Jake Legler PE
Idaho Transportation Department
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AASHTOWare & Permitting

Special Projects Engineer?

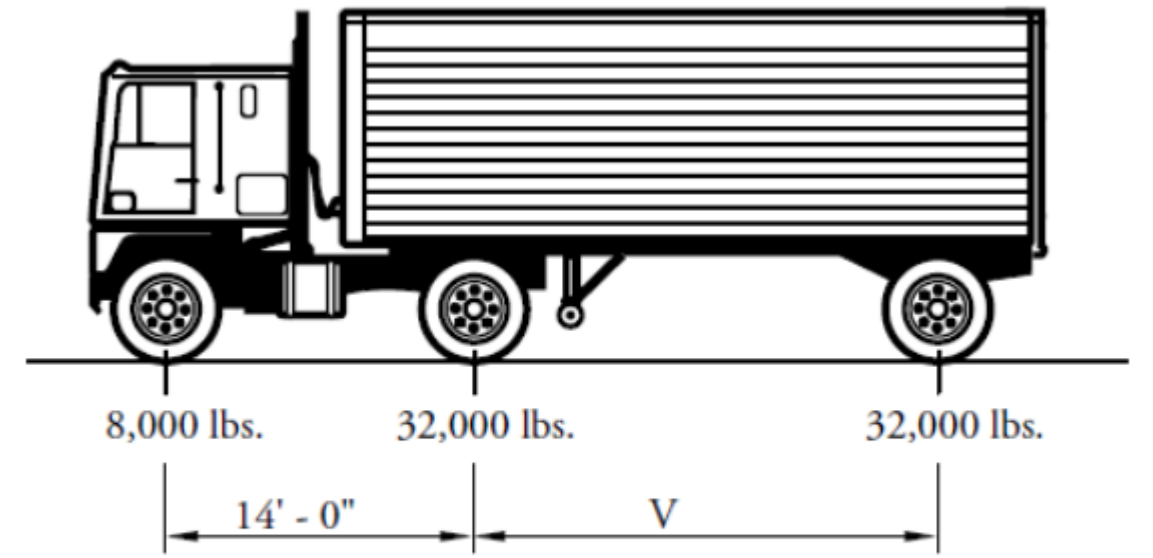
- Bridge Scour Evaluation and Mitigation
- Manage Overhead Structure Inspection Program
- Manual Writing and Upkeep
- Transportation Asset Management Plan (TAMP)
- Bridge Life Cycle Cost Analysis and Planning
- Over legal Permitting

Types of Loads

- Legal Loads
- Divisible Over Legal Loads – Annual Permits
- Indivisible Over Legal Loads – Single Trip Permits

Bridge Design Loads

- HL-93



V = Variable spacing – 14 feet to 30 feet inclusive.
Use spacing that produces maximum stresses.

Potential Bridge Loads

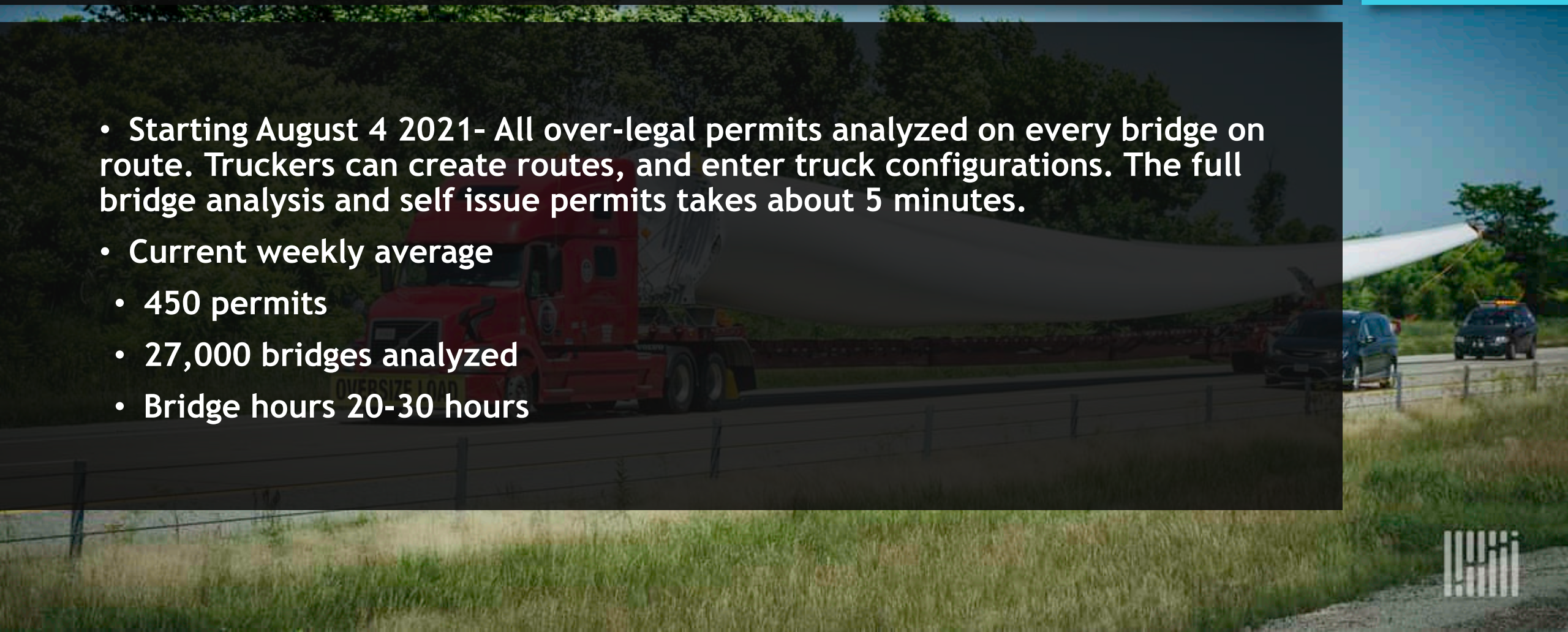
ITD Over-legal Permitting Journey

Since we built bridge to 1990's – check heavy trucks over trouble bridges.

ITD Over-legal Permitting Journey

1990’s to 2021 – DMV screens by factor to determine which permits need bridge analysis. Bridge office puts bridge speed and lane restrictions on permit based on BrR analysis. Process 50-70 permits a week, 300-400 bridges analyzed. Bridge hours 60-80 a week

ITD Over-legal Permitting Journey



- Starting August 4 2021- All over-legal permits analyzed on every bridge on route. Truckers can create routes, and enter truck configurations. The full bridge analysis and self issue permits takes about 5 minutes.
- Current weekly average
  - 450 permits
  - 27,000 bridges analyzed
  - Bridge hours 20-30 hours

