



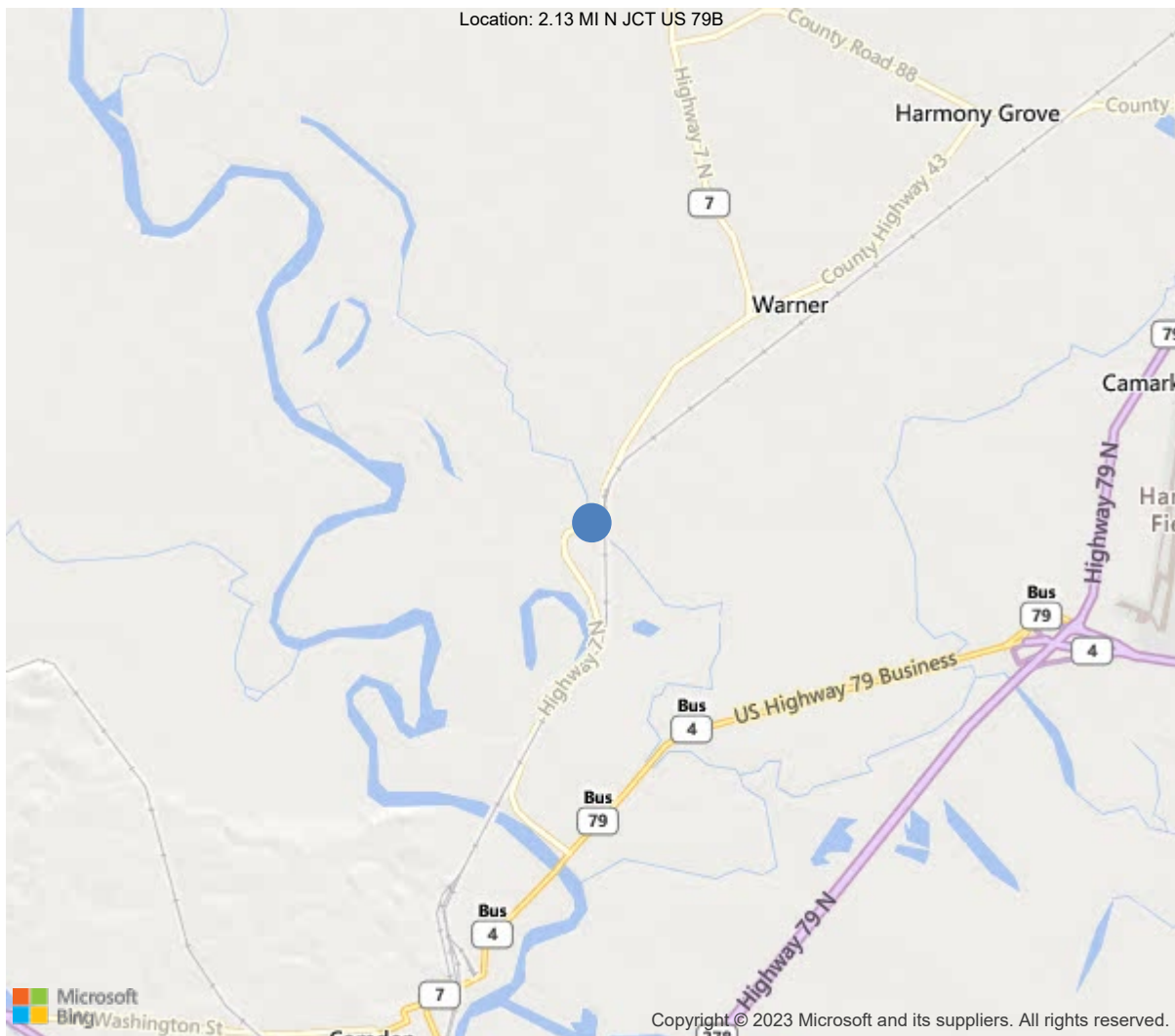
Latitude:33.62188, Longitude:-92.81508

Route:7 Section:04 Log:2.1

Arnold Road ID:52x7x4xA, Arnold Log mile:2.093

District 07, 103 - Ouachita County

Owner: 1 - State Highway Agency



33.62188, -92.81508



Asset #M0161(Routine, NSTM)

