

To: Jin Wang
Project Manager

From: Rachel Spicer
Group Manager

Date: 10/30/2025

Essential Repair Finding – FCVINE-W.5-SUMV

The following bridge is recommended for repairs as recently discovered by the bridge inspection program:

Responsible Party: City of Fort Collins

Facility Carried: East Vine Drive

Feature Intersected: Lake Canal

ERF Color Code Classification: **YELLOW** (See definition at end of letter)

Structure Description: FCVINE-W.5-SUMV is concrete rigid frame with a widening comprising a concrete slab supported by concrete wall abutments.

Findings

After the last routine inspection in April 2025, the south bridge rail and curb sustained significant impact damage, resulting in the complete removal of the south rail and curb, leaving a shear drop from the south edge of the eastbound lane to the channel bottom. A special unscheduled inspection on 10/28/2025 found that the south steel member of the widening exhibits severe corrosion with 80-100% section loss in the south vertical plate for 60% of its length and in the bottom channel south flange and web for 24% of its length. The bridge widening exhibits signs of structural distress: a 1.5 inch sag was measured in the south member at midspan. Additionally, Abutment 2 underneath the widening has a wide full height x full depth crack with spalling and abrasion.

Recommendations

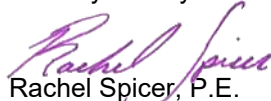
It is our office's recommendation to replace the bridge widening, including the south curb and rail. The Essential Repair for this structure is given a **YELLOW** priority.

Let us know your Plan of Action

CDOT would like to know your plan of action to repair or mitigate the above conditions. Please respond to this ERL with a very brief plan of action that includes what repairs are planned and a general timeframe for when you expect repairs will be made.

Please let me know if you have any questions or if I can provide any additional information regarding this inspection.

Thank you for your time,



Rachel Spicer, P.E.
rspicer@benesh.com
720-347-5037

Inspector Printed Name: Danielle Krause

Inspector Signature: *Danielle Krause*

Date of Inspection: 10/28/2025

Senior Inspection Engineer Printed Name: RACHEL SPICER

Senior Inspection Engineer Signature: *Rachel Spicer*

Date Reviewed: 10/30/25

By signing here, I have determined that the above description of Essential Bridge Repairs meets the established criteria set forth by CDOT Staff Bridge and that the repair is essential. Color code prioritization has been determined and notification of the above findings has been sent to the local agencies' public works or road and bridge departments.

Definition, Classification and Prioritization

Definition of Essential Bridge Repairs: Repairs necessary to ensure the safe and continued service of off-system major bridge structures. Examples of essential repair needs include but are not limited to: tension members identified as fracture critical members within the Structure File Data and which are damaged by natural or impact forces, a condition which results in a restriction of the maximum acceptable load carrying capacity of a structure to some value less than 27 Tons on the Type III, 3-axle truck at the Operating Rating level, three adjacent crushed stringers, three broken stringers in one span, two of which are adjacent to one another, stringers with rot at the ends, which may cause the stringer to fall off the timber cap, “mushrooming” for a depth of 2 inches on three adjacent stringers, rot in the top of 80 percent of all stringers in one span, which reduces the effective depth by 25 percent, rot in timber piles that affect the carrying-capacity of the structure, concrete girders with over 30 percent of the primary moment steel severed, loss of section in beam ends and/or spalls in concrete girder supports where girders have less than 80 percent bearing area remaining, steel members with over 30 percent section loss, steel or aluminum culverts including super spans with unusual section displacement and/or gaps at the point of overlap and cracks in bolt lines, steel or aluminum pipe culverts with perforations in the bottom 1/3, scour greater than one foot since the last inspection which has caused vertical or horizontal displacement, scour under a spread footing, which has caused a loss of 15 percent of the bearing area.

When identifying a needed repair as essential, the Bridge Inspection Program Manager will classify the repair based on the appropriate time frame for addressing the problem as follows:

Classification	Legacy Color Code	Target Time Frame for Completion	Priority	Federal NBIS	Initial Notification	E-Mail Notification Time Frame	Follow-up Time Frame
Urgent Priority Repair	Orange	Within 30 days	Urgent		E-Mail Notification	Within 10 working days of finding	14 Calendar days of E-Mail
High Priority Repair	Yellow	Within 90 days	High		E-Mail Notification	Within 10 working days of finding	14 Calendar days of E-Mail
Moderate Priority Repair	Green	Within one year	Moderate		At presentation	As needed (not required)	As needed or At next inspection
Monitor	Blue	Specified in the letter	Monitor		E-Mail Notification	Within 10 working days of finding	As suggested in the notification
Low Priority Repair (maintenance item)	No Color	As funding allows	Low		Included with transfer files to Owner	N/A	At next inspection

CC:

Lynn E. Croswell, P.E., CDOT Bridge & Structure Inspection Engineer
 Natasha Butler, P.E., CDOT Bridge Asset Management Engineer
 Josh Dunbar, CDOT Structure Inspections Project Manager
 Andrew Brown, CDOT Bridge Inspections Project Manager
 Spencer Tucker, P.E., FHWA Division Bridge Engineer



Elevation looking north



South vertical plate has R4 corrosion with 80-100% section loss



South member at midspan has 1.5 inch sag



South member bottom channel south flange and web has R4 corrosion with 80-100% section loss



Abutment 2 under widening has wide full height x full depth vertical crack with spalling and abrasion

To: Jin Wang
Project Manager

From: Nathaniel Coffman
Project Engineer

Date: 10/30/2025

Essential Repair Finding – FCVINE-W.5-SUMV

Responsible Party: City of Fort Collins

Facility Carried: East Vine Drive

Feature Intersected: Lake Canal

ERF Color Code Classification: **ORANGE** (See definition at end of letter)

Structure Description: FCVINE-W.5-SUMV is a concrete rigid frame structure with a concrete slab widening on concrete wall abutments.

Findings

As a result of the load rating performed as part of the Off-System bridge inspection program, this bridge requires posting for all vehicles. The load rating is controlled by the concrete slab superstructure of the widened porting under the eastbound traffic lane due to severe corrosion of reinforcement.

Recommendations

It is our office's recommendation that load posting signs be installed in accordance with the sign diagrams shown in Attachment 1 and according to the guidelines in Attachment D – CDOT Load Posting Guidelines for the Colorado Posting Trucks, Specialized Hauling Vehicles and Emergency Vehicles. Per the most recent inspection report dated 10/28/2025 and load rating dated 10/30/2025, the bridge requires posting for all vehicles. To properly post the bridge, we recommend that the following be implemented:

- Install a Single Limit Posting Sign (MUTCD R12-1) at the west approach to the bridge as shown in Attachment 1 (total of 1 signs).

The Essential Repair for this structure has been given an **ORANGE** Priority.

Let us know your Plan of Action

CDOT would like to know your plan of action to repair or mitigate the above conditions. Please respond to this ERL within 14 days with a very brief plan of action that includes what repairs are planned and a general timeframe for when you expect repairs will be made.

Please let me know if you have any questions or if I can provide any additional information.

Thank you for your time,



Nathaniel Coffman, P.E.
ncoffman@benesch.com
720-722-5720

Definition, Classification and Prioritization

Definition of Essential Bridge Repairs: Repairs necessary to ensure the safe and continued service of off-system major bridge structures. Examples of essential repair needs include but are not limited to: tension members identified as fracture critical members within the Structure File Data and which are damaged by natural or impact forces, a condition which results in a restriction of the maximum acceptable load carrying capacity of a structure to some value less than 27 Tons on the Type III, 3-axle truck at the Operating Rating level, three adjacent crushed stringers, three broken stringers in one span, two of which are adjacent to one another, stringers with rot at the ends, which may cause the stringer to fall off the timber cap, “mushrooming” for a depth of 2 inches on three adjacent stringers, rot in the top of 80 percent of all stringers in one span, which reduces the effective depth by 25 percent, rot in timber piles that affect the carrying-capacity of the structure, concrete girders with over 30 percent of the primary moment steel severed, loss of section in beam ends and/or spalls in concrete girder supports where girders have less than 80 percent bearing area remaining, steel members with over 30 percent section loss, steel or aluminum culverts including super spans with unusual section displacement and/or gaps at the point of overlap and cracks in bolt lines, steel or aluminum pipe culverts with perforations in the bottom 1/3, scour greater than one foot since the last inspection which has caused vertical or horizontal displacement, scour under a spread footing, which has caused a loss of 15 percent of the bearing area.

