CLARK COUNTY STAFF REPORT

DEPARTMENT:	Public Works, Operations				
DATE:	May 5, 2020				
REQUESTED ACTION:	Adopt an ordinance restricting load limits on three county bridges and updating load limits on eight previously restricted county bridges.				
	Consent X Hearing County Manager				
BACKGROUND On November 15, 2013, the US Department of Transportation, Federal Highway Administration (FHWA) sent out a directive requiring local agencies to update load-rating evaluations on all National Bridge Inventory (NBI) Bridges. Per the directive, the updated load-rating evaluations included new truck configurations called Special Hauling Vehicles (SHV). Following the FHWA directive, the Fixing America's Surface Transportation (FAST) Act required that Emergency Vehicles, Type EV2 and Type EV3, also be evaluated for each bridge. Considering the additional requirements included in the FHWA directive and FAST Act, Public Works hired a bridge engineering consultant firm to perform load-rating evaluations. In December 2018, June 2019, and November 2019, Public Works staff attended council hearings to establish restrictions on a total of fifteen bridges based upon these updated load ratings. Based upon findings from the consulting firm and Clark County regarding load-ratings, legally operating SHV and EV loading configurations must be restricted on three additional county bridges and updated on eight previously restricted bridges as detailed below in accordance with 23 CFR 650.313(c) and RCW 47.48.010.					
I. New County Bridge Restrict	ions:				
 Bridge No. 33 Pleasant Value a. EV2 26 Ton b. EV3 20 Ton c. SU5 27 Ton d. SU6 27 Ton e. SU7 27 Ton 	s s s				
 Bridge No. 229 172nd A a. EV3 39 Ton 	avenue [NE 172nd Ave. over China Ditch, County Atlas Pg. 19]: s				
 3. Bridge No. 275 Van Atta a. EV3 29 Ton b. SU4 25 Ton c. SU5 27 Ton d. SU6 27 Ton 	s s				

e. SU7

30 Tons

- II. Updates to Previously Restricted County Bridges:
 - 1. Bridge No. 12 Knapps Station [NW Krieger Rd. over Whipple Creek, County Atlas Pg. 24]:
 - a. SU6 30 Tons instead of 28 Tons
 - b. SU7 31 Tons instead of 29 Tons
 - 2. Bridge No. 30 Flatwood [NE 239th St. over Mill Creek, County Atlas Pg. 36]:
 - a. EV3 35 Tons instead of 37 Tons
 - 3. Bridge No. 116 Lucia Falls [NE Hantwick Rd. over East Fork Lewis River, County Atlas Pg. 47]:
 - a. EV3 37 Tons instead of 38 Tons
 - 4. Bridge No. 201 Brush Prairie [NE 156th St. over Salmon Creek, County Atlas Pg. 27]:
 - a. EV3 29 Tons instead of 33 Tons
 - 5. Bridge No. 212 JC Ward [NE 182nd Ave. over Salmon Creek, County Atlas Pg. 29]:
 - a. SU4 24 Tons instead of 21 Tons
 - b. SU5 25 Tons instead of 23 Tons
 - c. SU6 28 Tons instead of 26 Tons
 - d. SU7 32 Tons instead of 29 Tons
 - 6. Bridge No. 213 Morgan [NE 182nd Ave. over Morgan Creek, County Atlas Pg. 29]:
 - a. EV2 22 Tons
 - b. EV3 14 Tons
 - 7. Bridge No. 222 None [NE 167th Ave. over Morgan Creek, County Atlas Pg. 28]:
 - a. EV3 24 Tons
 - b. SU5 29 Tons instead of 26 Tons
 - c. SU6 29 Tons instead of 26 Tons
 - d. SU7 30 Tons instead of 28 Tons
 - 8. Bridge No. 299 Landon [NE CC Landon Rd. over Yacolt Creek, County Atlas Pg. 48]:
 - a. EV3 23 Tons

COUNCIL POLICY IMPLICATIONS

None.

ADMINISTRATIVE POLICY IMPLICATIONS

In order to comply with the FHWA directive requiring load restriction signs to be posted within 30 days of receiving notice of critical findings, the council previously approved Resolution No. 2019-11-14 authorizing the County Engineer to post updated signs at applicable bridges prior to action by the Council, with the caveat that the Council would be informed of the postings in a timely fashion. The above-listed vehicle load restrictions have already been posted at appropriate bridges. Council adoption of the ordinance will codify the updated bridge load restrictions into the Clark County Code.

BUDGET IMPLICATIONS

YES	NO	
X		Action falls within existing budget capacity.
. 1	X	Action falls within existing budget capacity but requires a change of purpose within existing appropriation
If YES, please complete		Additional budget capacity is necessary and will be requested at the next supplemental. If YES, please complete the budget impact statement. If YES, this action will be referred to the county council with a recommendation from the county manager.

