2021 ANNUAL BRIDGE INSPECTION

Tri-City Railroad 1st Subdivision

Prepared for the:

Tri-City Railroad Company, LLC

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2021 ANNUAL BRIDGE INSPECTION TRI-CITY RAILROAD COMPANY, LLC (TCRY) 1st SUBDIVISION

SUMMARY

All bridges and a scale of the Tri-City Railroad Company were inspected by Chester Pruett and Kasey Kirschling of Railstar Engineering on the 15th of July, 2021 and found to be in good condition, due in large part to extensive bridge and track rehab work in 2015 and 2020. A few problems do exist, however.

The most serious problem is in Bridge B45.5 over Columbia Park Trail. The concrete bearing block at the SW corner of Pier 1 is cracked, crumbling, and can no longer be relied upon to carry load. This problem has been noted for several years and immediate repair is highly recommended.

Also in Bridge B45.4 are a couple construction problems from 2015 rehab work. Many of the new bridge ties are the wrong size and subsequent efforts to shim them have been unsuccessful. There are gaps under many ties and shims continue to work loose and fall onto the roadway. A less immediate issue is the premature failure of grout pads under the new steel bents in both approaches.

New ties, rail and ballast were installed in "Berry's Bridge" (B42.7 over Interstate 182) last year (2020) and are performing well. At the same time, the Yakima River Bridge (B44.4) received new ties and rail, a big improvement, but there is evidence of rail movement and some of the HCP clips anchoring the ties to the steel are working loose.

FINDINGS & RECOMMENDATIONS

The work performed last year on the decks of the Yakama River Bridge (B44.4) and "Berry's Bridge" (B42.7), was thoroughly inspected. The new ballast and curve alignment of Berry's Bridge are holding up well. However, the left rail in the Yakama River Bridge is moving south, skewing ties in Sections 3, 4 & 5. Furthermore, ties not anchored in Section 5 have begun to rotate or "tip" southward. Many of the HCP clips securing the ties to the steel stringers are loosening, especially in Section 2 (Through Plate Girders). Some clips have loosened enough to no longer secure ties.

Three ties on the headwall of the north abutment of the Yakima River Bridge (B44.4) rest in unusual steel saddles that don't bear evenly across the concrete headwall. The ties are shimmed with several ¼" shims under the tie plates. While the existing ties are performing adequately, it is understood ties of the correct height are on order. Eventually, the steel saddles will work loose. A more permanent solution is desirable.

Some shims under ties in Section 2 (the span over the roadway) of the Columbia Park Trail Bridge (B45.5) have worked loose and fallen out, creating a danger to auto traffic below. Railroad forces have worked to keep this under control, but shims continue to fall out leaving gaps under many ties and

putting great load on the remaining ties. The ties without shims will start crushing unless proper shims or proper sized ties are installed.

In the new steel approaches to the same bridge, the grout pads used where the steel bents rest upon the concrete pedestals have been spalling ever since 2016. While not an immediate threat to operations, they continue to deteriorate and will require repair long before any other component in the new section of this bridge. For some reason the tube-shaped intermediate stringer bearings on the concrete piers never received grout pads during construction in 2015 and simply rest on shims. These shims worked out and were repaired two years ago but are likely to work loose again. Founding these bearings on grout pads would solve this problem.

The most serious issue identified in this year's inspection is the disintegration of a concrete bearing block on the SW corner of Pier 1 of Section 2 of the Columbia Park Trail Bridge. This block is intended to support the west end of the floorbeam receiving steel stringers of Section 1. It's cracked, broken and can no longer be relied upon to support the floorbeam. Alternatively, the load passes to stringers bearing upon the intermediate steel tube bearings mentioned above. This may induce out-of-plane bending at the connection, possibly leading to cracking in the future. A new block should be made and properly fit up to the bearing plate of the floorbeam. It's also highly recommended that grout pads are installed below the tube bearings. The engineer and TCRY maintenance forces discussed how TCRY could affect these repairs themselves.

Observed over several years of inspection of Barry's Bridge (B42.7), the hasp for the hatch under the south end of the steel box girder (at the south abutment) is broken. The hatch is light enough to allow easy access to the interior. To head off a potential liability issue, it is recommended that the hasp be repaired and strengthened to prevent entry. It is also recommended to free the hinges on the north end hatch and secure it as well.

Whenever a new bridge is constructed between a highway and railroad, an agreement between the State DOT and the railroad is generally written which describes, among other things, who is responsible for inspection and who is responsible for maintenance. We recommend locating that document. Apparently, the U.S. Department of Energy owned the railroad when Bridge B42.7 was constructed.

The scale adjacent to the Railroad's maintenance building at MP 27.6 appears to be in overall good condition. We are told the scale is still serviceable. This was not a scale inspection, per se, but an inspection of the beams that carry live load which were found to be in good condition and the structure safe to support rail traffic.

METHOD OF INSPECTION

This was an **Annual** railroad bridge inspection, adhering to methodologies described in the **AREMA Bridge Inspection Handbook** developed by Committee 10 - Structures, Maintenance & Construction, and in compliance with recent FRA regulations spelled out in 49 CFR Parts 213 and 237, "Bridge Safety Standards." Jose Romero of TCRY was in radio contact with train crews and with Martin Romero, who was on site and provided On-Track Safety in the form of Train Approach Warning ("Watchman-Lookout" Protection) when it was necessary to foul the track.

All members of steel and concrete structures were accessed and carefully observed visually. Where direct visual examination was not possible, access was gained using free climbing.

NOTE: <u>The order of numbering of bridge sections has been reversed</u> from previous inspections which ran north to south in harmony with the bridge designations, <u>to **south increasing north**</u>. This is in harmony with the mileposts and bridge member numbering on bridge documents. It is also the direction used by the railroad for MOW.

REPORT FORMAT

The first report is a **BRIDGE LIST**, arranged by Mile Post. Bridges composed of different types of construction are divided into **SECTIONS**, such as East Approach, Main Section and West Approach. The number and type of spans are next, followed by the name of the nearest *Station* or town.

A *"BRIDGE INSPECTION SUMMARY"* report follows the bridge list. This is rather like a bridge list, but shows a condition summary field for each bridge and the date of the last inspection.

Three lists of recommended bridge work are next, organized first by PRIORITY (*"RECOMMENDED BRIDGE WORK, GROUPED by PRIORITY"*), next by BRIDGE (*"RECOMMENDED BRIDGE WORK by BRIDGE"*), and lastly a list of low cost work items (*"SUGGESTED LOW COST BRIDGE WORK"*).

Finally, are the **INSPECTION RECORDS** for each bridge. Each record contains five basic bodies of information – **PHOTOGRAPHS, INVENTORY INFORMATION, THE INSPECTION RECORD**, **SUB/SUPERSTRUCTURE DETAILS** and **RECOMMENDED WORK**.

1. INVENTORY INFORMATION

The top band contains inventory information, that being information that identifies and describes each bridge section and does not change between inspections. This includes the bridge list fields as well as year constructed, deck type and so forth. Abbreviations for bridge types are described as follows:

ΤΥΡΕ	DESCRIPTION	MATERIAL
Beam Span	Steel Beam Span	Steel
Conc Slab Span	Reinforced Concrete Slab Span	Concrete
Thru Truss	Steel Through Truss	Steel
TPG	Through Plate Girder	Steel

2. INSPECTION INFORMATION

The next band identifies the date and type of inspection, as well as who conducted it. Fields for typical inspection focus are included, such as "Line & Surface," Deck Condition," and so on.

3. <u>RECOMMENDED REPAIRS</u>

If there are any, a table for prioritized recommended repairs follows. The specific meaning of each priority is as follows:

PRIORITY	DESCRIPTION
1	Unsafe. Stop operation over structure.
2	Repair as soon as possible. Monitor very frequently, at least weekly.
3	Repair within one to three years. Monitor frequently, at least monthly.
4	Repair within three to five years.
5	Repair as funds permit.

If available, information concerning work that has been completed is also included.

SUBSTRUCTURE AND SUPERSTRUCTURE DETAIL TABLES

Tables for substructure and superstructure observations and anomalies complete each report. Basically, one table represents substructure elements - timber **BENTS** for timber trestles and pile piers, and **PIERS** and abutments for concrete/steel substructures. Another table represents the superstructure - timber **STRINGERS** for timber, and **STEEL/CONCRETE SPANS** (expanded by panels if necessary) for the appropriate material of construction. These tables provide a map easily followed while walking through each structure, increasing the efficiency and accuracy of the process.

This information is pertinent from inspection to inspection and serves to ensure that anomalies discovered in previous inspections are checked. Rather than being filed away, they are propagated forward with each inspection. The inspector visually checks each location and confirms - with the date of the current inspection - each bent, pier, span or panel. If conditions have changed, a new line with revised information is created.

" \checkmark " or "O.K." signifies the member has been inspected visually or hammer sounded and appears to be functioning as intended.

