

# Chapter 8

## 2021 Annual Bridge Report

### Introduction

Washington Administrative Code (WAC) 136-20-060, requires all county engineers in Washington state to submit a written report of bridge inspection efforts and findings to their overseeing legislative body. Before adoption of the annual budget, the Board of County Commissioners is required to adopt a six-year plan for transportation improvements. WAC 136-20-060 also requires that the resolution adopting the six-year plan include information to the board on deficient bridges during the preparation of the plan.

This report summarizes the county's 2020-2021 bridge program.

The three main goals of the bridge program are:

- Keep bridges open and safe for public use.
- Preserve bridge infrastructure by publishing an annual bridge report containing the history of inspections and evaluations of each structure's condition. This data can be used to maximize the useful life of bridges through active maintenance and rehabilitation.
- Replace bridges with new structures when repair and rehabilitation are not feasible.

This report also contains a summary on bridges scheduled to be reconstructed or retrofitted in 2022 and 2023.

### Program goal

Zero structurally deficient, functionally obsolete, or scour critical bridges in Thurston County.

### Credits

This report was prepared by the Public Works bridge program. The bridge program is responsible for the inspection and reporting required by the Washington Administrative Code (WAC) but also for providing engineering services that are necessary for maintenance repairs, load ratings and scour evaluations. The bridge program reports directly to the County Engineer and is supported by federally certified bridge inspectors, engineers and other personnel.

#### Management & Inspection

**Scott Lindblom**

P.E., County Engineer

**Matt Unzelman**

P.E., Traffic Engineering and Operations Manager

**Shawn Brandt**

Inspection Team Leader

#### Maintenance

**Lucy Mills**

Road Operations Manager

## Inventory

Public Works has 144 county owned bridges in its bridge inventory. Six (6) bridges have been added to the bridge inventory, three were added from the Fish Passage Culvert Program, and three were large culverts added as short span bridges. Two of these six bridges qualify as NBI reportable bridges. Public Works also has inter-local agreements to inspect two bridges for the City of Yelm and three bridges for the City of Tenino. However, the cities are required to complete any necessary maintenance on their bridges.

Five (5) bridges owned and operated by railroads and one (1) owned and operated by the Chehalis Indian Tribe require safety inspections since they cross over a county road per the Washington State Bridge Inspection Manual.

Six (6) bridges on the Chehalis Western Trail, four (4) bridges on the Yelm-Tenino Trail and two (2) bridges on the Gate Belmore Trail are included in the bridge inventory. Public Works is working towards incorporating other trail bridges into its inventory.

Thurston County Public Works inspects 102 National Bridge Inventory (NBI) reportable bridges which



are categorized by superstructure material type. A bridge must be greater than 20' to be NBI reportable

Thurston County Public Works inspects 42 NBI non-reportable bridges which are categorized by superstructure below. These bridges are non-eligible for federal replacement or rehabilitation funding.



## Inspections and findings

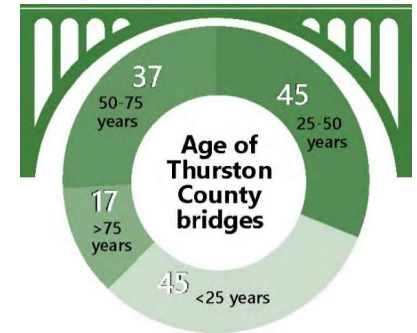
The National Bridge Inspection Standards (NBIS) and WAC 136-20-060 mandate that public agencies inspect and report on all bridges at least once every two years. Per these requirements, the county is required to document and report the current condition of each bridge, determine the degree of wear and deterioration, and recommend repairs or required service.

A total of 86 routine bridge inspections were performed in 2020. Bridge inspectors evaluated bridge conditions and documented observable defects. If necessary, inspectors created repair work orders, coordinated with road operations crews to complete the work and then performed follow up inspections once the work had been completed. Some work items were urgent and repaired quickly, while others were prioritized lower as longer-

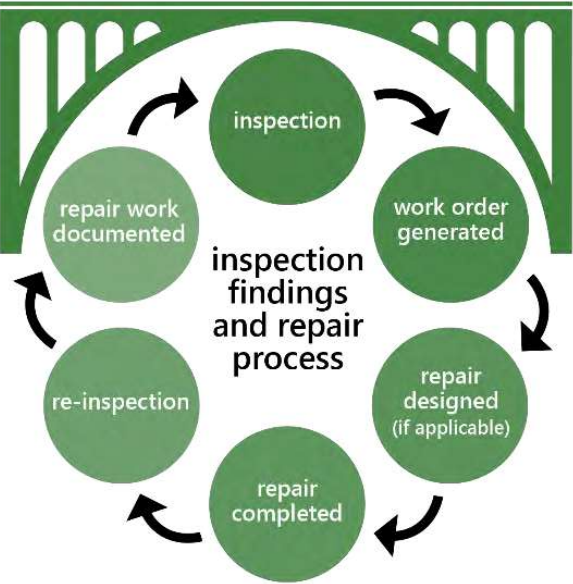
term maintenance items that will help preserve the service life of the bridge.

Several times each year, updated inspection reports are forwarded to the Washington State Department of Transportation (WSDOT) Local Programs which verify compliance with the NBIS and reports to the Federal Highway Administration (FHWA). More frequent inspections and evaluations are completed on bridges determined to be in need of more frequent review due to their age, exposure or condition. This program has served the citizens of Thurston County well because maintenance needs have been identified sufficiently early so that costs of repairs have remained relatively economical. However, maintenance needs and costs continue to increase due to the aging bridge inventory

Sixteen (17) bridges in the bridge inventory have exceeded their theoretical design life of 75 years. Ten (10) of these bridges were built in the 1920s or earlier and four of them have a similar design as Salmon Creek Bridge (L-4) on Lit leroch Road that was replaced in 2014. These four bridges are more frequently inspected due to the suspected lack of steel reinforcement in the superstructure or substructure. More frequent inspections are also completed on the Tilley Road (T-2),



Holmes Island (H-3), Mays Road (M-17) and the McLane Delphi (MC-7), Nisqually Cutoff (N-1) bridges due to their condition.



