Appendix A:

Bridge Inspection Reports

STRUCTURE INSPECTION REPORT

Structure # 03808
FLATHEAD CREEK 009 - NE WILSALL

Bridge Inventory Information

Bridge Inspection Date: 07/24/2018

General Location Data	
(22) Owner	02 County Hwy Agency
(6A) Feature Intersected	FLATHEAD CREEK 009
(8) NBI Structure Number	L34001000+03001
(9) Location	NE WILSALL
(MDT058) Structurally Deficient|Functionally Obsolete	0 Not Deficient
(MDT076) Deck Condition	Fair-1
(MDT077) Structure Condition	Good
(SR) Sufficiency Rating	90.6

A- Location Data	
(MDT001) Agency structure name	none
(1) State Code	308
(MDT027) On|Off System	0 Off System
(2) MDT Inspection District	02 BUTTE
(MDT115) MDT Administrative District	
(MDT116) MDT Financial District	
(MDT020) MDT Maintenance Division	22 BOZEMAN
(MDT078) MDT Maintenance Section	none Not a State Maintained Bridge
(3) County Code	067 PARK
(MDT117) Border Bridge - Neighboring County Code	000 NONE
(4) Place Code	00000 Rural Area
(7) Facility Carried by Structure	SHIELDS RIVER RD
(21) Maintenance Responsibility	02 County Hwy Agency
(MDT031) Railroad Over/Underpass	0 Not Applicable
(MDT032) Railroad Owner	NA Not Applicable
(MDT014) Interchange Indicator	0 Not an Interchange
(MDT015) Interstate Ramp Indicator	0 Not a Ramp
(MDT114) MPO	
(112) Nbis Bridge Length	Y Long Enough

STRUCTURE INSPECTION REPORT

Structure # 03808
FLATHEAD CREEK 009 - NE WILSALL

B- Construction Data	
(27) Year Built	1955
(106) Year Reconstructed	
(MDT102) Years Rehabilitated	
(MDT019) MDT Orignial Drawing Number	
(MDT103) MDT Rehab Drawing Numbers	
(MDT097) Plans in SMS?	
(MDT098) Shop Drawings in SMS	
(MDT017) MDT Original Construction Project Number	S186(2)
(MDT099) MDT Rehab Project Numbers	
(MDT018) MDT Original Construction Station	15+78
(MDT100) MDT Rehab Stations	
(MDT021) MDT UPN	
(MDT101) MDT Rehab UPNs	

C- Improvement Cost Data	
(75A) Type of Work Proposed	
(75B) Work to be Completed by	
(76) Length Of Structure Improvement	ft
(94) Bridge Improvement Cost	
(95) Roadway Improvement Cost	
(96) Total Project Cost	
(97) Year Of Improvement Cost Estimate	

D- Border State Data	
(98A-1) Border Bridge-Neighboring State Code	
(98A-2) Border Bridge - Neighboring FHWA Region Code	
(98B) Border Bridge-Percent Responsibility	
(99) Border Bridge Structure Number	

E- Historical Structure Data	
(37) Historical Significance	5 5 Not eligible for NRHP

F - Bridge Location	
(16) Latitude (DMS)	460007.61
(17) Longitude (DMS)	1103928.09

STRUCTURE INSPECTION REPORT

Structure # 03808
FLATHEAD CREEK 009 - NE WILSALL

G - Span and Dimensional Data	
(33) Bridge Median	0 0 No median
(34) Skew	0 %
(35) Structure Flared	0 0 No flare
(42A) Type of Service on Bridge	1 1 Highway
(48) Length Of Maximum Span	25 ft
(49) Structure Length	52 ft
(53) Min Vert Clear Over Bridge Roadway	99.99 ft
(101) Parallel Structure Designation	N No parallel structure exists
(103) Temporary Structure Designation	
(38) Navigation Control	0 No navigation control on waterway
(39) Navigation Vertical Clearance	000 Not Applicable (default) ft
(40) Navigation Horizontal Clearance	0000 Not Applicable (default) ft
(116) Minimum Navigation Vertical Clearance	ft

H - Main Span	
(43A) Main Span Material	7 Wood or Timber
(43B) Main Span Design Type	02 Stringer|Multi-beam or Girder
(45) Number Of Spans In Main Unit	2

I - Approach Span	
(44A) Approach Span Material	0 Not Applicable
(44B) Approach Span Design Type	00 Not Applicable
(46) Number Of Approach Spans	0

J - Deck Data	
(50A) Left Curb|Sidewalk Width	1 ft
(50B) Right Curb|Sidewalk Width	1 ft
(52) Out-to-Out Deck Width	26 ft
(MDT006) Deck Area	1351 Area
(107) Deck Structure Type	8 Wood or Timber
(108A) Type of Wearing Surface	6 Bituminous
(108B) Type of Membrane	0 None
(108C) Deck Protection	0 None
(MDT104) Bridge Deck Seal	
(MDT105) Polymer Overlay	
(MDT106) Mill and Overlay	

(MDT107) New Bridge Deck	
(MDT108) Experimental Deck	

K - Under Bridge Service	
(42B) Type of Service under	5 Waterway
(54A) Minimum Vertical Underclearance-Reference Feature	N Feature not a highway or railroad
(54B) Minimum Vertical Underclearance	0 ft
(55A) Min Lateral Underclear On Right-Reference Feature	N Feature not a highway or railroad
(55B) Minimum Lateral Underclearance on Right	0 ft
(56) Min Lateral Underclear On Left	0 ft
(111) Pier|abutment Protection	
(113) Scour Critical Status	5 Bridge foundations determined to be stable for calculated scour conditions.
(69) Underclear, Vertical and Horizontal	N Not applicable

L - Load and Rating Data	
(MDT016) Load Rating Date	
(MDT022) Name of Load Rater	-1
(31) Design load	3 MS 13.5 (HS 15)
(66) Inventory Rating	26.9 ton
(65) Method Used To Determine Inventory Rating	2 Allowable Stress (AS)
(64) Operating Rating	36.9 ton
(63) Method Used to Determine Operating Rating	2 Allowable Stress (AS)
(70) Legal Load Status	5 Equal to or above legal loads
(MDT110) Bridge being Rated by Consultant	
(MDT112) Completed Rating Model?	
(MDT065) Type 3 Truck Inventory Rating	ton
(MDT071) Type 3S2 Truck Inventory Rating	ton
(MDT068) Type 3-3 Truck Inventory Rating	ton
(MDT036) SU4 Truck Inventory Rating	ton
(MDT039) SU5 Truck Inventory Rating	ton
(MDT045) SU7 Truck Inventory Rating	ton
(MDT042) SU6 Truck Inventory Rating	ton
(MDT091) EV2 Truck Inventory Rating	ton
(MDT092) EV3 Truck Inventory Rating	ton
(MDT066) Type 3 Truck Operating Rating	ton

(MDT072) Type 3S2 Truck Operating Rating	ton
(MDT069) Type 3-3 Truck Operating Rating	58 ton
(MDT037) SU4 Truck Operating Rating	ton
(MDT040) SU5 Truck Operating Rating	ton
(MDT043) SU6 Truck Operating Rating	ton
(MDT046) SU7 Truck Operating Rating	ton
(MDT093) EV2 Truck Operating Rating	ton
(MDT094) EV3 Truck Operating Rating	ton
(MDT079) Truck Type 3 LRFR Rating	ton
(MDT081) Truck Type 3S2 LRFR Rating	ton
(MDT080) Truck Type 3-3 LRFR Rating	ton
(MDT082) Truck Type SU4 LRFR Rating	ton
(MDT083) Truck Type SU5 LRFR Rating	ton
(MDT084) Truck Type SU6 LRFR Rating	ton
(MDT085) Truck Type SU7 LRFR Rating	ton
(MDT095) Truck Type EV2 LRFR Rating	ton
(MDT096) Truck Type EV3 LRFR Rating	ton

M - General Facility Data	
(5A) Inventory Route-Record Type	1 Route carried `on` the structure
(5C) Designated Level of Service	1 Mainline
(5B) Route Signing Prefix	4 County highway
(5D) Route Number	34001
(5E) Directional Suffix	2 East
(12) Base Highway Network	0 Not on Base Network
(13A) LRS Number	C034001N
(13B) Inventory Route, Subroute Number-Subroute Number	00
(19) Bypass|Detour Length	2 mi
(MDT009) Detour Speed	-1 mi/hr
(104) NHS Indicator	0 Not on the NHS
(MDT030) Posted speed limit (MPH)	35 mi/hr
(11) Accumulated Miles	.286 mi
(MDT087) Decimal Mile Post	.3
(MDT113) Mile Post	0+0.300 mi
(MDT035) Road Name	
(MDT075) Roadway System	