Bridge List

OWNER: Port of Benton

REGION:

RAILROAD: Tri-City Railroad

Bridge List - Tri-City Railroad - 1st Subdivision

UEBI	Mile Post	Bridge	Sec	Section Name	Spans	а Туре	Intersects	Near
11400	19.74	B45.7	1		1	Beam Span	Conc. Lined Irrigation Canal	Richland WA
11401	19.96	B45.5	1	South Approach	4	Beam Span	Columbia Park Trail (2- lane Hwy)	Richland WA
11401	19.96	B45.5	2	Main Section	1	TPG	Columbia Park Trail (2- Iane Hwy)	Richland WA
11401	19.96	B45.5	3	North Approach	4	Beam Span	Columbia Park Trail (2- lane Hwy)	Richland WA
11402	21.00	B44.4	1	South Approach I	11	Conc Slab Span	Yakima River	Richland WA
11402	21.00	B44.4	2	South Approach II	2	TPG	Yakima River	Richland WA
11402	21.00	B44.4	3	Main Section	2	Thru Truss	Yakima River	Richland WA
11402	21.00	B44.4	4	North Approach I	1	TPG	Yakima River	Richland WA
11402	21.00	B44.4	5	North Approach II	1	Beam Span	Yakima River	Richland WA
11403	22.64	B42.7	1		4	Steel Box Girder	Interstate Highway 182	Richland WA
11404	27.61	B37.7	1		3	Scale - Fulcrum		Richland WA

Number of Sections: 11 Number of Spans: 34

Number of Bridges: 5

OWNER: Port of Benton

REGION:

RAILROAD: Tri-City Railroad

LINE: 1st Subdivision

Total Number of Bridges: 5

- **Total Number of Sections: 11**
 - Total Number of Spans: 34

BridgeOWNER:Port of BentonInspectionREGION:SummaryRAILROAD:Tri-City Railroad

Bridge Inspection Summary -

Tri-City Railroad - 1st Subdivision

Mile Post	Bridge	Sec	Section Name	Spans	Туре	Last Inspection D	Date Brief Summary of Findings
19.74	B45.7	1		1	Beam Span	7/16/2022	Good condition except for loose and missing steel shims under ties (left rail only). RR forces attempt to keep tight.
19.96	B45.5	1	South Approach	4	Beam Span	7/15/2021	New in 2015. Grout pads under bent legs cosmetically repaired but in poor condition.
19.96	B45.5	2	Main Section	1	TPG	7/15/2021	Concrete bearing block at southwest corner is broken and no longer carrying load. Shims under ties loose, risk falling onto highway.
19.96	B45.5	3	North Approach	4	Beam Span	7/15/2021	New in 2015. Minor ballast leak on left side of dump bent. Grout pads under bent legs cosmetically repaired but in poor condition.
21.00	B44.4	1	South Approach I	11	Conc Slab Spa	n 7/15/2021	Good condition.
21.00	B44.4	2	South Approach II	2	TPG	7/15/2021	Good condition. New ties in 2020.
21.00	B44.4	3	Main Section	2	Thru Truss	7/15/2021	Good condition. New ties in 2020.
21.00	B44.4	4	North Approach I	1	TPG	7/15/2021	Good condition. New ties in 2020.
21.00	B44.4	5	North Approach II	1	Beam Span	7/15/2021	Good condition. New ties in 2020. Backwall ties in steel "saddles" and are incorrect height. Replacements of proper size are supposed to be coming.
22.64	B42.7	1		4	Steel Box Gird	er 7/15/2021	Hasp weld has broken on girder access door at south end and door can be opened. Technically a confined space, unsafe on hot days due to internal temperature. Door at north end also partially open but not easily accessible to trespassers.
27.61	B37.7	1		3	Scale - Fulcrur	n 7/15/2021	Good condition although would benefit from cleaning and repair of wiring for lights. Recommend replace loose, warped boards on deck as they could be tripping hazzard.
Total B	ridge Co	ount:	5 Section	Count:	11 Spa	n Count: 34	

Recommended Bridge Work

Owner: Port of Benton Region: Railroad: Tri-City Railroad Line: 1st Subdivision

Priority 2 Work

Line	Brg No	Sec	Repair Description	Work By	WorkItem	Est Cost
1st Subdivision	B45.5	2	REPLACE BROKEN BEARING BLOCK ON LEFT SIDE OF PIER 1.	Contractor	1	
1st Subdivision	B45.5	2	Reposition and secure loose shims under ties. Consider permanent fix such as replacement with treated plywood toenailed into ties or long steel shims bolted to top flange (similar to a cover plate).	Contractor	3	

Priority 3 Work

Line	Brg No	Sec	Repair Description	Work By	WorkItem	Est Cost
1st Subdivision	B45.5	1	Either remove intermediate tube bearings on concrete pier if beams are adequate to span entire distance or make tubes tight under beams and cast grout pads beneath with high strength polymer grout.	Contractor	1	
1st Subdivision	B45.5	1	Repair ballast leak and tamp approach behind South headwall.	Railroad	3	
1st Subdivision	B45.5	1	Repair grout pads under steel bents by completely removing defective material and pouring new pads with properly suited grout.	Contractor	4	
1st Subdivision	B45.5	3	Either remove intermediate tube bearings on concrete pier if beams are adequate to span entire distance or make tubes tight under beams and cast grout pads beneath with high strength polymer grout.	Contractor	1	
1st Subdivision	B45.5	3	Repair grout pads under steel bents by completely removing defective material and pouring new pads properly with properly suited grout.	Contractor	4	
1st Subdivision	B45.5	3	Repair ballast leak on left side of dump bent.	Railroad	5	
1st Subdivision	B44.4	2	Adjust and tighten loose HCP tie clips.	Railroad	2	
1st Subdivision	B44.4	3	Adjust and tighten loose HCP tie clips.	Railroad	5	
1st Subdivision	B44.4	4	Adjust and tighten loose HCP tie clips.	Railroad	2	
1st Subdivision	B44.4	5	Install ties of correct height on abutment backwall. Consider removing unusual steel "saddles" holding ties and making top of backwall level and even so ties don't rock.	Railroad	1	
1st Subdivision	B44.4	5	Adjust and tighten loose HCP tie clips.	Railroad	3	
1st Subdivision	B42.7	1	Repair girder access doors at south and north abutments. Repair broken weld in lock hasp on south door and secure. Close and secure north door.	Railroad	1	
1st Subdivision	B42.7	1	Find out if WASHDOT inspects, how often and if they enter girders.	Engineer/Inspector	2	
1st Subdivision	B37.7	1	Replace warped, loose deck boards. Could be tripping hazzard if scale is used.	Railroad	1	

Priority 4 Work

Line	Brg No	Sec	Repair Description	Work By	WorkItem	Est Cost
1st Subdivision	B44.4	1	Extend inner guard rail completely across section 5.	Railroad	1	
1st Subdivision	B44.4	3	Install 2 of 2 missing anchor bolts (!) at SE corner of Span 1, and 1 of 2 same type of bolt at NW corner of Span 2.	Contractor	3	
1st Subdivision	B37.7	1	Clean beams and drain channel floor in scale pit.	Railroad	2	

Completed Work

Line	Brg No	Sec	Repair Description	Work By	Completed
1st Subdivision	B45.7	1	Clean debris from bearing areas	Railroad	1/1/2017
1st Subdivision	B45.7	1	Reposition and secure loose steel shims under ties (left rail only). Consider permanent fix such as replacement with treated plywood toenailed into ties or long steel shims bolted to top flange (similar to a cover plate).	Railroad	10/18/2019
1st Subdivision	B45.5	1	Loose bolts in tie spacers and loose hook bolts tightened. Note: have not secured with the correct size nails as of 8/27/2020 but TCRY intends to do so. (Nails originally used were not large enough to prevent nuts from turning.)	Railroad	8/27/2020
1st Subdivision	B45.5	3	Loose bolts in tie spacers and loose hook bolts tightened. Note: have not secured with the correct size nails as of 8/27/2020 but TCRY intends to do so. (Nails originally used were not large enough to prevent nuts from turning.)	Railroad	8/27/2020
1st Subdivision	B44.4	2	Ties and rail replaced in 2020.	Railroad	8/15/2020
1st Subdivision	B44.4	3	Ties and rail replaced in 2020. Note: 35 replaced in 2018.	Contractor	8/15/2020
1st Subdivision	B44.4	3	Underwater inspection coordinated by HDR.	Engineer/Inspector	10/18/2019
1st Subdivision	B44.4	3	35 new ties installed by railroad forces in late 2018 in Panels 2 thru 6 in Span 1, and Panels 3 and 4 in Span 2.	Railroad	1/1/2019
1st Subdivision	B44.4	4	Ties and rail replaced in 2020.	Contractor	8/15/2020
1st Subdivision	B44.4	5	Ties and rail replaced in 2020.	Contractor	8/15/2020
1st Subdivision	B42.7	1	Ballast, ties and rail all replaced in 2020.	Contractor	10/7/2020

Recommended Bridge Work by Bridge, Grouped by Line (Including Completed)

Owner: Port of Benton

Region:

Railroad: Tri-City Railroad

1st Subdivision

Brg. B45.7 Section No. 1

MP 19.74	1 Span Beam Span					Est Cost or Date
Repair Description		Work by	Program Yr Priority	Workitem	Done?	Completed
Clean debris from bearing	gareas	Railroad		1	\checkmark	1/1/2017
Reposition and secure loc Consider permanent fix su toenailed into ties or long cover plate).	use steel shims under ties (left rail only). uch as replacement with treated plywood steel shims bolted to top flange (similar to a	Railroad		2		10/18/2019