### Load ratings

All load ratings meet the latest federal requirements (23 CFR 650) including the criteria for Special Hauling Vehicles (SHVs) and Emergency Vehicles (EVs). Notable weight restrictions include:

- Reeder Road Bridge (R-3) –The Reeder Rd Bridge has been replaced and staff will be making a recommendation to the BoCC to remove this restriction.
- Holmes Island Road Bridge (H-3) – Weight restriction will only affect vehicles with 4 or more axles carrying heavy loads. Everyday traffic will not be impacted.
- Yelm Highway Bridge (O-12) - Staff will be making a recommendation to the BoCC to weight restrict single unit vehicles with 5,6 or 7 axles to 30, 33 and 37 tons respectively.

### Scour evaluations

The term “scour critical” is used to categorize bridge foundations in water where supporting material could be washed out by a flood event. Public Works reviewed and updated scour evaluations for all bridges in the inventory. Sixteen (16) bridges resulted in being categorized as scour critical. Attached to this report is a map showing scour critical bridge locations.

### Functionally obsolete (OB)

Functionally obsolete means that the deck geometry, load carrying capacity, clearance or approach roadway alignment has reduced the bridges ability to adequately meet the traffic demands. Functional obsolescence typically results from older bridge designs that are subject to increased traffic demands and are substandard structures as defined by the current bridge design codes. Thurston County currently owns 20 functionally obsolete bridges.

Bridge Conditions				
Agency	Number of Bridges	Scour Critical	Functionally Obsolete (FO)	Structurally Deficient (SD)
Thurston County	144	16	20	1
City of Tenino	3	0	2	0
City of Yelm	2	0	0	0
Railroad bridges	5	0	N/A	N/A
Chehalis Indian Tribe	1	0	N/A	N/A

## Structurally deficient (SD)

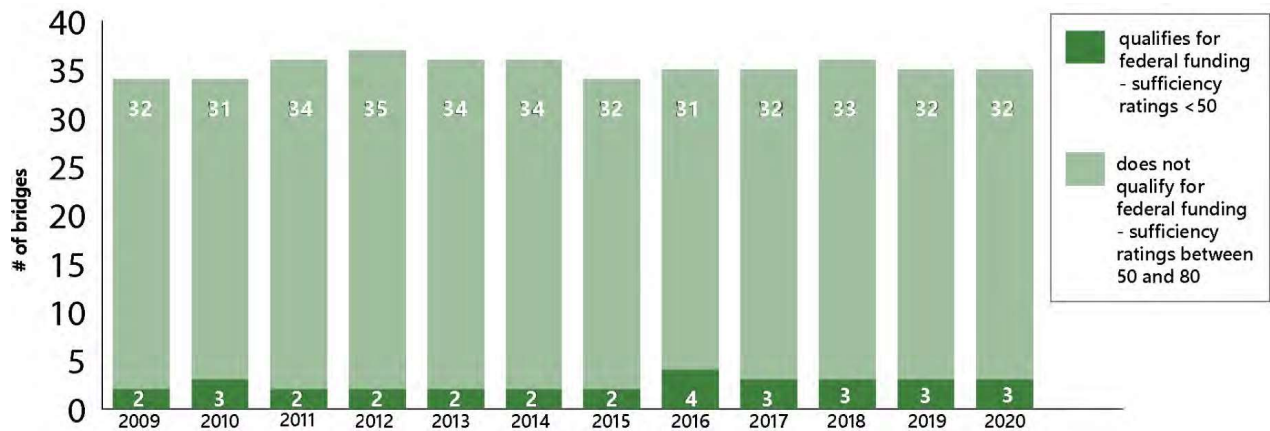
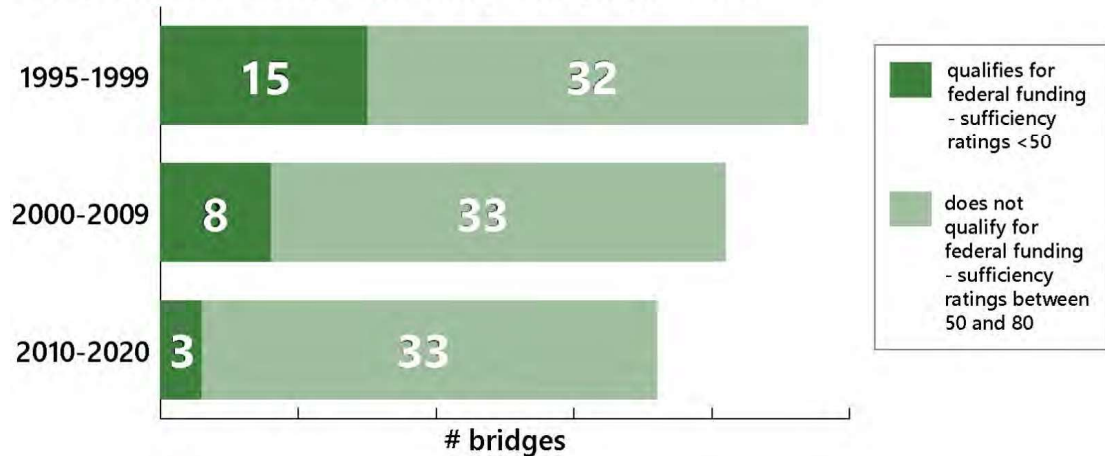
Structurally deficient means that a bridge requires repair or replacement of a certain component. These components include bridge foundations, superstructures and decks. Being structurally deficient does not imply that the bridge is in danger of collapse or unsafe to the traveling public.