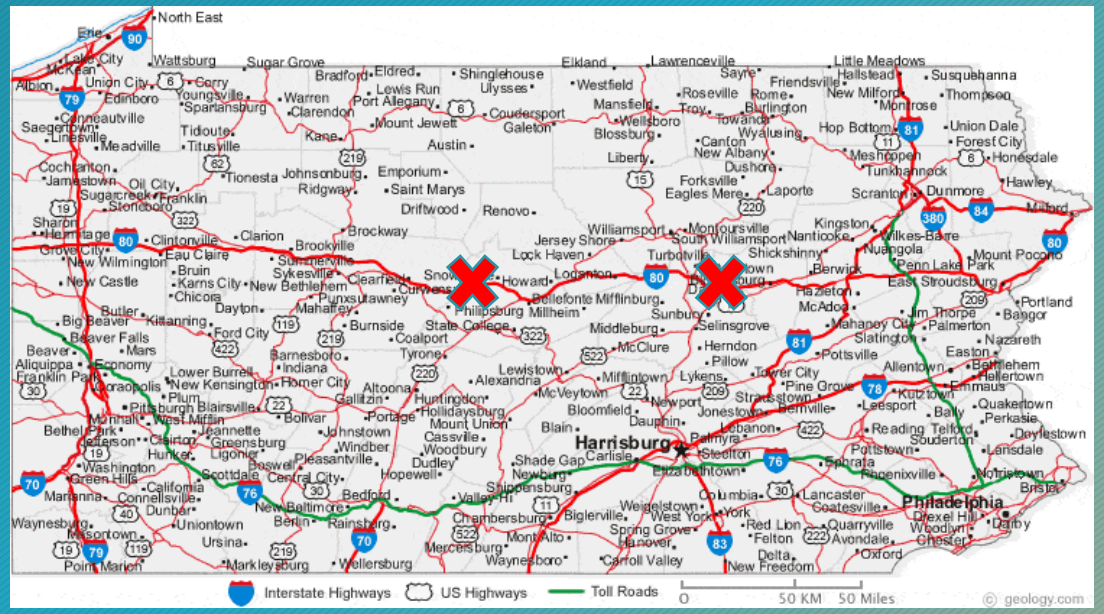
Routing or Rating

Pennsylvania

Idaho

Routing or Rating

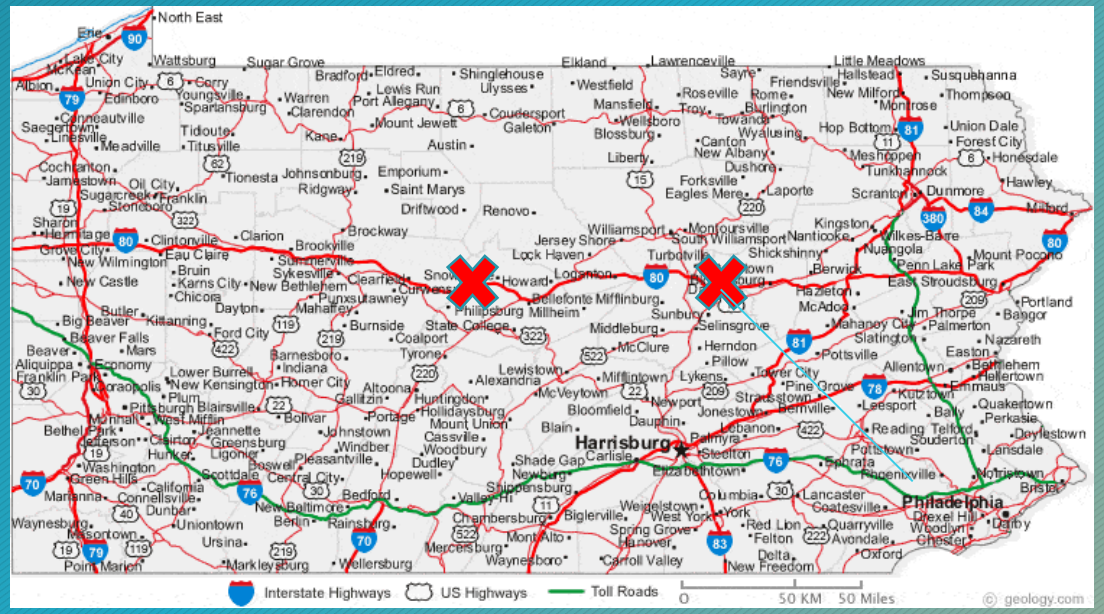
Pennsylvania



Idaho

Routing or Rating

Pennsylvania



Idaho

What type of permitting does your Agency need?

Rule Based

- Faster
- Conservative
- Set it and forget it

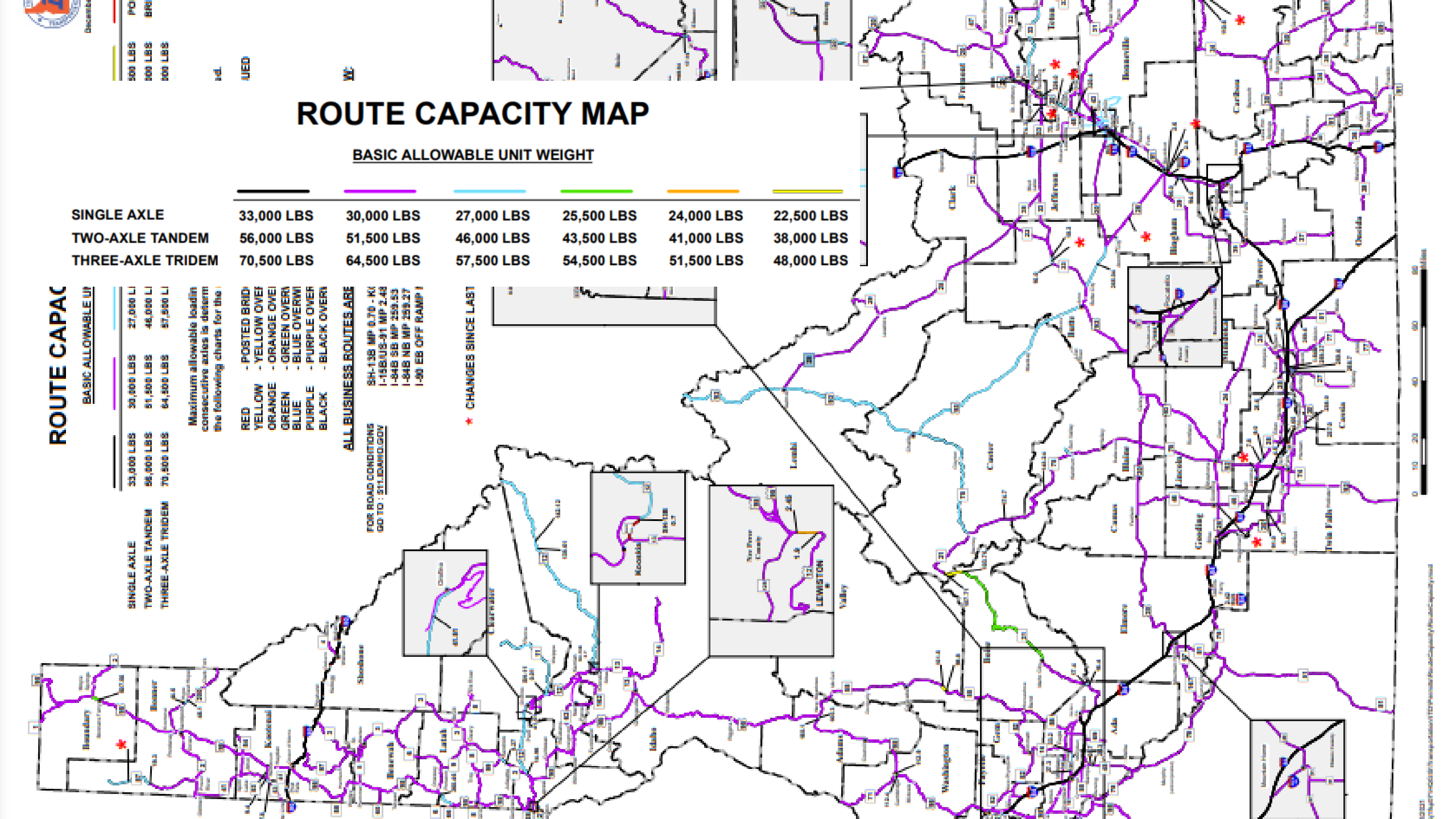
Analysis Based

- Slower
- More effort on data
- Can get trucks over with less restrictions

ROUTE CAPACITY MAP

BASIC ALLOWABLE UNIT WEIGHT

SINGLE AXLE	33,000 LBS	30,000 LBS	27,000 LBS	25,500 LBS	24,000 LBS	22,500 LBS
TWO-AXLE TANDEM	56,000 LBS	51,500 LBS	46,000 LBS	43,500 LBS	41,000 LBS	38,000 LBS
THREE-AXLE TRIDEM	70,500 LBS	64,500 LBS	57,500 LBS	54,500 LBS	51,500 LBS	48,000 LBS

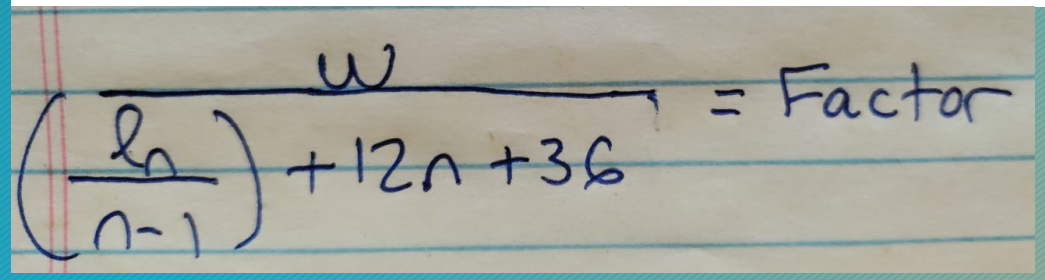


Truck Factors / Bridge Factors

- Quick screening tool for Bridge Capacity and Truck Loads
  - Combines axle weights and spacing
- At ITD the truck factor is based on Federal Formula B

$$w = 500\left(\frac{\ell n}{n-1} + 12n + 36\right)$$

- w = the maximum weight in pounds that can be carried on a group of two or more axles to the nearest 500 pounds (230 kg).
- ℓ = spacing in feet between the outer axles of any two or more consecutive axles.
- n = number of axles being considered.