BUDGET DETAILS

Local Fund Dollar Amount	N/A
Grant Fund Dollar Amount	N/A
Account	County Road Fund 1012
Company Name	N/A

DISTRIBUTION:

Council staff will post all staff reports to the county website, www.clark.wa.gov/council-meetings

Attachments: (1) Ordinance; (2) Truck Type & Maximum Load Document; (3) Detour Plans; and (4) PowerPoint

Ler MacDonald, PE

Public Works Deputy Director

Ahmad Qayoumi, Pi?

Public Works Director/County Engineer

Cherie Sabug

Interim Finance Division Manager

Primary Staff Contact: Rani Jaafar, Ext. 1618

CLARK COUNTY COUNCIL

DATE: MAU 6 2020

SR#

SHING!

ORDINANCE NO. 2020-05-02

An ordinance to establish load limits upon certain bridges in Clark County.

WHEREAS, RCW 47.48.010 grants local jurisdictions the authority to restrict maximum loading on County owned bridges based on load rating evaluations and other engineering studies;

WHEREAS, the American Association of State Highway Transportation Officials (AASHTO) created six (6) new truck loading configurations that require engineering evaluation on individual bridges to determine maximum loading that the bridge can sustain without restriction;

WHEREAS, the AASHTO designated truck configurations required to be evaluated by a bridge load rating evaluation have the following designations: Emergency Vehicles (EV2 & EV3); Special Hauling Vehicles (SU4, SU5, SU6, & SU7) and Notional Rating Load (NRL);

WHEREAS, the Clark County Department of Public Works hired a bridge engineer to evaluate seventeen (17) bridges under this standard, along with three (3) additional bridges that were previously evaluated in the absence of the six (6) new bridge load configurations;

WHEREAS, the bridge engineer's evaluation revealed the need to place the following load limits on the corresponding bridges to reduce damage to the bridges, thus extending their life and protecting the public's investment:

- I. New County Bridge Restrictions:
 - 1. Bridge No. 33 Pleasant Valley [NE 50th Ave. over Salmon Creek, County Atlas Pg. 27]:
 - a. EV2 26 Tons
 - b. EV3 20 Tons
 - c. SU5 27 Tons
 - d. SU6 27 Tons
 - e. SU7 27 Tons
 - 2. Bridge No. 229 172nd Avenue [NE 172nd Ave. over China Ditch, County Atlas Pg. 19]:
 - a. EV3 39 Tons
 - 3. Bridge No. 275 Van Atta [NE 112th Ave. over Salmon Creek, County Atlas Pg. 28]:
 - a. EV3 29 Tons
 - b. SU4 25 Tons
 - c. SU5 27 Tons
 - d. SU6 27 Tons
 - e. SU7 30 Tons
- II. Updates to Previously Restricted County Bridges:
 - 1. Bridge No. 12 Knapps Station [NW Krieger Rd. over Whipple Creek, County Atlas Pg. 24]:
 - a. SU6 30 Tons instead of 28 Tons
 - b. SU7 31 Tons instead of 29 Tons

- 2. Bridge No. 30 Flatwood [NE 239th St. over Mill Creek County Atlas Pg. 36]:
 - a. EV3 35 Tons instead of 37 Tons
- 3. Bridge No. 116 Lucia Falls [NE Hantwick Rd. over East Fork Lewis River, County Atlas Pg. 47]:
 - a. EV3 37 Tons instead of 38 Tons
- 4. Bridge No. 201 Brush Prairie [NE 156th St. over Salmon Creek, County Atlas Pg. 27]:
 - a. EV3 29 Tons instead of 33 Tons
- 5. Bridge No. 212 JC Ward [NE 182nd Ave. over Salmon Creek, County Atlas Pg. 29]:
 - a. SU4 24 Tons instead of 21 Tons
 - b. SU5 25 Tons instead of 23 Tons
 - c. SU6 28 Tons instead of 26 Tons
 - d. SU7 32 Tons instead of 29 Tons
- 6. Bridge No. 213 Morgan [NE 182nd Ave. over Morgan Creek, County Atlas Pg. 29]:
 - a. EV2 22 Tons
 - b. EV3 14 Tons
- 7. Bridge No. 222 None [NE 167th Ave. over Morgan Creek, County Atlas Pg. 28]:
 - a. EV3 24 Tons
 - b. SU5 29 Tons instead of 26 Tons
 - c. SU6 29 Tons instead of 26 Tons
 - d. SU7 30 Tons instead of 28 Tons
- 8. Bridge No. 299 Landon [NE CC Landon Rd. over Yacolt Creek, County Atlas Pg. 48]:
 - a. EV3 23 Tons

WHEREAS, the FHWA and WSDOT regulations require the County engineer to post signage regarding the load limits noted above, in accordance with 23 CFR 650.313(e) and RCW 47.48.010, within 30 days of receiving findings of a bridge load rating evaluations; and,

WHEREAS, the County Council previously adopted Resolution No. 2019-11-14 that authorized the County Engineer to post restrictions prior to presenting the same to Council, if doing so was necessary to meet the 30 day posting requirement mentioned above, as long as the postings were brought to the attention of the Council in a timely fashion; and

WHEREAS, Public Works, by and through this ordinance, has brought the new load restrictions before this Council for amendment of the code in accord with the actual posted limitations.