The only Thurston County owned structurally deficient bridge is the Reeder Road Bridge (R-3). The bridge is weight restricted due to the condition of the railcar superstructure and foundation. A repair was completed in 2015 to allow vehicles up to 8 tons to cross the bridge.

## Sufficiency rating (SR)

Another measure that provides an overview of the condition of the inventory is a rating factor known as the Sufficiency Rating (SR). The SR of the entire inventory provides a comparative look at the health of the inventory from one year to next. The SR is a score calculated for each bridge using a multitude of ratings the inspector assigns to the bridge, based on the condition of the various components of the bridge. The geometric layout, safety, and importance of the bridge to the traveling public is also factored into the SR. The SR ranges from zero (a bridge that is closed and cannot carry traffic loads) to 100 (a new bridge with no deficiencies)

Comparison of average sufficiency ratings





## Completed repairs

Repairs/maintenances are completed as needed or scheduled to keep our bridges safe. 2020 bridge repairs/maintenance included guardrail replacement, bridge cleaning, log jam removal, brush removal, fence replacement, approach repairs, beaver dam removal, paving and more.

## Upcoming repairs

Several bridge repairs are planned for 2021. These repairs include bridge approach reconstruction, scour repairs, crack repairs and brush removal. Approach reconstruction consists of excavating the bridge approaches and replacing with suitable backfill material that will prevent settlement. Scour repairs generally include placing rip rap material around piers or foundations to prevent material from washing downstream.

- **Upcoming Repair - Steamboat Island Rd Bridge (S-7)**  
- This project is to repair cracking and prevent delamination or spalling in the pile caps of the S-7 Bridge. The repair for the S-7 Bridge includes repairing cracks using high pressure epoxy grouting techniques. The design, permitting and construction of this repair is expected in 2022.



- **Completed Repair - Nisqually Cutoff Bridge (N-1)** - A repair was completed to install/connect a steel beam to the existing pile cap to restore the carrying capacity of the bridge. A contractor completed this work for \$90,000.



### Planned bridge repairs in 2021

Bridge	Repair	Approx. Cost
Benson Bridge (V-1)	Approach Repair	\$ 10,000
Multiple Bridges	Small Repairs	\$ 15,000
Multiple Bridges	Brush Removal	\$ 10,000
Multiple Bridges	Bridge Cleaning	\$ 10,000
Multiple Bridges	HMA Crack Seal	\$ 1,500
Benson Bridge (V-1), Old Hwy 99 (O-7)	Guardrail Damage Repair	\$10,000
Nisqually Cutoff Bridge	Pier Cap Repair	\$90,000

## Completed construction

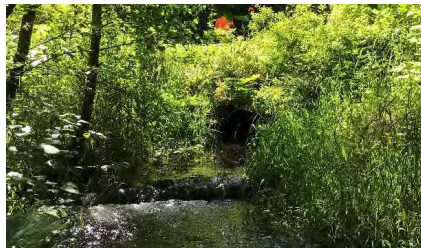
- **Deschutes River Trestle (YT-1)**

This project was a continuation of previous project to improve the life span of this timber trestle. This repair included replacing more than 20 of the existing timber piles beneath the bridge. This project was completed under Bid in the Fall of 2020.



- **Elbow Lake Creek Fish Passage (P-4)**

Image right, before construction. Image far right, after construction.



- **Salmon Creek Fish Passage (J-6)**

Image right, before construction. Image far right, after construction.



- **Beaver Creek Fish Passage (C-7)**

Image right, before construction. Image far right, after construction.



# Recommended bridge replacement considerations

## On-network bridges

For purposes of prioritizing individual projects, criteria is needed to reflect overall network and regional needs.

Prioritization criteria considered:

- **Bridge sufficiency rating** – A measure that provides an overview of the condition of the bridge. The sufficiency rating is a score calculated for each bridge using a multitude of ratings the inspector assigns to the bridge, based on the condition of the various components of the bridge.
- **Scour critical** – Are the bridge foundations in water where supporting material could be washed out by a flood event?
- **Funding secure** – Does the county have other funds secured for the project or portion of the project?
- **Route classification** – Is the bridge located on an arterial or collector classified route?
- **Functionally obsolete** – Is the deck geometry, load carrying capacity, clearance or approach roadway alignment reduce the bridges ability to adequately meet the traffic demands?
- **Average daily traffic** – Traffic volume carried by bridge.
- **Professional judgement** – Reflective of professional knowledge of the roadway network, traffic conditions, planning or pending development activity and other factors as appropriate

Criteria	Percent emphasis
Bridge sufficiency rating	21
Professional judgement	17
Funding secure	15
Scour critical	13
Average daily traffic	13
Route classification	13
Functionally obsolete	9

Route classification	Score
Arterial	6
Collector	3
None	0
Professional judgement	
High	8
Medium	4
Low	0
Bridge sufficiency rating	
0-30	10
30-50	7
50-75	4
75-100	0

Functionally obsolete	
Yes	4
No	0
Scour critical	
Yes	6
No	0
Average daily traffic	
5,000-20,000	6
2,000-5,000	4
500-2,000	2
0-500	0
Funding secure	
Secure	7
Partially secure	4
Not secure	0

# Recommended bridge replacement considerations

## Off-network bridges

For purposes of prioritizing individual projects, criteria was needed to reflect the off network bridges and regional needs. The criteria considered:

- **Bridge sufficiency rating** – A measure that provides an overview of the condition of the bridge. The sufficiency rating is a score calculated for each bridge using a multitude of ratings the inspector assigns to the bridge, based on the condition of the various components of the bridge.
- **Scour critical** – Are the bridge foundations in water where supporting material could be washed out by a flood event?
- **Funding secure** – Does the county have other funds secured for the project or portion of the project?
- **Average daily traffic** – The number of users that are carried by bridge.
- **Professional judgment** - Reflective of professional knowledge of the roadway network, traffic conditions, planning or pending development activity and other factors as appropriate.