- Factor developed for all axle groupings use highest

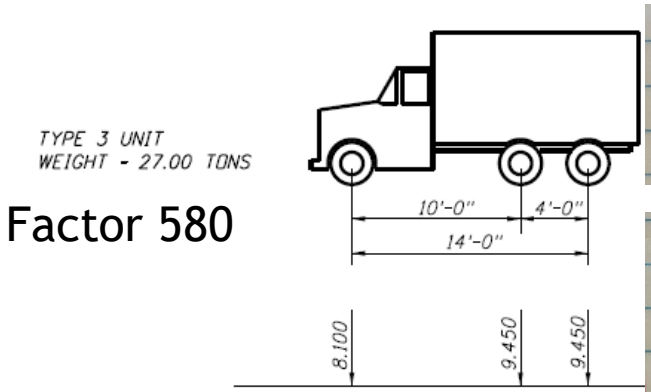
Bridge Factors

- Bridge Factor is based on Rating Factors for Legal trucks

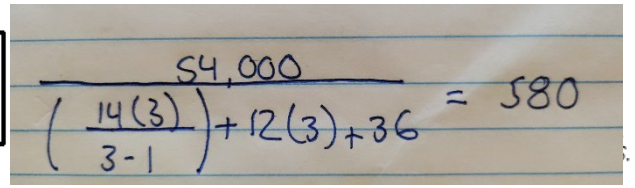
HS-20	Truck	36	U11	Gusset	Fastener Resistance	1.76	63
Idaho - Type 3	Truck	27	U11	Gusset	Fastener Resistance	2.04	55
Idaho - Type 3S2	Truck	39.5	G2 - Int. Gir.	1.5	Flexural - Steel Strength	2.10	83
Idaho - Type 3-3	Truck	39.5	G2 - Int. Gir.	1.5	Flexural - Steel Strength	2.04	81
Idaho - 121k	Truck	60.5	G2 - Int. Gir.	1.5	Flexural - Steel Strength	1.63	99
CALTRANS P13	Truck	157	G2 - Int. Gir.	1.5	Flexural - Steel Strength	0.84	132

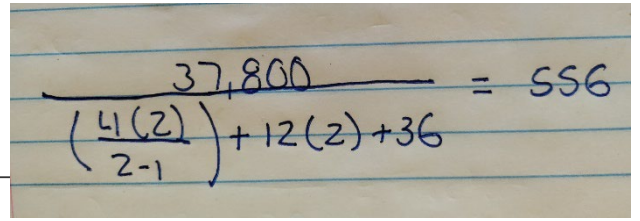
2.04 * 580 = 1183
2.10 * 552 = 1159
2.04 * 494 = 1007

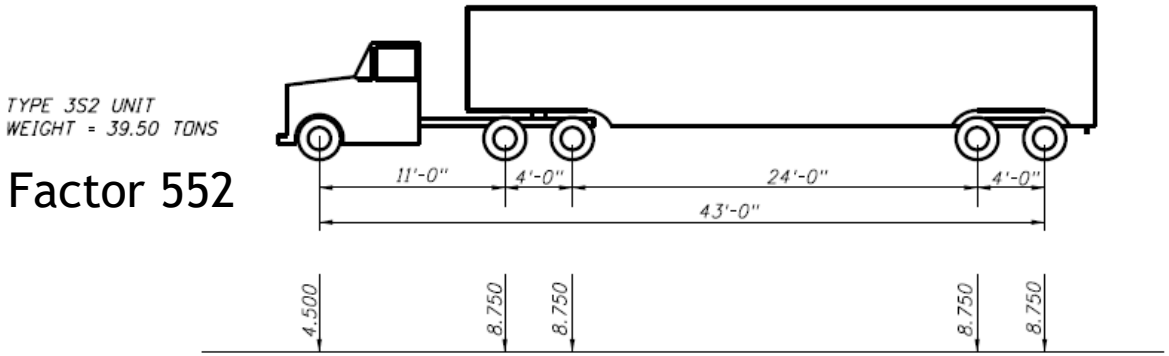
Bridge Factor is 1007



Factor 580

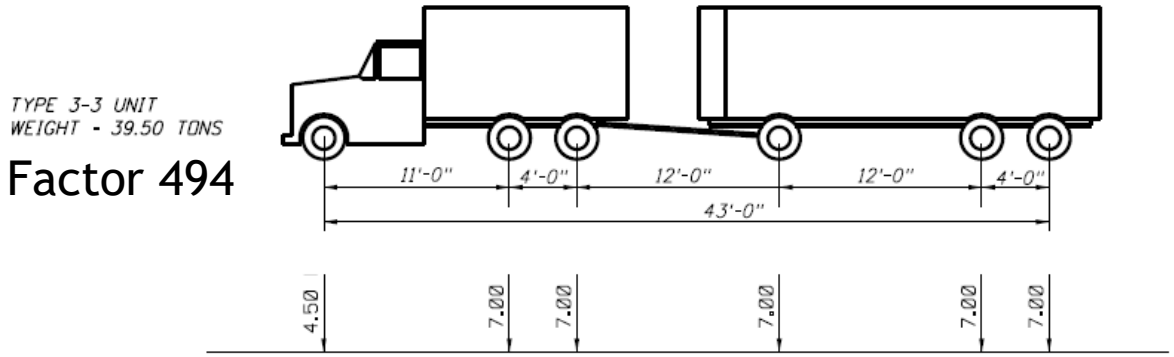




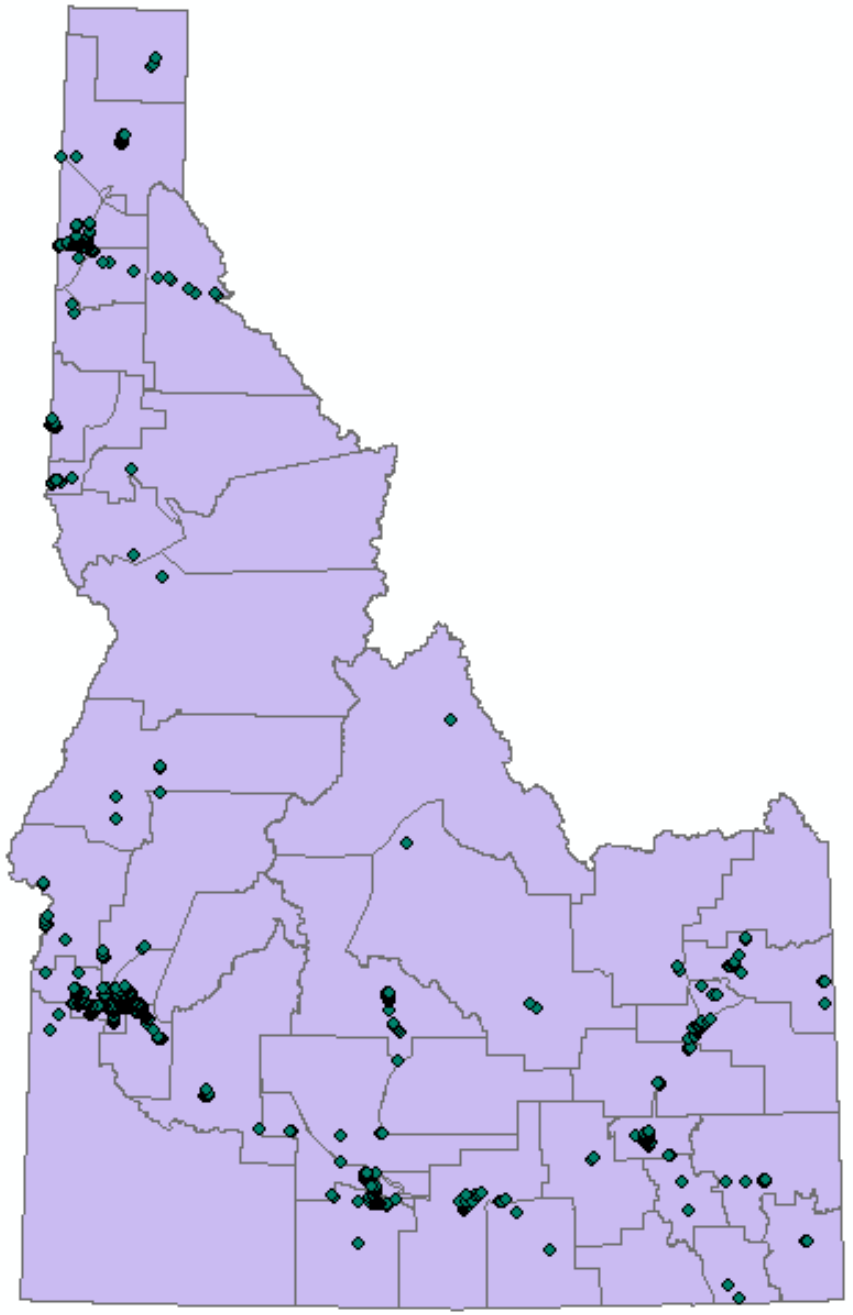


Factor 552

Truck Factors



Factor 494



Idaho Transportation Department
Overhead Structure Inspection Report

S1000421
Route: US 95 Location: Sandpoint Bypass

Location Data

District: District 1
County: Bonner
Location: Sandpoint Bypass
NBI Bridge ID(If applicable):
Route: US 95
Latitude: 48° 16' 54.10"
Longitude: 116° 32' 53.60"
Administrative Jurisdiction: District 1