NOW THEREFORE, it is ordered as follows:

Section 1. Amendatory. Sec. 7 of Ord. 1991-07-13, as most recently amended by Sec. 1 of Ord. 2019-11-04 and codified as CCC 10.08A.070 is hereby amended to read:

10.08A.070 Emergency restrictions—Maximum gross load and/or speed.

Notwithstanding the provisions of Sections 10.08A.040 and 10.08A.050, whenever any county road by reason of rain, snow, climatic or other conditions will be seriously damaged or destroyed unless the permissible weight and/or speed of vehicles traveling thereon is reduced, the County Engineer may enforce the following restrictions on all county roads throughout Clark County:

- (1) Weight.
 - (a) All motor vehicles will be limited to fifty percent (50%) of the gross vehicle weight authorized pursuant to RCW <u>46.44.041</u> as amended, not to exceed three hundred (300) pounds per inch of manufacturer-rated tire width for any axle; and/or
 - (b) All loads must be evenly distributed.
- (2) Speed limits may be reduced as necessary to minimize road damage.
- (3) The following weight restrictions apply to the following bridges:
 - (a) Bridge No. 6 Gibbons Creek [SE Evergreen Way over Gibbons Creek, County Atlas Pg. 4]:

EV3 29 Tons

(b) Bridge No. 96 Rock Creek [Rock Creek Rd. over Rock Creek, County Atlas Pg. 46]:

EV3 34 Tons

(c) Bridge No. 168 Matney [NE 68th St. over Matney Creek, County Atlas Pg. 20]:

SU4 19 Tons

SU5 19 Tons

SU6 18 Tons

SU7 19 Tons

EV2 20 Tons

EV3 14 Tons

Bridge No. 213 Morgan [NE 182nd Ave. over Morgan Creek, County Atlas Pg. 29]: SU4 19 Tons SU5 19 Tons SU6 18 Tons SU7 19 Tons EV2 22 Tons EV3 14 Tons Bridge No. 217 Venersborg [NE 209th St. over Salmon Creek, County Atlas Pg. 38]: SU7 33 Tons EV3 25 Tons Bridge No. 222 None [NE 167th Ave. over Mud Creek, County Atlas Pg. 28]: EV3 24 Tons SU5 ((26)) 29 Tons SU6 ((26)) 29 Tons SU7 ((28)) 30 Tons Bridge No. 299 Landon [CC Landon Rd. over Yacolt Creek, County Atlas Pg. 48]: EV3 23 Tons SU6 30 Tons SU7 33 Tons Bridge No. 30 Flatwood [NE 239th St. over Mill Creek [EV3—Max 37 Tons], (h) County Atlas Pg. 36]: EV3 ((37)) 35 Tons Bridge No. 116 Lucia Falls [Hantwick Rd. over East Fork Lewis River, County Atlas Pg. 47]: EV3 ((38)) 37 Tons (i) Bridge No. 201 Brush Prairie NE 156th St. over Salmon Creek, County Atlas Pg. 27]: EV3 ((33)) 29 Tons Bridge No. 212 JC Ward [NE 182nd Ave. over Salmon Creek, County Atlas Pg. 29]: SU4 ((21)) 24 Tons SU5 ((23)) 25 Tons SU6 ((26)) 28 Tons SU7 ((29)) 32 Tons EV3 37 Tons

(I) Bridge No. 11 Whipple Creek [NW 179th St. over Whipple Creek, County Atlas Pg. 25]: EV3 28 Tons

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(m) Bridge No. 12 Knapps Station [NW Krieger Rd. over Whipple Creek, County
      Atlas Pg. 24]:
EV3 25 Tons
SU6 ((28)) 30 Tons
SU7 ((29)) 31 Tons
      Bridge No. 63 Carson [NE 67th Ave. over Mills Creek, County Atlas Pg. 36]:
(n)
EV2 16 Tons
EV3 15 Tons
SU4 20 Tons
SU5 21 Tons
SU6 20 Tons
SU7 20 Tons
      Bridge No. 169 Matney South [NE 232nd Ave. over Matney Creek, County
      Atlas Pg. 20]:
EV2 15 Tons
EV3 18 Tons
SU4 24 Tons
SU5 24 Tons
SU6 24 Tons
SU7 26 Tons
      Bridge No. 33 Pleasant Valley [NE 50th Ave. over Salmon Creek, County Atlas Pg.
27]:
EV2 26 Tons
EV3 20 Tons
SU5 27 Tons
SU6 27 Tons
SU7 27 Tons
     Bridge No. 229 172nd Avenue [NE 172nd Ave. over China Ditch, County
      Atlas Pg. 19]:
      39 Tons
EV3
      Bridge No. 275 Van Atta [NE 112th Ave. over Salmon Creek, County Atlas Pg. 28]:
EV3 29 Tons
SU4 25 Tons
SU5 27 Tons
SU6 27 Tons
SU7 30 Tons
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The SU and EV abbreviations above are AASHTO designations for certain vehicle types.

