Request for Proposal (RFP) Bid No: <u>Bid 20-05-2317LE</u> Addendum No. 2

Date:	July 13, 2020
То:	All Proposers
Subject:	Addendum No. 2 Consisting of Twenty-Five (25) Pages
RFP No.:	Bid 20-05-2317LE
Project Name:	N9402(2)1,2&3 Bridge N656 Replacement
Owner:	Navajo Division of Transportation

Proposer shall make note of and/or incorporate all changes listed below into the requested Request for Proposal (RFP):

- 1. The BIA (Engineer of Record) has reviewed and revised plan sheet 2. Please replace sheet 2 of the N9402(2)1,2&3 plan set with the one attached to Addendum 2.
- 2. The Navajo Division of Transportation has received the following questions regarding this RFP and thereby issues the following responses:

Questions Submitted	Responses Provided
Will hand delivered proposals still be accepted with Covid restrictions?	Yes, the Navajo DOT will be available on the RFP deadline date (July 23, 2020) to receive the proposals. You must call the phone number listed in the RFP and someone will meet you at the front gate of the building complex to accept them.
In the plan set note 3 as shown on sheet 5 of 40 states CIP concrete in super and sub structure shall be class A(AE) with a min 28 day strength of 27.8 MPa (4003 psi). In the FP-14, for class A(AE) the min 28 day strength is 4500 psi. Which compressive strength do we need to price out? 4000psi or 4500 psi?	The design was based on 4000 psi concrete, but supplemental specification (Exhibit F) section 104.04 of the FP-14 indicates the standard specifications (FP-14) supersedes the plans so you have to price it for 4500 psi.
Per the STS Section 551- Piling, 551.07 Test Pile. It is our understanding that if Pre-Boring is required for test pile to reach minimum tip elevations that this would be incidental to bid item 55120-0000. If Pre-	The plans did not call for preboring, as indicated in the bid schedule which does not show a separate bid item for pre-boring. So this should not be an issue unless the contractor encounters sandstone before elevation 1843

Boring is required for the production pile will this be paid under an added item 55115-1000, Pre-Boring? Please verify.	during the pile work; in which case a modification would be required to socket the pile 1.5 m into sandstone if the bearing capacity is not achieved at this depth which we doubt this will be an issue from looking at the boring logs.
Will standard size 24" Pipe Pile be acceptable for the 610mm size?	Yes, 24" is the direct English equivalent for 610 mm.
Can you provide a "RIGHT-OF-WAY & REFERENCE MARKERS DETAIL SHEET" for this project?	Please see the attached ROW plat map for the ROW marker locations. No additional detail sheet to be provided.
Will an as-built of the existing bridge be made available?	The BIA could not find a set of the old plans as this old bridge was built in 1978. The bridge inspection reports are attached to this Addendum for your information. We have also included a standard steel military bridge sheet detail from our files, this standard detail sheet is NOT specific to this project installation.
Does NDOT know if the existing bridge was coated with lead-based paint at any point in its' history.	There should not be lead in the paint because it was built the same year lead based paint was outlawed in this country.
	The information provided herein should not be considered as 100% accurate. The Contractor is responsible under the NN clauses to complete their due diligence in the field and research to determine how they will bid the project.
Is there only (1) expansion joint being installed? Or are there two, one on each approach slab?	Sheet 25 of the plans call for expansion devices at each end of the approach slabs and at both abutments, so there are a total of 4 required (which includes 2 fixed joint seals and 2 expansion joint strip seals).
Do the subcontractors have to be licensed in the state of Arizona if they are licensed in the state of New Mexico? Section 12.4 Licensed subcontractors requires states, "All subcontractors used by the Contractor in its performance under this Contract shall be duly registered and licensed to practice their profession in the Navajo Nation	Yes, the subcontractor must be licensed on the Navajo Nation <u>OR</u> in the state of Arizona. Being licensed in the state of New Mexico does not qualify a subcontractor for this project.

It is the responsibility of the Contractor to find their source of borrow and water for the project
in accordance with the special contract requirements.
The aggregate surfacing material and the diluted EN-1 is mixed and blended until a homogeneous mixture is achieved with an approved pulverizing machine according to the EN-1 manufacturer's instructions and to the satisfaction of the CM.
The motor grader will not produce the homogeneous mix of ABC and EN-1 required for the final aggregate surfacing to perform as intended. The grader is only used to spread the homogeneous mix onto the approach roadway to the lines and grades called for

END OF ADDENDUM NO. 2

Thank you for your interest!