SUM OF ESTIMATED COSTS:

Brg. B45.5 Section No. 1 South Approach

MP 19.96 4 Spans Beam Span					Est Cost or Date
Repair Description	Work by	Program Yr Priority	Workitem	Done?	Completed
Either remove intermediate tube bearings on concrete pier if beams are adequate to span entire distance or make tubes tight under beams and cast grout pads beneath with high strength polymer grout.	Contractor	3	1		
Repair ballast leak and tamp approach behind South headwall.	Railroad	3	3		
Repair grout pads under steel bents by completely removing defective material and pouring new pads with properly suited grout.	Contractor	3	4		
Loose bolts in tie spacers and loose hook bolts tightened. Note: have not secured with the correct size nails as of 8/27/2020 but TCRY intends to do so. (Nails originally used were not large enough to prevent nuts from turning.)	Railroad		2		8/27/2020
		SUM OF EST	IMATED CO	STS:	

Brg. B45.5 Section No. 2 Main Section

MP 19.96 1 Span TPG Repair Description	Work by	Program Yr Priority	Workitem	Done?	Est Cost or Date Completed
REPLACE BROKEN BEARING BLOCK ON LEFT SIDE OF PIER 1.	Contractor	2	1		
Reposition and secure loose shims under ties. Consider permanent fix such as replacement with treated plywood toenailed into ties or long steel shims bolted to top flange (similar to a cover plate).	Contractor	2	3		
		SUM OF EST	TIMATED CC	STS:	

Brg. B45.5 Section No. 3 North Approach

MP 19.96 Repair Description	4 Spans Beam Span	Work by	Program Yr Priority	Workitem	Done?	Est Cost or Date Completed
Either remove intermedia adequate to span entire d cast grout pads beneath w	te tube bearings on concrete pier if beams are istance or make tubes tight under beams and <i>v</i> ith high strength polymer grout.	Contractor	3	1		
Repair grout pads under s material and pouring new	teel bents by completely removing defective pads properly with properly suited grout.	Contractor	3	4		
Repair ballast leak on left	side of dump bent.	Railroad	3	5		

1st Subdivision (Cont.)

Loose bolts in tie spacers and loose hook bolts tightened. Note: have not secured with the correct size nails as of 8/27/2020 but TCRY intends to do so. (Nails originally used were not large enough to prevent nuts from turning.)

SUM OF ESTIMATED COSTS:

2

rg. B44.4 Section No. 1 South Approach I MP 21.00 11 Spans Conc Slab Span					Est Cost
Repair Description	Work by	Program Yr Priority	Workitem Done		Completed
Extend inner guard rail completely across section 5.	Railroad	4	1		
		SUM OF EST	IMATED CO	STS:	

Brg. B44.4 Section No. 2 South Approach II

MP 21.00 2 Spans	TPG	Mark bu			Danal	Est Cost or Date
Repair Description		WORK Dy	Program ir Priority	workitem	Done?	Completed
Adjust and tighten loose HCP tie clips.		Railroad	3	2		
Ties and rail replaced in 2020.		Railroad		1	\checkmark	8/15/2020
			SUM OF EST	TIMATED CC	STS:	

Brg. B44.4 Section No. 3 Main Section

MP 21.00 2 Spans Thru Truss					Est Cost or Date
Repair Description	Work by	Program Yr Priority	Workitem	Done?	Completed
Adjust and tighten loose HCP tie clips.	Railroad	3	5		
Install 2 of 2 missing anchor bolts (!) at SE corner of Span 1, and 1 of 2 same type of bolt at NW corner of Span 2.	Contractor	4	3		
Ties and rail replaced in 2020. Note: 35 replaced in 2018.	Contractor		1	\checkmark	8/15/2020
Underwater inspection coordinated by HDR.	Engineer/Inspecto	r	2	\checkmark	10/18/2019
35 new ties installed by railroad forces in late 2018 in Panels 2 thru 6 in Span 1, and Panels 3 and 4 in Span 2.	n Railroad		4	\checkmark	1/1/2019

SUM OF ESTIMATED COSTS:

Brg. B44.4 Section No. 4 North Approach I

MP 21.00 1 Span TPG		Program Yr Priority	Workitem	Done?	Est Cost or Date
	Work Sy	inogram in thomy	Workitein		Completed
Adjust and tighten loose HCP tie clips.	Railroad	3	2		
Ties and rail replaced in 2020.	Contractor		1	\checkmark	8/15/2020
		SUM OF EST	IMATED CO	STS:	

Brg. B44.4 Section No. 5 North Approach II

Work by	Program Yr Priority	Workitem	Done?	Est Cost or Date Completed
Railroad	3	1		
Railroad	3	3		
Contractor		2	\checkmark	8/15/2020
	Work by Railroad Railroad Contractor	Work byProgram Yr PriorityRailroad3Railroad3Contractor3	Work byProgram Yr PriorityWorkitemRailroad31Railroad33Contractor2	Work byProgram Yr PriorityWorkitemDone?Railroad31Railroad33Contractor2

SUM OF ESTIMATED COSTS:

Brg. B42.7 Section No. 1

MP 22.64 Repair Description	4 Spans Steel Box Girder	Work by	Program Yr Priority	Workitem	Done?	Est Cost or Date Completed
Repair girder access doors broken weld in lock hasp on north door.	at south and north abutments. Repair on south door and secure. Close and secure	Railroad	3	1		
Find out if WASHDOT insp	ects, how often and if they enter girders.	Engineer/Inspecto	r 3	2		
Ballast, ties and rail all rep	laced in 2020.	Contractor		3	\checkmark	10/7/2020
			SUM OF EST	IMATED CO	STS:	

Brg. B37.7 Section No. 1

MP 27.61	3 Spans Scale - Fulcrum	Work by	Drogrom Vr. Driarity	Workitom	Dono2	Est Cost or Date
Repair Description		work by	Program in Priority	workitem	Doner	Completed
Replace warped, loose deck used.	boards. Could be tripping hazzard if scale is	Railroad	3	1		
Clean beams and drain char	nel floor in scale pit.	Railroad	4	2		

SUM OF ESTIMATED COSTS:

SUGGESTED LOW EFFORT BRIDGE WORK

Owner: Port of Benton Region: Railroad: Tri-City Railroad Line: 1st Subdivision

Priority 3 Work

Line	Brg No	Sec	Repair Description	Work By	WorkItem	Est Cost
1st Subdivision	B45.5	3	Repair ballast leak on left side of dump bent.	Railroad	5	
1st Subdivision	B37.7	1	Replace warped, loose deck boards. Could be tripping hazzard if scale is used.	Railroad	1	
Priority 4 Work						
Line	Brg No	Sec	Repair Description	Work By	WorkItem	Est Cost
1st Subdivision	B37.7	1	Clean beams and drain channel floor in scale pit.	Railroad	2	

BRIDG		SPECTIC	ON REC	ORD	Lat.	N 46° 1	4.1996'		Jnique			B45.7
Owner Pc	ort of Be	enton			Long.	W 119° 1	4.7228'			Mile Po	ost	19.74
Region						uidao Niomoo			1400	1		
Railroad TF	RI-CITY	RAILROAD				rost Station				Irrigati	on Can	
Line 1s	t Subdi	vision			Inea	Country					Richia	
Gen Bridge No	otes:				Curr	County		0			Benton	Overhead?
					Cros	sses/Carries		Conc.	Lineo	a irrigati	on Can	
						Access	I ruck to	o Abutmen	it.			
Milepos	ts increas	e to N	Members in	ncrease to E]							
Abutmer	its 2	Alignmen	t Curve	Se	ction	1						
Conc/Steel Pie	ers	Guard Rail	? Yes	1	Spans	Beam	Spar	า				
Timber Ber	nts	Wal	< None	Est Height		No Trac	ks I	Deck	0	ion Y	ear Const	1950
Timber Pie	ers	Fiber Optic	? No	Estimologia				Deek	Οp			
Skewe	d? No	Other Fixture	s No	Ave Spa	an	Gen S	ection	Two Bear 36" Deep	ms: o, ¾" Wel	o, 6½"x ¼ "	Flange.	
Lines of I	Beams, Gii	rders or Stringer	s 2	Section Lg	th 2	6'	Notes.	26' Bearir 7'-0" ctr-0	ng to Beai ctr.	ring, 27' Out t	o Out.	
Line & Surface	Good				Date 7/	15/2021	Inspect	ion Typ	e Anr	nual		
Deck	N/A			Project	No 15	15	Ins	pector(s	5) C. F	Pruett, K.	Kirschlir	Ig
Ties	New, 7-1	/2" × 13" × 10' @ 1	4"		Genera	Warm and	clear skies.	· ·		,		0
Walkway	N/A			I	nspectio	n						
Approaches	Slightly lov	w.			Comment	S						
Headwalls	ОК											
Wingwalls	Small crac	k in left w.w. of abu	ıt. l.	Brief	Summar	y Good cond	lition excep	ot for loose	e and miss	sing steel shim	s under ties	(left rail
Erosion	None app	arent		includi	ng Urgen Conditio	it	ior ces atter	iipt to kee	p tignt.			
Drift	No											
vegetation	Minor					•						
PIERS (inc	luding	ABUTMENT	S)									
Pier Dat	e Hgt		Description	L				Pie	er Note	s		
I 07/16/2	21 4	Concrete.			Small	crack in left win	ıgwall.					
2 07/16/2	21 4	Concrete.			√							
STEEL/CO	NCRET	E SPANS (b	y PANEL)								
Span Panel	Lngth	Date				Pane	el Notes					
	26	07/16/21	Steel shims under	ties are loose or n	nissing. Left	rail only, no sh	nims require	ed under ri	ight. KR 1	forces attemp	t to keep tig	ht.
Recomme	nded a	nd Complete	ed Work									
Wrkltm Da No. Re	ate cmnd	Date Confirmd	Re	commended V	Nork De	scription			Priority	Rv.	Done?	Completed
2 08/	05/16	Repo	ition and secure le	cose steel shims ur	nder ties (le	ft rail only). Co	nsider perr	manent	3	Railroad		10/18/2019
		fix suc bolted	h as replacement to top flange (sin	with treated plywo nilar to a cover plat	ood toenaile te).	ed into ties or lo	ong steel sl	nims				
I 03/	27/12	Clean	ng areas	·				4	Railroad		1/1/2017	
Signed (Insp	Signed (Inspector):											