General Roadway Notes	

N - Base Network Data	
(28B) Lanes Under the Structure	0
(32) Approach Roadway Width	22 ft
(51) Bridge Roadway Width Curb-To-Curb	24.2 ft
(72) Approach Roadway Alignment	8 Equal Desirable Crit
(28A) Lanes on the Structure	2

O - Other NetWork Data	
(20) Toll	3 On Free Road
(100) STRAHNET Highway Designation	0 Not a STRAHNET route
(105) Federal Lands Highways	0 Not applicable
(110) National Truck Network	0 Not part of National Truck Network
(MDT048) School Bus Route	1 On School Bus Route
(6B) Features Intersected-Critical Facility Indicator	

P - Roadway Size and Clearance Data	
(10) Minimum Vertical Clearance	99.99 ft
(47) Total Horizontal Clearance	24.2 ft
(102) Direction of Traffic	2 2-way traffic
(MDT007) Departmental Route	L34001
(MDT002) Both|South|West Direction	0 Both Directions
(MDT003) Both|South|West Vertical Distance	99.990 ft
(MDT051) South|West Horizontal Distance	24.199
(MDT024) North|East Direction	
(MDT026) North|East Vertical Distance	ft
(MDT025) North|East Horizontal Distance	ft

Q - Traffic Data	
(26) Functional Classification	08 Rural, Minor Collector
(MDT060) Traffic Volume Class	01
(29) Average Daily Traffic	100
(30) Year of Average Daily Traffic	2002
(109) Average Daily Truck Traffic (%)	3
(114) Future Average Daily Traffic	100
(115) Year Of Future Avg Daily Traffic	2026

STRUCTURE INSPECTION REPORT

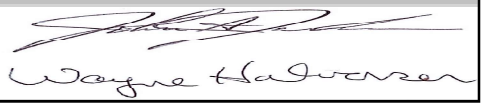
Structure # 03808
FLATHEAD CREEK 009 - NE WILSALL

General Bridge Notes

STRUCTURE INSPECTION REPORT

Structure # 03808
NE WILSALL - FLATHEAD CREEK 009

Inspection Information

Responsible Person	Name	Signature
Inspector	John Jackson	
QC	Wayne Halvorsen	

User	Begin	End	Comments
John Jackson	07-24-2018 10:00 am	07-24-2018 11:30 am	On-site.

Day	Weather	Temperature	Comments
07-24-2018 10:00 - 11:30	Sunny	65	

R- Inspection	Current Value	Previous Value
(36A) Traffic Safety Features - Bridge Railings	0	0
(36B) Traffic Safety Features - Transitions	0	N
(36C) Traffic Safety Features - Approach guardrail	N	N
(36D) Traffic Safety Features - Approach guardrail Ends	0	0
(41) Structure Open, Posted, or Closed to Traffic	A	A
(58) Deck Rating	6	6
(59) Superstructure	6	7
(60) Substructure	6	6
(MDT061) Type 1 Underwater Inspection Required	Y	
(61) Channel	5	7
(62) Culvert	N	N
(67) Structural Evaluation	6	6
(68) Deck Geometry	6	6
(69) Underclear, Vertical and Horizontal	N	N
(71) Waterway Adequacy	8	8
(MDT076) Deck Condition	Fair-1	
(MDT077) Structure Condition	Good	
(92C-1b) Special Inspection Required	N	

Inspection Hours and Dates	Current Value	Previous Values
(MDT005) Date Last QA	2000-01-01	
(MDT010) FC Inspection Details	None	
FC Next Inspection Date		

STRUCTURE INSPECTION REPORT

Structure # 03808

NE WILSALL - FLATHEAD CREEK 009

(MDT023) Next Inspection Date	2020-07-12	2018-07-12
(MDT028) Other Inspection Details	none	
Other Inspection Next Date		
(MDT034) Request Review of Load rating	0	
(MDT050) Snooper Required	N	
Special Inspection Next Date		
(MDT058) Structurally Deficient|Functionally Obsolete	0	0
(MDT061) Type 1 Underwater Inspection Required	Y	
(MDT062) Type 1 Underwater Inspection Date	2018-7-24	
(MDT063) Type 1 Underwater Inspection Frequency (months)	48	
(MDT064) Type 1 Underwater Inspection Next Date		
(MDT074) Underwater Inspection Details	1	N
Type 2 Underwater Next Inspection Date		
(90) Inspection Date	2018-07-24	2016-07-12
(91) Regular Inspection Frequency (Months)	24	24.00
(92A-1) FC Inspection Required	N	N
FC Inspection Frequency (Months)		
(92B-1) Type 2 Underwater Inspection Required	N	N
Type 2 Underwater Inspection Frequency (Months)		
(92C-1a) Other Inspection Required	N	N
(92C-1b) Special Inspection Required	N	
Other Inspection Frequency (Months)		
Special Inspection Frequency (months)		
FC Inspection Date		
Special Inspection Date		

General Inspection Notes
Scour in channel under bridge - Type 1 UW performedAdded one timber pile in downstream end of pier wall to inspection quantity

Repair Suggestions:

Repair ID	Date Requested	Type	Status	Priority	Comments
#Error	07-25-2018	Repair suggestion	Open	Low	Bank erosion at Abut 3 RT wingwall. Repair is suggested to preserve abutment in future high water events

General Bridge Photos

Photo #: Approach - South West
Location: , Comments:

STRUCTURE INSPECTION REPORT

Structure # 03808
NE WILSALL - FLATHEAD CREEK 009

Photo #: Superstructure - Pier 2 Location: , Comments:	
Photo #: Profile - South East Location: , Comments:	

Element Inspection Data

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
31		Timber Deck (SF)	Area	1356	91.1	5.0	3.9	0.0
31		1170 - Split/Delamination (Timber)	Area	1356	0.0	0.0	3.5	0.0
31		1150 - Check/Shake	Area	1356	0.0	5.0	0.4	0.0

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STRUCTURE INSPECTION REPORT

Structure # 03808
NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
Previous Inspection Notes:								
10% st checking on soffit and 5% end checks on deck edge Condition State 2 : 15								
Current Inspection Notes:								
Random checking visible in soffit Short end splits in most deck planks CS3 end checks in deck planks. Photo in 1170								

Photo #:Deck Plank End Splits and Checks Location: Comments: Element:31 - Timber Deck (SF)	

STRUCTURE INSPECTION REPORT

Structure # 03808
NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
111		Timber Open Girder|Beam (LF)	Length	669	67.6	32.4	0.0	0.0
111		1150 - Check/Shake	Length	669	0.0	32.4	0.0	0.0

Previous Inspection Notes:

1% st checking. Condition State 2 : 1
1% st3 check G6 span 2. Condition State 3 : 1

Current Inspection Notes:

CS2 checks:
Span 1: G1 - full length (26 ft), G2 - full length, G4 - 6 ft, G5 and 6 - 6 ft on lower surface, G7 - 10 ft, G9 - 3 ft, G13 - 9 ft (86 ft)
Span 2: G1 - 3 ft, G2 - 4 ft, G4 - full length, G5 - 12 ft(2 ft in lower surface), G7 -8 ft, G8 - wide full length, G10 - full length, G13 - full length (131 ft)
CS3 checking from previous inspection was not observed

Photo #:Lower Surface Checks Span 1 G5, G6

Location:

Comments: Typical also of Span 2 G4, G5

Element:111 - Timber Open Girder|Beam (LF)

STRUCTURE INSPECTION REPORT

Structure # 03808
NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
212		Timber Pier Wall (LF)	Length	26	30.7	30.8	38.5	0.0
212		1170 - Split/Delaminatio n (Timber)	Length	26	0.0	0.0	3.8	0.0
212		1150 - Check/Shake	Length	26	0.0	30.8	38.5	0.0

Previous Inspection Notes:

5% minor st2 length long checking. Condition State 2 : 5

Current Inspection Notes:

Three ft of CS2 shakes in 7th plank from top on Far Face
Random CS2 checks in planks
CS3 check in approx 10 ft of third plank from top on Near Face
Short split in RT end of third plank from top on Far Face

Photo #:CS3 Checking - Near Face- Plank 3

Location:

Comments:

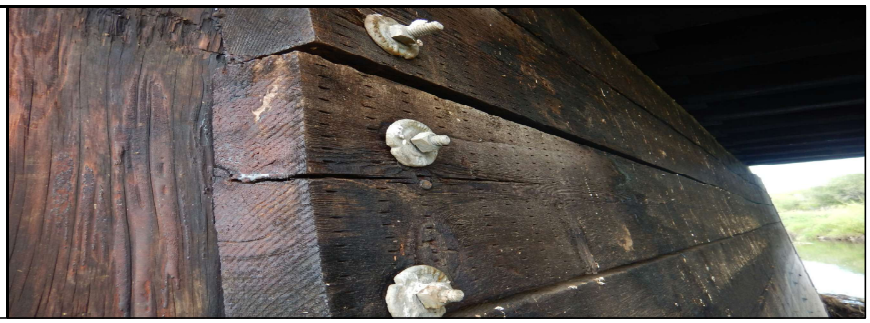
Element:212 - Timber Pier Wall (LF)

Photo #:End Split - Far Face Plank

Location:

Comments:

Element:212 - Timber Pier Wall (LF)



STRUCTURE INSPECTION REPORT

Structure # 03808
NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
216		Timber Abutment (LF)	Length	79	30.0	60.0	10.0	0.0
216		6000 - Scour	Length	79	0.0	43.0	0.0	0.0
216		1170 - Split/Delaminatio n (Timber)	Length	79	0.0	0.0	10.0	0.0
216		1150 - Check/Shake	Length	79	0.0	45.0	0.0	0.0

Previous Inspection Notes:

5% minor st2 checks. Condition State 2 : 5
Good condition Condition State 1 : 95

Current Inspection Notes:

Minor scour along Abut 3 backwall and RT wingwall
Exposure of roadway fill under backwall and erosion around wingwall. See photos in Element 900
Multiple CS2 checks in all 4 wingwall pile.
Random areas of CS2 checking in backwalls, wingwalls CS checks most of length
Many end splits in backwall and wingwall planks - approx 8 ft
Percent adjusted for defect overlap

Photo #:Typical End Splits

Location:

Comments:

Element:216 - Timber Abutment (LF)

Photo #:Typical End Splits

Location:

Comments:

Element:216 - Timber Abutment (LF)

STRUCTURE INSPECTION REPORT

Structure # 03808
NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
Photo #:Typical End Splits Location: Comments: Element:216 - Timber Abutment (LF)								

Photo #:Typical End Splits Location: Comments: Element:216 - Timber Abutment (LF)	

STRUCTURE INSPECTION REPORT

Structure # 03808

NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
228		Timber Pile (EA)	Each	13	30.7	30.8	38.5	0.0
228		1150 - Check/Shake	Each	13	0.0	30.8	38.5	0.0
228		1140 - Decay/Section Loss	Each	13	0.0	0.0	8.0	0.0

Current Inspection Notes:

CS2 checks: Pier 2 - P6 multiple CS2 checks; Abut 3 - P2, P3, P5 multiple CS2 checks
Abut 1: P1 - wide full length CS3 check, P4 - 5 ft spiral check
Abut 2: P1 - wide CS3 check, P4 - CS3 check, P6- wide CS3 check in top 4 ft - nearly a split
Decay in lower 3 ft of Abut 3 - P6. Photos

Photo #:Abut 1 - P1 CS3 Check

Location:

Comments:

Element:228 - Timber Pile (EA)

Photo #:Abut 3 - P6 CS3 Check

Location:

Comments:

Element:228 - Timber Pile (EA)

Photo #:Abut 3 P6 Decay

Location:

Comments:

Element:228 - Timber Pile (EA)

Generated by: MDT on 7/30/2018

STRUCTURE INSPECTION REPORT

Structure # 03808
NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4

Photo #:Abut 3 - P6 CS3 Check

Location:

Comments:

Element:228 - Timber Pile (EA)

Photo #:Abut 3 P6 Decay

Location:

Comments:

Element:228 - Timber Pile (EA)

Photo #:Abut 1 - P1 CS3 Check

Location:

Comments:

Element:228 - Timber Pile (EA)

Photo #:Abut 1 - P4 Spiral Check

Location:

Comments:

Element:228 - Timber Pile (EA)

Generated by: MDT on 7/30/2018

STRUCTURE INSPECTION REPORT

Structure # 03808
NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
235		Timber Cap (LF)	Length	75	64.0	20.0	16.0	0.0
235		1150 - Check/Shake	Length	75	0.0	20.0	16.0	0.0

Previous Inspection Notes:

3ft deep of st3 checks on all 6 ends of timber caps. Condition State 3 : 24
Good condition. Condition State 1 : 76

Current Inspection Notes:

CS3 checks in all cap ends - approx 12 ft total
Superficial checking
Random CS2 checking in all caps

Photo #:Abut 3 Cap End Check

Location:

Comments:

Element:235 - Timber Cap (LF)

Photo #:Abut 1 Cap End Check

Location:

Comments:

Element:235 - Timber Cap (LF)

STRUCTURE INSPECTION REPORT

Structure # 03808

NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
332		Timber Bridge Rail (LF)	Length	105	0.0	0.0	0.0	0.0
332		7000 - Damage	Length	105	0.0	0.0	4.8	0.0
332		1170 - Split/Delaminatio n (Timber)	Length	105	0.0	0.0	7.6	0.0
332		1150 - Check/Shake	Length	105	0.0	100.0	0.0	0.0
332		1140 - Decay/Section Loss	Length	105	0.0	0.0	2.5	0.0

Previous Inspection Notes:

10% good condition Condition State 1 : 10
85% st2 checking throughout rails and posts. Condition State 2 : 85
5% damage to horizontal timber rail on NW corner from impact. Condition State 2 : 5

Current Inspection Notes:

Decay in tops of 3 posts
Five ft of traffic damage to Abut 1 LT rail end
Eight ft of splitting on plank ends
CS2 checks in all posts and throughout rail

STRUCTURE INSPECTION REPORT

Structure # 03808

NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
510	31	Wearing Surfaces (SF)	Area	1356	33.4	50.0	16.6	0.0
510	31	7000 - Damage	Area	1356	0.0	14.7	0.0	0.0
510	31	3220 - Crack (Wearing Surface)	Area	1356	0.0	0.0	16.6	0.0
510	31	3210 - Delamination/Patched Area/Pothole (Wearing Surfaces)	Area	1356	0.0	50.0	0.0	0.0

Previous Inspection Notes:

20% st2 sound patched areas and 20% st2 partial depth potholes. Condition State 2 : 40
Good condition Condition State 1 : 60

Current Inspection Notes:

Rutting in area of LT pattern cracking
Wide full width crack over Pier 2
Heavy pattern cracking in LT lane approx 200 sqft
Approx 20 sqft of partial depth potholes.
Thin patch over approx 50% of deck

Photo #:Transverse and Map Cracking

Location:

Comments:

Element:510 - Wearing Surfaces (SF)

Generated by: MDT on 7/30/2018

STRUCTURE INSPECTION REPORT

Structure # 03808

NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
900		Scour	Each	2	0.0	100.0	0.0	0.0
900		6000 - Scour	Each	2	0.0	100.0	0.0	0.0

Current Inspection Notes:

Scour hole in channel under Span 1 - approx 12 ft wide x 18 ft long - 2.5 to 3 ft deep at center of hole - no undercutting of either Abut 1 or Pier 2
Main channel runs under Span 2 with some scour(approx 1.5 ft) apparent when compared to channel adjacent to bridge. Minor scour along Abut 3 with exposure of roadway fill under backing planks and erosion of bank adjacent to Abut 3 RT wingwall.