Section 2. Enforcement. The Washington State Patrol is requested to enforce the provisions of this ordinance. The Sheriff of Clark County is directed to enforce the provisions of this Ordinance. The County Engineer is directed to erect and maintain the necessary signs in accordance with the Uniform Standards adopted by Washington State Department of Transportation.

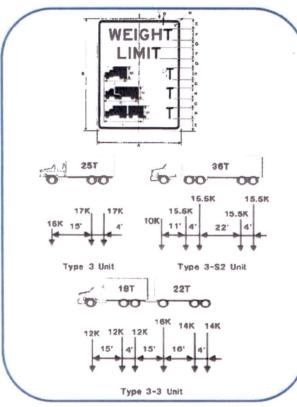
Section 3. Effective Date. This ordinance shall be effective on the 10th day following adoption.

Section 4. Instructions to Clerk. The Clerk of the Council shall:

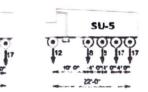
- (1) Record a copy of this Ordinance with the Clark County Auditor;
- (2) Cause notice of adoption of this Ordinance to be published forthwith, pursuant to Clark County Code 1.02.140(7); and
- (3) Provide a copy of this Ordinance to Code Publishing with instructions to publish.

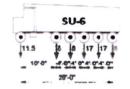
Section 5. Direction to Code Reviser. Sections 2-6 are not subject to codification.

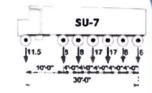
Section 6. Roll Call Vote. The following persons voted in favor of adopting the above ordinance TEMPLE UNTS; JUNE OSON; JOHN Blom; Gary Medvigy; + Eileen Quiring. The following persons voted in opposition to the adoption of the above ordinance,					
APPROVE AS TO FORM ONLY: William Richardson Deputy Prosecuting Attorney	With the Lentz, District 1 By Julie Olsba District 2 Sim Blom, District 3 3 4 A British Gary Medvigy, District 4				

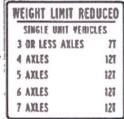












SU-4





INTERFEC	rez	
AXLES	n	
	121	
	121	
	121	37
	121	
		0



Maximum Truck Type Load (Tons) AASHTO 1 / Type 3 25 AASHTO 2 / Type 3S2 36 AASHTO 3 / Type 3-3 40 Notional Load / NRL* 40 Single Unit 4 / SU4 27 Single Unit 5 / SU5 31 Single Unit 6 / SU6 35 Single Unit 7 / SU7 39 Emergency Vehicle / Type EV2 28 Emergency Vehicle / Type EV3 43 * encompasses Special Hauling Vehicles (SHVs)