Chuster Vanito





1st Subdivision, South Approach of Brg. No. B45.5

BRIDG	EINS	PECTIO	N RECO	RD	Lat	. N	46°	14	4.3796'	Un	ique			В	45.5
Owner Po	rt of Ber	nton			Long	. W	119°	14	4.8788'		401	Mile	Post		19.96
Region						Brida	e Nar	me					olumbi	a Par	k Trail
Railroad TR	I-CITY R	AILROAD				arest	t Stati					0	Piol	a rai	
Line 1s			cares	Court							lianu	VVA			
Gen Bridge No	otes:				-		Cour	nty					Bento	on (Overhead
Sections I and 3 re	eplaced with s	steel trestles in 2015.			Cr	osses	/Carr	ies	Colu	mbia Pa	ark Tra	ail (2	-lane H	lwy)	No
							Acce	ess	Bridge is approac	over a highw hes for track,	/ay, allowi however	ng truck , are too	< access from o narrow to	m below.	. High fill 10date
Milepost	s increase	to N	Members increa	ise to E					rubber t	ire vehicle alc	ong side.				
Abutmen	ts	Alignment	Tangent N	A Se	ection	1	1	So	uth Ap	oproach					
Conc/Steel Pier	rs 4	Guard Rail?	Yes	4 ⁹	Spans	Be	ean	n S	Spar	1					
Timber Ben	ts	Walk	None		(type)					Dud	•		Y C		2015
Timber Pier	rs	Fiber Optic?	No	st Heigh	t 22	ſ	No Ir	ack	s I	Deck	Oper	ו	Tear Co	onst	2015
Skewed	d? Yes	Other Fixtures	No	Ave Sp	an	15'	Ger	n Se	ection	Steel bents a	are on co	ncrete s	sills.		
Lines of B	eams, Giro	lers or Stringers	4 S	ection Lg	gth	56'		1	Notes:						
Line & Surface	Slightly une	even. Approaches to	o main span slightly] [Date 7	7/15/2	2021		Inspect	ion Type	Annu	al			
Deck	NI/A				. NI. 🗖			_	1		<u> </u>				
Ties	New in 20	15				1515	A/		Ins	pector(s)	C. Pr	uett, l	C. Kirsc	nling	
Walkway	N/A]	Gene Inspecti	ion	vvarm a slightly l	loose	e. Ballast le	eak at South h	r interme neadwall.	diate dea	arings on co	increte p	ler
Approaches	Low (slight	ly)		ן כ	Comme	nts									
Headwalls	Ballast leak	behind South head	wall.]											
Wingwalls OK							Now in	2015	Grout	pada undar be	ant loss c	ormatic		d but in r	
Erosion	Brief	t Summa ing Urge	ary ' ent '	conditic	201. on.	. Grout	paus under De	ent legs c	USITIEUCA	ally repaired	i but in p	001			
Drift	None]	Conditi	ion											
Vegetation	Minor			s	low Ord	ler?									
PIERS (incl	ludina 4		5)												

Pier	Date	Hgt	Description	Pier Notes
I	07/16/21	-	Steel Cap on four steel H-Piles. This part of original approach.	Ballast leak on left side.
2	07/16/21	18	4-column steel bent. New 2015.	New in 2015 but grout pads performing poorly. Cracking and spalling noted in previous reports. Cosmetic repairs using grout attempted since 2018 inspection.
3	07/16/21	18	4-column steel bent. New 2015.	New in 2015 but grout pads performing poorly. Cracking and spalling noted in previous reports. Cosmetic repairs using grout attempted since 2018 inspection.
4	07/16/21	18	4-column steel bent. New 2015. Skewed.	New in 2015 but grout pads performing poorly. Cracking and spalling noted in previous reports. Cosmetic repairs using grout attempted since 2018 inspection.
5	07/16/21	18	Concrete Pier No. 1 of Section 2. Skewed. This part of bridge is original.	Failed bearing block under left stringer, common to sections I and 2, described in detail in Section 2. The shims under the intermediate bearings were noted loose during the 2018 inspection. They were repositioned and tighted in 2019 but are unsecured and working loose, just as they had between 2015 construction and 2019.

STEEL/CONCRETE SPANS (by PANEL)

Span	Panel	Lngth	Date	Panel Notes
1	0	15	07/16/21	4 rolled steel beams. Some tie spacer bolts are too short but functioning.
2	0	15	07/16/21	4 rolled steel beams. Some tie spacer bolts are too short but functioning.

3	0	15	07/16/21	4 rolled steel beams. Some tie spacer bolts are too short but functioning.
4	0	15	07/16/21	4 rolled steel beams. Some tie spacer bolts are too short but functioning.

Recommended and Completed Work

Wrkltm No.	Date Recmnd	Date Confirmd	Recommended Work Description	Priority	Ву:	Done?	Completed
I	12/30/15	07/15/21	Either remove intermediate tube bearings on concrete pier if beams are adequate to span entire distance or make tubes tight under beams and cast grout pads beneath with high strength polymer grout.	3	Contractor		
3	07/15/21	07/15/21	Repair ballast leak and tamp approach behind South headwall.	3	Railroad		
4	11/01/17	07/15/21	Repair grout pads under steel bents by completely removing defective material and pouring new pads with properly suited grout.	3	Contractor		
2	11/01/17	10/18/19	Loose bolts in tie spacers and loose hook bolts tightened. Note: have not secured with the correct size nails as of $8/27/2020$ but TCRY intends to do so. (Nails originally used were not large enough to prevent nuts from turning.)	3	Railroad		8/27/2020

Signed (Inspector):





B45.5

Bent 3 Looking South.



1st Subdivision, Main Section of Brg. No. B45.5

BRI	DG	E IN	SPECTI	ON RECO	RD	Lat.	N 46	9 14.379	6'Uniq Bridge	ue ID		B	45.5
Own	er Po	ort of B	enton			Long.	W 119	° 14.878	<u>3'</u>	Mi	le Post	1	9.96
Regi	on] E	Bridge N	ame			Columbia	Parl	< Trail
Railro	ad TR	RI-CITY	RAILROAD			Nez	arest Sta	tion		·	Richl	and	WΔ
Li	^{ne} 1s	t Subd	ivision				Ca				Deveter		
Gen Br	idge No	otes:				-	Col				Bentor		Overhead?
Sections	I and 3 r	eplaced wi	th steel trestles in 20	5.		Cro	sses/Car	ries Co	umbia Par	k Trail (2-lane Hv	vy)	No
	4.1			M I]	Ac	Cess Bridge appro rubbe	is over a highway aches for track, ho r tire vehicle alon	r, allowing tru owever, are t g side.	uck access from too narrow to a	below. 	High fill odate
	Thepos	ts increa	se to N	Members Increa	se to E] 							
A	butmen	ts	Alignme	nt Tangent N/	A Se	ction	2	Main Se	ection				
Conc/S	teel Pie	rs 2	Guard Ra	il? Yes	1	Spans (type)	TPG						
Tim	ber Ben	its	Wa	lk None	st Hoight		No	Fracks I	Deck	Open	Year Con	st	1950
Tim	ber Pie	rs	Fiber Opti	c? No	St Height	25			Deck	Open	Teal Con	31	1750
	Skewe	d? Yes	Other Fixtur	es No	Ave Spa	an	G	en Section	7 panels skew	ed by 2 (one	florebeam bears	s on pie	r top).
Lii	nes of B	Beams, G	irders or Stringe	rs 2 Se	ection Lg	th é	66'	Notes					
Line &	Surface	Slightly u lower.	ineven. Approache	s to main span slightly] C	Date 7/	15/202	Inspe	ction Type	Annual			
	Deck	N/A			Project	No 15	515	lı	spector(s)	C. Pruett	, K. Kirschl	ing	
	Ties	New in 2	2015.]	Gener	al Warm	n and clear ski	es.				
V	/alkway	N/A] I	nspectio	on						
Appr	oaches	N/A] C	Commen	ts						
He	adwalls	N/A]								
Wi	ngwalls	N/A			Brief	Summai	v Conci	rete bearing b	ock at southwest	corner is bro	oken and no lon	ger cari	rying
I	Erosion	None			includi	ng Urger	nt load.	Shims under t	ies loose, risk fallii	ng onto highv	way.		
	Drift	N/A] (Conditic	on						
Veg	getation	None			SI	low Orde	r?						
PIERS	6 (inc Date	luding • Hg		TS) Description					Pier N	lotes			
I	08/27/2	20	Concrete			Conc	rete bearir	ng block under	left (west) end o	f lateral beam	n common to bo	oth sect	ions I
						and 2 Section	is broken on 1 stringe	and no longe er is picking up	r carrying load. It that load which	is likely that may lead to c	intermediate be cracking in steel.	aring fo	r
2	08/27/2	20	Concrete			\checkmark					-		
STEE			TE SPANS (
Span	Panel	Lngth	Date					Panel Note	s				
	I	9.4	08/27/20	2 rolled steel beams. So	me hook bo	olts and tie	spacer bolt	ts are loose. S	hims under ties a	re made of va	arious materials	and mai	ny are
				loose, some missing.									