Criteria	Percent emphasis
Bridge sufficiency rating	27
Funding secure	19
Scour critical	16
Average daily traffic	16

Professional judgement	
High	6
Medium	4
Low	0
Bridge sufficiency rating	
0-30	10
30-50	7
50-75	4
75-100	0
Scour critical	
Yes	6
No	0

Average daily traffic	
5,000-20,000	6
2,000-5,000	4
500-2,000	2
0-500	0

## 2021 program goals

- Continue to work towards having all trail bridges included in the inventory.
- Better cost tracking of all Bridge Program activities to build a better work program budget in 2022.
- Develop a long-term plan to obtain another lead certified bridge inspector.
- Include more non-reportable short span structures (i.e. large culverts and box culverts) in the bridge inventory to better prepare for future funding opportunities.
- Identify funding opportunities to for Tilley Road Bridge (T-2) replacement.

## Bridge replacement priorities

Based on the previously described criteria, the following bridges are prioritized for replacement:

### Yelm Hwy Bridge (0-12)



With a sufficiency of 37.78 and a length of 183 feet it could be a candidate for replacement funding. This bridge is federally classified as an Urban Principal Arterial and is used by more than

11,000 vehicles per day. This bridge is located over the railroad tracks and is just east of the Lacey city limits. Both the east and west approaches of Yelm Hwy are three lane sections making the two lanes, 26-foot total width, bridge a choking point for traffic. A Type, Size and Location report was completed for the project. The following are some of the highlights from the report:

- Preferred bridge alternative includes 95' Spliced Post Tension which would be a single span across the railroad right-of-way.
- Foundation abutments supported by drilled shafts.
- Roadway section includes a travel in both directions, a center turn lane, bike lanes, sidewalks and street lighting.
- A large amount of gravity block walls would be needed to retain roadway approaches.
- Total estimated project cost is \$16,000,000.
- This report allows Public Works to be better positioned for future funding opportunities.

### Tilley Road Bridge (T-2)



The Tilley Rd bridge (T-2) over Beaver Creek is functionally obsolete with a sufficiency rating of 62.22. This bridge accommodates more than 5,000 vehicles per day and is also used as an I-5 detour

route for major incidents on I-5 between Grand Mound and Maytown. The timber bridge components have significantly deteriorated and reached the end of their life span. This bridge is less than 20 feet long and is ineligible for Federal funding.

Public Works hired a consultant to complete a Type, Size and Location (TS&L) report for the bridge in order to determine the type of structure and preliminary cost for the replacement. This study is expected to be completed in 2021. Preliminary data from the study suggest that the bridge will be able to utilize shallow foundations. However, the road/bridge will need to be raised to meeting permitting and flooding requirements. This will require the extensive use of retaining walls to minimize/avoid wetland impacts.

### Little Rock Road Bridge (L-5)



This Bridge does not qualify for federal replacement funding because it is shorter than 20 feet and has a sufficiency of more than 50. Other funding options

including local funding need to be considered for a replacement project. This bridge was built in the 1920's and is susceptible to scour due to its shallow foundations that are suspected not to have any steel reinforcement.

This portion of Little Rock Road is federally classified as a Rural Major Collector, is a secondary detour route for I-5, and is used daily by more than 7,000 vehicles. The southern bridge pier cracked at mid-span due to a combination of material washing away from beneath it and the suspected lack of steel reinforcement to support it.

A repair including pouring concrete in the area where material had washed away was completed in 2014 to stabilize it. The estimated cost to replace this bridge is \$1,500,000. The total project estimated cost is \$2,000,000 to include the roadway work at the nearby Little Rock Road and 113<sup>th</sup> Ave intersection.

Project design, environmental permitting and necessary right of way acquisition were completed for this project nearly 10 years ago. Staff will review the design, permits and cost estimates.