Inspection Data

Inspection Date: 9/18/2018
Insp Freq: 36
Inspector: Sam Rodriguez
Equipment Req.: Standard Lift Vehicle
Traffic Control Information:
None required.
Overall Condition: 6 Satisfactory
Drawing No.:
Project Key No.:

Roadway Data

Classification

Roadway: One Route Under
Kind of Highway: 2 U.S. Numbered Hwy
Design Level of Service: 3 Bypass
Traffic Direction: 3 South
Functional Class: 14 Urban Other Princ

Traffic

Lanes: 2
ADT Total: 9000
Truck ADT: 21%
ADT Year: 2017

Clearance

Min Vertical Clearance: 18.10 ft
Min Lateral UnderClr Right: 10.8 ft
Min Lateral UnderClr Left:

ITD Roadway Data

Segment Code: 015909
Milepost: 474.620

Structure Data

Material Type: Steel
Design Type: OHS: Cantilever - Mono
Structure Length: 34.00 ft
Max Span Length: 34.00 ft
No. of Spans: 1
Year Built:

Element Condition

Galvanized Steel, Cantilever, No Paint

Element/Description	Environment	Quantity								
		Total	State 1		State 2		State 3		State 4	
701-Concrete Foundation	Mod.	1.00 each		1.00		0.00		0.00		0.00
Reinforced concrete foundation.										
702-Steel Anchor Rods	Mod.	12.00 each		12.00		0.00		0.00		0.00
Steel anchor rods.										
704-Steel Base Plate	Mod.	1.00 each		1.00		0.00		0.00		0.00
Steel base plate.										
706-Steel End Support Column	Mod.	25.00 ft		25.00		0.00		0.00		0.00
Steel end support column.										
718-End Support-to-Chord Connection	Mod.	1.00 each		0.00		1.00		0.00		0.00
Steel end support column to chord connection for steel monotube.										
1020-Connection	Mod.	1.00 each		0.00		1.00		0.00		0.00
1 of 26 steel end support column to chord connection bolts is loose.										
719-Steel Single Chord Span	Mod.	34.00 ft		34.00		0.00		0.00		0.00
Single steel chord span for steel cantilever monotube.										


SPEED LIMIT 10
BY-PASS LANE
SCALE LANE
ARKING
REA
TRUCKS ENTERING HIGHWAY
TRUCKS ENTERING HIGHWAY
DEERE

Know Your Inventory

- Bridges not Load Rated in AASHTOWare BrR
  - Tables
  - Rules
  - Excel sheets
  - Engineering Judgement (no plans)
- Bridges Load Rated in AASHTOWare BrR
  - Load Rating Tool
  - LFD Member Alternative
  - LRFR
  - 3D FEM
  - Check out to run

Tables, Rules, Excel, Engineering Judgement

Truck Length (ft)	VW_{none} (kips)	VW_{5mph} (kips)	$VW_{OnlySmphCL}$ (kips)
100	250	250	250
110	250	250	250
120	250	250	272
130	250	250	294
140	250	250	317
150	250	250	340
160	250	250	362
170	250	260	385
180	250	275	408
190	254	291	430
200	267	306	453
210	281	321	475
220	294	337	498
230	307	352	500
240	321	367	500
250	334	382	500

Weight (kips)	Requirement
225 to <250	Slow to 45 mph
250 to <275	Slow to 5 mph
275 to <325	Slow to 5 mph Only vehicle on the bridge in the direction of travel (centered in travelway)
325 to <400	Slow to 5 mph Only vehicle on the bridge in the direction of travel (centered in travelway) Trailer axles must be a minimum of 16 feet wide
400 to <600	Slow to 5 mph Only vehicle on the bridge in the direction of travel (centered in travelway) Only one lane of traffic allowed in the opposing direction Trailer axles must be a minimum of 16 feet wide

18770	
Requirement	Factor
Normal Travel	< 659
45mph	< 700
25mph	< 783
5mph	< 785
OV	< 1009
OV 5 mph	< 1359
Manual	>= 1359

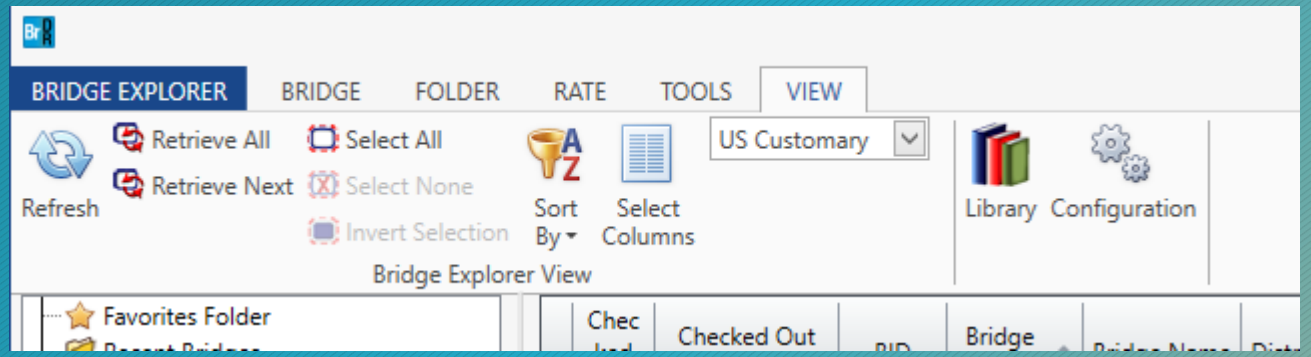
AASHTOWare BrR

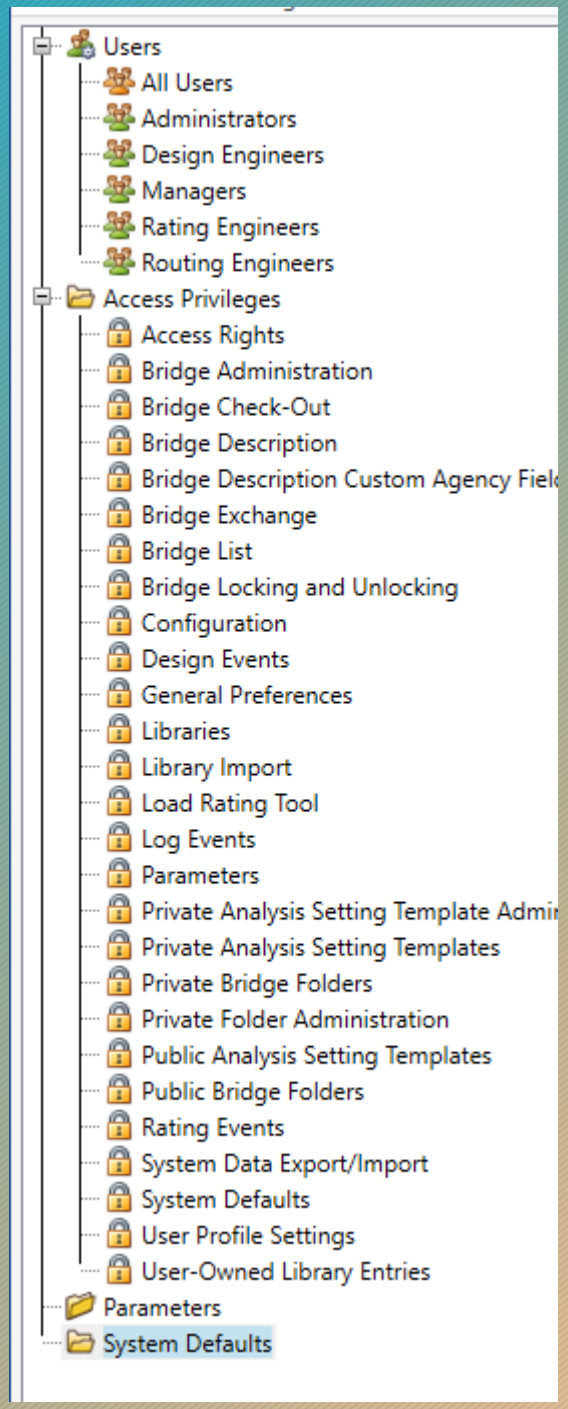
- Load Rating Tool
- LFD Member Alternative
- LRFR
- 3D FEM
- Check Out To Run