m 1320

Ardaniel Begay, Principal Contract Analyst Project Contact Person

ROADWAY GENERAL NOTES

- ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-14), AND THE SUPPLEMENTAL SPECIFICATIONS FOR THIS PROJECT.
- ALL PERMANENT AND TEMPORARY ROADSIDE SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD), LATEST EDITION, AND IN ACCORDANCE WITH THE DETAILS ON THESE PLANS. PLACEMENT OF PERMANENT TRAFFIC SIGNS SHALL BE FIELD ADJUSTED AS DIRECTED BY THE AT NO ADDITIONAL COST TO THE GOVERNMENT
- THE TEMPORARY TRAFFIC CONTROL DETAILS SHOWN ON THESE PLANS REFLECT GENERAL REQUIREMENTS FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THESE DETAILS, TAKING INTO ACCOUNT THE CONTRACTOR'S CONSTRUCTION SEQUENCING PLAN, MUTCD, AND THE SUPPLEMENTAL SPECIFICATIONS FOR SECTION 635, TEMPORARY TRAFFIC CONTROL.
- 4. THE DESIGN FEATURES INCLUDING HORIZONTAL AND VERTICAL ALIGNMENTS, TYPICAL SECTIONS AND OTHER DESIGN DETAILS SHOWN IN DESIGN LEADER THE WARDEN AND THE ALTERED OF MODIFIED IN ANYWAY DURING CONSTRUCTION WITHOUT THE EXPRESSED WRITTEN DIRECTION AND APPROVAL OF THE THE AWARDING UNLESS OTHERWISE NOTED IN THESE PLANS OR SPECIFICATIONS. DRAINAGE STRUCTURES AND TURNOUTS SHALL BE INSTALLED AS SHOWN WITH ONLY MINOR CORRECTIONS IN LOCATION, SKEW, AND/OR INVERT ELEVATIONS AS NEEDED TO FIT FIELD CONDITIONS. TURNOUTS MAY NOT BE RELOCATED MORE THAN 5.0 METERS FROM THE LOCATIONS SHOWN ON THE PLANS WITHOUT THE WRITTEN APPROVAL OF THE THROUGH THE COR/COTR.
- THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY AND EXPENSE FOR DISPOSAL OF TRASH AND/OR CONSTRUCTION DEBRIS IN ACCORDANCE WITH SECTIONS 107 AND 203 OF THE FP-14, AND ANY AND ALL PERMIT REQUIREMENTS. THIS WORK SHALL BE INCIDENTAL OBLIGATIONS OF THE CONTRACTOR
- THE BIDDER SHALL READ AND MAKE CAREFUL EXAMINATION OF THE PLANS, SPECIFICATIONS, QUANTITIES, MATERIAL, SURVEYING REQUIREMENTS, AND VISIT THE SITE OF THE PROPOSED CONSTRUCTION TO BECOME FAMILIAR WITH THE SITE CONDITIONS AND LIMITATIONS BEFORE MAKING A PROPOSAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL ERRORS RESULTING FROM THE FAILURE TO MAKE SUCH AN EXAMINATION. ANY INFORMATION DERIVED FROM THE MAPS, PLANS, SPECIFICATIONS, PROFILES, EXISTING FEATURES WITHIN OR NEAR THE PROJECT R.O.W. THAT MAY REQUIRE SPECIAL CONSTRUCTION PROCEDURES: THE CONTRACTOR IS RESPONSIBLE FOR ADDRESSING THIS IN HIS BID AMOUNT IF APPLICABLE
- THE CONTRACTOR IS REQUIRED TO SUBMIT A REVISED PIPE LIST TO THE NRO-DOT, PLANNING & DESIGN BRANCH CHIEF THROUGH THE COR/COTR, BASED ON THE FIELD STAKING IN ACCORDANCE WITH SECTION 152 OF THE CONTRACT SUPPLEMENTAL SPECIFICATION. THE APPROVAL OF ANY AND ALL REVISED PIPE LISTS WITH ACCOMPANYING DRAWINGS IS RENDERED AS A SERVICE ONLY AND IS NOT CONSIDERED A GUARANTEE OF MEASUREMENTS, QUANTITIES, INSTALLATION PROCEDURES, AND/OR DIMENSIONS, NOR SHALL IT BE CONSIDERED AS RELEVING THE CONTRACTOR FROM COMPLYING WITH THE CONTRACT SPECIFICATIONS AND DESIGN PLANS. THE CONTRACTOR IS HEREBY NOTIFIED THAT UNDER NO CIRCUMSTANCE SHALL ANY DRAINAGE STRUCTURE(S) BE INSTALLED BELOW THE NATURAL FLOW LINE OF THE WASH, CHANNEL, ARROYO, OR DITCH LINE.
- NO WORK SHALL BE PERFORMED OR GROUND DISTURBED OUTSIDE OF THE DESIGNATED CONSTRUCTION LIMITS IN ACCORDANCE WITH SECTION 107 OF THE FP-14 WITHOUT WRITTEN APPROVAL BY THE NRO-DOID DIVISION MANAGER THROUGH THE COR/COTR UNLESS OTHERWISE SHOWN AND LABELED ON THESE PLANS AS "CONSTRUCTION ZONE". IN NO CASE SHALL ANY WORK BE PERFORMED OUTSIDE THE DESIGNATED R.O.W. LIMITS WITHOUT WRITTEN APPROVAL FROM THE NRO-DOT DIVISION MANAGER THROUGH COR/COTR UNLESS OTHERWISE SHOWN AND CALLED OUT ON THESE PLANS AS "CONSTRUCTION ZONE"