Photo #:Span 1 Scour Hole

Location:

Comments:

Element:900 - Scour

Photo #:Abut 3 Minor Undercutting

Location:

Comments:

Element:900 - Scour

Photo #:Span 1 SCour Hole

Location:

Comments:

Element:900 - Scour

Generated by: MDT on 7/30/2018

STRUCTURE INSPECTION REPORT

Structure # 03808
NE WILSALL - FLATHEAD CREEK 009

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4

Photo #:Abut 3 RT Bank Erosion

Location:

Comments:

Element:900 - Scour

General Inspection Notes	
Previous Inspection Notes	
Current Inspection Notes	

STRUCTURE INSPECTION REPORT

Structure # 03809
SHIELDS RIVER 010 - 4M NE WILSALL

Bridge Inventory Information

Bridge Inspection Date: 08/01/2017

General Location Data	
(22) Owner	02 County Hwy Agency
(6A) Feature Intersected	SHIELDS RIVER 010
(8) NBI Structure Number	L34001003+09001
(9) Location	4M NE WILSALL
(MDT058) Structurally Deficient|Functionally Obsolete	0 Not Deficient
(MDT076) Deck Condition	Fair-1
(MDT077) Structure Condition	Good
(SR) Sufficiency Rating	87.9

A- Location Data	
(MDT001) Agency structure name	none
(1) State Code	308
(MDT027) On|Off System	0 Off System
(MDT020) MDT Maintenance Division	22 BOZEMAN
(2) MDT Inspection District	02 BUTTE
(3) County Code	067 PARK
(4) Place Code	00000 Rural Area
(7) Facility Carried by Structure	SHIELDS RIVER RD
(21) Maintenance Responsibility	02 County Hwy Agency
(112) Nbis Bridge Length	Y Long Enough
(MDT031) Railroad Over/Underpass	
(MDT032) Railroad Owner	
(MDT014) Interchange Indicator	
(MDT015) Interstate Ramp Indicator	
(MDT078) MDT Maintenance Section	none Not a State Maintained Bridge

B- Construction Data	
(27) Year Built	1955
(106) Year Reconstructed	
(MDT102) Years Rehabilitated	
(MDT019) MDT Orignial Drawing Number	3559

STRUCTURE INSPECTION REPORT

Structure # 03809

SHIELDS RIVER 010 - 4M NE WILSALL

(MDT103) MDT Rehab Drawing Numbers	
(MDT097) Plans in SMS?	
(MDT098) Shop Drawings in SMS	
(MDT017) MDT Original Construction Project Number	S 186(2)
(MDT099) MDT Rehab Project Numbers	
(MDT018) MDT Original Construction Station	199+53
(MDT100) MDT Rehab Stations	
(MDT021) MDT UPN	
(MDT101) MDT Rehab UPNs	

C- Improvement Cost Data	
(75A) Type of Work Proposed	
(75B) Work to be Completed by	
(76) Length Of Structure Improvement	ft
(94) Bridge Improvement Cost	
(95) Roadway Improvement Cost	
(96) Total Project Cost	
(97) Year Of Improvement Cost Estimate	

D- Border State Data	
(98A-1) Border Bridge-Neighboring State Code	
(98A-2) Border Bridge - Neighboring FHWA Region Code	
(98B) Border Bridge-Percent Responsibility	
(99) Border Bridge Structure Number	

E- Historical Structure Data	
(37) Historical Significance	5 5 Not eligible for NRHP

F - Bridge Location	
(16) Latitude (DMS)	460244.26
(17) Longitude (DMS)	1103820.87

G - Span and Dimensional Data	
(33) Bridge Median	0 0 No median
(34) Skew	0 %
(35) Structure Flared	0 0 No flare
(42A) Type of Service on Bridge	1 1 Highway
(48) Length Of Maximum Span	45 ft

STRUCTURE INSPECTION REPORT

Structure # 03809

SHIELDS RIVER 010 - 4M NE WILSALL

(49) Structure Length	70.7 ft
(53) Min Vert Clear Over Bridge Roadway	99.99 ft
(101) Parallel Structure Designation	N No parallel structure exists
(103) Temporary Structure Designation	
(38) Navigation Control	0 No navigation control on waterway
(39) Navigation Vertical Clearance	000 Not Applicable (default) ft
(40) Navigation Horizontal Clearance	0000 Not Applicable (default) ft
(116) Minimum Navigation Vertical Clearance	ft

H - Main Span	
(43A) Main Span Material	2 Concrete continuous
(43B) Main Span Design Type	04 Tee Beam
(45) Number Of Spans In Main Unit	3

I - Approach Span	
(44A) Approach Span Material	0 Not Applicable
(44B) Approach Span Design Type	00 Not Applicable
(46) Number Of Approach Spans	0

J - Deck Data	
(50A) Left Curb|Sidewalk Width	1 ft
(50B) Right Curb|Sidewalk Width	1 ft
(52) Out-to-Out Deck Width	26.7 ft
(MDT006) Deck Area	1887 Area
(107) Deck Structure Type	N Not applicable
(108A) Type of Wearing Surface	6 Bituminous
(108B) Type of Membrane	0 None
(108C) Deck Protection	0 None

K - Under Bridge Service	
(42B) Type of Service under	5 Waterway
(54A) Minimum Vertical Underclearance-Reference Feature	N Feature not a highway or railroad
(54B) Minimum Vertical Underclearance	0 ft
(55A) Min Lateral Underclear On Right-Reference Feature	N Feature not a highway or railroad
(55B) Minimum Lateral Underclearance on Right	0 ft
(56) Min Lateral Underclear On Left	0 ft
(111) Pier|abutment Protection	

(113) Scour Critical Status	8 Brdg. foundations stable for asses. or cal. conditions. Cal. scour is above top of footing.
(69) Underclear, Vertical and Horizontal	N Not applicable

L - Load and Rating Data	
(MDT016) Load Rating Date	11/19/1973
(MDT022) Name of Load Rater	srk
(31) Design load	3 MS 13.5 (HS 15)
(66) Inventory Rating	24.9 ton
(65) Method Used To Determine Inventory Rating	2 Allowable Stress (AS)
(64) Operating Rating	42 ton
(63) Method Used to Determine Operating Rating	2 Allowable Stress (AS)
(70) Legal Load Status	5 Equal to or above legal loads
(MDT065) Type 3 Truck Inventory Rating	25 ton
(MDT071) Type 3S2 Truck Inventory Rating	40 ton
(MDT068) Type 3-3 Truck Inventory Rating	47 ton
(MDT036) SU4 Truck Inventory Rating	ton
(MDT039) SU5 Truck Inventory Rating	ton
(MDT042) SU6 Truck Inventory Rating	ton
(MDT045) SU7 Truck Inventory Rating	ton
(MDT091) EV2 Truck Inventory Rating	ton
(MDT092) EV3 Truck Inventory Rating	ton
(MDT066) Type 3 Truck Operating Rating	42 ton
(MDT072) Type 3S2 Truck Operating Rating	66 ton
(MDT069) Type 3-3 Truck Operating Rating	78 ton
(MDT037) SU4 Truck Operating Rating	ton
(MDT040) SU5 Truck Operating Rating	ton
(MDT043) SU6 Truck Operating Rating	ton
(MDT046) SU7 Truck Operating Rating	ton
(MDT093) EV2 Truck Operating Rating	ton
(MDT094) EV3 Truck Operating Rating	ton
(MDT079) Truck Type 3 LRFR Rating	ton
(MDT081) Truck Type 3S2 LRFR Rating	ton
(MDT080) Truck Type 3-3 LRFR Rating	ton
(MDT082) Truck Type SU4 LRFR Rating	ton
(MDT083) Truck Type SU5 LRFR Rating	ton

(MDT084) Truck Type SU6 LRFR Rating	ton
(MDT085) Truck Type SU7 LRFR Rating	ton
(MDT095) Truck Type EV2 LRFR Rating	ton
(MDT096) Truck Type EV3 LRFR Rating	ton

M - General Facility Data	
(5A) Inventory Route-Record Type	1 Route carried `on` the structure
(5C) Designated Level of Service	1 Mainline
(5B) Route Signing Prefix	4 County highway
(5D) Route Number	34001
(5E) Directional Suffix	2 East
(12) Base Highway Network	0 Not on Base Network
(13A) LRS Number	C034001N
(13B) Inventory Route, Subroute Number-Subroute Number	00
(19) Bypass|Detour Length	11 mi
(MDT009) Detour Speed	-1 mi/hr
(104) NHS Indicator	0 Not on the NHS
(MDT030) Posted speed limit (MPH)	35 mi/hr
(11) Accumulated Miles	3.752 mi
(MDT087) Mile Post	3+0.900
(MDT035) Road Name	
(MDT075) Roadway System	
General Roadway Notes	

N - Base Network Data	
(28B) Lanes Under the Structure	0
(32) Approach Roadway Width	22 ft
(51) Bridge Roadway Width Curb-To-Curb	24 ft
(72) Approach Roadway Alignment	8 Equal Desirable Crit
(28A) Lanes on the Structure	2

O - Other NetWork Data	
(20) Toll	3 On Free Road
(100) STRAHNET Highway Designation	0 Not a STRAHNET route
(105) Federal Lands Highways	0 Not applicable
(110) National Truck Network	0 Not part of National Truck Network
(MDT048) School Bus Route	0 Not on School Bus Route