## Bridge index

County reference	WSDOT ID	Bridge name	Feature the bridge is constructed over	Roadway, railroad, or trail connected to the bridge	Year built/rebuilt	Length	Width	Avg. daily traffic	Sufficiency rating
A-1	08708200	ANDERSON RD NORTH	SLOUGH	ANDERSON ROAD	2003	108	40.1	3226	97.23
A-2	08708300	ANDERSON ROAD MIDDLE	DRAIN CHAN	ANDERSON RD	2003	36	40	3226	97.23
A-3	08905800	ALPINE CULVERT	NONAME CREEK	ALPINE DRIVE SW	1960	11	0	1528	100
B-2	08893500	BEAVER CREEK BRIDGE	BEAVER CREEK	BEAVER CREEK ROAD	2017	40	20	430	70.83
B-3	08343200	BLOOM CREEK BRIDGE	BLOOM CREEK	110 TH AVE S.W.	1966	20	24	2634	79.73
B-4	08343100	BLOOM ROAD BRIDGE	BLOOM CREEK	110 TH. AVE. S.W.	1966	20	24	2238	77.9
B-5	08343000	BLOOM BRIDGE	BLACK RIVER	110TH AVE SW	1986	180	28.8	2339	88.78
BR-1	08652400	BORDEAUX RANCH BRIDGE	OVERFLOW	BARBOUILLAT STREET	1999	31	29.5	50	94.53
BT-1	08905700	BEAVTRIB CULVERT	NONAME CREEK	140th AVE SW	1986	11	0	255	99.88
C-1	08754400	CASE ROAD EXT BRIDG	ALLEN CREEK	CASE RD EXT	2007	29	24	28	94.74
C-2	08485700	CASE RD (PEARCE BRIDGE)	SCATTER CREEK	CASE ROAD SW	1965	66	24	2751	75.61
C-3	08082600	CASE ROAD BRIDGE	BEAVER CREEK	CASE ROAD	1970	59	28	3040	79.65
C-4	08384600	CASE ROAD BRIDGE	SALMON CREEK	CASE ROAD	1965	22	24.2	4154	66.59
C-5	08891900	CARPENTER ROAD CULVERT	LAKE LOIS	CARPENTER ROAD	2014	24	54	10192	80.01
C-6	08899200	140TH AVE CULVERT	NO NAME CREEK	140TH AVE SW	1960	14	0	121	98.94
C-7	XG110200	CASE RD FISH CULVERT	No name creeek	Case Road	2020	16	0	2719	98.6
CF-1	08796600	TAELYNN B	SWIFT CREEK	CEDAR FLATS ROAD	2008	91	28	887	77.31
CH-2	XG110201	CHURCHILL CULVERT	NO NAME CREEK	CHURCHILL RD SE	1960	10	0	282	91.34
CW-1	08827400	MARTINWAY PED CROSSING	MARTINWAY	CHEHALIS WEST TR	2010	182	14	24466	Trail
CW-2	08870900	PACIFIC AVE PED BRIDGE	PACIFIC AVE.	CHEHALIS WESTRN TR	2014	157	14	24185	Trail
CW-3	08879000	14 AVE PED TRESTLE	14th Ave SE	Chehalis Westrn Tr	1900	67	8.7	7256	Trail
CW-4	08883300	CHEHALIS W. TRL CW-4 TRE	CHAMBERS LAKE DRAINAGE	CHEHALIS W. TRL.	1900	17	13.5	0	Trail
CW-5	08883400	CHEHALIS W. TRL CW-5 TRE	CHAMBERS LAKE DRAINAGE	CHEHALIS W. TRL.	1900	49	13	0	Trail
D-2	08104600	GOEBEL BRIDGE	SKOOKUMCHUCK RIVER	GOEBEL RD SE	1982	144	16	27	80.21
D-3	XG110203	DRAHAM CULVERT	WOODLAND CREEK	DRAHAM ST NE	1960	10	0	2749	98.58

## Bridge index

County reference	WSDOT ID	Bridge name	Feature the bridge is constructed over	Roadway, railroad, or trail connected to the bridge	Year built/rebuilt	Length	Width	Avg. daily traffic	Sufficiency rating
E-1	08245700	RICH BRIDGE	DESCHUTES RIVER	RICH ROAD	1981	295	40	3843	96.58
E-2	08610200	DEMPSEY CREEK BRIDGE	DEMPSEY CREEK	DELPHI ROAD	1995	24	35.1	4432	93.53
E-3	08350500	ENDICOTT ROAD BRIDGE	CREEK	ENDICOTT ROAD	1958/1992	38	25.2	458	89.81
E-4	08342800	VOLMER BRIDGE	BLACK RIVER	123RD. S.W.	1986	180	28.8	229	97.91
E-5	0009749B	MUD BAY RD OXING	MUD BAY ROAD	EVERGREEN PARKWAY	1975	211	40	6090	92
F-1	08652700	FISH POND CREEK	FISH POND CREEK	FAIRVIEW ROAD	2000	23	0	1401	81.93
F-2	08902100	FLUMERFELT BRIDGE	OCONNER CREEK	FLUMERFELT ROAD	2018	36	24	140	94.43
FP-1	08901000	26th Ave Culv	Woodland Ck Tributary	26th Ave NE	2018	12	0	738	99.9
G-1	08430600	GIBSON ROAD BRIDGE	SCATTER CREEK	GIBSON ROAD SW	1967	62	24	535	80.81
GB-12	08899300	GATE BELMORE BRIDGE-12	NO NAME CREEK	TRAIL	1900	43	9.3	0	Trail
GB-13	08899400	GATE BELMORE BRIDGE-13	NONAME CREEK	TRAIL	1900	45	9.3	0	Trail
GM-1	08880000	PRAIRIE CREEK CULVERT	Prairie Creek	Grand Mound Way SW	1950	9	0	344	98.95
H-1	08443200	STEARNS BRIDGE	WOODLAND CREEK	HAWKS PRAIRIE ROAD	1955	61	24.1	5737	57.93
H-3	08295400	HOLMES ISLAND BRIDGE	LONG LAKE	HOLMES ISD RD	1962	53	18.8	177	50.79
HP-1	08902000	HUNTER BRIDGE	UNAMED CREEK	HUNTER POINT RD NW	2018	81	24	387	80.91
HV-1	08904900	HOLIDAY VALLEY CULVERT	SCHNEIDER CREEK	HOLIDAY VALLEY DR	1960	12	0	630	89.12
I-3	08827500	INDEPENDENCE RD BRIDGE	STREAM	INDEPENDENCE RD	2010	106	30	888	94.85
I-5	07972100	INDEPENDENCE BRIDGE	CHEHALIS RIVER	INDEPENDENCE ROAD	1976	436	28	1409	81.83
I-6	08041800	INDEPENDENCE RD BRIDGE	OVERFLOW CHANNEL	MARBEL ST. SW	1940/1964	22	24.7	1360	81.02
J-1	08041900	JAMES RD. BRDG (CULVERT)	OVERFLOW CHANNEL	JAMES ROAD	1985	26	0	1265	99.82
J-2	08093500	JAMES BRIDGE	SCATTER CREEK	JAMES ROAD SW	1982	84	26	1265	84.4
J-3	08171400	JAMES ROAD BRIDGE	PRAIRIE CREEK	OLD HWY NO. 9	1936	43	24.1	3433	65.24
J-4	08137300	JOHNSON CREEK ROAD BRDG	JOHNSON CREEK	JOHNSON CREEK ROAD	1985	40	26.2	324	86.9
J-5	08047000	JOHNSON CREEK RD BRIDGE	JOHNSON CREEK	JOHNSON CREEK ROAD	1977	52	26.2	324	91.94
J-6	08917100	JONES BRIDGE	SALMON CREEK	JONES ROAD	2020	50	24	659	85.84
JP-1	08899100	63RD UNDERCROSS	FOOT PATH	63RD AVE NE	1960	10	0	1078	99.85
L-1	08754500	128TH AVE. BRIDGE	UNNAMED STREAM	128TH AV SW	2007	29	35.3	3047	98.57