When identifying a needed repair as essential, the Bridge Inspection Program Manager will classify the repair based on the appropriate time frame for addressing the problem as follows:

Classification	Legacy Color Code	Target Time Frame for Completion	Priority	Federal NBIS	Initial Notification	E-Mail Notification Time Frame	Follow-up Time Frame
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CC:

Lynn E. Croswell, P.E., CDOT Bridge & Structure Inspection Engineer
 Nyssa Beach, P.E., CDOT Bridge Asset Management Engineer
 Andrew Brown, CDOT Bridge Inspections Project Manager
 Spencer Tucker, P.E., FHWA Division Bridge Engineer



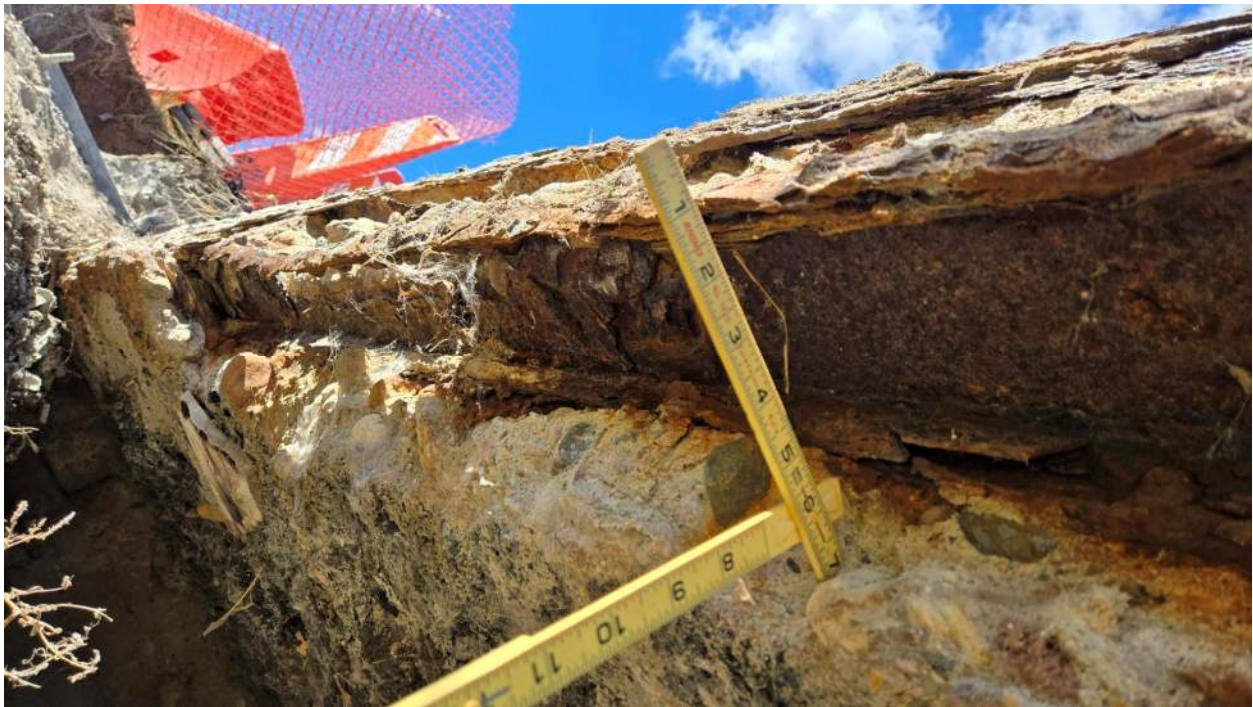
Elevation looking north



South vertical plate has failed

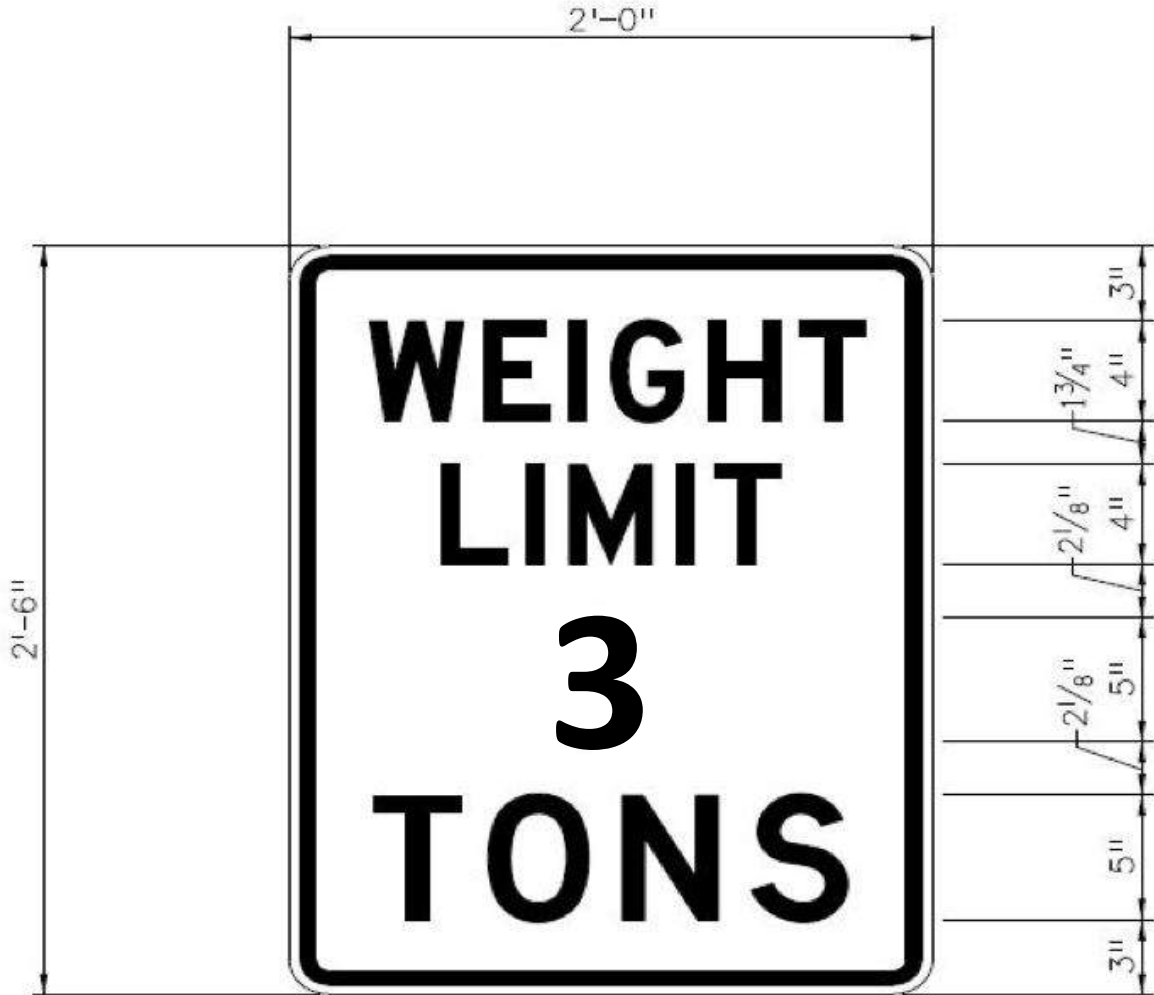


South member at midspan has 1.5 inches vertical sag



South member 4 feet from Abutment 1 bottom channel south flange and web have 80-100% section loss for 6 feet.

SINGLE LIMIT POSTING SIGN
Off-System Bridges



CONVENTIONAL ROADS

MUTCD Sign R12-1 (RETROREFLECTIVE)

FCVINE-W.5-SUMV

Carries East Vine Drive over Lake Canal

Location: 0.5 Miles West of Timberline Rd

ENGINEERING JUDGMENT LOAD RATING SUMMARY

Structure #:

FCVINE-W.5-SUMV

Rated using: • Asphalt thickness: <u>11</u> in. or Fill thickness: <u>5</u> in. • <input type="checkbox"/> Colorado Legal Loads (CO) or <input type="checkbox"/> Interstate Legal Loads (Interstate) • <input type="checkbox"/> Multi-lane for Legal & Permit Vehicles or <input type="checkbox"/> Single lane for Legal & Permit Vehicles	Highway #: East Vine Drive over Lake Canal Batch I.D.: Structure Type: Concrete Rigid Frame/Concrete Slab Parallel Structure #:
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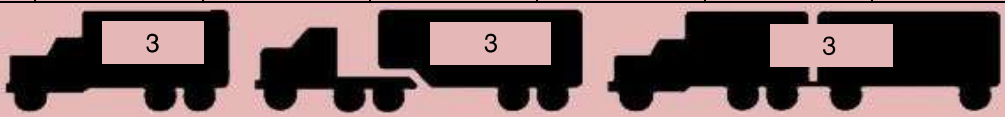
Structural Member	Widening						
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Tons

Inventory	3						
Operating	3						

Tons

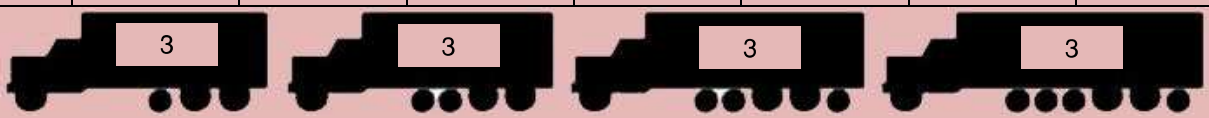
Type 3 truck <small>(Interstate 24T / CO 27T)</small>							
Type 3S2 truck <small>(Interstate 38T / CO 42.5T)</small>							
Type 3-2 truck <small>(Interstate 39T / CO 42.5T)</small>							



Type 3
Type 3S2
Type 3-2

Tons


Type SU4 truck <small>(27T)</small>							
Type SU5 truck <small>(31T)</small>							
Type SU6 truck <small>(Interstate 35T / CO 33T)</small>							
Type SU7 truck <small>(Interstate 39T / CO 35T)</small>							
NRL <small>(40T)</small>							



SU4
SU5
SU6
SU7

Tons

EV2 <small>(28.75T)</small>							
EV3 <small>(43T)</small>							



EV2
EV3

Tons


Permit Truck <small>(96T)</small>							
Modified Tandem <small>(50T)</small>							

Comments:

Posting Required:

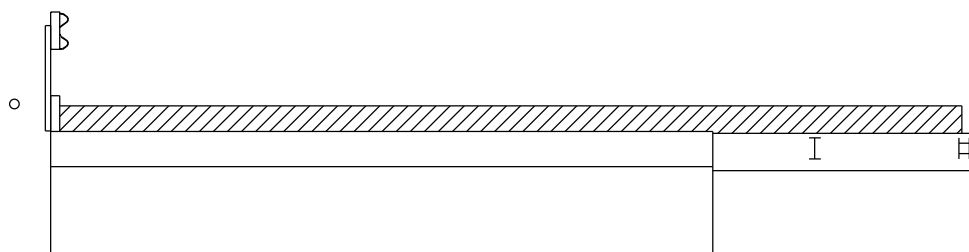
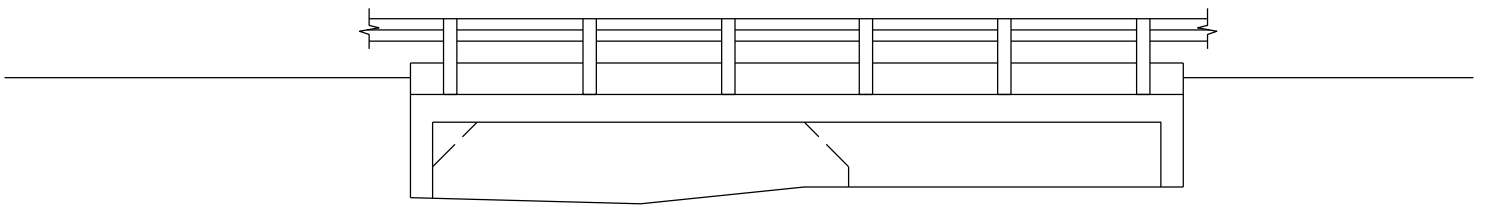
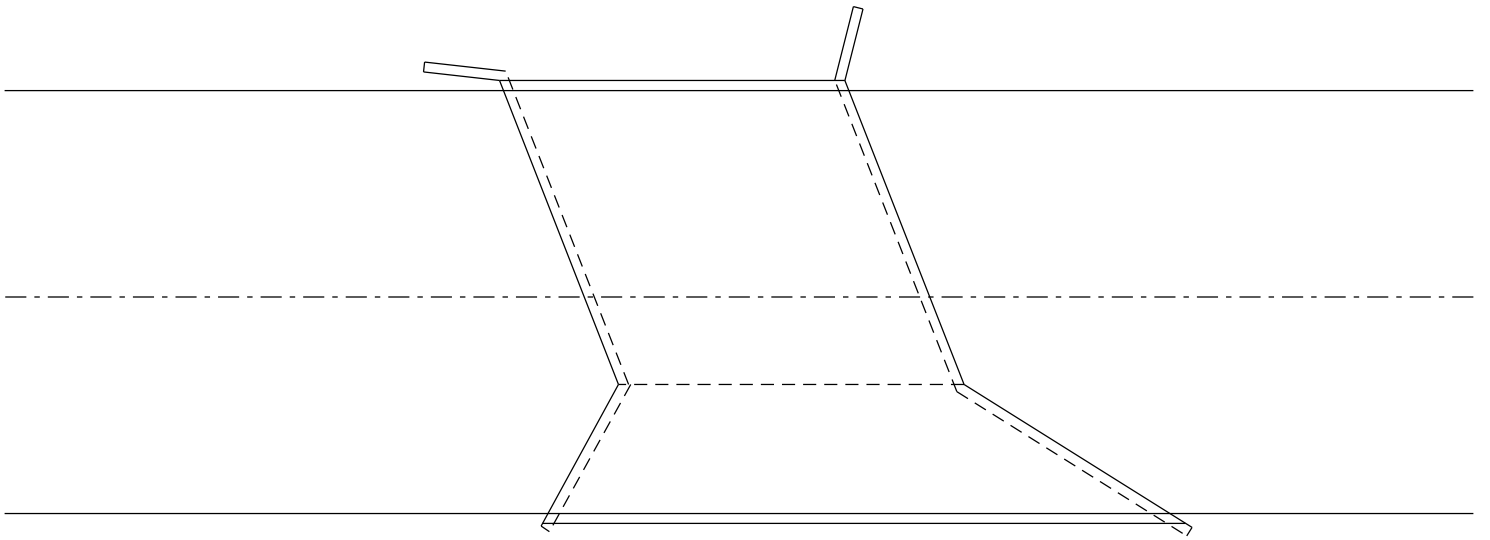
- Year constructed: 1950; year of widening unknown
- Construction drawings not available; visually rated
- Original structure: 17 inches of asphalt/fill over 14 inch top slab.
- Widening: 16 inches asphalt/fill over (2) steel members in 16 inch concrete encasement; widening has 33 foot 6 inch maximum span at south edge.
- Special inspection performed 10/28/2025; superstructure condition rating = 3
- South member at midspan has 1.5 inch sag and areas of severe corrosion with up to 100% section loss.
- Concrete encasement provides additional capacity/stiffness; not able to quantify due to unknown reinforcement
- LLDF=0.25 for south member
- Posting is only required for eastbound lane; westbound lane does not pass over widening

PE Seal



10/30/2025

Rated by: (Print name and sign) <i>RACHEL SPICER Rachel Spicer</i>	Date: 10/30/25	Checked by: (Print name and sign) NATHANIEL COFFMAN	Date: 10/30/25
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FCVINE-W.5-SUMV

Bridge, CRF - Concrete Rigid Frame

Special Unscheduled Draft Report

INSPECTION DATE

10/28/2025

Team Leader (IE04): Danielle Krause

Lead Inspector (IE04A): Danielle Krause

Team Member(s) (IE04B): Rachel Spicer,
Nathaniel Coffman

INSPECTION ORGANIZATION

**Alfred Benesch &
Company**

Signed on: **Not Available**

Signed by: **Not Available**



Structure Information Summary

Identification

East Vine Drive over Lake Canal
Structure Key FCVINE-W.5-SUMV
Structure Name
Structure Type CRF - Concrete Rigid Frame
Year Built 1950

Ownership and Location

Inspection Program Off System
Owner L03 - City or municipal highway agency
Responsible Party Fort Collins
County 069 - Larimer
City 27425 - Fort Collins
Inspection Area North
Location Description 0.5 Mi W of Timberline Rd
Highway & Milepoint 0 / 0 mi

Geometry

Total Length 34.8
Width, Out to Out 25.3
Deck Area 880
Total # of Spans 1
Asphalt Thickness 17

Highway Traffic

Nat. Highway System No
Lanes Carried 2
Highway Type Carried 5 - City
ADT Carried 6025
Lanes Under 0
Highway Type Under
ADT Under 0

Risk Factors

NSTM N - NSTM inspection not required
Scour Critical AB-T - TEMP, Stable for scour, possibly dependent on coutermeasures. A, B
Approach Alignment G - Good
Inspection Frequency 12 Mo.
Underwater Required No
Pin Required No
Special Required False
Membrane
Expansion Device O - No expansion device 304/354, 305/355
Open Essential Repair No



Inspection History

Date	Type	Rating	Deck	Super	Sub	Culv
2026-10-15	Special Sc					
2026-04-04	Routine					
2025-10-28	Special U	Poor	N	3	5	N
2025-04-04	Routine	Poor	N	4	5	N
2024-04-22	Routine	Poor	4	4	5	N
2024-04-22	Special U	Poor	4	4	5	N
2023-04-10	Routine	Poor	4	4	5	N
2021-04-22	Routine	Poor	4	4	5	N
2019-04-03	Routine	Poor	4	4	5	N
2017-04-06	Routine	Poor	4	4	5	N

Load Rating

Posting Status P - Permanent A - Needs Action (Unposted and requi
Posting 0 - > 39.9% below
Load Rating Date 10/30/2025
Design Load / Method U - Unknown / Unknown
Oper. Rating Method 0 - Field Eval
Oper. Rating Value 3
Overload Color Code

Vertical Clearance

VCLR Date 01/01/1901
Min / Max Clr. Above 99.9 / 99.9
Min / Clr. Under

Safety Features

Rail Type Rail Type XX
Bridge Rail 0 - Inspected feature does not meet currently accepta
Rail Transition 0 - Inspected feature does not meet currently accepta
Approach Rail 0 - Inspected feature does not meet currently accepta
End Treatment 0 - Inspected feature does not meet currently accepta



Appraisal (AP)

- AP01 - Approach Alignment Rating: G - Good
- AP02 - Overtopping Likelihood: 1 - Remote, once every 100 years or less frequently
- AP03 - Scour Vulnerability: AB-T - TEMP, Stable for scour, possibly dependent on coutermeasures. A, B
- AP04 - Scour Plan of Action: 0 - A scour POA is not required
- AP04A - Scour Documentation: Yes
- AP04B - Monitoring Comment:
- AP04C - Monitoring Trigger:
- AP04D - Closure Trigger:
- AP04E - Mobilize Trigger:
- AP04F - Scour Watch 113M: No
- AP05 - Seismic Vulnerability: N - Bridge does not require seismic evaluation due to low anticipated ground motion or agency prioritization
- AP12A - SNBI Deskside Review Complete: Yes
- AP12B - SNBI Field Verification Complete: Yes

Condition (C)

- C01 - Deck Rating: N - Not applicable
- C02 - Superstructure Rating: 3 - Serious
- C03 - Substructure Rating: 5 - Fair
- C04 - Culvert Rating: N - Not applicable
- C05 - Railing Condition Rating: 8 - Very good
- C06 - Railing Transition Condition Rating: N - Not applicable
- C07 - Bearing Condition Rating: N - Not applicable
- C08 - Joint Condition Rating: N - Not applicable
- C09 - Channel Condition Rating: 7 - Good
- C10 - Channel Protection Rating: 7 - Good
- C11 - Scour Condition Rating: 7 - Some minor scour
- C12 - Overall Condition: Poor
- C13 - Lowest Condition Rating: 3
- C14 - NSTM Inspection Rating: N - Not applicable
- C15 - Underwater Condition Rating: N - Not applicable

Classification (CL)