(6B) Features Intersected-Critical Facility Indicator	

P - Roadway Size and Clearance Data	
(10) Minimum Vertical Clearance	99.99 ft
(47) Total Horizontal Clearance	24 ft
(102) Direction of Traffic	2 2-way traffic
(MDT007) Departmental Route	L34001
(MDT002) Both|South|West Direction	0 Both Directions
(MDT003) Both|South|West Vertical Distance	99.990 ft
(MDT051) South|West Horizontal Distance	23.999
(MDT024) North|East Direction	
(MDT026) North|East Vertical Distance	ft
(MDT025) North|East Horizontal Distance	ft

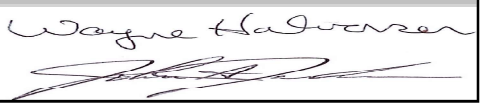
Q - Traffic Data	
(26) Functional Classification	08 Rural, Minor Collector
(MDT060) Traffic Volume Class	01
(29) Average Daily Traffic	100
(30) Year of Average Daily Traffic	2003
(109) Average Daily Truck Traffic (%)	3
(114) Future Average Daily Traffic	100
(115) Year Of Future Avg Daily Traffic	2025

General Bridge Notes

STRUCTURE INSPECTION REPORT

Structure # 03809
4M NE WILSALL - SHIELDS RIVER 010

Inspection Information

Responsible Person	Name	Signature
Inspector	Wayne Halvorsen	
QC	John Jackson	

User	Begin	End	Comments
Wayne Halvorsen	08-16-2017 10:00 am	08-16-2017 11:00 am	On-site.

Day	Weather	Temperature	Comments
08-16-2017 10:00 - 11:00	Cloudy	65	

R- Inspection	Current Value	Previous Value
(36A) Traffic Safety Features - Bridge Railings	0	0
(36B) Traffic Safety Features - Transitions	0	N
(36C) Traffic Safety Features - Approach guardrail	N	N
(36D) Traffic Safety Features - Approach guardrail Ends	0	0
(41) Structure Open, Posted, or Closed to Traffic	A	A
(58) Deck Rating	6	7
(59) Superstructure	7	7
(60) Substructure	7	7
(61) Channel	8	8
(62) Culvert	N	N
(67) Structural Evaluation	6	6
(68) Deck Geometry	6	6
(69) Underclear, Vertical and Horizontal	N	N
(71) Waterway Adequacy	8	8
(MDT076) Deck Condition	Fair-1	
(MDT077) Structure Condition	Good	

Inspection Hours and Dates	Current Value	Previous Values
(MDT005) Date Last QA	2000-01-01	
(MDT010) FC Inspection Details	None	
FC Next Inspection Date		
(MDT016) Load Rating Date	1973-11-19	
(MDT023) Next Inspection Date	2019-08-01	2017-08-16
(MDT028) Other Inspection Details	none	

STRUCTURE INSPECTION REPORT

Structure # 03809

4M NE WILSALL - SHIELDS RIVER 010

Other Inspection Next Date		
(MDT034) Request Review of Load rating	0	
(MDT050) Snooper Required	N	
Special Inspection Next Date		
(MDT058) Structurally Deficient|Functionally Obsolete	0	0
Type 1 Underwater Inspection Required		
Type 1 Underwater Inspection Date		
Type 1 Underwater Inspection Frequency (months)		
(MDT064) Type 1 Underwater Inspection Next Date		
(MDT074) Underwater Inspection Details	N	
Type 2 Underwater Next Inspection Date		
(90) Inspection Date	2017-08-01	2015-08-17
(91) Regular Inspection Frequency (Months)	24	24.00
(92A-1) FC Inspection Required	N	N
FC Inspection Frequency (Months)		
(92B-1) Type 2 Underwater Inspection Required	N	N
Type 2 Underwater Inspection Frequency (Months)		
(92C-1a) Other Inspection Required	N	N
Other Inspection Frequency (Months)		
Special Inspection Frequency (months)		
Special Inspection Required		
FC Inspection Date		
Special Inspection Date		

General Inspection Notes

Repair Suggestions:					
Repair ID	**Date Requested**	**Type**	**Status**	**Priority**	**Comments**

General Bridge Photos	
Photo #:ALE Location: , Comments:	
Photo #:SUPER Location: , Comments:	

STRUCTURE INSPECTION REPORT

Structure # 03809
4M NE WILSALL - SHIELDS RIVER 010

Photo #:PLN Location: , Comments:	

Element Inspection Data

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
16		Reinforced Concrete Top Flange (SF)	Area	1884	100.0	0.0	0.0	0.0

Previous Inspection Notes:
Patched and unpatched potholes in AC surfacing Condition State 1 : 100
Current Inspection Notes:
Minor cracking.

STRUCTURE INSPECTION REPORT

Structure # 03809
4M NE WILSALL - SHIELDS RIVER 010

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
110		Reinforced Concrete Open Girder|Beam (LF)	Length	282	100.0	0.0	0.0	0.0

Previous Inspection Notes:

A few small spalls Condition State 1 : 95.04
A few small spalls Condition State 2 : 4.96

Current Inspection Notes:

A few small spalls and minor cracking.

STRUCTURE INSPECTION REPORT

Structure # 03809
4M NE WILSALL - SHIELDS RIVER 010

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
205		Reinforced Concrete Column (EA)	Each	4	75.0	25.0	0.0	0.0
205		1080 - Delamination/Spall/Patched Area	Each	4	0.0	25.0	0.0	0.0

Previous Inspection Notes:

Afew small spalls and light abrasion near water line Condition State 1 : 100

Current Inspection Notes:

NW column has a CS2 spall.
Minor abbrasion.

STRUCTURE INSPECTION REPORT

Structure # 03809

4M NE WILSALL - SHIELDS RIVER 010

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
215		Reinforced Concrete Abutment (LF)	Length	62	100.0	0.0	0.0	0.0

Previous Inspection Notes:

No apparent deficiencies Condition State 1 : 100

Current Inspection Notes:

Good condition.

STRUCTURE INSPECTION REPORT

Structure # 03809

4M NE WILSALL - SHIELDS RIVER 010

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
234		Reinforced Concrete Cap (LF)	Length	46	100.0	0.0	0.0	0.0

Previous Inspection Notes:

No apparent deficiencies Condition State 1 : 100

Current Inspection Notes:

Good condition.

STRUCTURE INSPECTION REPORT

Structure # 03809

4M NE WILSALL - SHIELDS RIVER 010

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
313		Fixed Bearing (EA)	Each	8	0.0	100.0	0.0	0.0
313		7000 - Damage	Each	8	99.0	0.0	0.0	1.0
313		1000 - Corrosion	Each	8	0.0	100.0	0.0	0.0

Previous Inspection Notes:

Paint system is sound. No apparent deficiencies Condition State 1 : 100

Current Inspection Notes:

Freckled rust. Corrosion has started at each bearing.

STRUCTURE INSPECTION REPORT

Structure # 03809

4M NE WILSALL - SHIELDS RIVER 010

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
330		Steel Bridge Rail (LF)	Length	141	0.0	100.0	0.0	0.0
330		7000 - Damage	Length	141	0.0	14.2	0.0	0.0
330		1000 - Corrosion	Length	141	0.0	100.0	0.0	0.0

Previous Inspection Notes:

Areas of coating failure and surface rust Condition State 1 : 75.18
Areas of coating failure and surface rust Condition State 2 : 24.82

Current Inspection Notes:

Freckled rust. Corrosion has started full length.
20 ft of minor damage.

STRUCTURE INSPECTION REPORT

Structure # 03809
4M NE WILSALL - SHIELDS RIVER 010

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
510	16	Wearing Surfaces (SF)	Area	1884	96.1	0.0	3.9	0.0
510	16	3220 - Crack (Wearing Surface)	Area	1884	0.0	0.0	1.4	0.0
510	16	3210 - Delamination/Patched Area/Pothole (Wearing Surfaces)	Area	1884	0.0	0.0	2.5	0.0

Previous Inspection Notes:

Patched and unpatched potholes in AC surfacing Condition State 1 : 97.98
Patched and unpatched potholes in AC surfacing Condition State 2 : 2.02

Current Inspection Notes:

40 ft2 of potholes.
7 ft2 of repaired areas.
27 ft2 of CS3 cracking.See photo.

Photo #:DECK CRACKING.