## Bridge index

County reference	WSDOT ID	Bridge name	Feature the bridge is constructed over	Roadway, railroad, or trail connected to the bridge	Year built/rebuilt	Length	Width	Avg. daily traffic	Sufficiency rating
L-2	08419200	LEITNER BRIDGE	SCATTER CREEK	LEITNER ST.	1978	70	26.2	282	92.42
L-3	07992500	BLACK RIVER BRIDGE	BLACK RIVER	128TH AVE SW	1968	100	28	3047	75.89
L-4	08867800	SALMON CREEK BRIDGE	SALMON CREEK	LITTLE ROCK ROAD	2014	77	41.5	6458	94.1
L-5	08341900	LITTLE ROCK ROAD BRIDGE	BLOOM DITCH	LITTLE ROCK ROAD	1924/1966	20	24.7	7927	76.96
L-6	0004057A	W. ULRY	CREEK	LITTLE ROCK RD.	1951	60	26	3164	72.46
L-7	0004057B	W. ANDERSON	BEAVER CREEK	LITTLE ROCK RD	1951	137	26	3577	78.62
LC-1	08741900	LACKAMAS CREEK	LACKAMAS CREEK	BALD HILLS ROAD	2006	29	35.2	3480	95.04
M-10	08685000	MOON RD	OVERFLOW	188th Ave SW	2002	61	27.3	1114	86.88
M-12	08652600	MULLEN ROAD BRIDGE	CREEK	Mullen Road	1999	92	25.6	7703	64.53
M-14	08652200	MARTIN WAY BRIDGE (west)	MC ALLISTER CREEK	MARTIN WAY EAST	2000	118	71	17895	92.21
M-15	08652300	MARTIN WAY BRIDGE (EAST)	SLOUGH	MARTIN WAY E	2000	118	71	17895	92.21
M-17	08279300	MAYS ROAD BRIDGE (215TH)	ZEKNOR CREEK	215TH AVE SW	1984/1990	19	14.8	74	66.48
M-18	08223700	MIMA CREEK BRIDGE	MIMA CREEK	GATE ROAD	1972	32	28	508	98.3
M-2	08905500	ALLEN CRK BOX CULVERT	ALLEN CREEK	MAYTOWN ROAD SW	1960	8	0	3331	98.44
M-3	08708000	MULL ROAD BRIDGE	SCATTER CREEK	MULL ROAD	2003	18	20	69	96.99
M-4	08618900	MEADOWS BRIDGE	OVERFLOW CHANNEL	MEADOWS ROAD	1995	208	16	12	83.37
M-5	08652500	MILITARY ROAD	SCATTER CR	OLD MILITARY ROAD	1999	28	23.8	290	88.95
M-6	08142800	MILITARY BRIDGE	DESCUTES RIVER	MILITARY ROAD	1984	150	26	911	85.95
M-7	08352000	GATE BRIDGE	BLACK RIVER	MOON ROAD	1976	203	28	1003	87.87
M-8	08638900	MOON BRIDGE	OVERFLOW CHANNEL	MOON ROAD	1998	205	28	1003	90.18
M-9	08684900	MOON RD	OVERFLOW CHANNEL	188 SW	2002	51	27.3	1114	86.88
MC-1	08618800	MCELFRESH ROAD BRIDGE	ZEKNOR CREEK	MCELFRESH ROAD SW	1995	56	24	79	88.23
MC-2	08633700	MCCORMICK ROAD BRIDGE	OVERFLOW CHANNEL	175 TH S.W.	1997	42	27.6	77	99.98
MC-5	08597400	MCLANE BRIDGE	MCLANE CREEK	DELPHI ROAD SW	1993	110	34	2686	98.24
MC-6	08597300	MCLANE DELPHI RD BRIDGE	MCLANE CREEK	MCLANE DELPHI ROAD	1992	62	34	2686	96.71
MC-7	08257700	MCLANE DELPHI RD BRIDGE	MCLANE CREEK	DELPHI ROAD SW	1924	24	24	2150	57.83
MC-8	08342400	MCLANE DELPHI RD BRIDGE	MCLANE CREEK	DELPHI ROAD SW	1924	24	24	2612	53.48