- CL01 - Owner: L03 - City or municipal highway agency
- CL01A - Responsible Party: Fort Collins
- CL02 - Maintenance Responsibility: L03 - City or municipal highway agency
- CL03 - Federal or Tribal Land Access: N - Not applicable
- CL04 - Historical Significance: N - Bridge is not eligible for the National Register, and is not in a historic district eligible for the National Register
- CL05 - Toll: N - Bridge does not carry a toll road and is not a toll bridge
- CL06 - Emergency Evacuation Designation:
- CL07A - Structure Status: 3 - Active
- CL08A - Structure Class: Bridge
- CL09A - Structure Type: CRF - Concrete Rigid Frame
- CL10A - Construction Type 120B: 02 - Poured in Place
- CL11A - Features Intersected: Lake Canal
- CL11B - Feature Carried: East Vine Drive
- CL12A - Service Type On: 1 - Highway
- CL13A - Service Type Under: 5 - Waterway
- CL14A - BTE Eligibility: Not applicable
- CL15A - Federal Submission: MAJOR VEHICULAR

Feature (F): H01 - East Vine Drive

- F01A - Feature Type: H - Highway
- F01B - Feature Designation: 1
- RT01A - Route Designation: 1
- RT02 - Route Number: 0
- RT03 - Route Direction: EW - Eastbound and Westbound
- H01 - Functional Classification: 4 - Minor Arterial
- H02 - Urban Code: 30628 - Fort Collins
- H03 - NHS: N - Not on NHS
- H04 - National Highway Freight Network: N - Not on the NHFN
- H05 - STRAHNET Designation: N - Not a STRAHNET route
- H06 - LRS Route: 069-0-2013-4728
- H07 - LRS Mile Point: 1.983
- H08 - Lanes on Highway: 2
- H09 - AADT: 6025
- H10 - Average Annual Daily Truck Traffic: 0
- H10A - AADTT Percent: 18
- H11 - Year of AADT: 2022
- F02 - Feature Location: C - Carried on structure
- F03 - Feature Name: East Vine Drive
- RT03C - Primary Routelog: 1
- RT04 - Route Type: 5 - City
- RT05 - Level of Service: 1 - Mainline
- H12 - Maximum Vertical Clearance: 99.9
- H13 - Minimum Vertical Clearance: 99.9
- H14 - Minimum Horizontal Clearance Left:
- H15 - Minimum Horizontal Clearance Right:
- H16 - Maximum Usable Surface Width: 24.2
- H17 - Detour Length: 2
- H18 - Crossing Structure Number:
- H20A - Legacy Milepoint: 0
- H21A - Base Highway Network 12: 0 - Not on the Base Network
- H22A - Future ADT 114: 7531
- H22B - Year of Future ADT 115: 2042

Feature (F): W01 - Lake Canal

- F01A - Feature Type: W - Waterway
- F01B - Feature Designation: 1
- F02 - Feature Location: B - Below structure
- F03 - Feature Name: Lake Canal

Geometry (G)

- **G01 - NBIS Length:** 33.5
- **G02 - Total Length:** 34.8
- **G03 - Maximum Span:** 33.5
- **G04 - Minimum Span:** 33.5
- **G05 - Out To Out:** 25.3
- **G06 - Width Curb to Curb:** 24.2
- **G07 - Left Curb Or Sidewalk:** 0
- **G08 - Right Curb Or Sidewalk:** 0
- **G09 - Approach Roadway Width:** 38
- **G10 - Median:** 0 - No median
- **G11 - Skew:** 34
- **G12 - Curved Bridge:** N - Not curved
- **G13 - Maximum Height:** 5
- **G14 - Sidehill Bridge:** N - Not a sidehill bridge
- **G15 - Irregular Deck Area:**
- **G16 - Federal Deck Area:** 880
- **G17A - Asphalt / Fill Thickness:** 17
- **G18A - Expansion Device Type 124:** O - No expansion device 304/354, 305/355

Identification (ID)

- **ID01 - Structure Number:** FCVINE-W.5-SUMV
- **ID01A - Structure Key:** FCVINE-W.5-SUMV
- **ID02 - Structure Name:**
- **ID03 - Replaces (Old):**
- **ID06A - Parallel Structure Key 8P:**
- **ID07A - Parallel Structure 101:** No parallel structure exists.

Inspection Event (IE)

- **IE02 - Inspection Field Start:** 2025-10-28
- **IE03 - Inspection Date:** 2025-10-28
- **IE03A - Field End Date:** 2025-10-28
- **IE05 - Current Inspection Interval:**
- **IE06A - Current Target Date:**
- **IE06B - Report Due Date:** 2026-01-28
- **IE07 - Risk Based Inspection Interval:** 1 - Method 1
- **IE08 - QC Date:**
- **IE09 - QA Date:**
- **IE10 - Inspection Finalized:**
- **IE14A - Special Equipment:** 0 - Not Applicable
- **IE16A - Weather:** 48 F, Clear, windy
- **IE17A - Bat Present:** No

Inspection Requirements (IR)

- **IR01 - NSTM Required:** N - NSTM inspection not required
- **IR02 - Fatigue Details:** N - No E/E(prime) details
- **IR03 - UW Required:** No
- **IR03A - UW Category:**
- **IR04 - Complex Feature:** No
- **IR05A - Pin Required:** No
- **IR06A - Special Required:** No
- **IR07A - Inspection Program:** Off System
- **IR08A - LiDAR Required:** No

Location (L)

- **L01 - State:** 08 - Colorado
- **L02 - County:** 069 - Larimer
- **L03 - City/Town:** 27425 - Fort Collins
- **L04 - District:** 41
- **L04A - Zone:** North
- **L05 - Latitude:** 40.596291
- **L06 - Longitude:** -105.038886
- **L07 - Border Structure:**
- **L08 - Border State:**
- **L09 - Border Inspection Responsibility:**
- **L10 - Border Lead State:**
- **L11 - Location Description:** 0.5 Mi W of Timberline Rd
- **L12 - MPO:** 2 - North Front Range
- **L13A - TPR:** 03 - North Front Range
- **L18A - Functional Location:**

Roadside Hardware (RH)

- **RH01 - Bridge Railings:**
- **RH01A - Bridge Rail Year of Spec:**
- **RH02 - Transitions:**
- **RH02A - Rail Transition Year of Spec:**
- **RH03A - Structure Rail Type 125A:** Rail Type XX
- **RH04A - Structure Rail Modified 125B:** 0 - Not modified
- **RH05A - Height of Rail:** 39
- **RH06A - Structure Rail 36A:** 0 - Inspected feature does not meet currently acceptable standards or a safety feature is required and none is provided.
- **RH07A - Transition 36B:** 0 - Inspected feature does not meet currently acceptable standards or a safety feature is required and none is provided.
- **RH08A - Approach Rail Rating:** 0 - Inspected feature does not meet currently acceptable standards or a safety feature is required and none is provided.
- **RH09A - End Treatment Rating:** 0 - Inspected feature does not meet currently acceptable standards or a safety feature is required and none is provided.

Substructure (SB): A01 - A01 - Abutment, cantilever/wall

- **SB01A - Substructure Configuration:** A - Abutment
- **SB01B - Substructure Designation:** 1
- **SB02 - Number of Substructure Units:** 2
- **SB03 - Substructure Material:** C01 - Reinforced concrete, cast-in-place
- **SB04 - Substructure Type:** A01 - Abutment, cantilever/wall
- **SB05 - Substructure Protective System:** 0 - None
- **SB06 - Foundation Type:** F01 - Footing, not on rock
- **SB07 - Foundation Protective System:** 0 - None

Span (SP): M01 - F01 - Frame, three-sided

- **SP01A - Span Configuration:** M - Main Span
- **SP01B - Span Designation:** 1
- **SP02 - Number of Spans:** 1
- **SP03 - Number of Beam Lines:** 1
- **SP04 - Span Material:** C01 - Reinforced concrete, cast-in-place
- **SP05 - Span Continuity:** 7 - Buried
- **SP06 - Span Type:** F01 - Frame, three-sided
- **SP07 - Span Protective System:** 0 - None
- **SP08 - Deck Interaction:**
- **SP09 - Deck Material and Type:** 0 - None
- **SP10 - Wearing Surface:**
- **SP11 - Deck Protective System:**
- **SP12 - Deck Reinforcing Protective System:**
- **SP13 - Deck Stay-In-Place Forms:**

Span (SP): W01 - S01 - Slab, solid

- **SP01A - Span Configuration:** W - Widening
- **SP01B - Span Designation:** 1
- **SP02 - Number of Spans:** 1
- **SP03 - Number of Beam Lines:** 1
- **SP04 - Span Material:** C01 - Reinforced concrete, cast-in-place
- **SP05 - Span Continuity:** 1 - Simple or single span
- **SP06 - Span Type:** S01 - Slab, solid
- **SP07 - Span Protective System:** U - Unknown
- **SP08 - Deck Interaction:**
- **SP09 - Deck Material and Type:** 0 - None
- **SP10 - Wearing Surface:**
- **SP11 - Deck Protective System:**
- **SP12 - Deck Reinforcing Protective System:**
- **SP13 - Deck Stay-In-Place Forms:**

Work (W)

- **W01 - Year Built:** 1950
- **W01A - Year Work Performed:** -1
- **W03A - Work Performed:** 38 - Other structural work.
- **W04A - Work Done By:**



Notes

- **ID05A - Owner Transfer Note :**
- **IE11 - Limited Inspection Note :** Inspection limited to concrete slab widening. Inspection performed due to owner concerns after vehicle strike destroyed south bridge rail and curb after latest routine inspection.
- **IE11A - Inspection Note :** Date: 10/28/2025
 Time: 1:00 PM Temp: 48 F Weather: Clear, windy
 Inspectors: RMS/DDK/NEC

- Item C02 code 4 changed to 3 due to corrosion of reinforcement affecting strength of the element.
- **IE12 - Inspection Equipment :** AN - No access equipment used|IN - No inspection equipment used
- **IE13A - Schedule Note :** 10/28/2025: Structure reduced to 6 month inspection cycle due to C02 lowered from 4 to 3. Special Scheduled inspections scheduled for 12M OCT N_0 to perform inspection on south slab.
- **IE15A - Special Access Note :**
- **L14A - Structure Note :** Inventory route is west to east
 North side is upstream
 Superstructure is concrete slab
 Substructure is numbered 1 through 2 from west to east

- 04/10/2023 - Structure meets criteria for new load rating due to extent of fill increase above the structure relative to the 1997 load rating. Due to the City's plans to replace the structure within the next few years and per conversation with CDOT, the inspection frequency was lowered to 12 months in lieu of a new load rating. A revised load rating would require extensive NDT as a new visual rating is not permitted by the CDOT Load Rating Manual due to the Deck and Superstructure ratings of 4.