I	6	9.4	08/27/20	2 rolled steel beams. Some hook bolts and tie spacer bolts are loose. Shims under loose, some missing.	r ties are mad	le of various r	naterials	and many are
I	7	9.4	08/27/20	2 rolled steel beams. Some hook bolts and tie spacer bolts are loose. Shims under loose, some missing.	r ties are mad	le of various r	naterials	and many are
Reco	mmer	nded a	nd Comp	leted Work				
Wrkltn	n Da	ite	Date					
No.	Re	cmnd	Confirmd	Recommended Work Description	Priority	By:	Done?	Completed
I	10/	18/19	07/15/21	REPLACE BROKEN BEARING BLOCK ON LEFT SIDE OF PIER 1.	2	Contractor		
3	11/0	01/17	07/15/21	Reposition and secure loose shims under ties. Consider permanent fix such as replacement with treated plywood toenailed into ties or long steel shims bolted to top	2	Contractor		

Signed (Inspector):





B45.5

Main Span Looking North.





1st Subdivision, North Approach of Brg. No. B45.5

BRIDO	GE INS	PECTIO	N RECO	RD	Lat.	N 46°	2 14	4.3796'	Un	ique		[B45.5
Owner F	Port of Be	nton			Long.	W 119	° 14	4.8788'		401	Mile F	Post	19.96
Region]	Bridge Na	ame				Co	lumbia Pa	ark Trail
Railroad T	RI-CITY F	RAILROAD			Ne	arest Star	tion				00	Pichlan	
Line 1	st Subdiv	vision				ai est sta						Richan	
Gen Bridge N	Notes:			_	Col	inty					Benton	Overhead	
Sections I and	3 replaced with	steel trestles in 2015.			Cro	sses/Car	ries	Colu	mbia Pa	ark Tra	ail (2-	lane Hwy)	No
						Aco	cess	Bridge is	over a highw	/ay, allowir	ng truck	access from belo	w. High fill
N411	· · · · · · · · · · · · · · · · · · ·		Marilan					rubber t	ire vehicle alo	ong side.	, are too	harrow to accor	modate
Мііерс	osts increase	to N	Members increa	ise to E									
Abutme	ents	Alignment	Tangent N	A Se	ection	3	No	rth Ap	proach				
Conc/Steel P	Piers 4	Guard Rail?	Yes	4	Spans	Bear	m S	Spar	า				
Timber B	ents	Walk	None							~			2015
Timber P	Piers	Fiber Optic?	No	st Heigh	t 22		гаск		Деск	Open	1	Tear Const	2015
Skev	ved? Yes	Other Fixtures	No	Ave Sp	an I	5' G	en Se	ection	Steel bents	are on cor	ncrete sil	lls.	
Lines of	f Beams, Gire	ders or Stringers	4 5	ection Lg	gth .	56'	1	Notes:					
Line & Surfac	e Slight wow	. Slightly uneven. A	opproaches to main]	Date 7	/15/2021		Inspect	ion Type	Annua	al		
	span slight	y lower.							<i>,</i> ,				
Dec	k N/A			Projec	t No 🛛	515		Ins	pector(s)	C. Pru	uett, K	. Kirschling	
Tie	s New in 20	15.]	Gener	al Warm	and c	lear skies.	Shims under	r intermed	diate bear	rings on concrete	e pier
Walkwa	y N/A]	Inspectio	on slightly	/ loose	2.					
Approache	s Low (slight	:ly)] (Commen	ts							
Headwall	s Ballast leak	at left side of dump	bent.										
Wingwall	s OK			Brief	f Summa	ry New i	n 2015	5. Minor	ballast leak or	left side (of dump	bent. Grout pag	ls under
Erosio	n None			includ	ing Urge	nt bent le	egs cos	smetically	repaired but	in poor co	ondition.		
Drif	ft No]	Conditio	on							
Vegetatio	n Minor			S	Slow Orde	er?							

PIERS (including ABUTMENTS)

Pier	Date	Hgt	Description	Pier Notes
Ι	07/16/21	18	Concrete Pier No. 2 of Section 2. Skewed. Original part of bridge.	The shims under the intermediate bearings were noted loose during the 2018 inspection. Those shims have since been repositioned and tighted but they are unsecured so will likely work loose in future, just as they have since 2015 construction.
2	07/16/21	18	4-column steel bent. New 2015. Skewed.	New in 2015 but grout pads performing poorly. Cracking and spalling noted in previous reports. Cosmetic repairs using grout attempted since 2018 inspection.
3	07/16/21	18	4-column steel bent. New 2015.	New in 2015 but grout pads performing poorly. Cracking and spalling noted in previous reports. Cosmetic repairs using grout attempted since 2018 inspection.
4	07/16/21	18	4-column steel bent. New 2015.	New in 2015 but grout pads performing poorly. Cracking and spalling noted in previous reports. Cosmetic repairs using grout attempted since 2018 inspection.
5	07/16/21	I	Steel Cap on four steel H-Piles. This is part of original approach.	\checkmark

STEEL/CONCRETE SPANS (by PANEL)

Span	Panel	Lngth	Date	Panel Notes
I	0	15	07/16/21	4 rolled steel beams. Some hook bolts and tie spacer bolts are loose. Some tie spacer bolts are too short but functioning.
2	0	15	07/16/21	4 rolled steel beams. Some hook bolts and tie spacer bolts are loose. Some tie spacer bolts are too short but functioning.
3	0	15	07/16/21	4 rolled steel beams. Some hook bolts and tie spacer bolts are loose. Some tie spacer bolts are too short but functioning.

4	0	15	07/16/2	4 rolled steel beams. Some hook bolts and tie spacer bolts are loose. Some tie spa	cer bolts a	are too short b	ut functio	ning.
Recor	nmen	ded a	nd Com	pleted Work				
Wrkltn No.	n Dat Rec	e mnd	Date Confirmd	Recommended Work Description	Priority	у Ву:	Done?	Completed
T	12/30	0/15	07/15/21	Either remove intermediate tube bearings on concrete pier if beams are adequate to span entire distance or make tubes tight under beams and cast grout pads beneath with high strength polymer grout.	3	Contractor		
4	11/0	1/17	07/15/21	Repair grout pads under steel bents by completely removing defective material and pouring new pads properly with properly suited grout.	3	Contractor	•	
5	10/18	8/19	07/15/21	Repair ballast leak on left side of dump bent.	3	Railroad		
2	11/0	1/17	07/15/21	Loose bolts in tie spacers and loose hook bolts tightened. Note: have not secured with the correct size nails as of 8/27/2020 but TCRY intends to do so. (Nails originally used were not large enough to prevent nuts from turning.)	3	Railroad		8/27/2020

Signed (Inspector):





B45.5

Right Side of Section 3



B45.5

Looking North from Pier 2.



Railstar Engineering

1st Subdivision, South Approach I of Brg. No. B44.4

BR	IDG	EINS	SPECTIO	N REC	ORD	Lat	. N	46°	15.1500	Uniqu	le		B44.4
Own	ner Po	rt of Be	nton			Long	. W	119°	15.4668	Bridge	Mi	le Post	21.00
Regi	on					1	Duid			1140.	2		
Railro			RAILROAD				Drid	ge man		Ŷ			
Li	ine 1s	t Subdiv	vision				eares	C Static				Richia	
Gen Br	ridge No	otes:						Count				Benton	Overhead
						Cr	osses	s/Carrie	es		Y	akima Rive	r No
								Acces	SS Truck t	o Abutment.			
	Milepost	ts increase	e to N	Members in	crease to E								
A	butmen	ts	Alignment	Tangent	N/A S	ection	-	1 5	South A	pproach I			
Conc/S	Steel Pie	rs II	Guard Rail?	Yes	11	Spans	C	onc	Slab	Span			
Tim Tin	ber Ben nber Pie	ts	Walk Fiber Optic?	West No	Est Heigh	t 20		No Tra	icks	Deck	Ballast	Year Const	
	Skewe	d? No	Other Fixtures	No	Ave Sr	an	15'	Gen	Section				
Li	nes of B	Beams, Gir	ders or Stringers		Section L	gth	165'		Notes:				
Line &	Surface	ОК				Date 7	7/15/	2021	Inspec	tion Type A	nnual		
	Deck	ОК			Projec	t No	515		Ins	spector(s)	. Pruett	, K. Kirschlin	g
	TiesOK						eral	Warm ar	nd clear skies				<u> </u>
V	Walkway Good condition.						ion						
Арр	roaches	OK				Comme	nts						
He	eadwalls	OK											
W	ingwalls	OK			Brie	f Summa	ary	Good co	ndition.				
	Erosion	No			includ	ing Urge	ent						
	Drift	No				Conditi	ion						
Ve	getation	Minor				Slow Ord	ler?						
PIER	S (incl	luding	ABUTMENTS	6)									
Pier	Date	e Hgt	1	Description						Pier No	otes		
I	07/16/2	1 18				√							
2	07/16/2	1 18				√ /							
3	07/16/2	1 10				✓ ✓							
-7	07/16/2	1 18				√							
6	07/16/2	1 19				√							
7	07/16/2	1 19				\checkmark							
8	07/16/2	1 19				\checkmark							
9	07/16/2	1 19				\checkmark							
10	07/16/2	1 19				√							
11	07/16/2	.1 19				Pier	· comn	non with	section 2				
STEE Span	L/CO Panel		E SPANS (by Date	PANEL)				Pa	nel Notes				
		15	07/14/21										