SH 7 S-4 LM 2.10 over PALMER BAYOU

Location: 2.13 MI N JCT US 79B

Team Lead: Rickie Bratton, Inspection Date: 06/28/2023

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	M0161
(5) Inventory Route	1
(2) Highway Agency District	07 - District 07
(3) County Code	103 - Ouachita County
(4) Place Code	0
(6) Features Intersected	PALMER BAYOU
(7) Facility Carried	SH 7 S-4 LM 2.10
(9) Location	2.13 MI N JCT US 79B
(11) Mile Point	2.1 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	33.62188
(17) Longitude	-92.81508
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	42
Material	4 - Steel continuous
Type	2 - Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	4
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6 - Bituminous
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1950
(106) Year Reconstructed	0
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	1100
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	7 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	19 ft
(49) Structure Length	78 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	23.3 ft
(52) Deck Width Out to Out	24.2 ft
(32) Approach Roadway Width (W/Shoulders)	32.2 ft
(33) Bridge Median	0 - No median
(34) Skew	0 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	23.6 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	99.9 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	0 - No navigation control on w
(111) Pier Protection	1 - Navigation protection not
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	0 ft
(40) Navigation Horizontal Clearance	0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	0
(26) Functional Class	7 - Rural Major Collector
(100) Defense Highway	0 - The inventory route is not
(101) Parallel Structure	N - No parallel structure exists
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	0 - The inventory route is not
(20) Toll	3 - On free road. The structure
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	6
(59) Superstructure	5
(60) Substructure	6
(61) Channel & Channel Protection	6
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	1 - M9 / H10
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	43
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	26
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	5
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	6
(72) Approach Roadway Alignment	5
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	0 - Inspected feature does not meet
(36C) Approach Guardrail	0 - Inspected feature does not meet
(36D) Approach Guardrail Ends	0 - Inspected feature does not meet
(113) Scour Critical Bridges	5 - Bridge foundations determined to
PROPOSED IMPROVEMENTS	
(75) Type of Work	31 - Replacement of bridge or
(76) Length of Structure Improvement	104 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 117
(96) Total Project Cost	\$ 307
(97) Year of Improvement Cost Estimate	2002
(114) Future ADT	1490
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	06/28/2023		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	Yes	12	06/28/2023
B: Underwater Inspection	No		
C: Other Special Inspection			
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			



General Observation

07/18/2018 JPR -- This structure is logged from South to North.

58 - Deck (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

AC OL

59 - Superstructure (5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.)

Steel girders with some minor rust. Girder 3 bt 1 section loss. Girder 12 @ bt 3 section loss. Bt 4 cap sec. loss to flange and web.

Bent 1 girders 11&12 holes in web at bearing.

Bent 3 girder 12 section loss to bottom flange.

Bent 5 girder 12 section loss at bearing.

60 - Substructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Steel Cap 2: Both members have uniform surface rust. There are areas of minor pitting where the caps are connected to the columns and beams.

Steel Cap 3: Both members have areas surface corrosion with minor pitting. There is section loss in the webs of the C-Channel of the caps members up to 1/8" deep. The section loss has occurred at the edge of the connection points of the caps and columns, also the connection points of the diaphragms that are between the two C-Channel members that make up the steel cap.

Steel Cap 4: Both members have uniform surface rust. There are areas of minor pitting where the caps are connected to the columns and beams.