EMERGENCY VEHICLE AXLE WEIGHT LIMIT SINGLE 13 T TANDEM 17 T



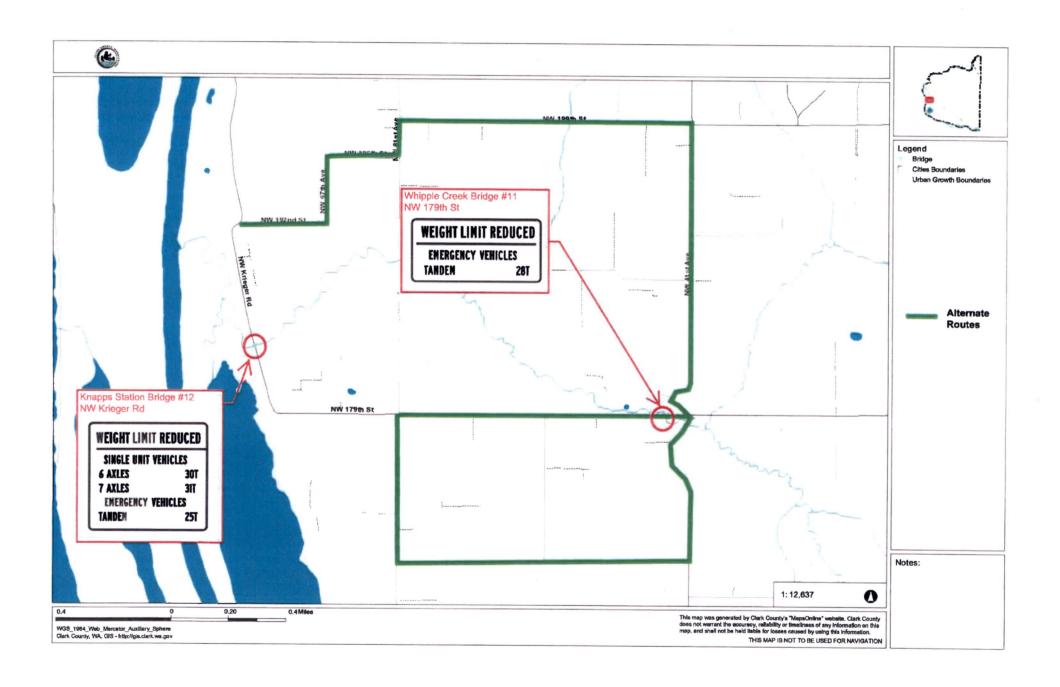


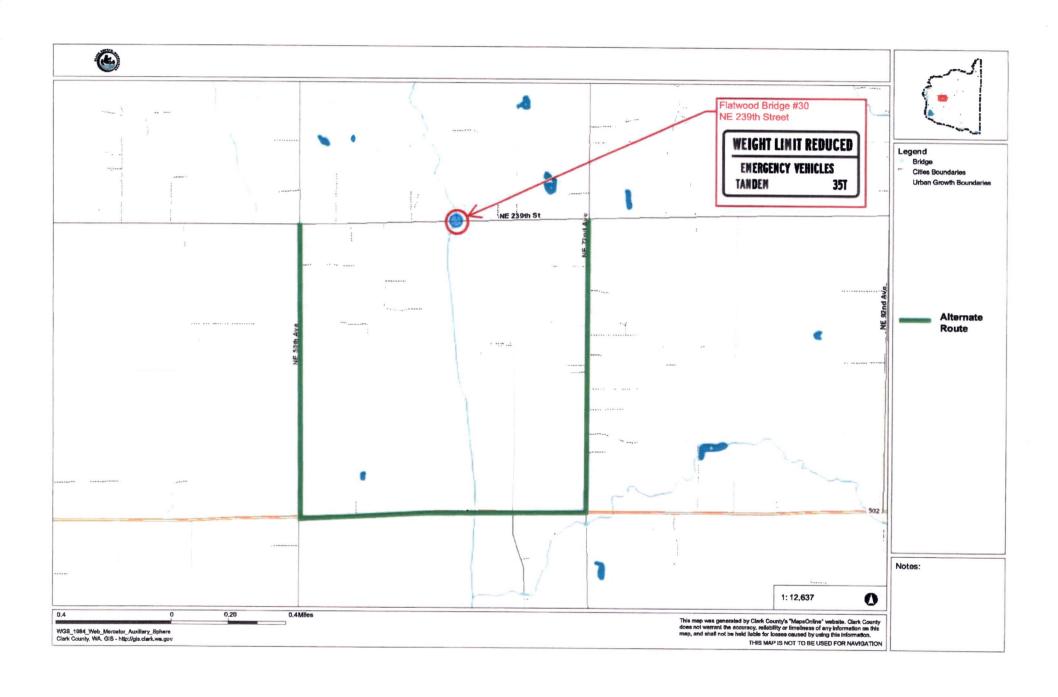
Typical fire truck

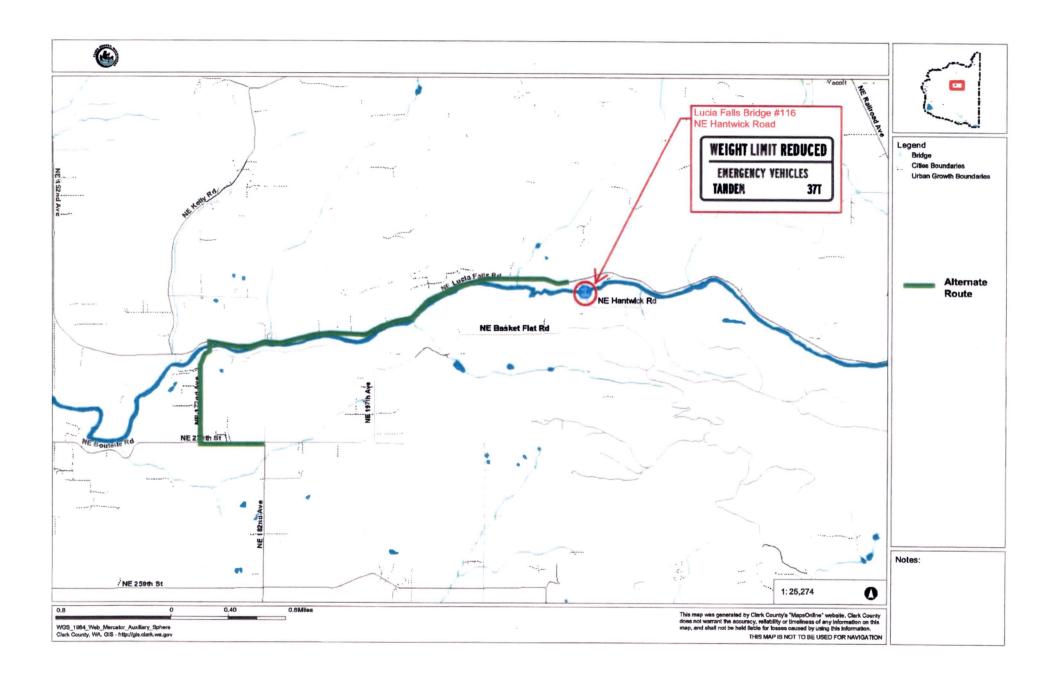
Type EV2 (LRFR & LFR Methods)