2	1	15	07/16/21	\checkmark
3	I	15	07/16/21	\checkmark
4	I	15	07/16/21	\checkmark
5	1	15	07/16/21	\checkmark
6	I	15	07/16/21	\checkmark
7	1	15	07/16/21	\checkmark
8	1	15	07/16/21	\checkmark
9	I	15	07/16/21	\checkmark
10	I	15	07/16/21	\checkmark
11	I	15	07/16/21	\checkmark

Recommended and Completed Work

Wrkltm	Date	Date					
No.	Recmnd	Confirmd	Recommended Work Description	Priority	By:	Done?	Completed
1	03/27/12	07/15/21	Extend inner guard rail completely across section 5.	4	Railroad		
		1					

Signed (Inspector):

Chuster Prutto



B44.4

Section 1 Looking North.



Underside of Section 1 Near Bent 3.



1st Subdivision, South Approach II of Brg. No. B44.4

BR	DG	E IN	SPECTI	ON REC	CORD	Lat.	N 46°	15.1500	Unique		B44.4
Own	er Po	ort of B	enton			Long.	W 119°	15.4668		Mile Post	21.00
Regi	on						Bridge Na	me		Yakima	River Bridge
Railro		RI-CITY	RAILROAD			Ne	earest Stati	on		R	ichland WA
Li	ne 1s	t Subd	ivision				Cou	nty		Bei	nton Overhead
Gen Br	idge No	otes:				Cro	osses/Carr	ies		Yakima	River No
							Acc		o Abutment.		
							7100	233			
I	Milepos	ts increa	se to N	Members i	ncrease to E						
A	butmen	ts	Alignme	nt Tangent	N/A Se	ction	2	South A	pproach II		
Conc/S	steel Pie	rs 3	Guard Ra	il? Yes	2	pans	TPG				
Tim	ber Ben	its	Wa	lk None		26		acks I	Deck On	en Year	Const 1907
Tin	nber Pie	rs	Fiber Opt	c? No	Latinegin	20					
	Skewe	d? No	Other Fixtur	es No	Ave Spa	an	Ge	n Section	Span 2 has "1907" o New ties installed a	on plate, but subst across entire deck	ructure is newer. in Sections 2 - 5 in
Li	nes of E	Beams, G	irders or Stringe	rs	Section Lg	th	175'	notes.	2020, including inte at each span but fla	entional camber th attens out under liv	at appears "humped" ve load.
	. . [
Line &	Surface	Good.	Appears humped, b	ut includes LL cai	mber.	Date 7	/15/2021	Inspec	tion Type Ann	ual	
	Деск	N/A	2020 One tie has	call stack of 1/4"	Project	No	515	In	spector(s) C. P	Pruett, K. Kir	schling
	Ties	shims -	plan is to replace w	th proper size.		Gene nspecti	ral Warm a	ind clear skie: nple betweer	 Minor corrosion ov top cover plates. 	verall and some pa	ck rust developing,
V	Valkway	N/A			C	Comme	nts				
Арр	roaches	N/A									
He	adwalls	N/A									
W	ingwalls	N/A			Brief	Summa	ary Good c	ondition. Ne	w ties in 2020.		
	Erosion	None ap Pier 13)	parent. (Can see	CMP around piles	^{s in} includi	ng Urge	ent				
	Drift	No				Conditi	on				
Veg	getation	None			SI	ow Ord	er?				
PIER	S (inc	luding	ABUTMEN	TS)							
Pier	Date		t Concernto Bion of	Description	ו				Pier Note	S	
11	07/16/2	21 17	Concrete.			 ✓					
13	07/16/2	21 20	Deep C.I.P. concr	ete cap on steel H-	piles. Pier shared	Mod	lerate drift.				
			with sections 3								
STEE	L/CO	NCRE	TE SPANS	by PANEL	.)						
Span	Panel	Lngth	Date	.			Pa	anel Notes			
1	-	9.75	07/16/21	throughout.							
	2	9.75	07/16/21	throughout.							
	3	9.75	07/16/21		throughout and pac	pack rust between top cover plates.					
	4	9.75	07/16/21	Bent Dottom late	rai brace. Minor co	corrosion throughout and pack rust between top cover plates.					
1	5	9.75	07/16/21	Minor corrosion	throughout and pac	K rust be	tween top co	ver plates.			
I	6	7./5	07/16/21	THINOP COPPOSION	unougnout and pac	.k rust De	ween top co	ver plates.			

1	7	9.75	07/16/21	Minor corrosion throughout.
I	8	9.75	07/16/21	Minor corrosion throughout.
2	I	10.25	07/16/21	Minor corrosion throughout.
2	2	10.25	07/16/21	Minor corrosion throughout.
2	3	10.25	07/16/21	Minor corrosion throughout and pack rust between top cover plates.
2	4	10.25	07/16/21	Minor corrosion throughout and pack rust between top cover plates.
2	5	10.25	07/16/21	Minor corrosion throughout and pack rust between top cover plates.
2	6	10.25	07/16/21	Minor corrosion throughout and pack rust between top cover plates.
2	7	10.25	07/16/21	Minor corrosion throughout and pack rust between top cover plates.
2	8	10.25	07/16/21	Minor corrosion throughout.
2	9	10.25	07/16/21	Minor corrosion throughout.

Recommended and Completed Work

Wrkltm No.	Date Recmnd	Date Confirmd	Recommended Work Description	Priori	ty By:	Done?	Completed
2	07/15/21		Adjust and tighten loose HCP tie clips.	3	Railroad		
1	03/27/12	07/15/21	Ties and rail replaced in 2020.	2	Railroad	✓	8/15/2020

Signed (Inspector):

Chuster Prints



B44.4

Right Side Bearings of Section 2.



B44.4

Side of Span 2 Looking Northwest.



1st Subdivision, Main Section of Brg. No. B44.4

BRIDG	E INSPECTION RECOR	RD Lat	t. N 46° 1	5.1500' Unique		B44.4		
Owner Pc	ort of Benton	Long	g. W 119° 1	5.4668'	2 Mile Post	21.00		
Region			Bridge Name		Yakima River	r Bridae		
Railroad TF	RI-CITY RAILROAD	N	earest Station		Richlan			
Line 1s	t Subdivision							
Gen Bridge No	otes:		councy		Vakima Divar	Overnead		
			Usses/Carries		takilla River	NO		
			Access	I ruck to Abutment.				
Milepos	ts increase to N Members increas	e to E						
Abutmen	nts Alignment Tangent N/A	Section	3 Ma	in Section				
Conc/Steel Pie	ers 3 Guard Rail? Yes	2 Spans	Thru T	russ				
Timber Ber	nts Walk None	(type)			O Year Const			
Timber Pie	ers Fiber Optic? No	st Height 26			Open Tear Const			
Skewe	d? No Other Fixtures No	Ave Span	Gen Se	ection New ties instal 2020, including	led across entire deck in Sectior intentional camber that appears	ıs 2 - 5 in s "humped"		
Lines of E	Beams, Girders or Stringers 2 Se	ction Lgth	220'	at each span bu	it flattens out under live load.			
Line & Surface	Good. Appears humped, but includes LL camber.	Date	7/15/2021	Inspection Type	Innual			
Deck	N/A	Project No	1515	Inspector(s) C. Pruett K. Kirschling				
Ties	New in 2020.	Gene	eral Warm and o	lear skies. Anchor bolts n	nissing southeast bearing, span I	(2 of 2!)		
Walkway	N/A	Inspect	ion and northwo	est bearing, span 2 (1 of 2) e.	. Minor rust streaks running dov	vn L0 U I		
Approaches	N/A	Comme	ents					
Headwalls	N/A							
Wingwalls	N/A	Brief Summ	Good condi	tion. New ties in 2020.				
Erosion	Unknown (under water).	including Urg	ent					
Drift	No	Condit	ion					
Vegetation	None	Slow Ord	der?					
PIERS (inc	luding ABUTMENTS)			Pier N	otes			

Pier	Date	Hgt	Description	Pier Notes
13	07/16/21	20	Deep C.I.P. concrete cap on steel H-piles. Pier shared with section 2. Normally in H2O.	Minor drift.
14	07/16/21	20	Deep C.I.P concrete cap on steel H-piles. Normally in H20	Minor drift. Concrete block under left bearing of 1st truss starting to deteriorate.
15	07/16/21	20	Deep C.I.P. concrete cap on steel H-piles. Pier shared with section 4. Normally in H2O.	Minor drift.