A-46 - Asset Files

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Asset #M0161(Routine, NSTM)

SH 7 S-4 LM 2.10 over PALMER BAYOU

Location: 2.13 MI N JCT US 79B

Team Lead: Rickie Bratton, Inspection Date: 06/28/2023

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	1888	1885	0	3	0
1080	Delamination/Spall/Patched Area	SF	3	0	0	3	0
510	Wearing Surfaces	SF	1810	1665	145	0	0
3220	Crack (Wearing Surface)	SF	145	0	145	0	0
(12) AC OL some wear and cracks.							
107	Steel Open Girder/Beam	LF	936	705	37	194	0
1000	Corrosion	LF	231	0	37	194	0
515	Steel Protective Coating	SF	4300	4268	32	0	0
3440	Effectiveness (Steel Protective Coatings)	LF	32	0	32	0	0
(107) All beam ends have active corrosion, beams 6 & 12 the top flanges have active corrosion the entire length.							
202	Steel Column	EA	16	1	14	1	0
1000	Corrosion	EA	15	0	14	1	0
515	Steel Protective Coating	SF	500	500	0	0	0
(202) Concrete encased piles, with 1.50' exposed at top. Exposed sections are rusty. 07/18/2018 JPR -- All of the concrete encasements @ the bottom have some abrasion and wear, especially Bt. 3 column 5 has some small holes in the concrete next to the footing.							
215	Reinforced Concrete Abutment	LF	76	73	0	3	0
1080	Delamination/Spall/Patched Area	LF	3	0	0	3	0
(215) Bt. 5 abutment has 3' spall.							
231	Steel Pier Cap	LF	150	103	34	13	0
1000	Corrosion	LF	47	0	34	13	0
515	Steel Protective Coating	SF	1000	0	770	200	30
3440	Effectiveness (Steel Protective Coatings)	LF	1000	0	770	200	30
(231) All caps are steel and are "doubled" each has two segments parallel that are welded and bolted to the exposed section of the H piles. Some rust and coating loss. Bent 4 cap @ Rt. side has some paint loss with some rust and pitting with some section loss to the top flange and has started pitting into the web.							
330	Metal Bridge Railing	LF	156	156	0	0	0
515	Steel Protective Coating	SF	312	312	0	0	0



Team Lead: Rickie Bratton, Inspection Date: 06/28/2023

Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	1888	1885	0	3	0
1080	Delamination/Spall/Patched Area	SF	3	0	0	3	0
510	Wearing Surfaces	SF	1810	1665	145	0	0
3220	Crack (Wearing Surface)	SF	145	0	145	0	0
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Comment: AC OL



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Location: 2.13 MI N JCT US 79B

Team Lead: Rickie Bratton, Inspection Date: 06/28/2023

Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
107	Steel Open Girder/Beam	LF	936	705	37	194	0
1000	Corrosion	LF	231	0	37	194	0
515	Steel Protective Coating	SF	4300	4268	32	0	0
3440	Effectiveness (Steel Protective Coatings)	LF	32	0	32	0	0
(107) All beam ends have active corrosion, beams 6 & 12 the top flanges have active corrosion the entire length.							

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Team Lead: Rickie Bratton, Inspection Date: 06/28/2023

Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
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1000	Corrosion	EA	15	0	14	1	0
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(202) Concrete encased piles, with 1.50' exposed at top. Exposed sections are rusty. 07/18/2018 JPR -- All of the concrete encasements @ the bottom have some abrasion and wear, especially Bt. 3 column 5 has some small holes in the concrete next to the footing.							
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Comment: Steel Cap 2: Both members have uniform surface rust. There are areas of minor pitting where the caps are connected to the columns and beams.

Steel Cap 3: Both members have areas surface corrosion with minor pitting. There is section loss in the webs of the C-Channel of the caps members up to 1/8" deep. The section loss has occurred at the edge of the connection points of the caps and columns, also the connection points of the diaphragms that are between the two C-Channel members that make up the steel cap.

Steel Cap 4: Both members have uniform surface rust. There are areas of minor pitting where the caps are connected to the columns and beams.



