44. FPM Marker said SH-38 from MP 0.69 to 1.33 in the City of Malad was designated as a 129,000 pound truck route earlier. The DMV confirmed that these two sections of SH-38 are designated as red routes. There are no bridges on the route. The pavement is in fair to poor condition with approximately 62% rated as deficient for cracking or rutting. The first section, from MP 0.0 to 0.6, is scheduled for a mill and inlay in 2019. No other projects are programmed on the route; however, it is continuously monitored. There are no safety concerns and the Chief Engineer's analysis recommends approving the route.

MILEPOSTS	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDITION STATE	CRACKING INDEX	ROUGHNESS INDEX	RUT AVERAGE (IN)
0.00 – 0.322	Flexible	Yes	Poor	1.7	1.65	0.13
0.322 – 0.623	Flexible	Yes	Poor	1.7	2.13	0.08
0.623 – 0.690	Flexible	Yes	Poor	4.2	2.31	0.07
1.33 – 6.310	Flexible	Yes	Poor	1.7	3.12	0.09
6.310 – 12.326	Flexible	Yes	Poor	2.0	3.00	0.10
12.326 – 14.567	Flexible	Yes	Poor	2.0	3.33	0.10
14.567 – 18.662	Flexible	No	Fair	2.2	3.36	0.10
18.662 – 22.547	Flexible	No	Fair	2.2	2.81	0.06
22.547 – 23.44	Flexible	No	Fair	2.2	2.83	0.08

Member Horsch made a motion to recommend that the Transportation Board approve the 129,000 pound truck route request for SH-38, milepost 0.0 to 0.69 and MP 1.33 to 23.44. The motion passed unanimously.

Case #201703: SH-37, MP 37.48 to 68.71. FPM Marker said the DMV confirmed that SH-37 is designated as a red route. The bridge analysis determined that the four bridges on the route will safely support vehicle combinations up to 129,000 pounds, assuming the axle configuration conforms to the legal requirements. The pavement is in good to fair condition. There are no safety concerns and the Chief Engineer's analysis recommends approving the route. FPM Marker added that the local road from the junction with SH-37 on the north to SH-38 on the south has been requested as a 129,000 pound truck route. Staff is working with the local officials on the request.

MILEPOSTS	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDITION STATE	CRACKING INDEX	ROUGHNESS INDEX	RUT AVERAGE (IN)
37.483 – 39.718	Flexible	No	Fair	2.8	2.59	0.07
39.718 – 45.000	Flexible	No	Fair	2.8	2.54	0.08
45.000 – 50.440	Flexible	No	Good	5	3.44	0.08
50.440 – 55.440	Flexible	No	Fair	2.4	2.77	0.07
55.440 – 59.800	Flexible	No	Good	4.8	3.44	0.06
59.800 – 64.134	Flexible	No	Good	4.4	3.62	0.06
64.134 – 68.714	Flexible	No	Fair	3.1	2.75	0.06

Member Horsch made a motion to recommend that the Transportation Board approve the 129,000 pound truck route request for SH-37, milepost 37.48 to 68.71. The motion passed unopposed.

Case #201706: US-30, MP 333.0 to 335.77. FPM Marker said this stretch of US-30 connects to previously-designated 129,000 pound truck routes, so it will eliminate a gap. DMV confirmed that this section of US-30 falls under the red route category. There are no bridges on this section. The pavement is in good to poor condition with one section considered deficient. The entire section is scheduled for a mill and inlay in 2019 and a seal coat in 2020. Although there are no major safety concerns, the five-year crash data shows a total of 98 crashes involving 185 units. Nine of those crashes involved tractor-trailer combinations with the most prevalent contributing circumstances being improper turn and inattention. No injuries or fatalities resulted from crashes with tractor trailers. The Chief Engineer's analysis recommends approving the route.

In response to Member Coleman's question on the turning crashes, FPM Marker replied that he believes the majority of crashes were cars hitting trucks; however, he did not do an extensive analysis on the crash data. Member Coleman suggested there may be an opportunity to improve safety. DE Bala said the safety data is reviewed on all routes annually. He does not believe this location warrants improvements based on the traffic count.

In response to questions on a railroad bridge and tight intersection, DE Bala does not believe either of those are concerns. The District's analysis included a study with TransSystems

vehicles. The 105,500 pound vehicles and 129,000 pound vehicles have the same off-track, so the District does not have any concerns with this route designation.

MILEPOSTS	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDITION STATE	CRACK- ING INDEX	ROUGHNESS INDEX	RUT AVERAGE (IN)
333.00 – 333.665	Flexible	No	Fair	3.5	2.80	0.22
333.665 - 334.006	Flexible	No	Good	4.7	3.16	0.11
334.006 – 335.391	Flexible	No/No	Good/Good	4.9/4.5	3.85/3.89	0.06/0.08
335.391 – 335.778	Flexible	No/Yes	Fair/Poor	4.7/4.9	2.59/2.53	0.11/0.11

Member Coleman made a motion to recommend that the Transportation Board approve the 129,000 pound truck route request for US-30, milepost 333.0 to 335.77. The motion passed unanimously.

Request for Comment. In response to a request to address the Subcommittee, Member Kempton said that no testimony will be taken on the District 5 routes on the agenda; however, comments that are general in nature would be allowed.