Location:

Comments:

Element:510 - Wearing Surfaces (SF)

Generated by: MDT on 8/22/2017

STRUCTURE INSPECTION REPORT

Structure # 03809
4M NE WILSALL - SHIELDS RIVER 010

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
515	313	Steel Protective Coating (SF)	Area	8	0.0	0.0	0.0	0.0
515	330	3440 - Effectiveness (Steel Protective Coatings)	Area	499	0.0	0.0	30.0	40.0
515	313	3440 - Effectiveness (Steel Protective Coatings)	Area	8	0.0	0.0	0.0	1.0
515	330	Steel Protective Coating (SF)	Area	499	30.0	0.0	30.0	40.0

Previous Inspection Notes:

Areas of coating failure and surface rust Condition State 1 : 100
Paint system is sound. No apparent deficiencies Condition State 1 : 12487.5
Areas of coating failure and surface rust Condition State 3 : 50.1
Areas of coating failure and surface rust Condition State 2 : 50.1

Current Inspection Notes:

Bare metal with surface corrosion on base plates ,sharp edges, and bolts
Paint deterioration with limited effectiveness.
Bare metal with surface corrosion.

STRUCTURE INSPECTION REPORT

Structure # 03809
4M NE WILSALL - SHIELDS RIVER 010

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
960		Steel Approach Guardrail Ends	Each	4	0.0	100.0	0.0	0.0
960		1000 - Corrosion	Each	4	0.0	100.0	0.0	0.0

Current Inspection Notes:

Freckled rust. Corrosion has started.

General Inspection Notes	
Previous Inspection Notes	
Current Inspection Notes	

STRUCTURE INSPECTION REPORT

Structure # 03810
SHIELDS RIVER 011 - 14M NE WILSALL

Bridge Inventory Information

Bridge Inspection Date: 08/16/2017

General Location Data	
(22) Owner	02 County Hwy Agency
(6A) Feature Intersected	SHIELDS RIVER 011
(8) NBI Structure Number	L34001014+07001
(9) Location	14M NE WILSALL
(MDT058) Structurally Deficient|Functionally Obsolete	0 Not Deficient
(MDT076) Deck Condition	Good
(MDT077) Structure Condition	Good
(SR) Sufficiency Rating	88.3

A- Location Data	
(MDT001) Agency structure name	none
(1) State Code	308
(MDT027) On|Off System	0 Off System
(MDT020) MDT Maintenance Division	22 BOZEMAN
(2) MDT Inspection District	02 BUTTE
(3) County Code	067 PARK
(4) Place Code	00000 Rural Area
(7) Facility Carried by Structure	SHIELDS RIVER RD
(21) Maintenance Responsibility	02 County Hwy Agency
(112) Nbis Bridge Length	Y Long Enough
(MDT031) Railroad Over/Underpass	
(MDT032) Railroad Owner	
(MDT014) Interchange Indicator	
(MDT015) Interstate Ramp Indicator	
(MDT078) MDT Maintenance Section	none Not a State Maintained Bridge

B- Construction Data	
(27) Year Built	1957
(106) Year Reconstructed	
(MDT102) Years Rehabilitated	
(MDT019) MDT Orignial Drawing Number	3542

STRUCTURE INSPECTION REPORT

Structure # 03810

SHIELDS RIVER 011 - 14M NE WILSALL

(MDT103) MDT Rehab Drawing Numbers	
(MDT097) Plans in SMS?	
(MDT098) Shop Drawings in SMS	
(MDT017) MDT Original Construction Project Number	S 186(4)
(MDT099) MDT Rehab Project Numbers	
(MDT018) MDT Original Construction Station	747+60
(MDT100) MDT Rehab Stations	
(MDT021) MDT UPN	
(MDT101) MDT Rehab UPNs	

C- Improvement Cost Data	
(75A) Type of Work Proposed	
(75B) Work to be Completed by	
(76) Length Of Structure Improvement	ft
(94) Bridge Improvement Cost	
(95) Roadway Improvement Cost	
(96) Total Project Cost	
(97) Year Of Improvement Cost Estimate	

D- Border State Data	
(98A-1) Border Bridge-Neighboring State Code	
(98A-2) Border Bridge - Neighboring FHWA Region Code	
(98B) Border Bridge-Percent Responsibility	
(99) Border Bridge Structure Number	

E- Historical Structure Data	
(37) Historical Significance	5 5 Not eligible for NRHP

F - Bridge Location	
(16) Latitude (DMS)	460959.73
(17) Longitude (DMS)	1103252.05

G - Span and Dimensional Data	
(33) Bridge Median	0 0 No median
(34) Skew	0 %
(35) Structure Flared	0 0 No flare
(42A) Type of Service on Bridge	1 1 Highway
(48) Length Of Maximum Span	25 ft

STRUCTURE INSPECTION REPORT

Structure # 03810

SHIELDS RIVER 011 - 14M NE WILSALL

(49) Structure Length	25 ft
(53) Min Vert Clear Over Bridge Roadway	99.99 ft
(101) Parallel Structure Designation	N No parallel structure exists
(103) Temporary Structure Designation	
(38) Navigation Control	0 No navigation control on waterway
(39) Navigation Vertical Clearance	000 Not Applicable (default) ft
(40) Navigation Horizontal Clearance	0000 Not Applicable (default) ft
(116) Minimum Navigation Vertical Clearance	ft

H - Main Span	
(43A) Main Span Material	7 Wood or Timber
(43B) Main Span Design Type	02 Stringer|Multi-beam or Girder
(45) Number Of Spans In Main Unit	1

I - Approach Span	
(44A) Approach Span Material	0 Not Applicable
(44B) Approach Span Design Type	00 Not Applicable
(46) Number Of Approach Spans	0

J - Deck Data	
(50A) Left Curb|Sidewalk Width	0 ft
(50B) Right Curb|Sidewalk Width	0 ft
(52) Out-to-Out Deck Width	26.2 ft
(MDT006) Deck Area	655 Area
(107) Deck Structure Type	8 Wood or Timber
(108A) Type of Wearing Surface	6 Bituminous
(108B) Type of Membrane	0 None
(108C) Deck Protection	0 None

K - Under Bridge Service	
(42B) Type of Service under	5 Waterway
(54A) Minimum Vertical Underclearance-Reference Feature	N Feature not a highway or railroad
(54B) Minimum Vertical Underclearance	0 ft
(55A) Min Lateral Underclear On Right-Reference Feature	N Feature not a highway or railroad
(55B) Minimum Lateral Underclearance on Right	0 ft
(56) Min Lateral Underclear On Left	0 ft
(111) Pier|abutment Protection	

(113) Scour Critical Status	5 Bridge foundations determined to be stable for calculated scour conditions.
(69) Underclear, Vertical and Horizontal	N Not applicable

L - Load and Rating Data	
(MDT016) Load Rating Date	07/12/2010
(MDT022) Name of Load Rater	AKJ
(31) Design load	3 MS 13.5 (HS 15)
(66) Inventory Rating	25.1 ton
(65) Method Used To Determine Inventory Rating	2 Allowable Stress (AS)
(64) Operating Rating	36.5 ton
(63) Method Used to Determine Operating Rating	2 Allowable Stress (AS)
(70) Legal Load Status	5 Equal to or above legal loads
(MDT065) Type 3 Truck Inventory Rating	20 ton
(MDT071) Type 3S2 Truck Inventory Rating	30 ton
(MDT068) Type 3-3 Truck Inventory Rating	38 ton
(MDT036) SU4 Truck Inventory Rating	ton
(MDT039) SU5 Truck Inventory Rating	ton
(MDT042) SU6 Truck Inventory Rating	ton
(MDT045) SU7 Truck Inventory Rating	ton
(MDT091) EV2 Truck Inventory Rating	ton
(MDT092) EV3 Truck Inventory Rating	ton
(MDT066) Type 3 Truck Operating Rating	29 ton
(MDT072) Type 3S2 Truck Operating Rating	43 ton
(MDT069) Type 3-3 Truck Operating Rating	56 ton
(MDT037) SU4 Truck Operating Rating	ton
(MDT040) SU5 Truck Operating Rating	ton
(MDT043) SU6 Truck Operating Rating	ton
(MDT046) SU7 Truck Operating Rating	ton
(MDT093) EV2 Truck Operating Rating	ton
(MDT094) EV3 Truck Operating Rating	ton
(MDT079) Truck Type 3 LRFR Rating	ton
(MDT081) Truck Type 3S2 LRFR Rating	ton
(MDT080) Truck Type 3-3 LRFR Rating	ton
(MDT082) Truck Type SU4 LRFR Rating	ton
(MDT083) Truck Type SU5 LRFR Rating	ton