## Bridge index

County reference	WSDOT ID	Bridge name	Feature the bridge is constructed over	Roadway, railroad, or trail connected to the bridge	Year built/rebuilt	Length	Width	Avg. daily traffic	Sufficiency rating
N-1	08061600	NISQUALLY CUTOFF BRIDGE	OVERFLOW CHANNEL	NISQUALLY CUTOFF	1936	92	44	5226	86.55
N-2	08833700	NOSCHKA BRIDGE	NOSKI CREEK	NOSCHKA ROAD	2011	42	18.5	51	92.51
O-1	08181900	O'CONNOR BRIDGE	SKOOKUMCHUCK RIVER	CONNOR ROAD	1989	245	26	152	87.47
O-11	08639000	OLD PACIFIC HWY BRIDGE	NISQUALLY RIVER	OLD PACIFIC HWY	1998	325	40	13122	90.91
O-12	08006700	OLY-YELM RD.RR.OC	RAILROAD	YELM HWY S.E.	1951	183	26	12500	37.78
O-2	08157100	PERRY CREEK BRIDGE	PERRY CREEK	OLD HWY 410	1937	98	24	587	87.65
O-3	08154400	OLD 101 BRIDGE	PERRY CREEK	Madrona Beach Road	1958	102	24.1	1325	81.61
O-4	08231400	MUD BAY BRIDGE	MUD BAY	MUD BAY ROAD	1978	208	44	12249	97.13
O-6	08827700	OLD HWY 99	PRAIRIE CREEK	OLD HWY 99	2010	63	66.2	11240	96.84
O-7	08439800	OLD HWY 99	SCATTER CREEK	OLD HWY 99 SW	1923	66	24.1	7789	64.36
O-9	08754300	OLD HIGHWAY 99	SCATTER CREEK	OLD HWY 99	2007	115	40	5656	92.02
OB-1	08827600	OYSTER BAY CULVERT	SCHNEIDER CREEK	OYSTER BAY ROAD	2009	20	0	715	93.8
P-1	08904500	PRATHER CULVERT	NO NAME CREEK	PRATHER ROAD SW	1960	10	0	513	99.42
P-2	08338900	PRATHER BRIDGE	CHEHALIS RIVER	PRATHER ROAD SW	1988	366	34	620	97.3
P-3	08416200	LAKE ST.CLAIR BRIDGE	ST.CLAIR LAKE	PENINSULA DRIVE	1963	54	20	329	66.92
P-4	08917200	PEISSNER RD BRIDGE	ELBOW LAKE CREEK	PEISSNER RD	2020	60	24	240	87.11
PG-1	08708100	PLEASANT GLADE BRIDGE	WOODLAND CREEK	PLEASANT GLADE RD	2003	51	22.5	420	76.31
R-1	08222100	RESERVATION RD RR BRIDGE	RAIL ROAD	RESERVATION ROAD	1993	331	36	8901	93.3
R-2	08854600	RICH ROAD BRIDGE	SPURGEON CREEK	RICH ROAD	2012	67	46.3	3843	96.58
R-3	08015400	REEDER ROAD BRIDGE	BEAVER CREEK	REEDER ROAD N	1985	54	11.1	10	17.02
R-4	08904600	RAINIER CULVERT	DITCH	118TH AVE SE	1960	10	0	498	99.74
R-5	XG110202	RICH ROAD CULVERT	NO NAME CREEK	RICH RD SE	1960	10	0	7974	94.02
S-1	08464100	SARGENT ROAD BRIDGE	SCATTER CREEK	SARGENT ROAD	1984	136	28	2812	81.18
S-10	08050600	SODERLUND RD CULVERTS	OVERFLOW CHANNEL	188 SW	1981	30	0	291	98.93
S-11	08904800	SUMMIT LK CULVERT	NONAME CREEK	SUMMIT LK SHORE RD	1960	13	0	1195	99.27
S-13	08633600	SKOOKUMCHUCK CULVERTS	SKOOKUMCHUCK OVERFLOW	SKOOKUMCHUCK ROAD	1996	33	0	981	98.52

## Bridge index

County reference	WSDOT ID	Bridge name	Feature the bridge is constructed over	Roadway, railroad, or trail connected to the bridge	Year built/rebuilt	Length	Width	Avg. daily traffic	Sufficiency rating
S-14	08664100	STEILACOOM ROAD BRIDGE	HARTMAN CREEK	STEIACOOM ROAD	2001	29	30	1001	94.85
S-15	0014577B	SCHNEIDER CREEK CULVERT	SCHNEIDER CR	OLD HWY 101	1995	23	0	3915	99.63
S-2	08486500	SCHOOL LAND BRG. (CULV)	OVERFLOW CHANNEL	SCH. LND. RD. CULV	1981	53	0	345	96.95
S-3	08486300	SCHOOL LAND CULVERT	OVERFLOW CHANNEL	SCHOOL LAND ROAD	1981	25	0	381	99.91
S-4	08217600	WELLERS BRIDGE	WADDELL CREEK	SHERMAN VALLEY RD	1982	70	26	352	83.99
S-5	08625900	RAY BRIDGE	SKOOKUMCHUCK RIVER	SKOOKUMCHUCK ROAD	1996	156	28	246	98.62
S-6	08093600	ISMAY BRIDGE	SKOOKUMCHUCK RIVER	SKOOKUMCHUCK ROAD	1984	150	28	981	89.86
S-7	08454700	STEAMBOAT ISLAND BRIDGE	TOTTEN INLET	STEAMBOAT IS. RD.	1982	706	15	146	68.05
S-8	08239000	MCALLISTER BRIDGE	MCALLISTER CREEK	STEILACOOM ROAD	1964	128	24.2	1384	69.23
S-9	08176200	SUMMIT LAKE BRIDGE	KENNEDY CREEK	SUMMIT LAKE ROAD	1985	47	26	671	87.21
SC-1	08684800	SILVER CREEK	SILVER CREEK	SILVER CREEK RD	2002	22	26.2	109	90.95
T-1	07973300	TIAPO RD (183rd)	OVERFLOW CHANNEL	183RD SW	1924	26	21.4	301	82.91
T-10	08908900	TOBOTON CULVERT	Toboton Creek	Peissner Rd SE	2019	17	0	235	92.81
T-2	08114200	TILLEY RD BRIDGE	BEAVER CREEK	TILLEY ROAD	1950	21	24.2	3396	41.42
T-3	08467800	TOWNSHIP RD BRIDGE	SCATTER CREEK	183RD SW	1949	68	24.1	2813	79.49
T-4	08128700	THOMPSON CK BRIDGE	THOMPSON CREEK	THOMPSON CREEK RD.	1987	30	26	89	94.17
T-5	07963300	TONO BRIDGE	SKOOKUMCHUCK RIVER	TONO ROAD	1972	161	28	333	98.39
T-6	08597200	BLACK LAKE BRIDGE	BLACK LAKE DRAINAGE DITC	BLK-BELMORE RD.	1992	60	40	5172	91.94
T-7	08885100	TILLEY CURVE CULVERT	UNNAMED WETLAND	TILLEY ROAD	2016	13	0	3396	96.97
T-8	08902200	TROY BRIDGE	OCONNER CREEK	TROY AVE SE	2018	56	24	20	94.81
T-9	08904700	THOMPSON CK CULVERT	THOMPSON CREEK	THOMPSON CK RD SE	1960	11	0	118	93.9
V-1	08354700	BENSON BRIDGE	DESCHUTES RIVER	VAIL CUTOFF RD	1956	122	24.1	1079	79.49
V-2	08295500	RUTH BRIDGE	DESCHUTES RIVER	VAIL LOOP ROAD	1982	149	28	851	91.15
V-3	08626000	BALLETTI BRIDGE	DESCHUTES RIVER	VAIL ROAD	1997	156	34.8	2194	96.31
V-4	08892700	VAIL LOOP BOX CULVERT	NONAME CREEK	VAIL LOOP RD SE	1950	11	0	521	99.76
W-1	08461100	WADDELL CRK BRIDGE	WADDELL CREEK	WADDELL CREEK ROAD	1969	130	28	1164	72.73