Hans Hayden, Mid Crystal Farms, said he believes local highway jurisdictions appear to be struggling with the 129,000 pound route designation process and the ability to issue permits due to insufficient resources. Enforcement is another issue. He recommended designating all roads in the state as 129,000 pound truck routes, but give local jurisdictions the authority to opt-out. The state should issue all permits. He added that ITD does a good job with 129,000 pound truck routes and permits and should help local entities.

Chairman Kempton acknowledged the concerns with some local highway jurisdictions' ability to process these requests and issue permits. ITD is working with the Local Highway Technical Assistance Council on this issue. Member Coleman added that LHTAC has reached out to local highway jurisdictions and is willing to provide assistance. ITD is also available to help upon request.

The meeting adjourned at 3:00 PM.

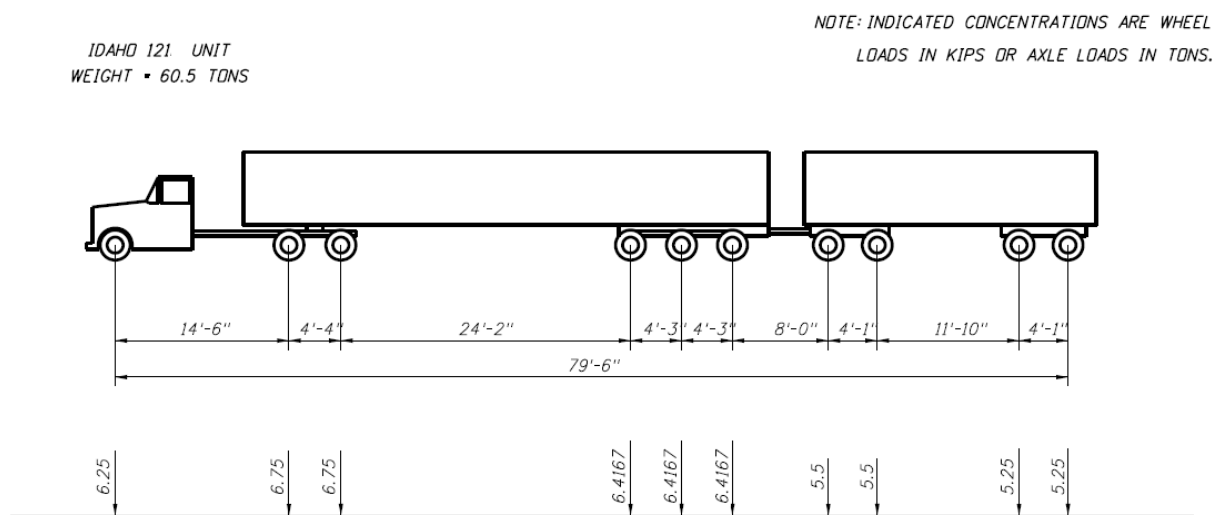
Sue S. Higgins
Respectfully submitted by:
SUE S. HIGGINS
Executive Assistant & Secretary
Idaho Transportation Board

ADDENDUM: Submitted by Bridge Engineer Dan Gorley

ITD Bridge Load Rating: Idaho 121 kip Notional truck versus 129 kip truck

ITD studies indicate that a nominal 121,000-pounds truck configuration that meets the provisions of Federal Formula B generates the highest possible load on bridge and culvert structures. Therefore it is the truck used by ITD to evaluate the load carrying capacity of these structures (ITD 121k load rating). Making the axle spacing as short as possible and maximizing the axle weights while still meeting the provisions of Federal Formula B maximizes the load effects on our bridges.

Per Idaho State Statute, the maximum weight for excess weight permits on select Idaho highways for reducible loads is 129,000 lb. (129 kip), in addition the axle configuration and maximum axle weight of 20,000 pounds must also satisfy Federal Formula B. ITD does not load rate bridges specifically for a 129 kip configuration but instead load rates for a configuration known as the Idaho 121 kip truck which has a total weight of 121,000 lb. The schematic shown below is the configuration of the Idaho 121 kip truck used in load rating:



As part of the process for approving 129 kip routes to be included on specific Idaho highways, the operating rating results for the Idaho 121 kip truck are used to determine whether bridges on a proposed 129 kip route are adequate to handle the 129 kip loading. The manual which explains the process for the 129 kip route request can be found on the external ITD website or through the following hyperlink: <http://lhtac.org/wordpress/wp-content/uploads/2016/12/NIATT-Route-Request-Guideprint.pdf> on page 15 in Section 2.

In March 2016, a study was done by Bridge Asset Management to compare the Idaho 121 kip truck ratings to a 129 kip truck configuration for local and state-system bridges in Idaho to assure the Idaho 121 kip truck encompasses the rating tons for a 129 kip truck configuration. A total of 2127 bridge rating files were run for the 2 truck configurations.

Approximately 5% (104 bridge rating models) had 129 kip truck Operating Rating TONS less than the 121 kip truck.

103 out of the 104 bridge rating models where the 129 kip Operating TON was less than 121 kip Operating TON would not require restricting the 129K truck. There was only 1 bridge with a 129 kip Operating TON less than the 121 kip Operating TON that would require restricting a 129 kip truck. For Bridge 23840, the 121 kip Operating Ton was 51.679 Ton, and the 129 kip Operating Ton was 51.318 Ton, both of which would be rounded down to 51 Tons on the ITD load rating form.

Based on this study, the Idaho 121 kip truck is a good 'notional' load to encompass the 129 kip truck that is legal on specific routes in Idaho.