(MDT084) Truck Type SU6 LRFR Rating	ton
(MDT085) Truck Type SU7 LRFR Rating	ton
(MDT095) Truck Type EV2 LRFR Rating	ton
(MDT096) Truck Type EV3 LRFR Rating	ton

M - General Facility Data	
(5A) Inventory Route-Record Type	1 Route carried `on` the structure
(5C) Designated Level of Service	1 Mainline
(5B) Route Signing Prefix	4 County highway
(5D) Route Number	34001
(5E) Directional Suffix	2 East
(12) Base Highway Network	0 Not on Base Network
(13A) LRS Number	C034001N
(13B) Inventory Route, Subroute Number-Subroute Number	00
(19) Bypass|Detour Length	1 mi
(MDT009) Detour Speed	-1 mi/hr
(104) NHS Indicator	0 Not on the NHS
(MDT030) Posted speed limit (MPH)	35 mi/hr
(11) Accumulated Miles	14.109 mi
(MDT087) Mile Post	14+0.700
(MDT035) Road Name	
(MDT075) Roadway System	
General Roadway Notes	

N - Base Network Data	
(28B) Lanes Under the Structure	0
(32) Approach Roadway Width	22 ft
(51) Bridge Roadway Width Curb-To-Curb	24 ft
(72) Approach Roadway Alignment	7 Above Min Criteria
(28A) Lanes on the Structure	2

O - Other NetWork Data	
(20) Toll	3 On Free Road
(100) STRAHNET Highway Designation	0 Not a STRAHNET route
(105) Federal Lands Highways	0 Not applicable
(110) National Truck Network	0 Not part of National Truck Network
(MDT048) School Bus Route	0 Not on School Bus Route

(6B) Features Intersected-Critical Facility Indicator	

P - Roadway Size and Clearance Data	
(10) Minimum Vertical Clearance	99.99 ft
(47) Total Horizontal Clearance	24.2 ft
(102) Direction of Traffic	2 2-way traffic
(MDT007) Departmental Route	L34001
(MDT002) Both|South|West Direction	0 Both Directions
(MDT003) Both|South|West Vertical Distance	99.990 ft
(MDT051) South|West Horizontal Distance	24.199
(MDT024) North|East Direction	
(MDT026) North|East Vertical Distance	ft
(MDT025) North|East Horizontal Distance	ft

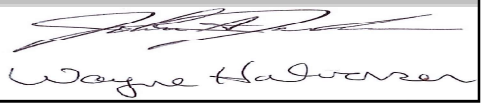
Q - Traffic Data	
(26) Functional Classification	08 Rural, Minor Collector
(MDT060) Traffic Volume Class	01
(29) Average Daily Traffic	100
(30) Year of Average Daily Traffic	2003
(109) Average Daily Truck Traffic (%)	3
(114) Future Average Daily Traffic	100
(115) Year Of Future Avg Daily Traffic	2025

General Bridge Notes

STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Inspection Information

Responsible Person	Name	Signature
Inspector	John Jackson	
QC	Wayne Halvorsen	

User	Begin	End	Comments
John Jackson	08-16-2017 12:30 pm	08-16-2017 02:00 pm	On-site.

Day	Weather	Temperature	Comments
08-16-2017 12:30 - 02:00	Sunny	75	

R- Inspection	Current Value	Previous Value
(36A) Traffic Safety Features - Bridge Railings	0	0
(36B) Traffic Safety Features - Transitions	0	N
(36C) Traffic Safety Features - Approach guardrail	N	N
(36D) Traffic Safety Features - Approach guardrail Ends	0	0
(41) Structure Open, Posted, or Closed to Traffic	A	A
(58) Deck Rating	7	6
(59) Superstructure	6	6
(60) Substructure	6	6
(MDT061) Type 1 Underwater Inspection Required	Y	
(61) Channel	8	8
(62) Culvert	N	N
(67) Structural Evaluation	6	6
(68) Deck Geometry	6	6
(69) Underclear, Vertical and Horizontal	N	N
(71) Waterway Adequacy	8	8
(MDT076) Deck Condition	Good	
(MDT077) Structure Condition	Good	

Inspection Hours and Dates	Current Value	Previous Values
(MDT005) Date Last QA	2000-01-01	
(MDT010) FC Inspection Details	None	
FC Next Inspection Date		
(MDT016) Load Rating Date	2010-07-12	

STRUCTURE INSPECTION REPORT

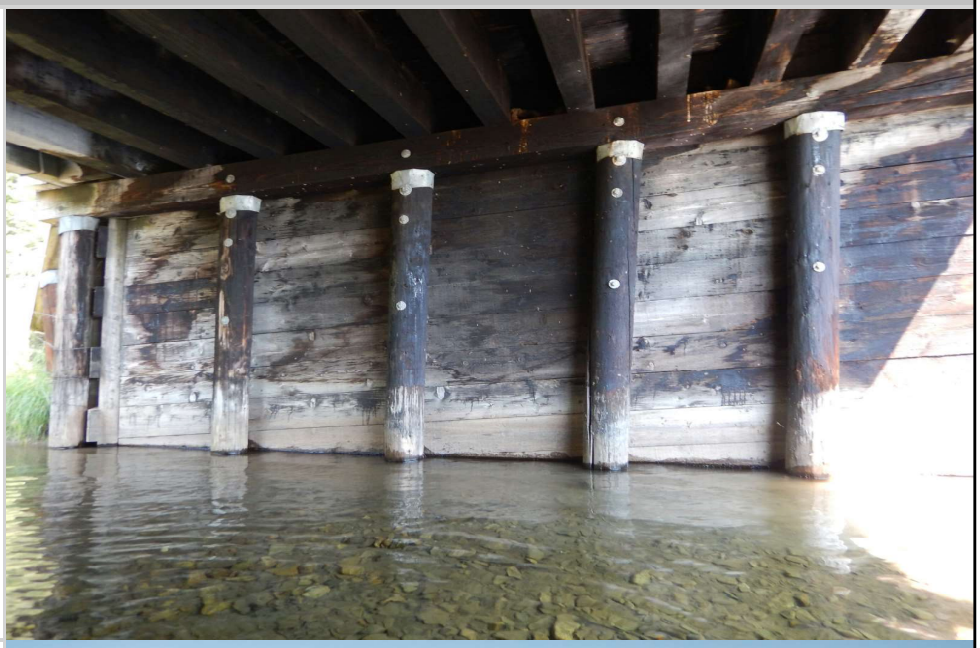
Structure # 03810

14M NE WILSALL - SHIELDS RIVER 011

(MDT023) Next Inspection Date	2019-08-16	2017-08-16
(MDT028) Other Inspection Details	none	
Other Inspection Next Date		
(MDT034) Request Review of Load rating	0	
(MDT050) Snooper Required	N	
Special Inspection Next Date		
(MDT058) Structurally Deficient|Functionally Obsolete	0	0
(MDT061) Type 1 Underwater Inspection Required	Y	
(MDT062) Type 1 Underwater Inspection Date	2017-8-16	
(MDT063) Type 1 Underwater Inspection Frequency (months)	48	
(MDT064) Type 1 Underwater Inspection Next Date	2021-8-16	
(MDT074) Underwater Inspection Details	N	
Type 2 Underwater Next Inspection Date		
(90) Inspection Date	2017-08-16	2015-08-17
(91) Regular Inspection Frequency (Months)	24	24.00
(92A-1) FC Inspection Required	N	N
FC Inspection Frequency (Months)		
(92B-1) Type 2 Underwater Inspection Required	N	N
Type 2 Underwater Inspection Frequency (Months)		
(92C-1a) Other Inspection Required	N	N
Other Inspection Frequency (Months)		
Special Inspection Frequency (months)		
Special Inspection Required		
FC Inspection Date		
Special Inspection Date		

General Inspection Notes

Repair Suggestions:					
Repair ID	**Date Requested**	**Type**	**Status**	**Priority**	**Comments**

General Bridge Photos	
Photo #: Abut 2 Location: , Comments:	
Photo #: Approach - South West Location: , Comments:	

STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Photo #: Profile - North West
Location: , Comments:

Photo #: Abut 1 Location: ,
Comments:

Element Inspection Data

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
31		Timber Deck (SF)	Area	657	93.0	7.0	0.0	0.0
31		1170 - Split/Delamination (Timber)	Area	657	0.0	2.0	0.0	0.0
31		1150 - Check/Shake	Area	657	0.0	5.0	0.0	0.0

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STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
Previous Inspection Notes:								
Cracking, rutting with pending potholes Condition State 2 : 100								
Current Inspection Notes:								
Short end splits in many planks End checks in most planks								

STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
111		Timber Open Girder|Beam (LF)	Length	364	79.1	15.9	5.0	0.0
111		1150 - Check/Shake	Length	364	0.0	15.9	5.0	0.0

Previous Inspection Notes:

Girder 4 has 6m of deep checks, a shake near midspan see photo. Also a shake a bearing area 1m in length. Girder 5 has a check full length on side. Girder 6 has check half length on side. Right exterior has deep weather checks. Condition State 1 : 70.05
Girder 4 has 6m of deep checks, a shake near midspan see photo. Also a shake a bearing area 1m in length. Girder 5 has a check full length on side. Girder 6 has check half length on side. Right exterior has deep weather checks. Condition State 3 : 9.89
Girder 4 has 6m of deep checks, a shake near midspan see photo. Also a shake a bearing area 1m in length. Girder 5 has a check full length on side. Girder 6 has check half length on side. Right exterior has deep weather checks. Condition State 2 : 20.05

Current Inspection Notes:

Minor checking in many
G1 - 9 ft CS2 check
G4 - 6 ft check midspan, 2 ft long end shake
G5 - Full length CS2 check - 28 ft
G8 - 3 ft CS2 check
G9 - 1 ft check from mechanical damage midspan
G13 - 9 ft CS2 check
G13 has 18 ft of deep checks. Photo

Photo #:G4 check

Location:

Comments:

Element:111 - Timber Open Girder|Beam (LF)

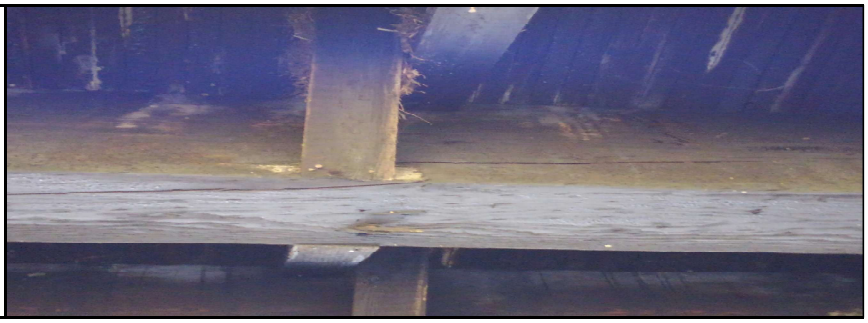

Photo #:G13 - Deep Checking

Location:

Comments:

Element:111 - Timber Open Girder|Beam (LF)

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STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4

Photo #:G13 - Deep Checking

Location:

Comments:

Element:111 - Timber Open Girder|Beam (LF)

STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
216		Timber Abutment (LF)	Length	95	0.0	59.0	41.0	0.0
216		1900 - Distortion	Length	95	0.0	0.0	10.5	0.0
216		1170 - Split/Delaminatio n (Timber)	Length	95	0.0	0.0	8.4	0.0
216		1150 - Check/Shake	Length	95	0.0	100.0	41.0	0.0

Previous Inspection Notes:

Abutment one left wingwall is deflected, column possibly broken but too deep to inspect. All four wingwalls and abutment deflected. Condition State 1 : 69.47
Abutment one left wingwall is deflected, column possibly broken but too deep to inspect. All four wingwalls and abutment deflected. Condition State 3 : 10.53
Abutment one left wingwall is deflected, column possibly broken but too deep to inspect. All four wingwalls and abutment deflected. Condition State 2 : 20

Current Inspection Notes:

Moderate depth checking throughout
Abut 1 LT wingwall is deflected approx 2 ft at top
End splits in backwall and wingwall planks
Deep checks in wingwall planks

Photo #:End split in wingwall plank

Location:

Comments:

Element:216 - Timber Abutment (LF)

Photo #:Abut 1 LT Deflection

Location:

Comments:

Element:216 - Timber Abutment (LF)

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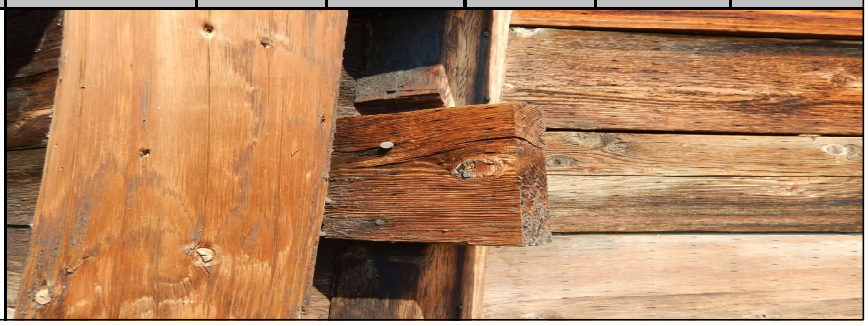
STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
Photo #:End split in backwall plank Location: Comments: Element:216 - Timber Abutment (LF)								

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STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
228		Timber Pile (EA)	Each	12	0.0	0.0	0.0	0.0
228		1900 - Distortion	Each	12	0.0	100.0	0.0	0.0
228		1170 - Split/Delaminatio n (Timber)	Each	12	0.0	0.0	8.3	0.0
228		1150 - Check/Shake	Each	12	0.0	100.0	50.0	0.0
228		1020 - Connection	Each	12	0.0	41.7	58.3	0.0

Current Inspection Notes:

All pile bow out at the bottom
Abut 2 pile 4 has a wide spiral split with some displacing of split wood.
Deep checks in Abut 1 piles 2,4,5 and 6 and Abut 2 piles 2 and 6
Multiple moderate depth checks in all pile

STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
235		Timber Cap (LF)	Length	56	0.0	50.0	50.0	0.0
235		1150 - Check/Shake	Length	56	0.0	50.0	50.0	0.0

Previous Inspection Notes:

Abutment two has a deep check along lower surface and 3m check along rt exterior cap face. Condition State 1 : 50
Abutment two has a deep check along lower surface and 3m check along rt exterior cap face. Condition State 2 : 50

Current Inspection Notes:

Abut 1 - CS2 checks full length of element
Abut 2 - CS3 checks full length of element

Photo #:Abut 2 Cap Checks

Location:

Comments:

Element:235 - Timber Cap (LF)

STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
332		Timber Bridge Rail (LF)	Length	49	0.0	87.8	12.2	0.0
332		7000 - Damage	Length	49	0.0	2.0	0.0	0.0
332		1170 - Split/Delaminatio n (Timber)	Length	49	0.0	0.0	12.2	0.0
332		1150 - Check/Shake	Length	49	0.0	100.0	0.0	0.0

Previous Inspection Notes:

Decay, splitting and checking. Paint system failing with cracking peeling and bubbling. Condition State 1 : 69.39
Decay, splitting and checking. Paint system failing with cracking peeling and bubbling. Condition State 2 : 30.61

Current Inspection Notes:

Approx 1 ft of impact damage to Abut 2 end of RT rail
CS2 checking throughout posts and rail
6 ft of end splitting on RT rail

Photo #:Rail end splitting

Location:

Comments:

Element:332 - Timber Bridge Rail (LF)

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STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
510	31	Wearing Surfaces (SF)	Area	657	96.1	0.9	3.0	0.0
510	31	3220 - Crack (Wearing Surface)	Area	657	0.0	0.0	3.0	0.0
510	31	3210 - Delamination/Patched Area/Pothole (Wearing Surfaces)	Area	657	0.0	0.9	0.0	0.0

Previous Inspection Notes:

Cracking, rutting with pending potholes Condition State 2 : 100

Current Inspection Notes:

10 sqft of map cracking in RT lane near Abut 2.
10 ft of wide cracks in AC surfacing.
Approx 6 sqft of AC patches

Photo #:Pattern cracking

Location:

Comments:

Element:510 - Wearing Surfaces (SF)

Photo #:Wide longitudinal crack

Location:

Comments:

Element:510 - Wearing Surfaces (SF)

STRUCTURE INSPECTION REPORT

Structure # 03810
14M NE WILSALL - SHIELDS RIVER 011

Element #	Parent Element	Name	Unit	Quantity	%CS 1	%CS 2	%CS 3	%CS 4
900		Scour	Each	1	0.0	100.0	0.0	0.0
900		6000 - Scour	Each	1	0.0	100.0	0.0	0.0

Current Inspection Notes:

Moderate scour along the face of Abut 1. Riprap has been placed against the abutment at some time.

General Inspection Notes	
Previous Inspection Notes	
Current Inspection Notes	