History of Load Rating Tool

- AASHTOWare BrR
  - Gold standard for Load Rating
  - Too slow for permitting – ratings take 5+ minutes for each bridge
  -
- Load Rating Tool
  - Uses pre-processed influence lines to quickly determine rating – 100 ratings / second
  - Began upgrade to BrR 10 years ago
  - First included in 6.8.2 with limited capabilities
  - 7.2 includes LRFR

Load Rating Tool Rules





System Defaults ×

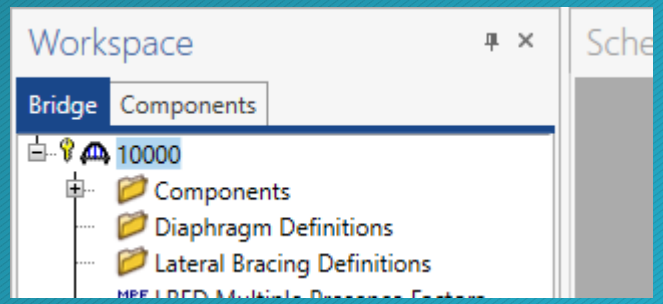
General | Bridge workspace | Superstructure analysis | Specifications | Substructure analysis | Tolerance | Custom agency fields | Rating tool

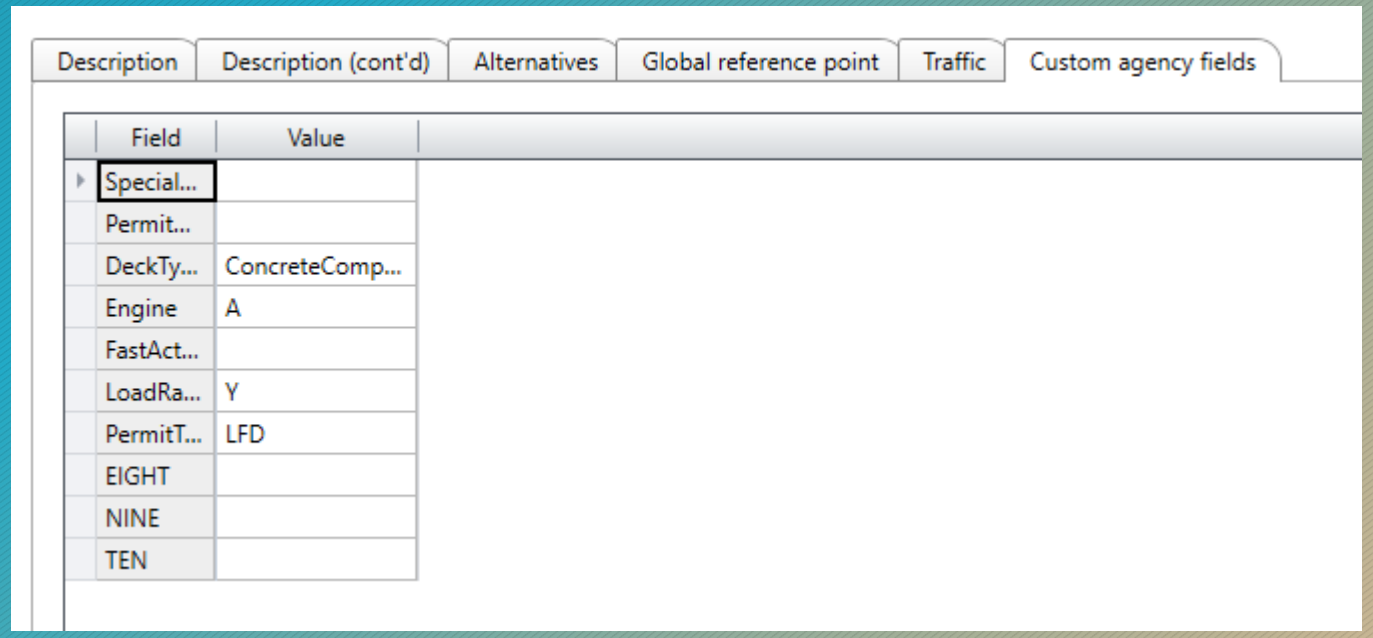
Load rating tool repository: Browse

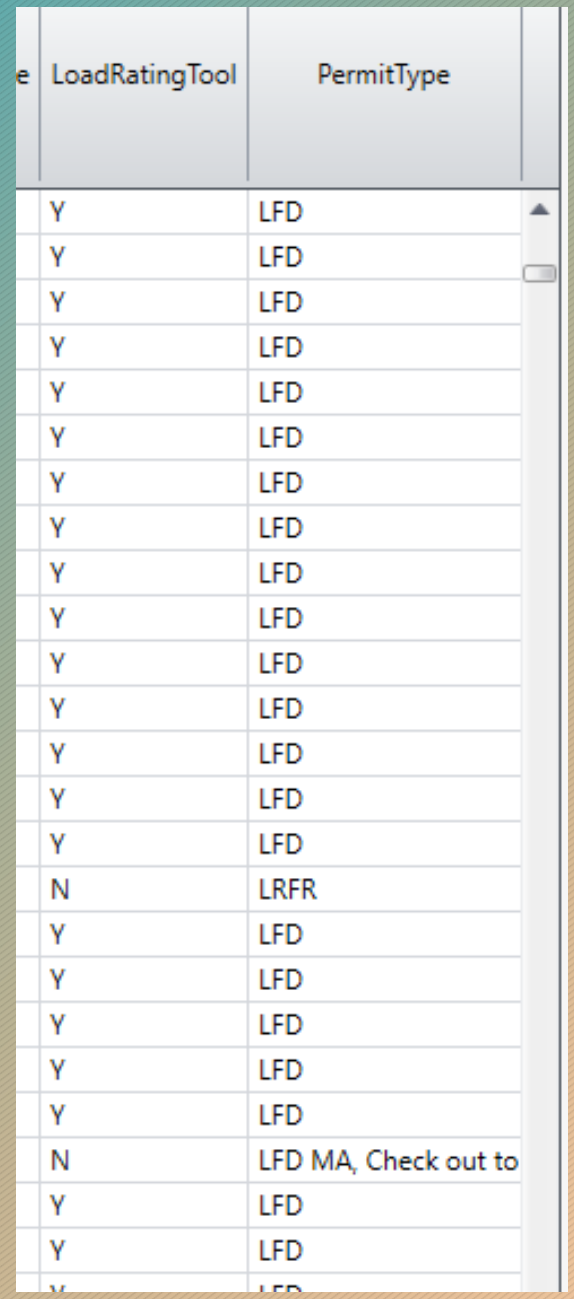
\\ITDHQ1FSP08\AssetManagement\Load Rating\LR ITD\BrR Prec\D305AE19-0435-4585-BE4D-7622AFAFBE99-7.0.0.3001

Processing order	Code	Description	Pass condition	% impact (%)	One lane restriction
1	1	OK		100.00	☐
2	2	45 mph	45 mph	69.20	☐
3	2	25 mph	25 mph	38.50	☐
4	4	5 mph	5 mph	0.00	☐
5	5	single lane	single lane	100.00	☑
6	6	single lane, 45 mph	single lane, 45 mph	69.20	☑
7	7	single lane, 25 mph	single lane, 25 mph	38.50	☑
8	8	single lane, 5 mph	single lane, 5 mph	0.00	☑

Managing Data







BRIDGE EXPLORER | BRIDGE | FOLDER | RATE | TOOLS | VIEW

New | CheckOut Authorization | Check Out | Check In | Open | Import | Batch — Bridge

Find | Copy | Paste | Copy To | Remove From | Delete — Manage

Lock | Unlock | Check Out | Check In — Protection

- Favorites Folder
- Recent Bridges
- All Bridges
  - All
  - Completely Defined
    - I 15
    - I 84
    - I 86
    - I 90
    - LRT
    - SH 200
    - SH 28
    - SH 33
    - SH 55
    - US 12
    - US 20
    - US 26
    - US 30
    - US 91
    - US 93
    - US 95
  - Not Completely Defined
- Deleted Bridges