- THE DETAILS SHOWN ON THE STORM WATER POLLUTION AND EROSION/SEDIMENT CONTROL DETAILS ARE GENERAL REQUIREMENTS TO BE USED BY THE CONTRACTOR IN PREPARING A STORM WATER POLLUTION PREVENTION PLAN ALONG WITH THE REQUIREMENTS IN SECTION 157 OF THE SUPPLEMENTAL SPECIFICATION AND SPECIAL CONTRACT REQUIREMENTS. THE CONTRACTOR IS REQUIRED TO SUBMIT COURTESY COPY OF THE APPROVED SWPPP TO THE NAVAJO NATION WATER QUALITY EPA OFFICE
- 10. THE QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY AND TO COMPARE AND CANVAS BIDS. ACTUAL PAY QUANTITIES WILL BE DETERMINED IN THE FIELD FOR AUTHORIZED CHANGES THAT AFFECT THE QUANTITIES. ANY OVER-RUN OR UNDER-RUN OF QUANTITIES SHALL BE SHALL BE PAID FOR AT CONTRACT PRICE.
- 11. ALL TURNOUT/DRIVEWAYS, AS CALLED FOR ON THESE PLANS, SHALL BE CONSTRUCTED, REBUILT, RESHAPED AND/OR REMOVED UP To the row or temporary easement limits is shown on these plans, all turnouts shall be sufface to the cattleguard, then from the back of cattleguard to the row or temporary easement line as shown on these plans, width of turnout specified is the measured at the top of suffacing. This work shall be paid for under the PROPRIATE BID ITEMS FOR THIS WORK AS SHOWN IN THE BID SCHEDULE
- 12. STRUCTURAL EXCAVATION AND BEDDING/BACKFILL OF ALL DRAINAGE STRUCTURES (CULVERTS, CONCRETE HEADWALLS AND WINGWALLS) SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF STRUCTURES. BEDDING AND BACKFILL MATERIAL SHALL MEET ALL REQUIREMENTS OF FP-14, SECTIONS 209 AND 704. APPROVED EXCESS EXCAVATION MATERIAL MAY BE USED TO REBUILD TURNOUTS, EARTHEN DITCH BLOCKS, AND/OR PLACED ALONG ROADWAY SHOULDERS AS EMBANKMENT IN AREAS ADJACENT TO THE REMOVAL AND AS DIRECTED BY THE COR/COTR.
- 13. ALL FURROW AND DRAINAGE DITCHES SHALL BE STAKED AND GRADED TO DRAIN UP TO THE R.O.W. LIMITS. EARTHEN DITCH BLOCKS, DIKES AND DITCHES SHALL BE CONSTRUCTED AS SHOWN ON THESE PLANS AND/OR ADDED AT LOCATIONS DESIGNATED BY THE AOTR/COR. ALL DITCH BLOCKS, DIKES AND FURROW DITCHES SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THIS WORK AS SHOWN IN THE BID SCHEDULE. AT ALL DRAINAGE PIPE REPLACEMENTS, INSTALLATIONS, EXTENSIONS, AND IN-PLACE PIPE COLEMING LOCATIONS, THE CONTRACTOR SHALL CLEAN, REGRADE, AND RESHAPE THE INLET AND OUTLET CHANNELS TO THE R.O.W. LINE AS DIRECTED BY THE COR/COTR. THIS WORK SHALL BE INCIDENTAL TO BID ITEMS FOR SECTIONS 602, 603, AND/OR
- 14. IMMEDIATELY PRIOR TO PLACING EMBANKMENT, AGGREGATE BASE AND/OR RECYCLED MATERIAL. THE TOP 152 mm OF THE ORIGINAL GROUND OR FINISHED SUBGRADE (INCLUDING TURNOUTS) SHALL BE CHECKED FOR COMPACTION AND GRADE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. IF COMPACTION DOES NOT MEET THE MINIMUM SPECIFIED COMPACTION AND TOLERANCE REQUIREMENTS, THE ORIGINAL GROUND AND/OR SUBGRADE SHALL BE RE-WATERED AND/OR SCARIFIED AS NEEDED AND RE-COMPACTED TO THE REQUIRED DENSITY AND TO FRANCE AT THE CONTRACTOR'S EXPENSE IN NO CASE SHALL ANY EMBANKMENT OR SURFACING MATERIAL BE PLACED ON FROZEN, MUDDY OR UNSTABLE NATURAL GROUND OR SUBGRADE. THIS NORK SHALL BE CONSIDERED AN INCIDENTAL OBLIGATION OF THE CONTRACTOR
- 15.THE EARTHWORK TABLE SHOWN IS TO ASSIST THE CONTRACTOR IN ESTABLISHING A BID UNDER THE EARTHWORK ITEMS SHOWN IN THE BID SCHEDULE. ANY BORROW MATERIAL CALLED FOR ON THE PLANS SHALL BE TAKEN FROM CONTRACTOR IDENTIFIED SOURCES OUTSIDE THE R.O.W. LIMITS. IT IS THE SOLE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR TO PROVIDE ANY SECTION 204.14