- 10/28/2025 - New visual load rating performed due to lowering of superstructure rating to 3. Posting required: 3T

Schedule

	Routine	Special Scheduled
Previous Inspection	2025-04-04 Final	
Current / Next Inspection	2026-04-04 Open	2026-10-15 Open
Target Date	4/15/2026	10/15/2026
Interval	12	12
Schedule String	12M APR N_0	12M OCT N_0



Load Ratings

Load Rating Date: 10/29/2025

The load rating information presented on this report is for informational purposes and is separate from the inspection findings. Any changes to the load rating made after the inspection date are not a result of this inspection unless explicitly stated in the rating comments. See the latest Load Rating Summary Sheet for specific rating information.

Rating LastModifiedBy: NCoffman@benesch.com. Rating LastModifiedOn: 10/30/2025.

Evaluation and Postings (EP)

EP01 Load Configuration	EP02 Load Rating	EP03 Posting Type	EP04 Posting Value
HS20 Inventory (Tons)	3		
HS20 Operating (Tons)	3		

- EP05A - Posting 70: 0 - > 39.9% below
- EP06A - Load Rating Organization 66C: Benesch
- EP07A - Load Rater Name 66N: Rachel Spicer
- EP08A - Load Rater Initials: RMS
- EP09A - Checker Name 66P: Nathaniel Coffman
- EP10A - Checker Initials 66J: NEC
- EP11A - Rating Package Review Date 66R:
- EP12A - Rating Package Reviewer 66RN:
- EP13A - Rating Calculations Complete 66CC:
- EP14A - Rating Package Complete 66RPC: Yes
- EP15A - Entire Structure Rated 66ESR: No
- EP16A - Rating Input Files Archived 66IFA:
- EP17A - Rating Output Files Archived 66OFA:
- EP18A - Rating Assigned To 66AT:
- EP19A - Rating Software Used 66RS: 7 - Engineering Judgment
- EP20A - BrR Rating Runs 66RR:
- EP21A - BrR Rating Analysis 66RA:
- EP22A - BrR Rating System Based 66S:
- EP23A - Rating Asphalt Thickness 66RT: 16
- EP24A - Girder Operating Rating, Tons 66A:
- EP25A - Overload Color Code 139:
- EP26A - Overload Color Code Live Load 139OLL:
- EP27A - Operating Controlling Member 66OC: S - Slab
- EP27B - Inventory Controlling Member 66IC: S - Slab
- EP28A - Rating Comment: Posting Required:
-Year constructed: 1950; year of widening unknown
-Construction drawings not available; visually rated
-Original structure: 17 inches of asphalt/fill over 14 inch top slab.
-Widening: 16 inches asphalt/fill over (2) steel members in 16 inch concrete encasement; widening has 33 foot 6 inch maximum span at south edge.
-Special inspection performed 10/28/2025; superstructure condition rating = 3
-South member at midspan has 1.5 inch sag and areas of severe corrosion with up to 100% section loss.
-Concrete encasement provides additional capacity/stiffness; not able to quantify due to unknown reinforcement
-LLDF=0.25 for south member
-Posting is only required for eastbound lane; westbound lane does not pass over widening

Load Ratings (LR)

- LR01 - Design Load 31: U - Unknown
- LR02 - Design Method 31D: Unknown
- LR03 - Load Rating Date: 2025-10-30
- LR03A - Load Rating Check Date 130C: 10/30/2025
- LR04 - Operating Rating Method: 0 - Field Eval
- LR04A - Inventory Rating Method 65: 0 - Field Eval
- LR09A - Within 1 Mile 64LT10: No
- LR10A - BrR Structure Number 66STR:
- LR11A - Plans Available 500: No
- LR12A - Overload Critical Structure 139OC:

Posting Status (PS)

- PS01A - Load Posting Structure Status: P - Permanent
- PS01B - Load Posting Status Code: A - Needs Action (Unposted and requires posting)
- PS03A - Posting - CO Legal Trucks: B - Posting or posting reduction recommended, but not implemented
- PS03B - Posting - SHV Trucks: B - Posting or posting reduction recommended, but not implemented
- PS03C - Posting - EV Trucks: B - Posting or posting reduction recommended, but not implemented
- PS03D - Temporary Structure 103: No



Element/Defect	Unit	Total Qty	CS1	CS2	CS3	CS4
38 - Reinforced Concrete Slab	sq feet	880	590 67%	22 2%	265 30%	3 0%
1080 - Delamination/Spall/Patched Area	each	269	0	4 1%	265 99%	0
1090 - Exposed Rebar	each	3	0	0	0	3 100%
1130 - Cracking (RC and Other)	each	18	0	18 100%	0	0

7 inches of asphalt on 10 inches of fill on 1 foot 2 inch concrete slab, original bridge, monolithic with abutments. 16 inches of asphalt and fill on 16 inch +/- thick slab widening with encased steel members. Widening was poured on fill and fill then removed. -encased steel members. Steel members, where visible at spalled areas, comprise (1) south member (2 channels, each 5 inch wide x 1.75 inch flange length with 0.25 inch thick x 10 inch high vertical plate) and (1) north member (W-shape, unknown depth and flange thickness, 6.5 inch flange width). Members are spaced at 56.5 inches on center. South member is 17 inches on center from outside south edge striping. North member center is 26.25 inches from north edge of widening. Eastbound lane width is 11 feet.

Original Slab:

Top slab has medium longitudinal crack (18 CS2 1130).

North bottom edge is spalled/delaminated full length x 7 inch x up to 7.5 inch deep exposing rebar with R3 to R4 corrosion (20 CS3 1080).

North bottom edge near midspan has 3 foot diameter area of spalling/delamination exposing rebar with R2 corrosion (3 CS3 1080).

South edge near midspan has a 3.5 foot x 6 inch delamination (4 CS2 1080).

Widened slab:

Encasement's bottom layer of concrete has not properly consolidated and has no structural integrity with several delaminated/spalled areas and exposed, R1 corroded rebar (210 CS3 1080).

North member bottom flange is exposed at (2) areas of spalling with R2 to R3 corrosion at east end. (20 CS3 overlap)

South edge of encasement has spalled for full length, exposing south member. (13 CS3 1080 used, 34 CS3 total)

South member 4 and 13 feet from Abutment 1 bottom channel south flange and web has 80-100% section loss for 6 feet and 2.5 feet, respectively. (9 CS4 overlap)

South steel member vertical plate has failed with up to 100% section loss for 21 feet 2 inches from Abutment 1. (21 CS4 1090)

CS4 defect has been reviewed by Benesch Program Engineer and affects the element or structure strength and/or serviceability. Bridge owner was notified of Essential Repair Finding on 10/30/2025.

215 - Reinforced Concrete Abutment	feet	54	0	0	54 100%	0
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1130 - Cracking (RC and Other)	each	4	0	0	4 100%	0
1190 - Abrasion/Wear (PSC/RC)	each	50	0	0	50 100%	0

Walls monolithic with original slab.

Abutments at groundline have honeycombing and abrasion with areas of disintegration and aggregate loss; abrasion up to 5 inches deep at Abutment 1 north end and Abutment 2 center and ends (50 CS3 1190 used, 54 CS3 total).

Abutment 1 at north end and center and Abutment 2 at south end and center have vertical cracks up to 0.25 inch wide (4 CS3 1130).

308 - Construction/Non-Expansion Joint	feet	20	20 100%	0	0	0
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Construction joint at widening full length of original bridge on south side. No significant defects noted.

322 - Approach Roadway	each	1	1 100%	0	0	0
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Straight alignment, no speed reduction required.

Asphalt over structure has wear and raveled area with alligator cracking up to 1 inch wide and potholes up to 1 foot diameter x 1 inch deep for approximately 75% of total area.

323 - Approach Railing	each	4	4 100%	0	0	0
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Extensions of bridge W-beam on timber posts with boxing glove end treatments; installed prior to 2024 inspection.

326 - Wingwalls	each	2	1 50%	1 50%	0	0
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Concrete wingwalls monolithic with abutments only on north side.

Wingwalls have abrasion up to 0.5 inch deep.

Northwest wingwall top corner has 14 inch x 8 inch x 8 inch deep spall exposing rebar (1 CS2).

329 - Sidewalk/Median/Curb	feet	55	10 18%	0	10 18%	35 64%
1080 - Delamination/Spall/Patched Area	each	10	0	0	10 100%	0
7000 - Damage	each	35	0	0	0	35 100%

Concrete curb, size varies.

North curb top face has several large spalls up to 4 feet x 1 foot x 5 inches deep throughout, with areas of exposed rebar. (10 CS3 1080)

South curb west end has been completely removed by impact. (35 CS4 7000)

CS4 defect has been reviewed by Benesch Program Engineer and affects the element or structure strength and/or serviceability. Bridge owner was notified of Essential Repair Finding on 10/30/2025.