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Location: 2.13 MI N JCT US 79B

Team Lead: Rickie Bratton, Inspection Date: 06/28/2023

Culvert

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4



Elevation.



Bent 5 girder 12 section loss at bearing with hole in the web.



Bent 1 girders 11/12 have holes in web at bearing.



Span 2 overview



Approach roadway northbound



Elevation



Elevation



Underview



Overview



Upstream



Downstream



Approach



Span 4.



Span 1, Bt. 1, Bm 11, lower web and bottom flange have corrosion with up to 1/4" deep



Beam 6, top flange has corrosion the entire length.



NSTM Steel Caps



Bt. 3 steel cap, corrosion with minor pitting between columns
2 & 3.

Maintenance Needs

Date Reported: 07/31/2012

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component: Superstructure

Deficiency Description

Bt. 1, beam 3 has pack rust with minor section loss to bottom flange and web @ bearing area.

Bt 3, beam 12 sec. loss to bottom flange and web.

Bt 4, beam12 has some paint failure with pack rust and some section loss to top and bottom flanges and also to web over bent 4 Rt.

Beams 6 and 12 have active corrosion to the top flange the entire length of the beams.

Span 4 girder 12 has some plates that were added onto girder 12 and had old guard rail posts attached to them, these plates have heavy pack rust and the rust is starting to affect the bottom flange of outside girders @ all locations of the plates.

Remarks



Bent 4 girder 12 has some pack rust with some section loss to top & bottom flanges and the web over Bt. 4.



Span 4 Girder 12, there are plates that were welded to outside of girder 12 all spans & appears the old guard rail posts were mounted to these plates. These plates have heavy pack rust and the rust is starting to affect the bottom flange of outside girders @ all locations of the plates.



Span 3 at Bt 3, Beams 5 & 6, beam ends have active corrosion with pitting.



Span 4, Beam 12, Bt. 4.



Span 4, Beam 12, Bt 3, hole in bottom flange.



Span 3, Beam 12, Bt. 3.



Span 1, Beam 3, Bt. 1.

Maintenance Needs

Date Reported: 07/19/2018

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component: Substructure

Deficiency Description

Bent 3 Cap, the webs of the C-Channel that make the cap have 1/8" section loss at connection areas, the original section of the web is 3/8" thick. One bolt head has corroded away at Column 4 bolted connection, also one bolt head has corroded away at the cap splice plate.

Bent 4 Cap right end has sec. loss to bottom flange and web.

Remarks



Bent 4 cap rt. side, top flange has some rust with pitting and minor section loss.



Bt. 3 cap, between columns 2 & 3.



Bt. 3 cap, between columns 3 & 4.



Bt. 3 cap, between columns 4.



Bt. 4 cap, right ahead end.



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Location: 2.13 MI N JCT US 79B