- 16. THE CONTRACTOR SHALL REMOVE, CLEAN AND STOCKPILE ALL SALVAGEABLE EXISTING CULVERTS, GUARDRAIL, CATTLE GUARDS AND FENCING MATERIALS, ETC., AS CALLED FOR ON THESE PLANS AND SECTIONS 203 AND 607. ALL SALVAGEABLE MATERIALS AS DETERMINED BY THE COR/COTR SHALL BE TAKEN TO THE FORT DEFIANCE AGENCY MAINTENANCE YARD LOCATED IN FORT DEFIANCE, ARIZONA AND STOCKPILED IN A DESIGNATED AREA. ANY MATERIALS DETERMINED TO BE LINUSABLE BY THE COR/COTR SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH SECTIONS 107, 109.02(m), AND 203. THE SALVAGE WORK SHALL BE INCLUDED IN THE APPROPRIATE UNIT PRICE BID ITEMS FOR SECTIONS 203 AND/OR 607.
- 17. THE ROADWAY TYPICAL SECTION SHOWN IS THE BASIC TEMPLATE TO WHICH THE PROJECT IS TO BE STAKED AND BUILT HOWEVER. THER KNOWN TYPICAL SECTION SHOWN IS THE BASIC TEMPORE TO WHICH THE PROJECT STO BE STALED AND BOILT, HOWEVER, THERE WILL BE LOCATIONS WHERE, DUE TO EXISTING GROUND CONDITIONS, TURNOUTS, CULVERTS OR OTHER STRUCTURES, ETC., THE SHOWN TYPICAL SLOPES MAY NOT BE ABLE TO BE CONSTRUCTED. IN THIS CASE THE NRO-DOT PLANNING & DESIGN BRANCH CHIEF, THROUGH THE COR/COTR, SHALL BE CONSULTED FOR CHANGES IN THE TYPICAL SECTIONS, PROFILES, DESIGN SLOPES, AND/OR OTHER ADJUSTMENTS BEFORE PROCEEDING WITH THE WORK UNLESS NOTED OTHERWISE ON THE PLANS. THE FINAL CONSTRUCTED ROAD SECTION SHALL BE BASED ON THE GOVERNMENT FURNISHED COMPUTERIZED STAKING REPORT AS ADJUSTED TO FIT FIELD CONDITIONS. THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN IN THE STAKING NOTES, UNLESS OTHERWISE APPROVED. IN NO CASE SHALL THE CUT AND FILL BACK SLOPES BE BUILT STEEPER THAN THE MAXIMUM ALLOWED IN THE ROADWAY TYPICAL SECTION SHOWN.
- 18. ANY EXISTING OR NEW ROADSIDE FEATURES OR OTHER IMPROVEMENTS NEGLIGENTLY DAMAGED BY THE CONTRACTOR DURING RUCTION SHALL BE RESTORED AND/OR REPLACED TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE
- 19. THE CONTRACTOR SHALL REMOVE EXISTING ROADSIDE SIGNS THAT INTERFERE WITH ROAD CONSTRUCTION AND/OR CONTRADICT THE CONTRACTOR'S TEMPORARY TRAFFIC CONTROL PLAN, AT THE START OF THE CONSTRUCTION. WARNING AND REGULATORY SIGNS THAT DO NOT CONTRADICT THE APPROVED TEMPORARY TRAFFIC CONTROL PLAN SHALL REMAIN IN PLACE UNTIL REPLACED WITH NEW SIGNS OR UNLESS OTHERWISE DIRECTED BY THE COR/COTR. THE CONTRACTOR SHALL NOTIFY THE AOTR/COR AT LEAST THREE (3) WORKING DAYS IN ADVANCE OF SUCH SIGN REMOVAL. REMOVED ROADSIDE SIGNS SHALL BE SALVAGED AND DELIVERED TO THE FORT DEFIANCE AGENCY MAINTENANCE YARD LOCATED IN FORT DEFIANCE, ARIZONA AND STOCKPILED IN A DESIGNATED LOCATION. SIGNS THAT IMPEDE CONSTRUCTION AND THAT ARE REQUIRED FOR THE SAFETY AND/OR INFORMATION OF THE TRAVELING PUBLIC SHALL BE REMOVED AND TEMPORARILY RESET AS DIRECTED BY THE COR/COTE, ANY OTHER SIGNS ALONG THE N9402 ROADWAY NOT SPECIFICALLY DESIGNATED ON THE PLANS TO REMAIN, SHALL BE REMOVED. THIS WORK SHALL BE CONSIDERED AN INCIDENTAL OBLIGATION OF THE CONTRACTOR.