330 - Metal Bridge Railing	feet	55	20 36%	0	0	35 64%
7000 - Damage	each	35	0	0	0	35 100%

Galvanized W-beam rail on galvanized steel wide flange posts with rubber blockouts mounted to concrete curbs; bridge rail replaced prior to 2024 inspection.

West bridge rail is torn off by impact. (35 CS4 7000)

CS4 defect has been reviewed by Benesch Program Engineer and affects the element or structure strength and/or serviceability. Bridge owner was notified of Essential Repair Finding on 10/30/2025.

515 - Steel Protective Coating	sq feet	70	70 100%	0	0	0
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Galvanized W-beam and posts. No significant defects noted.

501 - Channel/Bank	each	1	1 100%	0	0	0
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Flow is north to south; dry at time of inspection.

Manmade channel with mostly regulated flows. Very steep sloped banks (1:1) to normal water level with steep (2:1) grassy slopes beyond, minor undercutting. Medium to large red rocks along channel banks with small stones in streambed. Moderate accumulation of tumbleweeds.

600 - General Notes	none	1	1 100%	0	0	0
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(1) OM3 at northeast corner; delineator stickers on end treatments.

(1) 3 inch utility conduit on north side is bent downward, and non-functional.

Swallow nests attached to bridge at time of inspection.



38 - Reinforced Concrete Slab



Area of exposed cross bracing shows no intermediate members

10/28/2025 12:00:00 AM



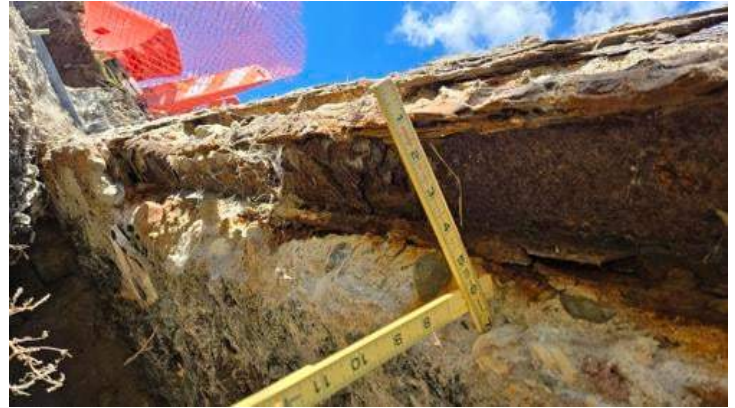
Exposed north member and cross bracing, general

10/28/2025 12:00:00 AM



South member at midspan has 1.5 inch sag

10/28/2025 12:00:00 AM



South member measures 5 inches wide

10/28/2025 12:00:00 AM



South member upper channel, close-up

10/28/2025 12:00:00 AM



South member upper channel, general

10/28/2025 12:00:00 AM



South member, general

10/28/2025 12:00:00 AM



South vertical plate measures 10 inches high

10/28/2025 12:00:00 AM

1080 - Delamination/Spall/Patched Area



North member bottom flange exposed, general

10/28/2025 12:00:00 AM

1090 - Exposed Rebar



South member 4 feet from Abutment 1 bottom channel south flange and web have 80-100% section loss for 6 feet

10/28/2025 12:00:00 AM



South vertical plate has failed 21 feet 2 inches from Abutment 1

10/28/2025 12:00:00 AM



Elevation



Elevation looking north

10/28/2025 12:00:00 AM



Maintenance Items

ERL Orange

302.01 - Signs Install new, repair missing/ broken

Status	Date Entered	Target Date	Deterioration Category
Open	10/29/2025	11/27/2025	Signage (Load Posting)

Problem Description

Install single limit posting sign at west approach.

ERL Yellow

353.30 - Replace deck (concrete, steel, timber)

Status	Date Entered	Target Date	Deterioration Category
Open	10/30/2025	01/26/2026	Rusted Steel

Problem Description

Replace bridge widening under eastbound lane.

High

200.31 - Concrete repair, including removal of spalled, delaminated, deteriorated concrete, may include rebar cleaning/replacement

Status	Date Entered	Target Date	Deterioration Category
Open	04/06/2017	01/01/2026	Spalled Concrete

Problem Description

Clean and patch north and south faces of slab.

High

200.31 - Concrete repair, including removal of spalled, delaminated, deteriorated concrete, may include rebar cleaning/replacement

Status	Date Entered	Target Date	Deterioration Category
Open	04/06/2017	01/01/2026	Spalled Concrete

Problem Description

Patch spalls in curbs.

High

399.00 - Maintenance requiring engineering.

Status	Date Entered	Target Date	Deterioration Category
Open	04/25/2013	01/01/2026	Other (See Description)

Problem Description

Prior to spending large amounts on maintenance/rehab, consideration should be given to replacing the bridge.

Low

306.00 - Bridge Rail/Approach Rail/Guardrail - Installation, Replace

Status	Date Entered	Target Date	Deterioration Category
Open	04/22/2021	01/01/2030	Rail (BR or GR) or Fence

Problem Description

Install approach rails, transitions, and end terminations to meet current AASHTO/CDOT standards.

Low

398.00 - Miscellaneous Bridge Work

<u>Status</u>	<u>Date Entered</u>	<u>Target Date</u>	<u>Deterioration Category</u>
Open	04/06/2017	01/01/2030	Other (See Description)

Problem Description

Contact Utility Company regarding broken/damaged utility at north side of bridge.

Low

358.99 - Miscellaneous substructure work

<u>Status</u>	<u>Date Entered</u>	<u>Target Date</u>	<u>Deterioration Category</u>
Open	03/11/2011	01/01/2030	Spalled Concrete

Problem Description

Coat/patch wingwalls and abutments to mitigate abrasion.

Low

306.00 - Bridge Rail/Approach Rail/Guardrail - Installation, Replace

<u>Status</u>	<u>Date Entered</u>	<u>Target Date</u>	<u>Deterioration Category</u>
Open	03/21/2007	01/01/2030	Rail (BR or GR) or Fence

Problem Description

Install bridge rails to meet current AASHTO/CDOT standards.



Streambed Profile



	3	9.4	17
2021	3.3	3.8	3
2023	3.2	4.2	3.4
2024	3.1	3.7	3.3
2025	3.2	3.7	3.1

	Measurement Type	Reference Line	Waterline
2025 04/04/25	Upstream	Original slab	
Comments: Dry at time of inspection.			
2024 04/22/24	Upstream		
Comments: Dry at time of inspection.			
2023 04/01/23	Upstream		
Comments: Dry at time of inspection			
2021 04/01/20	Upstream		
Comments: Dry at time of inspection			

Attachment D

Colorado Department of Transportation (CDOT)

Load Posting Guidelines for the Colorado Posting Trucks, Specialized Hauling Vehicles and Emergency Vehicles

In 1975, the American Association of State Highway and Transportation Officials (AASHTO) introduced three legal load models, designated as Type 3, Type 3S2, and Type 3-3 to simulate loadings from dump trucks, semi-trailer trucks and semi-trailer trucks with a pup trailer, respectively. In recent years, the trucking industry has introduced modified single-unit trucks (Specialized Hauling Vehicles or SHVs) with multiple drop axles that raise or lower as needed to allow these short-wheelbase trucks to carry the maximum load of up to 80,000 lbs and still meet the Federal Bridge Gross Weight Formula, or “Bridge Formula B” equation (https://ops.fhwa.dot.gov/freight/publications/brdg_frm_wghts/index.htm#table). These short-wheelbase vehicles are commonly used in the construction, waste management, bulk cargo and commodities hauling industries throughout the United States.

The AASHTO Type 3, Type 3S2, and Type 3-3 trucks closely match the Formula B in the short, medium, and long truck length ranges but do not adequately represent the live load effects of the short-wheelbase axle configurations of SHV's. SHVs are legal vehicles with legal axle weights that meet the Formula B equation for maximum axle group weight and represent loadings of short-wheelbase vehicles. Bridges with short spans and those with transverse floor beams are most sensitive to these more closely spaced axles.

On November 15, 2013, the Federal Highway Administration (FHWA) issued a memorandum titled “Load Rating of Specialized Hauling Vehicles” (<https://www.fhwa.dot.gov/bridge/loadrating/131115.cfm>) which required every state to post bridges for SHVs that do not pass a load rating analysis for these vehicles. On November 3, 2016, FHWA issued another memorandum titled “Load Rating for the FAST Act’s Emergency Vehicles” (<https://www.fhwa.dot.gov/bridge/loadrating/161103.cfm>) to provide guidance on load rating bridges for emergency vehicles (EVs). EVs are defined as those designed to be used under emergency conditions to transport personnel and equipment in response to fires and other hazardous situations. The memorandum states that bridges on the Interstate System or within one road mile of the Interstate System shall be rated for EVs. For the purpose of load rating, FHWA determined that two EV configurations produce live load effects that envelop the live load effects of the vehicles from the family of typical emergency vehicles. Both EV configurations have a single front axle and are differentiated by the single rear axle (EV2) and tandem rear axle (EV3).