Checked Out	Checked Out By	BID	Bridge ID	Bridge Name	District	County	Facility	Location	Route	Feature Intersected	Mile/Km (mi
		541	10655	08610A 14.73	04	31 Cassi	I 86 EBL	28.6 E. Bu	00086	Yale Road;Raft River	
		542	10660	08610A 14.8	04	31 Cassi	I 86 WB	28.6 E. Bu	00086	Yale Road;Raft River	
		4107	10665	08610A 18.93	05	77 Powe	I 86 WB	19.6 W. A	00086	COUNTY ROAD GS	
		2221	10675	08610A 20.78	05	77 Powe	I86 & R	17.9 W Ar	00086	Lanes Gulch	
		2354	10680	08610A 22.44	05	77 Powe	I 86 EBL	16.2 W. A	00086	Fall Creek	
		2377	10685	08610A 22.45	05	77 Powe	I 86 WB	16.2 W. A	00086	Fall Creek	
		1350	10690	S08610A 23.8	05	77 Powe	I 86 & F	14.8 W. A	00086	Little Warm Creek	
		264	10695	08610A 025.3	05	77 Powe	I 86 EBL	13.2 W. A	00086	Dairy Canyon;Fronta	
		265	10700	08610A 25.35	05	77 Powe	I 86 WB	13.2 W. A	00086	Dairy Canyon;Fronta	
		267	10705	08610A 26.46	05	77 Powe	I 86 EBL	12.1 W. A	00086	ROCK CR;MASSACRI	
		1059	10710	08610A 26.47	05	77 Powe	I-86 WE	12.1 W. A	00086	Rock Cr;Massacre Rc	
		1423	10740	S08610A 32.4	05	77 Powe	I 86 & F	6.0 W. An	00086	Little Creek	
		5784	10750	08610A 034	05	77 Powe	I-86 EBL	4.6 W. An	00086	Warm Creek Road G	
		5785	10755	08610A 034.0	05	77 Powe	I-86 WE	4.6 W. An	00086	Warm Creek Road G	
		3169	10765	08610A 38.58	05	77 Powe	I 86 EBL	AT AMERI	00086	SUNBEAM ROAD GS	
		3170	10770	08610A 38.59	05	77 Powe	I 86 WB	AT AMERI	00086	SUNBEAM ROAD GS	
		6244	10775	08610A 39.28	05	77 Powe	I86 EBL	NEAR AM	00086	PRIVATE RD;MACHIN	
		6245	10780	08610A 39.29	05	77 Powe	I86 WB	NEAR AM	00086	PRIVATE RD;MACHIN	
		1218	10790	08610A 41.32	05	77 Powe	I 86 EBL	2.7 E Ame	00086	Kopp Rd GS	

AASHTOWare Bridge Design and Rating

BRIDGE EXPLORER | BRIDGE | FOLDER | RATE | TOOLS | VIEW

New | CheckOut Authorization | Check Out | Check In | Open | Import | Batch — Bridge

Find | Copy | Paste | Copy To | Remove From | Delete — Manage

Lock | Unlock | Check Out | Check In — Protection

- Favorites Folder
- Recent Bridges
- All Bridges
  - All
  - Completely Defined
    - Ada County
    - I 15
    - I 84
    - I 86
    - I 90
    - LRT
    - SH 200
    - SH 28
    - SH 33
    - SH 55
    - US 12
    - US 20
    - US 26
    - US 30
    - US 91
    - US 93
    - US 95
  - Not Completely Defined
- Deleted Bridges

Checked Out	Checked Out By	BID	Bridge ID	Bridge Name	District	County	Facility	Location	Route	Feature Intersected	Mil	Owner	Maintainer	Area	Length (ft)	Year Built	Special Directions	PermitNotes	DeckType	Engine	LoadRating Tool	
		5914	21285	97113A 1.86	03	01 Ada	SMA 7113	In Boise; Curtis Ro	07113	I 184B; Curtis Road	1.86	Stat	State	52 PSG	203.000	1968			ConcreteComposite	A	Y	LFD
		5916	26036	X993010 100.15	03	01 Ada	BROOKSID	2.0 N. 1.8 E. EAGLE	00000	DRY CREEK	0.15	Cou	Cour	51 PSS	25.000	1994			NoDeck	A	Y	LFD
		5917	26091	98963A 10.53	03	01 Ada	SMA 8963	2.0 S. 1.9 E. Meridi	08963	Ridenbaugh Canal	0.53	Cou	Cour	51 PSS	38.000	2011			ConcreteNonComposite	A	Y	LFD
		5939	21506	97363A 1.67	03	01 Ada	STP7363; A	IN BOISE; AMERIC	07363	BOISE RIVER	1.67	Cou	Cour	52 PSG	313.000	1994			ConcreteComposite	A	Y	LFD
		5940	25813	99803A 18.24	03	01 Ada	SMA9803;I	In Boise	09803	Settlers Canal	8.24	Cou	Cour	51 PSS	67.000	2007			ConcreteComposite	A	Y	LFD
		5941	25818	99803A 15.68	03	01 Ada	SMA9803;I	In Boise; Maple Gr	09803	Finch Lateral	5.68	Cou	Cour	51 PSS	24.000	2008			NoDeck	A	Y	LFD
		5943	33405	X993010 100.09	03	01 Ada	S. Findley	In Boise	00000	New York Canal	0.09	Cou	Cour	54 PST	111.000	1998			ConcreteComposite	A	Y	LFD
		5960	21655	97183A 1	03	01 Ada	NHS 7183;	In Boise; S. 9th Str	07183	Boise River	1.00	Cou	Cour	45 SCMB	311.000	1987			ConcreteComposite	A	Y	LFD
		5961	25816	99803A 15.59	03	01 Ada	SMA9803;I	In Boise; Maple Gr	09803	Ridenbaugh Canal	5.59	Cou	Cour	55 PSMB	30.000	2008			NoDeck	A	Y	LFD
		5970	26348	97113A 1.74	03	01 Ada	SMA 7113	IN BOISE	07113	SETTLERS CANAL	1.74	Cou	Cour	52 PSG	71.000	2000			ConcreteComposite	A	Y	LFD
		5985	26071	97073A 13.51	03	01 Ada	SMA 7073	2.4 S. 2.5 W. BOIS	07073	NEW YORK CANAL	3.52	Cou	Cour	52 PSG	106.000	2006			ConcreteComposite	A	Y	LFD
		5988	26008	X993010 13.16	03	01 Ada	Lake Hazel	S Boise	00000	New York Canal	3.16	Cou	Cour	54 PST	119.000	2018			NoDeck	A	Y	LFD
		6018	19750	93770A 9.94	03	01 Ada	STC 3770;S	0.8 S. Star	03770	Boise River(Star Bridge)	9.70	Cou	Cour	52 PSG	378.000	1982			ConcreteComposite	A	Y	LFD
		6224	19825	93784A 2.09	03	01 Ada	STC 3784;E	3.4 E. KUNA	03784	New York Canal	2.06	Cou	Cour	54 PST	120.000	1977			ConcreteComposite	A	Y	LFD
		6257	25993	X993010 0.13	03	01 Ada	S WAYFINI	1.8 W MERIDIAN	00000	TEN MILE CREEK	0.13	Cou	Cour	55 PSMB	63.000	2019			NoDeck	A	Y	LFD
		6301	25855	99733A 2.46	03	01 Ada	STC 9733;L	IN BOISE;LAW DR	09733	Ridenbaugh Canal	2.45	Cou	Cour	55 PSMB	43.000	1989			ConcreteNonComposite	A	Y	LFD
		6303	26171	97028A 107.97	03	01 Ada	STC 7028;E	1.8 N. 1.4 E. EAGLE	07028	DRY CREEK CANAL	7.96	Cou	Cour	55 PSMB	60.000	1991			NoDeck	A	Y	LFD
		6314	25745	X993010 0.10	03	01 Ada	Bethel Cou	In Boise; Bethel Ct	00000	Ridenbaugh Canal	0.12	Cou	Cour	54 PST	34.000	1981			ConcreteComposite	A	Y	LFD
		6372	25985	993010 1.84	03	01 Ada	EMERALD	0.2 M.W.BOISE W	00000	I 184B E-W;EMERALD ST GS	8.55	Stat	State	52 PSG	291.000	1968			ConcreteComposite	A	Y	LFD
		6396	25911	97673A 0.45	03	01 Ada	STC 7673;	On Gowen Rd; E H	07673	New York Canal	0.45	Cou	Cour	52 PSG	112.000	2020			ConcreteComposite	A	Y	LFD
		6405	15786	08070B 63.53	03	01 Ada	I 84 EBL	9.2 E. Boise ECL	00084	KUNA RD;BLACKS CREEK RD	3.54	Stat	State	52 PSG	114.000	2020			ConcreteComposite	A	Y	LFD
		6407	15781	08070B 62.3	03	01 Ada	I 84 WBL	9.2 E. Boise ECL	00084	KUNA RD; BLACKS CREEK RD	3.54	Stat	State	52 PSG	114.000	2020			ConcreteComposite	A	Y	LFD
		6484	21661	97563A 6.09	03	01 Ada	OVERLANI	IN BOISE	07563	I 84;COLE/OVERLAND I.C	5.93	Stat	State	62 PSCG	216.000	1996			ConcreteComposite	A	Y	LFD
		6597	21191	97013A 7.98	03	01 Ada	SMA7013;I	3.0 E. Meridian	07013	Ridenbaugh Canal	7.88	Cou	Cour	17 RCF	30.000	1992			CulvertModule	A	Y	LFD
		6600	26047	X993010 0.40	03	01 Ada	N. Kay Ave	0.8 E. 1.2 N. of Kur	00000	Kuna Canal	0.40	Cou	Cour	17 RCF	21.000	2020			CulvertModule	A	Y	LFD
		6601	19776	99183A 12.97	03	01 Ada	SMA 9183	1.7 N. 2.0 W. Meri	09183	Five Mile Creek	2.97	Cou	Cour	17 RCF	25.000	2020			CulvertModule	A	Y	LFD
		6605	25785	93771A 103.20	03	01 Ada	STC 3771;I	1.2 S. 4.0 E. KUNA	03771	MORA CANAL	3.20	Cou	Cour	54 PST	94.000	1978			ConcreteComposite	A	Y	LFD
		6743	12800	97643A 3.77	03	01 Ada	SMA 7643	AT BOISE ECL;HEA	07643	NEW YORK CANAL	3.81	Cou	Cour	14 RCT	114.000	1964			ConcreteMono	A	Y	LFD
		6748	15790	S08070B 63.95	03	01 Ada	I 84 EBL	9.6 E. BOISE ECL	00084	BLACKS CREEK	3.98	Stat	State	17 RCF	20.000	1963			CulvertModule	A	Y	LFD
		6749	15795	S08070B 63.96	03	01 Ada	I 84 WBL	9.6 E. BOISE ECL	00084	BLACKS CREEK	3.99	Stat	State	17 RCF	20.000	1963			CulvertModule	A	Y	LFD
		6797	19761	99183A 109.67	03	01 Ada	SMA 9183	0.3 S. OVERLAND-	09183	RIDENBAUGH CANAL	9.60	Cou	Cour	17 RCF	34.000	1993			CulvertModule	A	Y	LFD
		6798	21670	97553A 2.60	03	01 Ada	SMA7553;I	1.1 SE BOISE SCL	07553	NEW YORK CANAL	2.53	Cou	Cour	21 RCCS	146.000	1989			NoDeck	A	Y	LFD
		6811	19796_mjh	Copy of 99773A 1.	03	01 Ada	SMA 9773	0.7 S. 3.0 W. Eagle	09773	Boise River;N. Channel	1.69	Cou	Cour	52 PSG	431.000	1992			ConcreteComposite	A	Y	LFD
		6911	21725_mjh	Copy of 97683A C	03	01 Ada	NHM 7683	In Boise; Gowen R	07683	UPRR; Gowen Road Br	5.29	Cou	Cour	14 RCT	152.000	1941				A	Y	LFD
		6927	21325_mjh	Copy of 97343A 3.	03	01 Ada	STP7343;C	IN BOISE;ORCHAR	07343	I 184B;ORCHARD ST GS	3.09	Stat	State	24 RCCT	143.000	1968				A	Y	LFD
		6949	12815	02110B 17.16	03	01 Ada	SH 21	17 N. Boise	00021	Mores Cr; Lucky Peak Res	7.16	Stat	State	49 SCT	848.000	1953	CheckOutToR	Run Larsa for Sub	ConcreteNonComposite	A	Y	LFD
		6992	15810_LAG	08070B 70.24	03	01 Ada	I 84 WBL	15.9 E. Boise ECL	00084	Indian Creek	0.23	Stat	State	14 RCT	26.000	1960			ConcreteMono	A	Y	LFD
		6993	15805_LAG	08070B 70.23	03	01 Ada	I 84 EBL	15.9 E. Boise ECL	00084	Indian Creek	0.23	Stat	State	14 RCT	26.000	1953			ConcreteMono	A	Y	LFD