- 20. GRADE AND SHAPE THE SHOULDER AND DITCHES TO PROVIDE POSITIVE DRAINAGE (AS DIRECTED BY COR/COTR) FROM THE SUBGRADE HINGE POINTS TO, AND INCLUDING, THE EXISTING DITCH LINE AREAS FOR THE CONSTRUCTION OF RIPRAP DITCH LININGS. SLOPE PROTECTION, RUNDOWNS AND DOWNDRAINS. THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPLICABLE TEMS SHOWN IN THE BID SCHEDULE
- 21. ALL R.O.W. REFERENCE MARKERS SHALL BE LABELED IN THE METRIC UNITS OF MEASURE. ALL EXISTING AND NEW BRASS CAPS SHALL BE STANED WITH BOTH AUGUNENT STATIONING AND ELEVATIONS IN METRIC, UNLESS OTHERWISE NOTED UNDER SECTION 152 OF THE SUPPLEMENTAL SPECIFICATIONS. ANY EXISTING R.O.W. MONUMENTS AND BRASS CAPS THAT MAY BE MISSING SHALL BE RESURVEYED AND LOCATED TO THEIR ORIGINAL POSITION AND LABELED AND STAMPED ACCORDINGLY. ALL EXISTING REFERENCE MARKERS SHALL BE SAND BLASTED, CLEANED, AND REPAINTED WITH ENGLISH STATIONS ON ONE SIDE AND METRIC STATIONS ON THE OTHER ANY DAVAGED BUSICUS CELARES, AND/OR MARKERS SHALL BE RESURVEYED AND REPLACED. THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 62101-0000, RIGHT OF WAY MONUMENT AND ITEM 62102-0000, REFERENCE MARKER
- 22. A COPY OF THE GEOTECHNICAL INVESTIGATION REPORT FOR THE BRIDGE WILL BE PROVIDED TO THE CONTRACTOR UPON WRITTEN REQUEST TO THE CO/COTR
- 23. AT THE COMPLETION OF THE CONSTRUCTION, THE CONTRACTOR SHALL INSPECT THE INTERIOR OF ALL NEWLY INSTALLED OR EXTENDED/CLEANED CULVERTS, CATTLEGUARDS, AND/OR OTHER EXISTING DRAINAGE STRUCTURES. THESE STRUCTURES SHALL BE MAINTAINED IN A CLEAN CONDITION, FREE OF SILT AND OTHER DEBRIS UNTIL FINAL ACCEPTANCE OF THE PROJECT. THIS WORK SHALL BE CONSIDERED AN INCIDENTAL OBLIGATIONS OF THE CONTRACTOR UNDER THE APPROPRIATE APPLICABLE BID ITEMS FOF SECTIONS 602, 603, 607, AND 619,
- 24. CONSTRUCTION SURVEY STAKING SHALL BE IN ACCORDANCE WITH SECTION 152 OF THE FP-14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND PROTECTING ANY GOVERNMENT FURNISHED REFERENCE AND CONTROL POINTS DURING CONSTRUCTION. THE COST OF ANY GOVERNMENT RESTAKING DUE TO THE NEGLIGENCE OF THE CONTRACTOR SHALL BE DEDUCTED FROM THE CONTRACTOR'S PROGRESS PAYMENTS.
- 25 THERE MAY BE ARCHAEOLOGICAL SITE MITIGATIONS THAT ARE NOTED ON THE PLANS THE CONTRACTOR SHALL NOTIFY THE NAVALO THERE WAT BE ARCHARCUDUICAL STIE MITUATIONS THAT ARE NOTED ON THE POWS. THE OWNERCOM STALL NOTIFY THE INWOUL NATION DEPARTMENT OF TRANSPORTATION (NNDOT) ROAD CULTURAL RESOURCE MANAGEMENT (RCRM) AS REQUIRED PRIOR TO STARTING CONSTRUCTION ACTIVITIES IN THESE LOCATIONS. SEE THE SPECIAL CONTRACT REQUIREMENT SECTION OF THE CONTRACT FOR ANY ADDITIONAL INFORMATION AND/OR REQUIREMENTS. THE CONTRACTOR SHALL PLACE TEMPORARY FLEXIBLE SAFETY FENCE AROUND THE ARCHAEOLOGICAL SITE(S) AS NOTED ON THE PLANS. THE FENCING MATERIAL SHALL BE ORANGE COLORED, PLASTIC TYPE MADE OF HI-DENSITY HDPE WITH SQUARE MESH OPENINGS PER SECTION 710.11 OF FP-14. TEMPORARY ARCHAEOLOGY FENCING SHALL BE CONSIDERED INCIDENTAL OBLIGATIONS OF THE CONTRACTOR IF A SPECIFIC BID ITEM IS NOT SHOWN IN THE BID SCHEDULE.