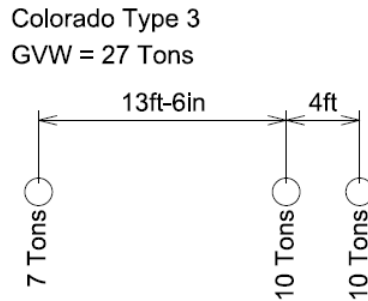
Legal Load Models Used for Posting in Colorado

The AASHTO legal loads are sufficiently representative of the vast majority of routine truck configurations in use throughout the United States, and are therefore used as vehicle models for load ratings. When a load rating shows that a bridge does not have sufficient capacity (i.e. an Operating rating factor less than 1.0) for any one of these legal load vehicles, the bridge must be posted. For bridges not on the Interstate System, the Colorado legal load vehicles (designated as Type 3, Type 3S2,

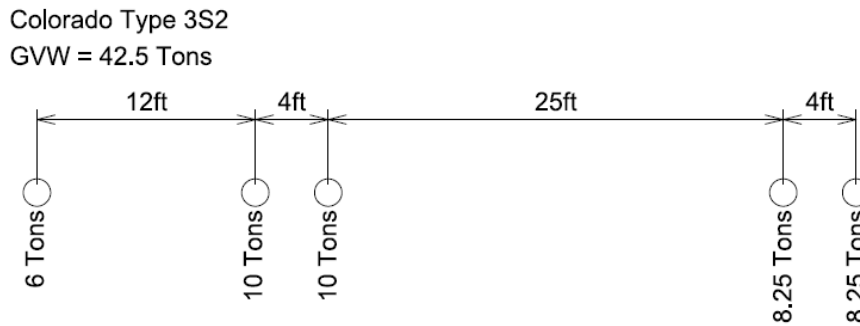
CDOT Off-System Inspection Program Letter
Attachment D

and Type 3-2) are used for load postings instead of the AASHTO legal vehicles. The Colorado posting truck configurations are as follows:

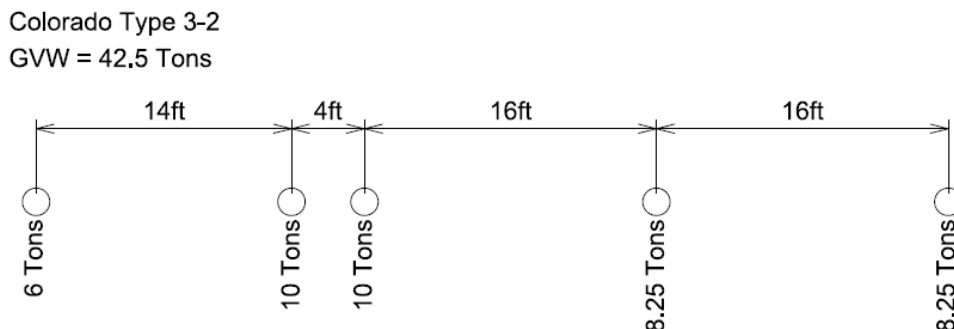
The Colorado Type 3 legal vehicle is a three-axle single-unit vehicle with a gross vehicle weight of 54,000 lbs. (27 tons). This Colorado vehicle model is heavier than the 50,000 lbs. (25 tons) AASHTO Type 3 legal vehicle. Note the weights shown are axle weights.



The Colorado Type 3S2 legal vehicle is a five-axle semi-tractor and trailer combination with a gross vehicle weight of 85,000 lbs. (42.5 tons). This Colorado vehicle model is heavier than the 72,000 lbs. (36 tons) AASHTO Type 3S2 legal vehicle. Note the weights shown are axle weights.



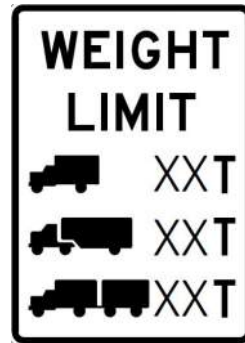
The Colorado Type 3-2 legal vehicle is a five-axle combination of a three axle semi-tractor and trailer combination pulling a loaded trailer and having a gross vehicle weight of 85,000 lbs. (42.5 tons). This Colorado vehicle model is heavier than the 80,000 lbs. (40 tons) AASHTO Type 3-3 legal vehicle. Note the weights shown are axle weights.



As discussed earlier, when the Operating Rating Factor for one or more of the Colorado legal vehicles is less than 1.0, Colorado uses a single weight-limit sign or a three-vehicle combination sign per the FHWA Manual on Uniform Traffic Control Devices (MUTCD). The silhouettes on the three-vehicle combination sign shown below represent the three Colorado legal vehicles described above.



MUTCD Sign R12-1

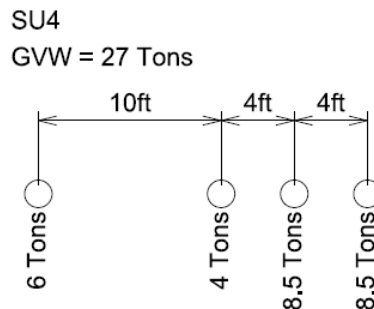


MUTCD Sign R12-5

Specialized Hauling Vehicles Loading Models

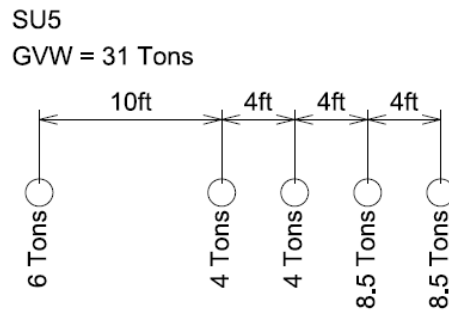
Four SHV models (SU4-SU7) were developed and adopted by AASHTO in 2005 to represent newer axle configurations that comply with Formula B and meet all Federal weight regulations but whose live load effects exceed the stresses induced by the Type 3, Type 3S2, or Type 3-3 legal vehicles.

The SU4 model is a four-axle vehicle with a gross vehicle weight of 54,000 lbs. (27 tons). Note the weights shown are axle weights.

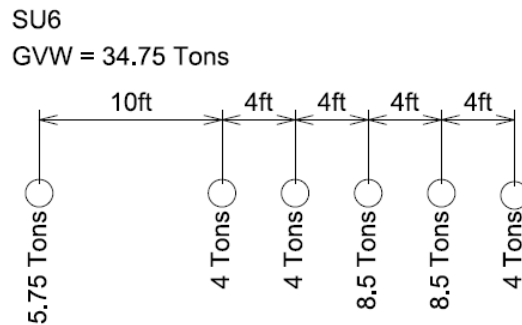


CDOT Off-System Inspection Program Letter
Attachment D

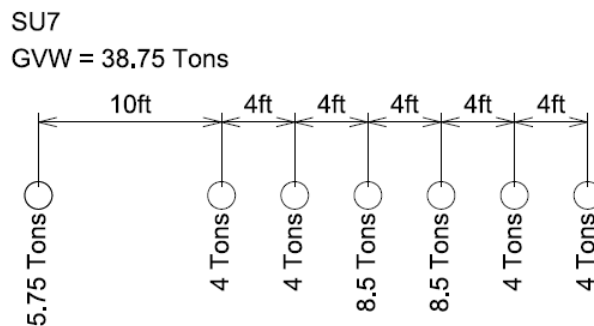
The SU5 model is a five-axle vehicle with a gross vehicle weight of 62,000 lbs. (31 tons). Note the weights shown are axle weights.



The SU6 model is a six-axle vehicle with a gross vehicle weight of 69,500 lbs. (34.75 tons). Note the weights shown are axle weights. Currently, the SU6 is only legal on Interstate Highways in Colorado. For the purposes of load posting of Off-System bridges, the SU6 is not required to be shown on the posting sign.



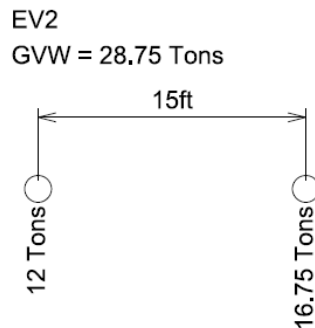
The SU7 model is a seven-axle vehicle with a gross vehicle weight of 77,500 lbs. (38.75 tons). Note the weights shown are axle weights. Currently, the SU7 is only legal on Interstate Highways in Colorado. For the purposes of load posting of Off-System bridges, the SU7 is not required to be shown on the posting sign.



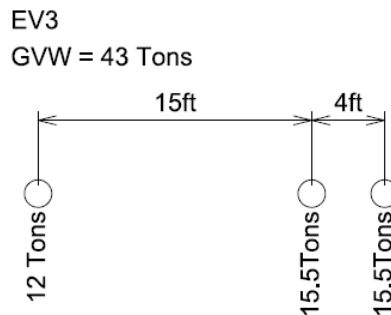
Emergency Vehicle Loading Models

EVs may not meet the Federal Bridge Formula B and can create higher load effects compared to the Colorado legal loads and the SHV models currently included in the MBE.

The first EV model is the EV2, which is a single rear axle vehicle with a gross vehicle weight of 57,500 lbs. (28.75 tons). Note the weights shown are axle weights.



The second EV model is the EV3, which is a tandem rear axle vehicle with a gross vehicle weight of 86,000 lbs. (43 tons). Note the weights shown are axle weights.