STEEL/CONCRETE SPANS (by PANEL)

Span	Panel	Lngth	Date	Panel Notes					
I	I	15.75	07/16/21	Both bolts missing from right (southeast) span to bearing connection. Minor corrosion throughout. Rust streaks on right side of LOUI, possibly from water retained behind peeling paint.					
I	2	15.75	07/16/21	Minor corrosion throughout.					
I	3	15.75	07/16/21	Minor corrosion throughout.					
I	4	15.75	07/16/21	Panel point 4 bent member (minor). Minor corrosion throughout.					
I	5	15.75	07/16/21	Minor corrosion throughout.					
I	6	15.75	07/16/21	Minor corrosion throughout.					

1	7	15.75	07/16/21	Minor corrosion throughout.
2	I	15.75	07/16/21	Minor corrosion throughout.
2	2	15.75	07/16/21	Minor corrosion throughout.
2	3	15.75	07/16/21	Minor corrosion throughout.
2	4	15.75	07/16/21	Minor corrosion throughout.
2	5	15.75	07/16/21	Minor corrosion throughout.
2	6	15.75	07/16/21	Minor corrosion throughout.
2	7	15.75	07/16/21	One bolt missing from left (northwest) span to bearing connection. Minor corrosion throughout.

Recommended and Completed Work

Wrkltm No.	Date Recmnd	Date Confirmd	Recommended Work Description	Priority	у Ву:	Done?	Completed
5	07/15/21		Adjust and tighten loose HCP tie clips.	3	Railroad		
3	11/01/17	07/15/21	Install 2 of 2 missing anchor bolts (!) at SE corner of Span I, and I of 2 same type of bolt at NW corner of Span 2.	4	Contractor		
1	12/30/15	07/15/21	Ties and rail replaced in 2020. Note: 35 replaced in 2018.	2	Contractor	 ✓ 	8/15/2020
4	12/30/15	07/15/21	35 new ties installed by railroad forces in late 2018 in Panels 2 thru 6 in Span 1, and Panels 3 and 4 in Span 2.	2	Railroad	✓	1/1/2019
2	12/30/15	07/15/21	Underwater inspection coordinated by HDR.	3	Engineer/Inspec	tor 🗸	10/18/2019

Signed (Inspector):

Chuster Prints



B44.4

Floor System & Anchor Bolts Under Section 3.



Left Side of Section 3.

1st Subdivision, North Approach I of Brg. No. B44.4

BRIDG	EINS	PECTIO	N RECO	RD	Lat. N	46° 1	5.1500'	Uni	que	ĺ	344.4
Owner Pc	ort of Ber	nton			Long. W	119° 1	5.4668'		02	Mile Post	21.00
Region					Bridge Name Yakima Riv						Bridge
Railroad TF		AILROAD			Neare	est Station				Richlan	
Line 1s	st Subdiv	ision		, tour e	County				Bonton	Overhead	
Gen Bridge No	otes:			Cross	councy				Vokimo Biyor	No	
			C10336					Takima River			
						Access	I ruck to	Abutment.			
Milepos	sts increase	to N	Members increa	se to E							
Abutmer	nts	Alignment	Tangent N/	A Sec	tion	4 No	orth Ap	proach	I		
Conc/Steel Pie	ers 2	Guard Rail?	Yes	1 Sp	oans T	ΡG					
Timber Ber	nts	Walk	None	(t	ype)				~		
Timber Pie	ers	Fiber Optic?	No	st Height	26	No Trac	ks I	Deck	Open	Fear Const	
Skewe	ed? No	Other Fixtures	No	Ave Spar	1 🗌	Gen S	ection	New ties ins	talled acro	oss entire deck in Section	.s 2 - 5 in s "humped"
Lines of I	Beams, Giro	lers or Stringers	3 S	ection Lgth	ר <mark>79'</mark>		Notes:	at each span	but flatte	ns out under live load.	namped
Line & Surface	Good. App	pears humped, but i	ncludes LL camber.	D	Date 7/15/2021 Inspection Type Annual						
Deck	N/A			Project I	No 151	5	Ins	pector(s)	C. Pru	iett, K. Kirschling	
Ties	New in 202	20.]	General	Warm and	clear skies.	Grout pads (ınder bea	rings starting to show sig	ns of
Walkway	N/A			In	spection	deterioratio Paint chippi	on. ing off. Min	or corrosion l	eneath.		
Approaches	N/A			Co	omments						
Headwalls	N/A]							
Wingwalls	Wingwalls N/A				Summary	Good cond	lition. New	r ties in 2020.			
Erosion Minor around piles.					g Urgent						
Drift	No] C	ondition						
Vegetation	None			Slo	w Order?						
PIERS (inc	ludina A	BUTMENTS	;)								

PIER	EKS (including Abo Then TS)											
Pier	Date	Hgt	Description	Pier Notes								
15	07/15/21	20	Deep C.I.P. concrete cap on steel H-piles.	Pier common with section 3. One pile damaged on lower concrete encasement.								
16	07/15/21	20	Deep C.I.P. concrete cap on steel H-piles.	Pier common with section 5								

STEEL/CONCRETE SPANS (by PANEL)

Span	Panel	Lngth	Date	Panel Notes				
I	-		07/15/21	\checkmark				
I	2		07/15/21	\checkmark				
I	3		07/15/21	\checkmark				
I	4		07/15/21	\checkmark				
I	5		07/15/21	\checkmark				
I	6		07/15/21	\checkmark				
I	7		07/15/21	\checkmark				
I	8		07/15/21	\checkmark				
Reco	Recommended and Completed Work							

Wrkltm No.	Date Recmnd	Date Confirmd	Recommended Work Description	P	riority	у Ву:	Done?	Completed
2	07/15/21		Adjust and tighten loose HCP tie clips.		3	Railroad		
1	12/30/15	10/18/19	Ties and rail replaced in 2020.		3	Contractor	· 🗸	8/15/2020
Signed (Inspector):		Chris	the Prints					



B44.4

Deck of Sections 4&5 Looking North.



B44.4

Looking Sorth from East side.

1st Subdivision, North Approach II of Brg. No. B44.4

BRID)G	E IN	SPEC	ΤΙΟΙ	N REC	CORD	Lat	t. N	46°	15.1500'	Ur				B44.4	
Owner	Ро	rt of B	enton				Long	g. W	119°	15.4668'		402	Mile Po:	st	21.00	
Region								Brida	o Nam			102	Vokir	no Piv	or Pridaa	
Railroad	TRI-CITY RAILROAD						N	Nearest Station								
Line	1s	t Subd	ivision											RICHI		
Gen Bridg	Gen Bridge Notes:								Benton							
							Cr	rosses/	Carrie				Yakin	na Riv	er No	
									Acces	S Truck to	o Abutment.					
Mile	Mileposts increase to N Members increase to E															
Abut	tmen	ts I	Ali	gnment	Tangent	N/A Se	ction	5	i N	lorth Ap	oproach	11				
Conc/Stee	el Pie	rs I	Gua	rd Rail?	Yes	1	pans	Be	eam	Spar	า					
Timber	r Ben	ts		Walk	None	Est Height			Jo Tra		Deck	0		ar Cons	1950	
Timbe	er Pier	rs	Fiber	Optic?	No	LSCITEIgin	. 20	<u> </u>	NO ITA		Deck	Ορ	en re		1750	
Sk	kewe	d? No	Other F	ixtures	No	Ave Spa	in		Gen	Section	New ties in 2020, inclue	istalled a ding inte	across entire d entional cambe	eck in Sec r that app	tions 2 - 5 in ears "humped"	
Lines	s of B	eams, G	irders or St	ringers	2	Section Lg	th	31'		notes:	at each spa	n but fla	ttens out unde	er live load	l.	
Line & Sur	rface	Good. A	Appears hump	oed, but in	icludes LL car	mber. [Date	7/15/2	2021	Inspect	tion Type	Ann	ual			
C	Deck	N/A				Project	No	1515	Kirschli	ng						
	Ties	New in 2	2020. Backw	all ties inco	orrect height	in	Gen	eral	Varm an	d clear skies						
		"saddles				I	nspect	tion								
Walk	(way	N/A	1.1.2			C	omme	ents								
Approa	cnes	LOW (SII	ntiy)	mmod Bl	an is to ropla											
Пеацу	waiis	with cor	rect size.	mmed. Fi	an is to repla	ice										
Wingv	walls	ОК				Brief	Summ	ary (Good cor	ndition. Nev	w ties in 2020). Backv	vall ties in stee	l "saddles"	' and are	
Ero	osion	Minor ar	ound piles in	pier 16.		includi	ng Urg	gent "	ncorrect	height. Rep	lacements of	proper	size are suppo	sed to be	coming.	
[Drift	No					Condit	ondition								
Vegeta	ation	None				SI	ow Or	v Order?								
	(:				,											
PIERS (Pier	Date	uaing Hg	LABUTIV t	IEN 15) Descriptior	1					Pier	·Note	s			
16 0	7/15/2	1 15	Deep C.I.P.	concrete c	ap on steel H-	piles.	Pie	er comm	on with S	Section 4.						
17 0	17 07/15/21 5 Concrete abutment.					Bad	ckwall tie	es in stee	el "saddles" a	nd are incorr	ect heig	ht.				
STEEL /				NS (by)										
Span Pa	anel	Lngth	Date	10 (by		<i>)</i>			Par	nel Notes						
I	I I	31	07/15/	21 🗸												
Recom	mer	nded a	and Com	pleted	Work											
Wrkltm	Da	te	Date													
No.	Re	cmnd	Confirmd		Re	commended V	Vork I	Descri	otion		Pı	riority	Ву:	Done?	Completed	
	03/2	//12	07/15/21	Install ties "saddles"	s of correct he holding ties an	ight on abutment b id making top of ba	ackwall. ckwall le	ackwall. Consider removing unusual steel 3 Railroad :kwall level and even so ties don't rock.								
3	07/1	5/21	07/15/21	Adjust an	nd tighten loos	e HCP tie clips.	3 Railroad						9/15/2022			
2	2 12/30/15 07/15/21 Ties and rail replaced in 2020.											3	Contractor		8/15/2020	