Revised plan
Harold Riley 7
per Addendun

BASIS OF ESTIMATED QUANTITIES									
ITEM NO.	DESCRIPTION	GRADING	UNIT WEIGHT	APPLICATION					
30411-3000	ROAD BOND EN-1 AGGREGATE STABILIZATION, IMPORTED SURFACE COURSE AGGREGATE, 152 mm DEPTH	Table 703-3	2268 kg/m'	MAINLINE 102 mm					





Indian Reservation Roads Program Bridge Management System

Structure Inventory and Appraisal Report

July 26, 2017

No filter is displayed for this report because the report always consists of a set of un-numbered, standalone SI&A report sheets. Nevertheless a filter may be specified, and it is used to control which SI&A sheets are created. Data is always taken from the most recent FINAL inspection the structure has in the reporting interval. If no reporting interval is specified, the system uses the default interval from 1991 to 2991 that always uses the most recent FINAL inspection in the system. Individual SI&A sheets report which inspection is supplying the data in the *effective inspection date* field.

Bureau of Indian Affairs Department of Transportation Branch Engineering Office 1001 Indian School Rd N.W. Albuquerque, NM 87104 505-563-3320



Indian Reservation Roads Program RR Bridge Management System **Structure Inventory and Appraisal Sheet**

REGION N - Navajo AGENCY N36 - Fort Defiance RESERVATION N36780 - Navajo (Ft. Defiance) BRIDGE NAME RIO PUERCO BRIDGE (1) STATE 04 - Arizona FHWA REGION CODE (8) STRUCTURE NUMBER N656 (5) INVENTORY ROUTE (parts A,B,C,D,E) 1 6 1 N9402 0 (2) HIGHWAY AGENCY DISTRICT 04 COUNTY CODE (3) (4) PLACE CODE 33980 (6) FEATURES INTERSECTED RIO PUERCO WASH (7) FACILITY CARRIED **IRR BIA RTE N9402** (9) LOCATION 1.5 MILES SOUTH OF LUPTON, AZ (11) KILOMETER POINT 31.054 (12) BASE HIGHWAY NETWORK (13) LRS INVENTORY route subroute 35 deg 19 min (16) LATITUDE 33.80 sec (17) LONGITUDE 109 deg **04** min 20.60 sec (98) BORDER BRIDGE STATE CODE PERCENT SHARE % (99) BORDER BRIDGE STRUCTURE # *********STRUCTURE TYPE AND MATERIAL*********** (43) STRUCTURE TYPE MAIN material 3 - Steel 3 02 - Stringer/Multi-beam or Girder 02 type (44) STRUCTURE TYPE APPROACHES 0 - Other material 0 0 - Other 00 type (45) NUMBER OF SPANS IN MAIN UNIT 010 (46) NUMBER OF APPROACH SPANS 0000 8 - Wood or Timber (107) DECK STRUCTURE TYPE 8 (108) WEARING SURFACE / PROTECTIVE SYSTEMS A) TYPE OF WEARING SURFACE 7 - Wood or Timber 7 **B)** TYPE OF MEMBRANE 0 - None 0 0 - None C) TYPE DECK PROTECTION 0 YEAR BUILT 1978 (27)(106)YEAR RECONSTRUCTED 0000 TYPE OF SERVICE 1 - Highway (42) on 1 5 - Waterway under 5 (28) LANES 02 on under 00 (29) AVERAGE DAILY TRAFFIC 000400 (30) YEAR OF ADT 2012 (109) % % TRUCKS 03 BYPASS DETOUR LENGTH 026 (19) km *****************GEOMETRIC DATA****************** (48) 12.5 m LENGTH OF MAXIMUM SPAN 124.7 m (49) STRUCTURE LENGTH CURB OR SIDEWALK (50) left 0.0 m right 0.0 m (51) BRIDGE ROADWAY WIDTH CURB TO CURB 5.1 m (52) DECK WIDTH OUT TO OUT 5.3 m (32)APPROACH ROADWAY WIDTH (W/SHOULDERS) 7.0 m (33) BRIDGE_MEDIAN No Median 0 (34) SKEW A deg (35) STRUCTURE FLARED 0 - No flare 0 (10) INVENTORY ROUTE MINIMUM VERTCAL CLEARANCE 99.99 m (47) INVENTORY ROUTE TOTAL HORIZONTAL CLEARANCE 05.1 m (53) MIN VERTICAL CLEARANCE OVER BRIDGE ROADWAY 99.99 m (54) MIN VERT UNDERCLEARANCE 00.00 m ref N (55) MIN LAT UNDERCLEARANCE right ref N 00.0 m (56) MIN LAT UNDERCLEARANCE left 00.0 m (38) NAVAGATION CONTROL 0 (111) PIER PROTECTION (39) NAVAGATION VERTICAL CLEARANCE 000.0 m (116) VERT-LIFT BRIDGE NAV MIN VERT CLEARANCE m (40) NAVAGATION HORIZONTAL CLEARANCE 0000.0 m

N656 04 - Arizona EFFECTIVE INSPECTION DATE 09/15/2016 SUFFICIENCY RATING 046.7 STATUS 2-FO-Functionally Obsolete ***** (222) BIA MAINTENANCE NON-URGENT COST 24,000 \$ 44,000 \$ (223) BIA MAINTENANCE URGENT COST (224) BIA TOTAL MAINTENANCE COST 68,000 \$ (225) BIA MAINTENANCE COST LAST 2 YEARS \$0 \$ (112) NBIS BRIDGE LENGTH Y - ves(104) HIGHWAY SYSTEM 0 0 - Inventory Route is not on the NHS (26) FUNCTIONAL CLASS 06 06 - Rural-Minor Arterial 0 - not a STRAHNET highway 0 (101) PARALLEL STRUCTURE No parallel structure exists N 3 - One lane bridge for 2-way traff (102) DIRECTION OF TRAFFIC 3 (103) TEMPORARY STRUCTURE (Blank Indicates Not Temporary) (105) FEDERAL LANDS HIGHWAYS - Indian Reservation Road (IR 1 (110) DESIGNATED NATIONAL NETWORK 0 0 - Not part of the network 3 62 - Bureau of Indian Affairs 62 62 - Bureau of Indian Affairs 62 (37) HISTORICAL SIGNIFICANCE 5 Bridge is not eligible for the National Register of Historic Place