## Bridge index

County reference	WSDOT ID	Bridge name	Feature the bridge is constructed over	Roadway, railroad, or trail connected to the bridge	Year built/rebuilt	Length	Width	Avg. daily traffic	Sufficiency rating
W-2	08610300	WALDRICK RD RR OVERPASS	RAILROAD	WALDRICK ROAD	1995	150	34	2391	97.75
W-3	08451100	COLLINS BRIDGE	DESCHUTES RIVER	WALDRICK ROAD	1986	150	34	1957	97.35
W-4	08215700	WILKENSEN	CENTRALIA CANAL	WILKENSEN ROAD	1986	60	34	5357	76
W-6	08252900	WOODARD BAY RD BRIDGE	WALKING TRAIL	WOODARD BAY	1958	76	24.2	1137	82.6
W-7	08251800	WOODARD BAY BRIDGE	WOODARD BAY	WOODARD BAY ROAD	1958/1977	60	24.1	1137	71.13
W-8	08193500	STONE CREEK BRIDGE	STONE CREEK	WADDELL CREEK RD.	1976	23	28	1531	88.22
W-9	08901900	PANTS CREEK CULVERT	PANTS CREEK	WADDELL CREEK RD	2018	18	0	1478	98.75
Y-1	08639100	YELM HWY PED OVERPASS	YELM HIGHWAY	PARKS PED. TRAIL	1998	126	12	24000	Trail
Y-2	08905600	SLUICE BOX CULVERT	EATON CREEK	YELM HWY	1950	8	0	7978	95.89
YT-1	08872200	DESCHUTES RIVER TRESTLE	DESCHUTES RIVER	YELM-TENINO TRAIL	1900	268	9	0	Trail
YT-2	08891600	RAILROAD GRADE BRIDGE	OBSOLETE RR	YELM TENINO TRAIL	1900	123	7.7	0	Trail
YT-3	08893000	YELM-TENINO TRAIL	CHURCH HILL CREEK	YELM-TENINO TRAIL	2004	30	9.6	0	Trail
YT-4	08899000	YELM TENINO TRAIL-RR GRADE BRIDGE	NO-NAME CREEK	YELM-TENINO TRAIL	1900	17	9.6	0	Trail
Railroad Bridges									
D-1	08216400	DURGIN ROAD TUNNEL	DURGIN ROAD	RAILROAD	1912	229	19.1	557	RR
M-13	08477000	MULLEN RD RR OVERPASS	MULLEN ROAD	N P RAILROAD	1950/2003	250	27.6	5211	RR
O-10	08053600	OLD 99 RAILROAD UNDERCRO	OLD 99	RAILROAD	1922	28	28	6729	RR
O-13	08022300	OLY-RAINIER RR OVERPASS	RAINIER RD.	BNRR Main Line	1920/2015	90	13	8230	RR
TENINO 1	08532000	BN INC U'XING	SUSSEX AVE W	BN INC RR MAINLINE	1985	125	24	22	RR
City of Yelm									
B-1	08389700	BALD HILL ROAD BRIDGE	YELM CREEK	BALD HILL ROAD	1960/1983	20	33.7	6500	81.84
MC-9	08414700	MCKENNA BRIDGE	YELM CREEK	103RD AVE. SW SE	1930	20	26.7	1800	56.47
City of Tenino									
MC-3	08243200	MCDUFF ROAD BRIDGE	SCATTER CREEK	143RD AVE S W	1987	62	34	1256	96.88

## Bridge index

County reference	WSDOT ID	Bridge name	Feature the bridge is constructed over	Roadway, railroad, or trail connected to the bridge	Year built/rebuilt	Length	Width	Avg. daily traffic	Sufficiency rating
O-8	08413300	OLD HWY 99	SCATTER CREEK	OLD HWY 99 SW	1923	66	24	5042	63.06
M-11	08619000	MORNINGSIDE BRIDGE	SCATTER CREEK	MORNINGSIDE DRIVE	1995	35	15.5	26	75.69
			Tribal						
CH-1	08728000	Casino Overcrossing	188TH AVE	PED OVERCROSSING	2005	93	12	1114	Casino