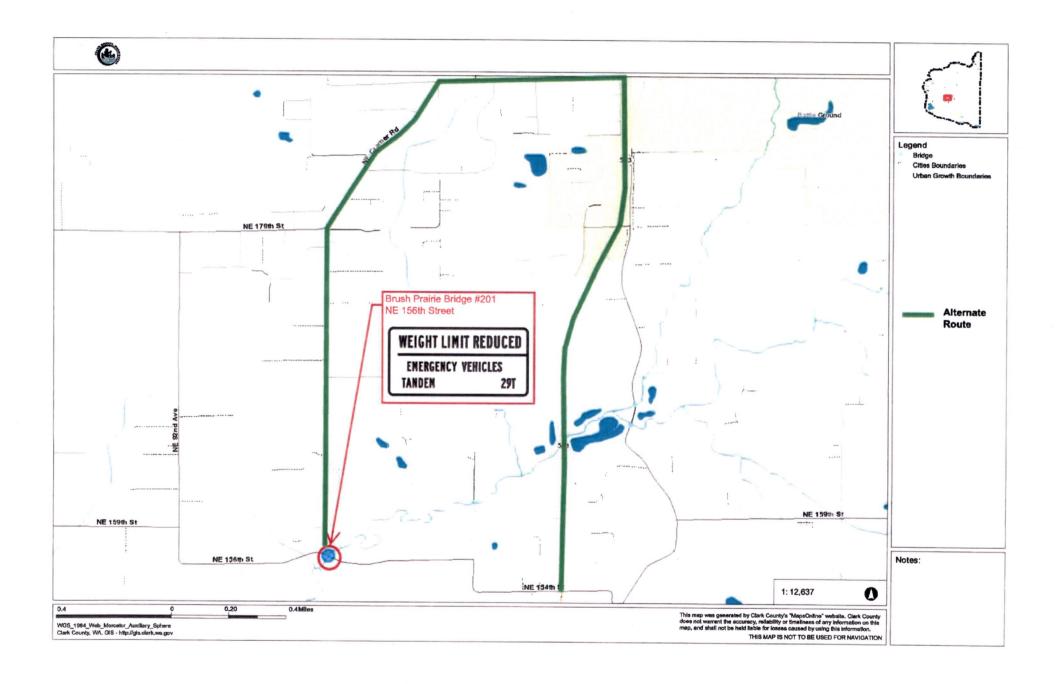
Type EV3 (LRFR & LFR Methods)