Total Bridge Count: 260

Load Rating Tool

Permit application number:

Application date: 3/13/2022

Requested by:

Minimum allowable rating factor: 1.00

Comment:

Bridges | Vehicles | Rating results

Filter results: Pass Fail Exceptions

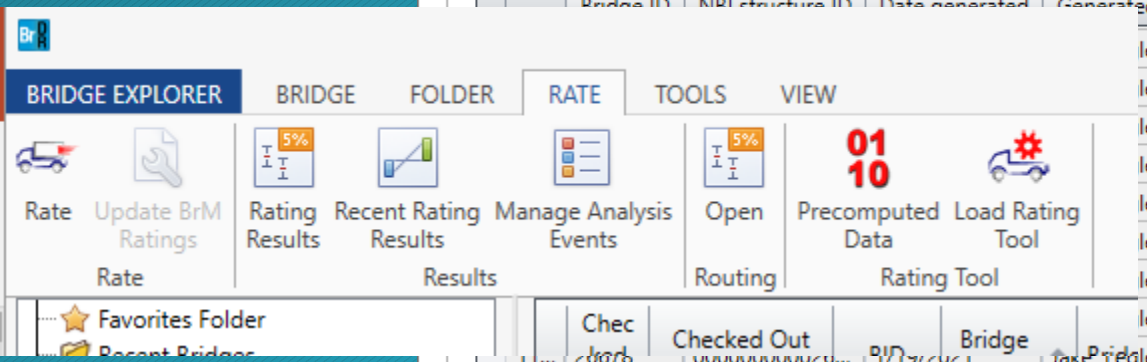
Vehicle	Rating level	BID	Bridge ID	Route number	Code	Description	Inventory rating factor	Operating rating factor	Controlling impact	Pass conditions	Analysis warnings
240k Test Truck (Do not dele...	Oper...	1740	15790_o...	00084	1	OK	0.759	1.267	1.000		
240k Test Truck (Do not dele...	Oper...	1741	15795_o...	00084	1	OK	0.803	1.342	1.000		
240k Test Truck (Do not dele...	Oper...	1825	26220	00000	1	OK	1.645	2.748	1.000		
240k Test Truck (Do not dele...	Oper...	1858	33435	00000	1	OK	1.330	2.221	1.000		
240k Test Truck (Do not dele...	Oper...	1916	26261	00000	1	OK	1.119	1.873	1.000		
240k Test Truck (Do not dele...	Oper...	1917	26280	00055	1	OK	0.734	1.604	1.000		
240k Test Truck (Do not dele...	Oper...	1930	21600	07433		Denied	0.575	0.959	1.000		
240k Test Truck (Do not dele...	Oper...	1930	21600	07433	2	45 mph	0.619	1.032	0.692	45 mph	
240k Test Truck (Do not dele...	Oper...	2061	33415	07023		Denied	0.502	0.839	1.000		
240k Test Truck (Do not dele...	Oper...	2061	33415	07023		Denied	0.541	0.903	0.692		
240k Test Truck (Do not dele...	Oper...	2061	33415	07023		Denied	0.585	0.978	0.385		
240k Test Truck (Do not dele...	Oper...	2061	33415	07023	4	5 mph	0.653	1.091	0.000	5 mph	
240k Test Truck (Do not dele...	Oper...	2063	34015	00016	1	OK	0.709	1.296	1.000		
240k Test Truck (Do not dele...	Oper...	2125	21451	07553	1	OK	7.058	11.786	1.000		
240k Test Truck (Do not dele...	Oper...	2130	25866	00000	1	OK	1.325	2.212	1.000		
240k Test Truck (Do not dele...	Oper...	2168	25876	00000	1	OK	1.339	2.237	1.000		
240k Test Truck (Do not dele...	Oper...	2172	25836	09273	1	OK	1.408	2.351	1.000		
240k Test Truck (Do not dele...	Oper...	2175	34020	00016	1	OK	0.882	1.472	1.000		

Create rating results file... View rating results file...