CDOT Posting Sign Guidelines for Off-System Bridges

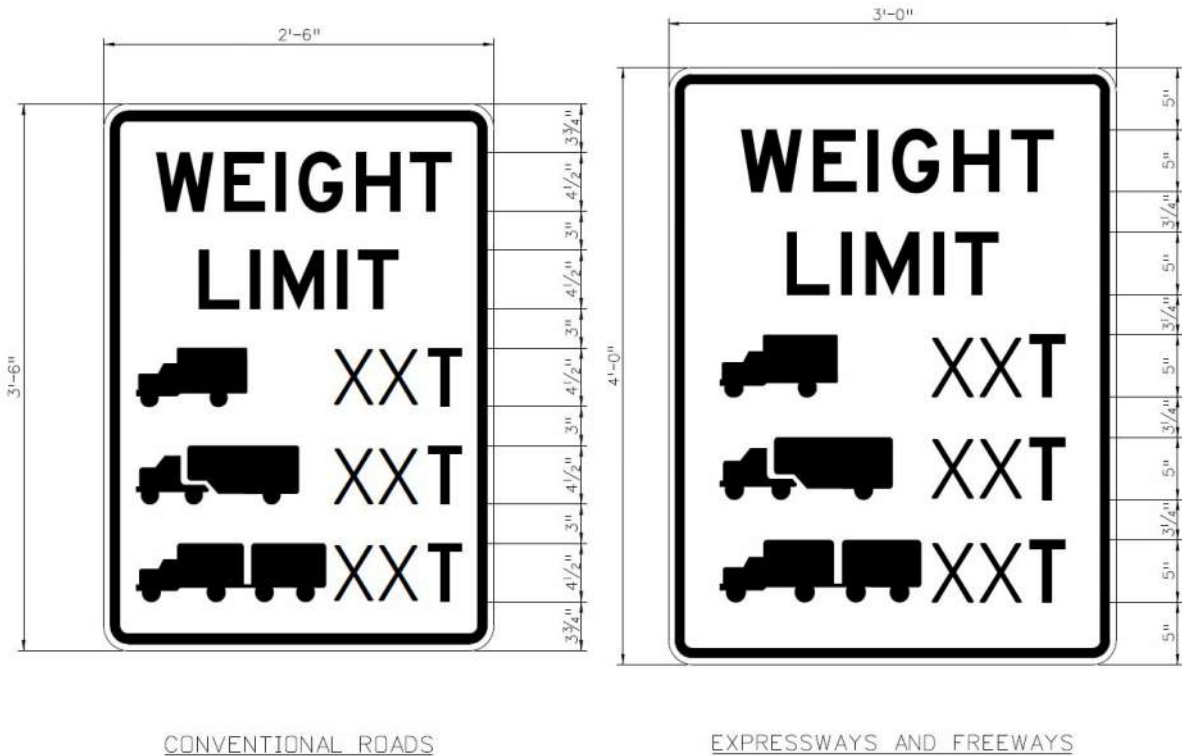
When a load rating shows that a bridge does not have sufficient capacity for any one of the SHV or EV models, the bridge must be posted in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). Currently, the MUTCD only has two signs (R12-1 with a single weight limit and R12-5 with the three silhouettes of legal vehicles) for load posting. The MUTCD does not allow States to add any other silhouettes of trucks to the R12-5 posting sign since it is dangerous for truck drivers to attempt to read a crowded sign while traveling at highway speeds.

The MUTCD allows supplemental posting signs to be modified to account for the posting of SHVs or EVs. It is up to each state to determine the language to be used on these supplemental posting signs. CDOT has designed supplemental posting signs, shown below, that will be used under different scenarios when a bridge requires posting for the Colorado Posting Trucks, SHVs, EVs or combinations thereof. Sign

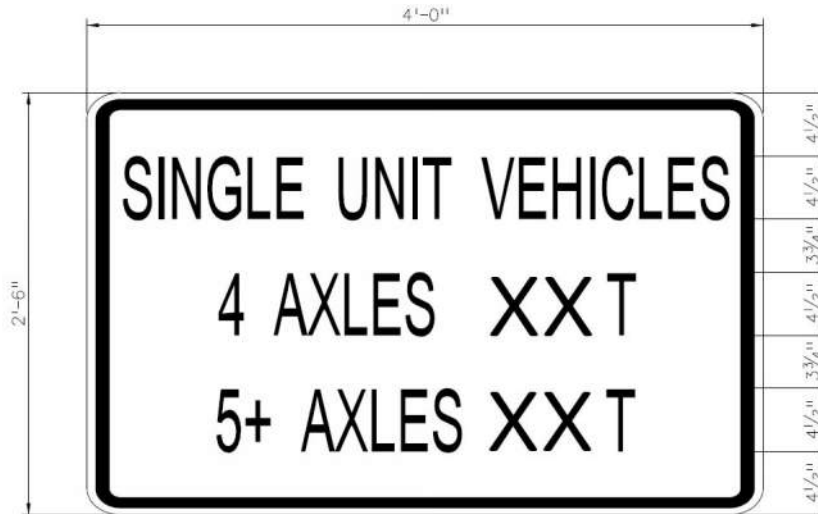
dimensions and letter heights of the posting signs are different depending on whether the bridge is on a conventional road or an expressway/freeway. A conventional road is a road that allows direct access to homes and businesses along it, or a low-volume road with an AADT (Annual Average Daily Traffic) of 400 or less. An expressway/freeway is a road that has partial or full control of access, or a road with an AADT greater than 400.

If a bridge requires posting for Colorado posting trucks, SHV's and EV's, or any combination thereof, the signs will be mounted in succession, with the Colorado posting truck sign (MUTCD R12-1 or R12-5) appearing first, then the SHV sign, then the EV sign. Spacing of the signs will depend on the posted speed of the roadway. The dimensions shown below and on the following pages shall be used when ordering the signs.

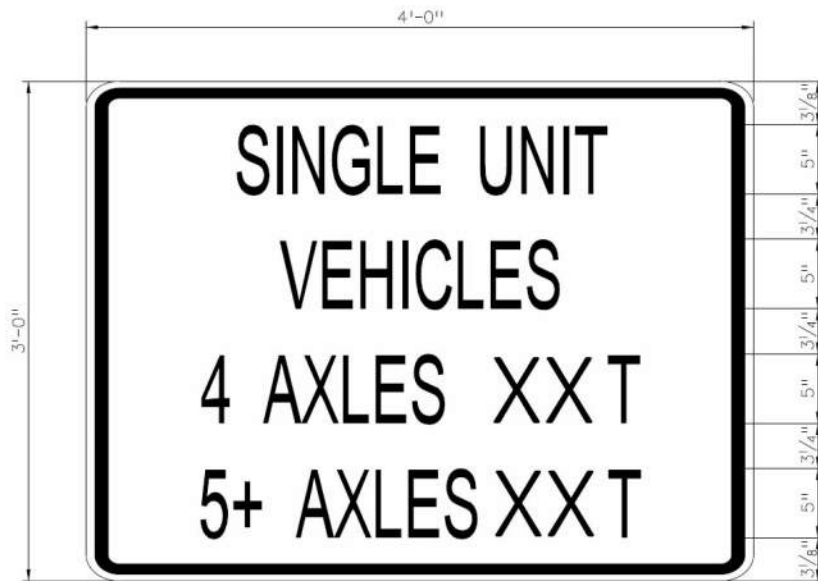
Posting signs for Colorado Posting Trucks:



Posting signs for SHV's:

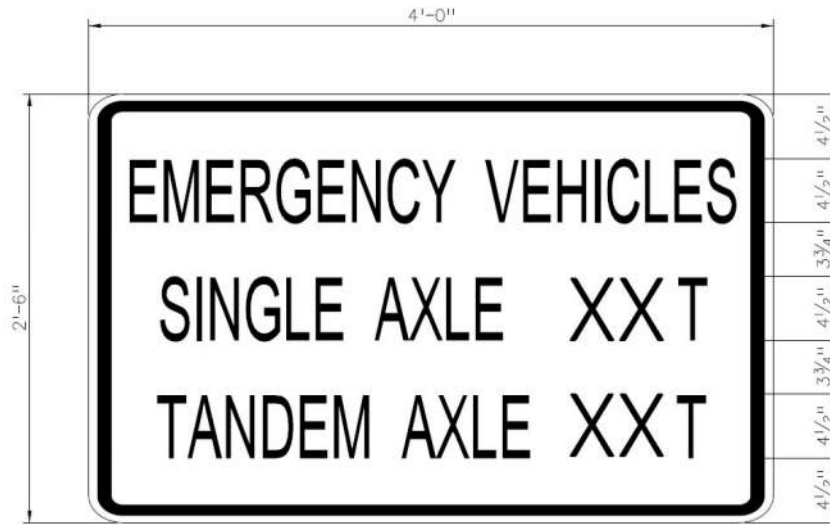


CONVENTIONAL ROADS

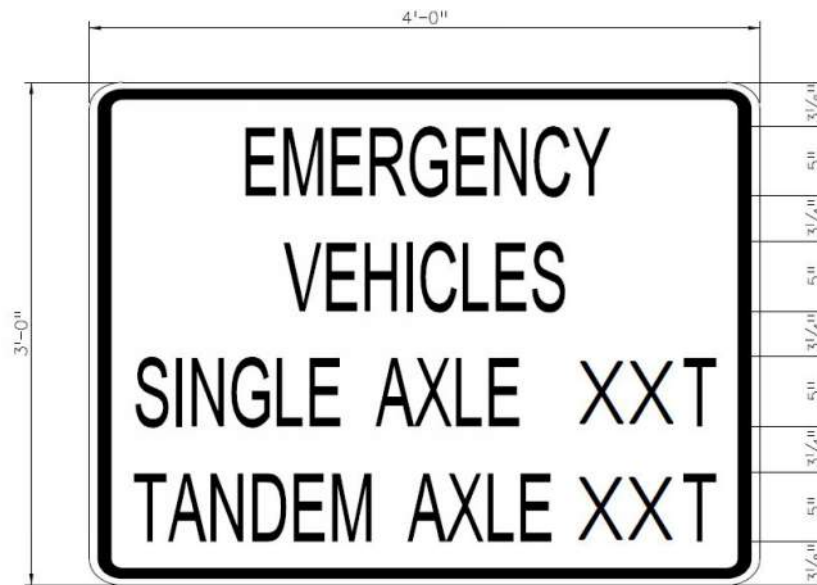


EXPRESSWAYS AND FREEWAYS

Posting signs for EV's:



CONVENTIONAL ROADS



EXPRESSWAYS AND FREEWAYS