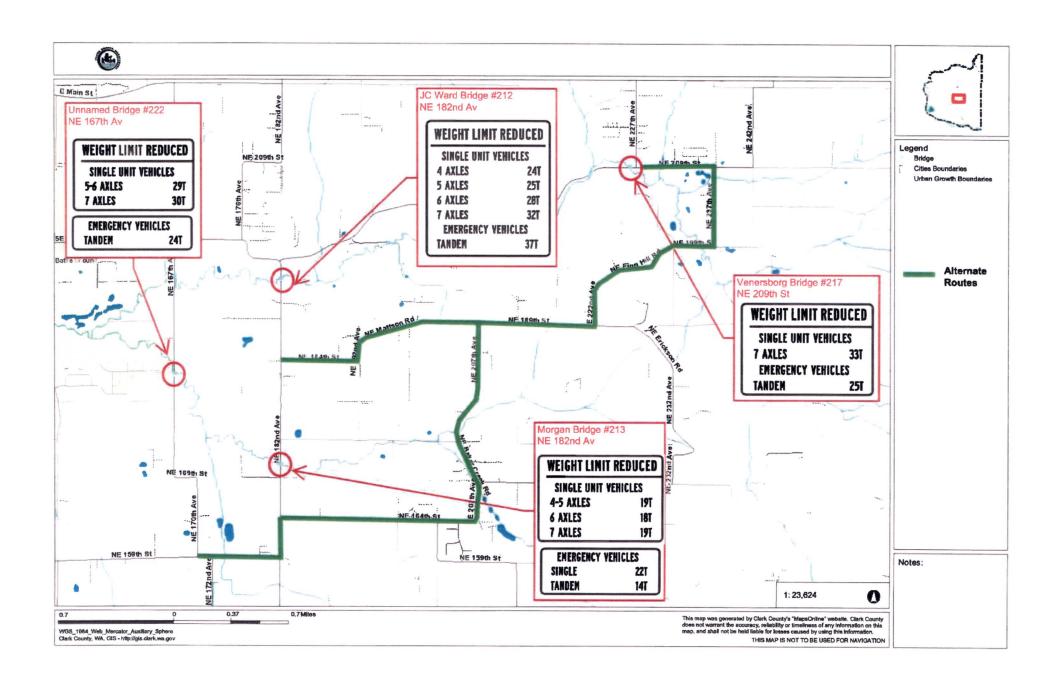
Typical ladder fire truck

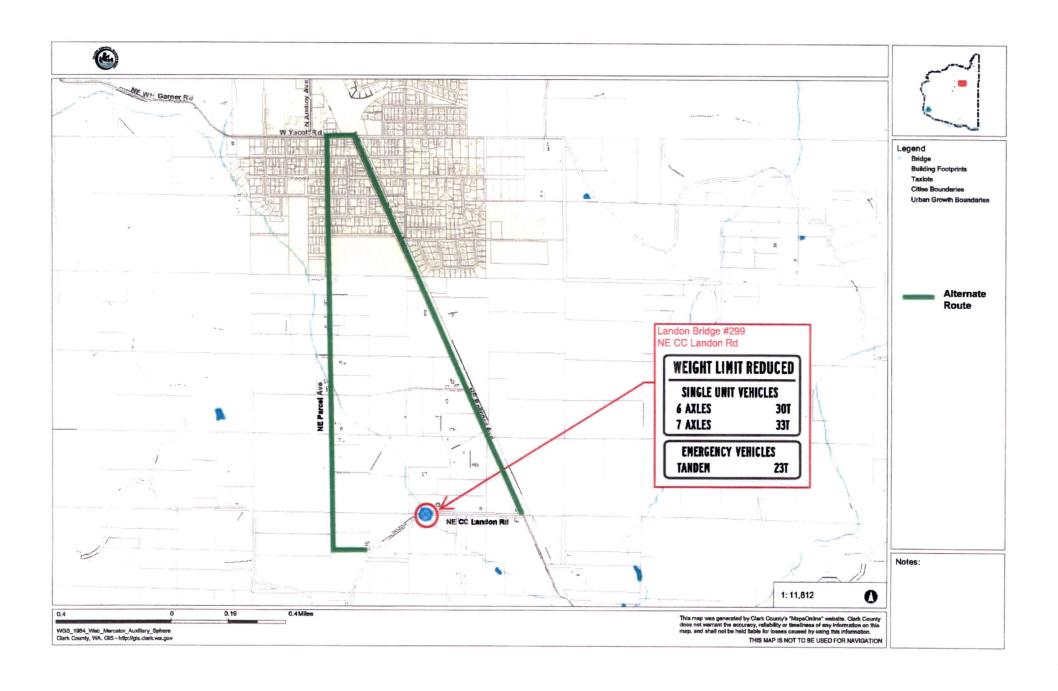


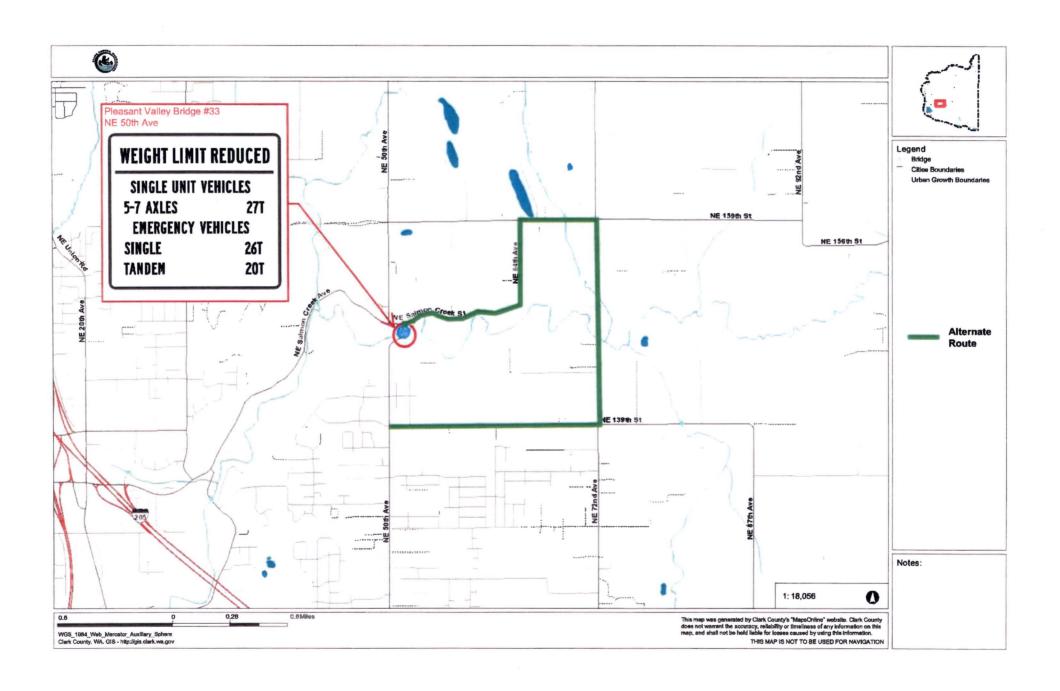


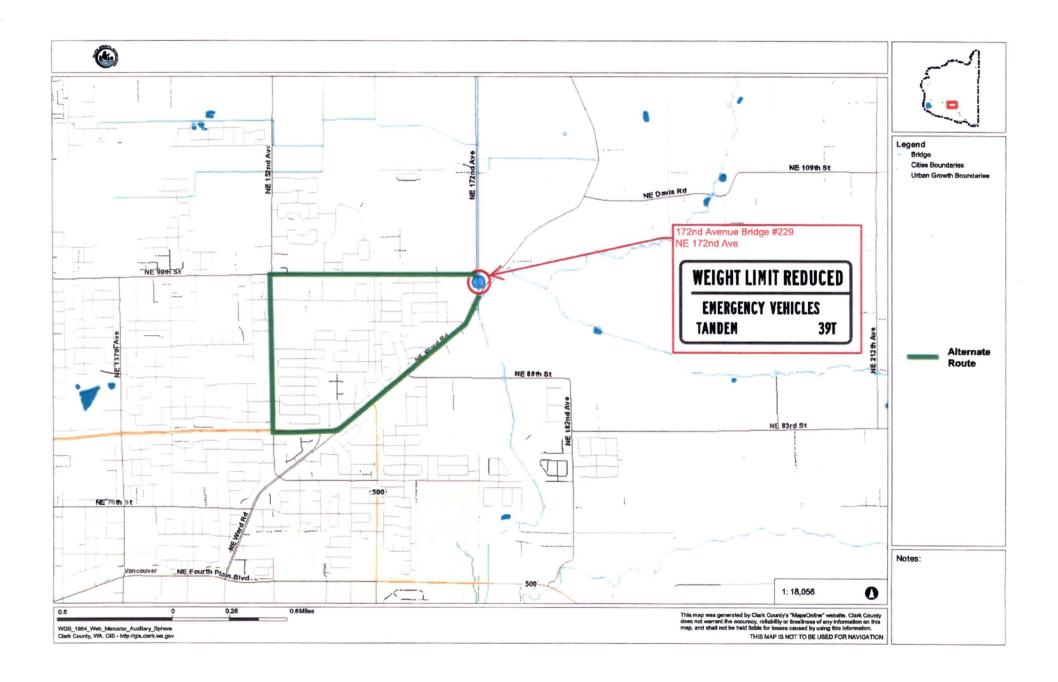












Load Limits on County Bridges

Public Works

May 5, 2020



Background

- The US Department of Transportation, Federal Highway
 Administration sent out a directive requiring local agencies to update load rating evaluations on all National Bridge Inventory
 (NBI) Bridges
- The American Association of State Highway Transportation Officials (AASHTO) designated six new truck loading configurations requiring load rating evaluations:
 - Emergency Vehicles (EV2 and EV3)
 - Special Hauling Vehicles (SU4, SU5, SU6, and SU7)



Load Limits on County Bridges

- To comply with the FHWA directive, Public Works hired a bridge engineer to evaluate the county's bridges and recommend load limits based on the new truck loading configurations
- Based on critical findings from the bridge engineer, legally operating SHV and EV loading configurations must be restricted on three (3) additional county bridges and updated on eight (8) previously restricted bridges