Close

Managing Load Rating Tool Files / Data

- We review Load Rating Tool files monthly
  - Create for new structures
  - Update for changed structures
  - Delete for structures no longer in inventory



Precomputed Data

Generate | Maintain

BID	Precomputed data				Bridge database				Select
	Bridge ID	NBI structure ID	Date generated	Generated by	Bridge ID	NBI structure ID	Date last modified	Last modified by	
				ler	18670	000000000018...	2/7/2018	Tisha Hyde	☐
				ler	18675	000000000018...	2/25/2019	Anthony Beauc...	☐
				ler	18735	000000000018...	7/13/2017	Tisha Hyde	☐
				ler	12930	000000000012...	9/4/2017	Tisha Hyde	☐
				ler	12920	000000000012...	2/26/2019	Anthony Beauc...	☐
				ler	12925	000000000012...	1/17/2017	Tisha Hyde	☐
				ler	17690	000000000017...	7/6/2017	Tisha Hyde	☐
				ler	18300	000000000018...	4/15/2019	Tyler Haney	☐
	Chec	Checked Out		Bridge	26678	000000000026...	2/4/2018	Tisha Hyde	☐
11...	29586	000000000029...	1/19/2021	Jake Legler	29586	000000000029...	2/4/2018	Tisha Hyde	☐
11...	31258	000000000031...	1/19/2021	Jake Legler	31258	000000000031...	7/7/2017	Tisha Hyde	☐
11...	10396	000000000010...	1/19/2021	Jake Legler	10396	000000000010...	2/10/2018	Tisha Hyde	☐
11...	13485	000000000013...	1/19/2021	Jake Legler	13485	000000000013...	3/3/2021	Tyler Haney	☑
11...	11050	000000011050	1/19/2021	Jake Legler	11050	000000011050	3/29/2019	Anthony Beauc...	☐
11...	11055	000000011055	1/19/2021	Jake Legler	11055	000000011055	3/29/2019	Anthony Beauc...	☐
11...	11160	000000011160	1/19/2021	Jake Legler	11160	000000011160	6/16/2017	Tisha Hyde	☐
11...	11185	000000000011...	1/19/2021	Jake Legler	11185	000000000011...	2/25/2019	Anthony Beauc...	☐
11...	11190	000000000011...	1/19/2021	Jake Legler	11190	000000000011...	6/25/2017	Tisha Hyde	☐
11...	15680	000000000015...	1/19/2021	Jake Legler	15680	000000000015...	2/26/2019	Anthony Beauc...	☐
11...	15805	000000000015...	1/19/2021	Jake Legler	15805	000000000015...	3/9/2018	Tyler Haney	☐
11...	16520	000000000016...	1/19/2021	Jake Legler	16520	000000000016...	1/31/2014	Tisha Hyde	☐
11...	16525	000000000016...	1/19/2021	Jake Legler	16525	000000000016...	1/31/2014	Tisha Hyde	☐
11...	16865	000000000016...	1/19/2021	Jake Legler	16865	000000000016...	2/10/2018	Tisha Hyde	☐
11...	16870	000000000016...	1/19/2021	Jake Legler	16870	000000000016...	2/10/2018	Tisha Hyde	☐
11...	16920	000000000016...	1/19/2021	Jake Legler	16920	000000000016...	2/10/2018	Tisha Hyde	☐
11...	16925	000000000016...	1/19/2021	Jake Legler	16925	000000000016...	2/10/2018	Tisha Hyde	☐

Select All | Select Outdated | Select Not Found | Clear Selected | Update Selected | Delete Selected

Close

Program: 2022-03-07 - District 1-6 v11 Apply

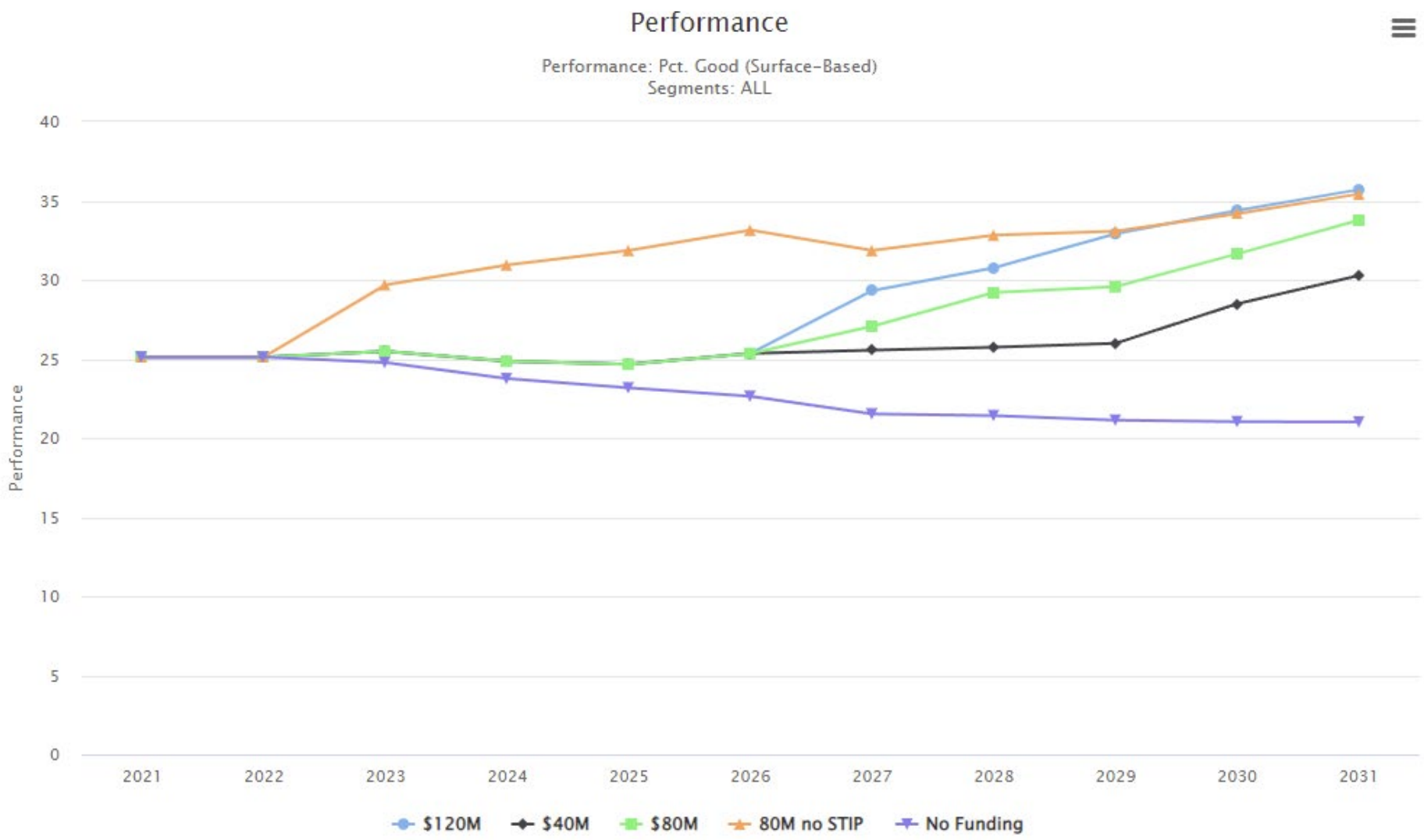
Programs > Scenario Explorer

Edit Parameters

Program: 2022-03-07 - District 1-6 v11 Apply

Programs > Scenario Explorer

Edit Parameters



Other Considerations

- Max weight (other) for self issuance
- Max weight (other) to go through system
- Non Standard Gauge Vehicles

Data Updates

- ITD updates bridge and load rating information quarterly
  - Backup of BrR database
  - Zip file of Load Rating Tool files
  - Spreadsheet with inventory information
- Able to make emergency changes via 511 restrictions system
- Can update bridge models and inventory information in between but testing is cumbersome

Data Testing

- 1) 121k Test – Run the 121k Truck over all State bridges through system. Match rating method and Operating Rating result.
- 2) 240k Test – Run the 240k Truck over all State bridges through system. Match speed and lane requirements
- 3) Side by Side - Run permits manually and make sure they match bridges on route, ratings, and requirements.

Data Testing

- Initial system setup – 121k Test, 240k Test, Side by Side
- Data updates – 121k Test, 240k Test
- Ongoing QA – Side by Side

System Monitoring

- Real Time monitoring for error bridges. Bridge where results are expected but system returns none.
- Monitoring of Failed and Manual results for bridges that are causing problems

Questions

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