(100) STRAHNET

(20) TOLL

(21) MAINTAIN

C) OTHER SPECIAL INSP

(22) OWNER

	CON		1			•				
(58)	DECK						5			
(59)	SUPERSTRUCTURE 5									
(60)	SUBSTRUCTURE 6									
(61)	CHANNEL & CHANNEL PROTECTION 5									
(62)	CULVERTS						N			
	**************************************	2 AND	POS	FINC****	*****	**				
(31)	DESIGN LOAD		100.				0			
(= =)	0 - Other or Unknown (descr	ibe on ir	ispectie	on reporting	form)					
(63)	OPERATING RATING METHOD		-	Load Facto	or (LF)		1			
(64)	OPERATING RATING (metric ton	5)				22	2.4			
(65)	INVENTORY RATING METHOD			Load Facto	or (LF)		1			
(66)	INVENTORY RATING (metric ton	s)				16	5.3			
(70)	BRIDGE POSTING			0->	39.9%		0			
(41)	STRUCTURE OPEN, POSTED OR	CLOSE	ED				в			
	DESCRIPTION <i>Den, posting</i>	g recom	mende	d but not leg	ally im					
	****** APP R	AISAI	*****	******	*****	*				
(67)	STRUCTURAL EVALUATION						5			
(68)	DECK GEOMETRY						N			
(69)	UNDERCLEARANCES, VERTICA	AL & H0	ORIZO	NTAL			N			
(71)	WATERWAY ADEQUACY						6			
(72)	APPROACH ROADWAY ALIGN	MENT					3			
(36)	TRAFFIC SAFETY FEATURES (r	ail/trans	/appr/a	ppr ends)		000	00			
(113)	SCOUR CRITICAL BRIDGES						5			
	**************************************	MPRO	VEM	ENTS***	*****	***				
(75)	TYPE OF WORK		, 131,1			3	31	1		
	31 - Replacement of bridge or of	her stru	cture b	ecause of si	ıbstan					
(76)	LENGTH OF STRUCTURE IMPRO	OVEME	NT			00125	.0	m		
(94)	BRIDGE IMPROVEMENT COST				1	1,950,00)()	\$		
(95)	ROADWAY IMPROVEMENT CO	ST				50,00	DO	\$		
(96)	TOTAL PROJECT COST				2	2,000,00)0	\$		
(97)	YEAR OF IMPROVEMENT COST	ESTIM	ATE			201	16			
(114)	FUTURE ADT 000468									
(115)	YEAR OF FUTURE ADT 2032									
	********************************	CTIO	NS***	******	*****	*				
(90)	INSPECTION DATE		~			09/1	16			
(91)	FREQUENCY					2	24	mo		
]							
(92)	CRITICAL FEATURE INSPECTIC	N		(93) CI	TI DATE					
A)	FRACTURE CRIT DETAIL	N		A)	0 /	0				
B)	UNDERWATER INSP	N	1	B)	0 /	0				

N

C)

0/0



INSPECTION REPORT CONFIGURATION

This inspection is tagged 'suplementary'. Static BIA data elements are being suppressed. No database inspection on this structure is flagged 'initial'.

INSPECTION IDENTIFICATION

Inspectors:	WILLIAM DIE	WILLIAM DIETRICK, LUKE BRANDHERM,								
Firm Name:	INFRASTRUC	FRASTRUCTURE ENGINEERS,INC.								
Structure Number:	N656		Inspect	ion Date:	15-SEF	P-2016	Rep	ort Due:	23-JAN-	-2017
	STR	UCTURE	IDENTI	TCATIO	N AND L	LOCATIC	DN			
Structure Name:	RIO PUERCO I	BRIDGE					State:	04	l - Arizona	ı
Location:	1.5 MILES SOU	UTH OF LU	UPTON, A	ΑZ						
Feature Crossed:	RIO PUERCO V	WASH								
Region:	N - Navajo			Com	nunity (if	f applicabl	e):		`	
Agency:	N36 - Fort Defiar	nce		Rese	rvation: N	N36780 - N	Navajo (Ft.	Defiance	e)	
ADT: 400	ADT Year: 2	.012	Percent	Trucks:	3	%	Sta	te Load L	imit: H	S20
A vehicular	bypass exists at	the site:	YES	Th	e bypass	is adequat	e for all ve	ehicles:	YES	
Th	ne length of the d	etour is:	26	km (19)						
	BIA Route N	Number:	N9402		Th	ne area bes	side the bri	dge is:	RURAL	(26a)
Number	of traffic lanes o	n route:	1		Numbe	er of traffic	c lanes on	bridge:	2	(28a)
Flooding occu	red since last ins	pection:	NO		If yes	s, when (n	nonth / yea	r):	/	
The highest	water ever was	BELOW	the de	eck by	0.0	m				
	ΔΟΡΙΤΙΟΝ	AI STDI	CTUDE	DENTTE				N		

Initial Reason:	NEW		Station On	Project:		UNKNOW	N		
Project Number:		UNKNOWN							
BIA Route Number:	N9402	Section N	Number:	110		Kilometer F	Point:	31	
Geographical Points: LUPTON, AZ I-40 TO THE NE AND, ST. ANSELM, TP S/ AND S/W/									
Classes of Traffic - Co	ommercial:	YES S	chool Bus:	YES	Car:	YES			

STRUCTURE DESCRIPTION INFORMATION

Year Original Cons	struction:	19	978 Y	′ear l	Reconstrue	ction:	0000							
					Design l	Load:		0		Sł	kew De	egrees	s t	0
		S	pan Type	;		#		Span Le	engths			Total	Length	
Main Structure	STEEL	STRIN	IGER/MI	JLTI-	BEAM OF	10		12.2 TC	D 12.5			1:	24.7	m
Approach Spans			NONE			0		0					0	m
Sidewalks - Right:	0	m	Left:	0	m		Cu	urbs - Right:	0	m	Left	: 0	m	
Bridge Roadway W	vidth Type	e:			Rail-Rail			Width Road	way or	n Bridg	je Dec	k:	5.1	m
								Overal	l Bridg	e Decł	< Widt	h:	5.3	m