New County Bridge Restrictions

- I. New County Bridge Restrictions:
 - Bridge No. 33 Pleasant Valley [NE 50th Ave. over Salmon Creek, County Atlas Pg. 27]
 - Bridge No. 229 172nd Avenue [NE 172nd Ave. over China Ditch, County Atlas Pg. 19]
 - Bridge No. 275 Van Atta [NE 112th Ave. over Salmon Creek, County Atlas Pg. 28]



Updates to Previously Restricted County Bridges

- Bridge No. 12 Knapps Station [NW Krieger Rd. over Whipple Creek, County Atlas Pg. 24]
- 2. Bridge No. 30 Flatwood [NE 239th St. over Mill Creek, County Atlas Pg. 36]
- 3. Bridge No. 116 Lucia Falls [NE Hantwick Rd. over East Fork Lewis River, County Atlas Pg. 47]
- Bridge No. 201 Brush Prairie [NE 156th St. over Salmon Creek, County Atlas Pg. 27]



Updates to Previously Restricted County Bridges

- Bridge No. 212 JC Ward [NE 182nd Ave. over Salmon Creek, County Atlas Pg. 29]
- Bridge No. 213 Morgan [NE 182nd Ave. over Morgan Creek, County Atlas Pg. 29]
- 7. Bridge No. 222 None [NE 167th Ave. over Morgan Creek, County Atlas Pg. 28]
- Bridge No. 299 Landon [NE CC Landon Rd. over Yacolt Creek, County Atlas Pg. 48]



Load Limits on County Bridges