Signed (Inspector):





BRI	DG	E INSPECTION RECORD							Lat. N 46° 15.4998'					nique			E	842.7	
Owne	r Po	rt of E	Ber	nton				Long	Long. W 119° 17.2500'					403	Mi	le Post		22.64	
Regio	n								Bridge Name							B	errv's	Bridae	
Railroa	d TR	I-CIT	r R	AILROAD				N	eares	t Sta	tion					Ri	chland	I WA	
Lin	e 1s	t Subo	vik	ision						Сог	Inty	Ponton o d							
Gen Brid	dge No	tes:						ı Cr	05565	s/Car	ries		Int	orsta	nto H	liahwa	v 182	No.	
Suggest fil agreemen WASHDO	nding out nt. If it's t OT?)	: who is r he State	espc - do	nsible for maintenance they inspect it? How a	e. There should about drawings?	be an (On-Lin	e with	th Access F				Bridge is over interstate highway and frontage roads. High fill approaches for track, however, are too narrow as is to accommodate nubber tire vehicle along side						n fill	
M	lilepost	s incre	ase	to N	Members in	crease	e to E												
Ab	utmen	ts 2		Alignment	Curve		Se	ction	•	1									
Conc/St	eel Pie	rs 3		Guard Rail?	Yes	2		Spans	S	tee	el B	ox C	Girder	-					
Timb	er Ben	ts		Walk	Both	Fst	Height	- 30		ΝοΤ	Fracks		Deck	Balla	st	Year (Const		
Timt	oer Pie	^s		Fiber Optic?	No	LSI	. i leight												
:	Skewe	d? No)	Other Fixtures	No		Ave Spa	In 125' Gen Section Curved steel box girder, continuous over the three piers							ree piers.				
Lin	es of B	eams, (Girc	lers or Stringers		Sec	tion Lg	th	500'		IN	iotes.							
Line & S	urface	Good					[Date	7/15/	202		Inspect	ion Type	Annı	Jal				
	Deck	Good					Project No 1515				Inspector(s) C. Pruett, K. Kirschling								
	Ties	New ti	es, r	ail and ballast in 202	.0.			Gene	eral	Warm	and cle	ear skies.		I					
Wa	alkway	Good (wide	e ballast with handra	uls)		I	nspect	ion	Hasp v Techn	weld ha iically a	as broken on south girder inspection door, and door can be opened. a confined space, unsafe on hot days due to internal temperature.							
Appro	baches	Slightly	low	•			C	.omme	nts	North door is partially open although difficult to reach, should be secure					ed.				
Hea	dwalls	Good																	
Win	gwalls	Good					Brief	Summ	ary	Hasp	weld ha	has broken on girder access door at south end and door can be oor at north end also partially open but not easily accessible to							
Ei	rosion	No					includi	ng Urg	ent	opene trespa	ssers.						to		
	Drift	N/A						Condit											
Vege	tation	None					S	low Ord	der?										
PIFRS	(incl	udin	Αr	BUTMENTS	;)														
Pier	Date	H	gt -		Description								Pier	Notes	;				
I	07/15/2	I 4		Concrete.				√											

I	07/15/21	4	Concrete.	\checkmark
2	07/15/21	20	Concrete.	\checkmark
3	07/15/21	20	Concrete.	\checkmark
4	07/15/21	20	Concrete.	\checkmark
5	07/15/21	8	Concrete.	\checkmark

STEEL/CONCRETE SPANS (by PANEL)

Span	Panel	Lngth	Date	Panel Notes
I	I	125	07/15/21	Broken hasp in girder inspection door. Cast-in-place concrete ballast deck on continuous steel box beam.
2	2	125	07/15/21	Cast-in-place concrete ballast deck on continuous steel box beam.
3	3	125	07/15/21	Cast-in-place concrete ballast deck on continuous steel box beam.
4	4	125	07/15/21	Access door seized slightly open. Cast-in-place concrete ballast deck on continuous steel box beam.
		• •		

Recommended and Completed Work

Wrkltm No.	Date Recmnd	Date Confirmd	Recommended Work Description	Priorit	y By: I	Done?	Completed
I	03/27/12	07/15/21	Repair girder access doors at south and north abutments. Repair broken weld in lock hasp on south door and secure. Close and secure north door.	3	Railroad		
2	12/30/15	07/15/21	Find out if WASHDOT inspects, how often and if they enter girders.	3	Engineer/Inspect	or	
3			Ballast, ties and rail all replaced in 2020.		Contractor	 ✓ 	10/7/2020

Signed (Inspector):

Chuster Parts



B42.7

Left Side Looking North.



BRID	GE I	NS	La	t. N	46°	· 1	9.2500'	Ur	nique				B37.7				
Owner	Port o	f Ben	ton				Lon	g. W	119	• 1	7.2500'		404	М	lile Post	:	27.61
Region										- - -			101				Seele
Railroad	TRI-CI	ITY R	AILROAD													D: - -	
Line	1st Su	ıbdivi	sion				Richla								Richiai		
Gen Bridge	Notes:								Cou	inty					Be	enton	Overhead
							C	rosse	es/Car	ries							No
									Acc	cess							
Mile	posts inc	rease	to	Members i	ncrea	se to]										
Abutn	nents	2	Alignmer	t Tangent	N//	A Se	ctior	ו ו	1								
Conc/Steel	Piers	2	Guard Rai	l? No		3 5	Spans	S	cal	е-	Ful	crum					
Timber	Bents		Wa	k None		•	(type)										
Timber	Piers		Fiber Opti	? No	E	st Heigh	t Height 0 No Tracks 2 Deck Direct Fixation Year Const										
Ske	ewed?	No	Other Fixture	s No		Ave Spa	Ave Span Gen Section Scale track supported on three continous beam spans.								ım spans.		
Lines	of Beams	s, Gird	ers or Stringe	rs 2	Se	ection Lg	th			I	Notes:	Dead track	support	ted on	transvers	e beams.	
Line & Surfa	ace OK					[Date	7/15	5/202 I		Inspect	ion Type	Ann	ual			
De	eck Boar	rds loos	e and warped.			Project	: No	151	5		Inspector(s) C. Pruett, K. Kirschling						
т	ies N/A					,	Gen	eral	Secon	d insp	pection this year (2020). First, in Feb., was to locate. A few photos						
Walkw	vay N/A					I	nspec	nspection were		taken (then. Returned today and accessed scale pit for first time (through						
Approach	nes OK					C	Comme	ents	scale is	s still o	still operable.						
Headwa	alls OK								Drain	n cnannei beiow starting to till with debris.							
Wingwa	Concrete walls around scale pit OK.					Brief	Sumn	narv	Good	condi	ndition although would benefit from cleaning and renair of wiring for						
Erosion None					includi	ng Urg	gent	lights.	Reco	mmend ro zard	eplace loose,	warped	board	s on deck	as they co	ould be	
Dr	Drift N/A						Condition										
Vegetati	on Non	e				S	low Or	der?									

STEE	STEEL/CONCRETE SPANS (by PANEL)									
Span	Panel	Lngth	Date	Panel Notes						
I	0		07/15/21	Very minor corrosion at bearings of main beams supporting "live" weigh rails. Transverse beams (supporting dead rails) in very good condition.						
2	0		07/15/21	Very minor corrosion at bearings of main beams supporting "live" weigh rails. Transverse beams (supporting dead rails) in very good condition.						
3	0		07/15/21	Very minor corrosion at bearings of main beams supporting "live" weigh rails. Transverse beams (supporting dead rails) in very good condition.						
Reco	mmer	nded an	d Complet	ed Work						
Wrkltn	n Da	te D	ate							

No. Confirmd Recmnd Recommended Work Description Priority By: Done? Completed 09/03/20 07/15/21 Replace warped, loose deck boards. Could be tripping hazzard if scale is used. Т 3 Railroad 2 09/03/20 07/15/21 Clean beams and drain channel floor in scale pit. 4 Railroad

Signed (Inspector):

V Chuster Prutto



B37.7

Scale Deck Looking South.



B37.7

Scale Pit Center.



B37.7

Scale Pit Looking North.



Railstar Engineering