Team Lead: Rickie Bratton, **Inspection Date:** 06/28/2023

Routine Maintenance

Check Box Maintenance Items

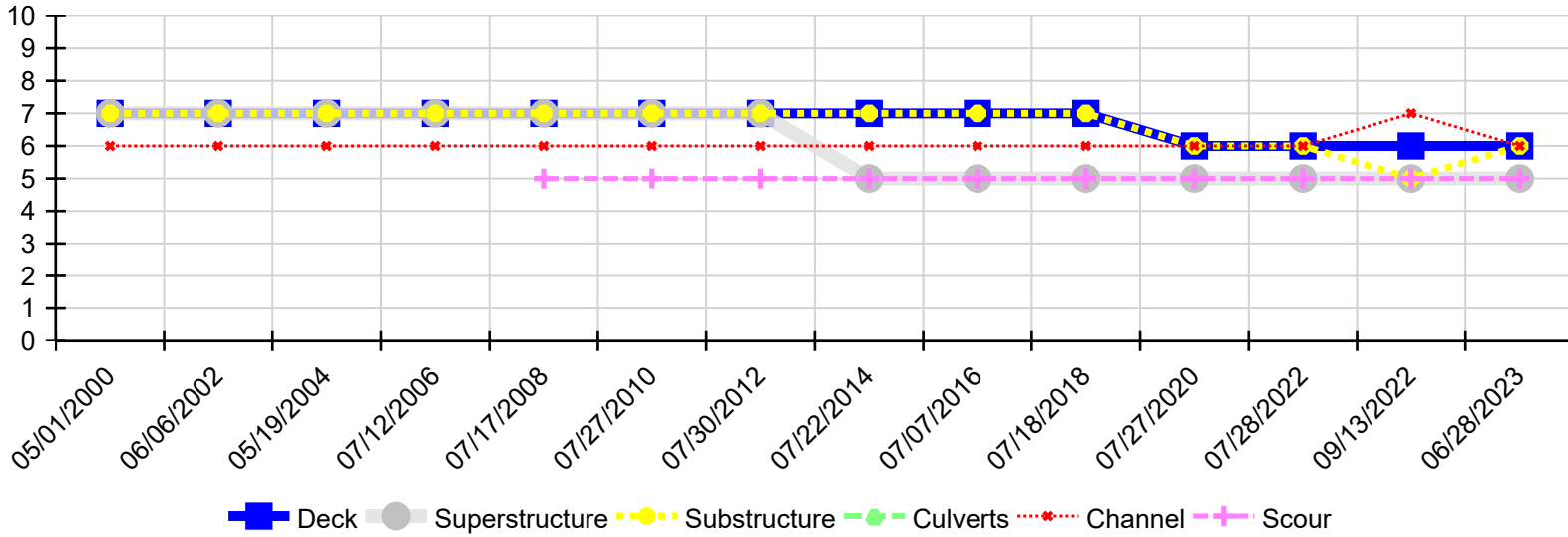
Type of Maintenance	Is recommended?
A-54 - Sealable Deck Cracks	
A-55 - Deck Washing Needed	
A-56 - Joint Cleaning/Flushing Needed	
A-57 - Beam End and Bearing Paint Needed	
A-58 - Cap Cleaning/Flushing Needed	
A-59 - Joint Repair Needed	
A-60 - Full Beam Painting Needed	
A-61 - Polymer Overlay Advised	
A-62 - Hydro and LMC Advised	
A-63 Missing/Incorrect Log Mile Signage	
A-64 - Vegetation Removal Requested	



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Team Lead: Rickie Bratton, **Inspection Date:** 06/28/2023

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
06/28/2023	6	5	6	N	6	5
09/13/2022	6	5	5	N	7	5
07/28/2022	6	5	6	N	6	5
07/27/2020	6	5	6	N	6	5
07/18/2018	7	5	7	N	6	5
07/07/2016	7	5	7	N	6	5
07/22/2014	7	5	7	N	6	5
07/30/2012	7	7	7	N	6	5
07/27/2010	7	7	7	N	6	5
07/17/2008	7	7	7	N	6	5
07/12/2006	7	7	7	N	6	N
05/19/2004	7	7	7	N	6	N
06/06/2002	7	7	7	N	6	N
05/01/2000	7	7	7	N	6	N



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Location: 2.13 MI N JCT US 79B

Team Lead: Rickie Bratton, Inspection Date: 06/28/2023

NSTM Inspection Report and Procedure
Bridge No. M0161 2.13 MI N JCT US 79B

A-128 - Description of Structure

A-129 - Range Of Dates, Personnel and Responsibilities

A-130 - Access Equipment

B.IR.02 Fatigue Prone Details

B.C.14 NSTM Inspection Condition

B.IR.04 Complex Feature



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Reference Photos:



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Location: 2.13 MI N JCT US 79B

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Bridge #M0161 NSTM Member Inspection Log			
Member or Element (NSTM)	Access Equipment	Condition Rating	General Condition Notes

NSTM specific defect notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4



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Signatures

Signature

Printed Name

Date