IRR	Indian Reservation Roads Program						
	Inspection Status:	FIN	IAL				
Wotonwov F		m2/c	Storm Fraguanay:				

	N656
09/1	5/2016
Print Date:	30-MAR-2017

Waterway Data - Q (flo	w):	m3/s \$	Storm Frequency:	yrs	Ve	elocity:	mps
Utilities on Structure:	NONE, NO HYI	DRO					
Construction Plans Loc	cation: NONE						
Design Stress Informat	ion - Type:	Unknown					
Concrete:	Re Bar:		Steel:	Timber F:		Timber H:	
Vertical Clearance:	99.99		Signed Clearance -	Feet Part:	0	Inches Part:	0
Roadway Width (Surfac	ce): 7	m	(Surface and Shoulde	ers): 7	m		



	BRIDGE APPROACHES
Approach Direction:	S
Surface Material:	GRAVEL
Surface Condition:	POTHOLE
Description:	POTHOLES
Vertical Alignment Description	ROAD CLIMBES UPHILL AWAY FROM BRIDGE
Horizontal Alignment Description	:STRAIGHT
Sight Distance:	50 m
Obstruction to Sight Distance:	CURVE AND HILL
Greatest difference in approach an	d bridge deck elevation: 75 mm
Comment about affect to speed:	POTHOLES CAUSE SEVERE SPEED REDUCTION
Opposite Alignment:	N
Surface Material:	GRAVEL
Surface Condition:	POTHOLE
Description:	GRAVEL
Vertical Alignment Description	SAG CURVE
Horizontal Alignment Description	RIGHT CURVE OFF IMMEDIATE NORTH END
Sight Distance:	50 m
Obstruction to Sight Distance:	CREST OF HILL
Greatest difference in approach and	bridge deck elevation: 35 mm
Comment about affect to speed:	MODERATE SPEED REDUCTION DUE TO RIGHT TURN AT END OF BRIDGE AND A FEW POTHOLES



1014	Date Discovered:	20 OCT 2014	There is a stored image:	NO	Is Urgent:	VES
1014	Date Discovered.	20-001-2014	Is Worse:	NO Is	Corrected:	NO
	Description:	MINOR RAIL DA 0.12M. BRIDGE OF N OF PIER 4 INSTALLED	AMAGE ON E RAIL, N END OF BRIDGE RAIL HAS BEEN HIT MULTIPLE TIMES WITH DAMAGE OF 2M. NEW RAILING	. RAILING B 5 TO BOTH S NEEDS TO 1	ENT UP TO IDES, E RA BE) AIL
	Worse Comment:	no comment				
				Estimated Co	st:	\$1,000
1015	Date Discovered:	20-OCT-2014	There is a stored image: Is Worse:	NO NO Is	Is Urgent: Corrected:	YES NO
	Description:	E RAIL S OF PIE 2M, W SIDE AB	ER 4 TRAFFIC DAMAGE, SPACER BENT OVE PIER 3 3M	". W SIDE AB	OVE PIER	1
	Worse Comment:	no comment				
				Estimated Co	st:	\$1,000
1006	Date Discovered:	07-DEC-2009	There is a stored image: Is Worse:	NO NO Is	Is Urgent: Corrected:	NO NO
	Description:	MANY OF THE 80MM HIGH MC HAVE CHECKS	TRANSVERSE DECK PLANKS ARE VEF OSTLY LOCATED AT THE OUTER EDGE UP TO 10MM WIDE; WEATHERED	RTICALLY O ES OF THE D	FFSET UP ECK; MAN	TO JY
	Worse Comment:	no comment				
				Estimated Co	st:	\$0
1008	Date Discovered:	07-DEC-2009	There is a stored image: Is Worse:	NO NO Is	Is Urgent: Corrected:	YES NO
	Description:	DAMAGE TO W AT EAST AND 4	EST BRIDGE RAILING 3.1M LONG; MIS AT WEST; MISSING RAILING SPACER	SSING RAILI : 1 AT EAST	NG BOLTS	8, 4
	Worse Comment:	UPGRADE BRID	OGE RAILS			
				Estimated Co	st: \$	20,000
1009	Date Discovered:	07-DEC-2009	There is a stored image: Is Worse:	NO NO Is	Is Urgent: Corrected:	NO NO
	Description:	MISSING 2 BOL THE TENSIONIN 2ND ROD FROM COMPARED TO	TS FROM THE CONNECTION OF THE B NG RODS; ALSO TENSIONING IS BACK I WEST; LENGTH OUT/OUT THREADEI .42M FOR ADJACENT ROD	RACKET TH ING OUT AT D ZONE IS .4	IAT HOLD 7 SPAN #4, 3M	S
	Worse Comment:	no comment				
				Estimated Co	st:	\$500



1010	Date Discovered:	07-DEC-2009	There is a stored image: Is Worse:	NO NO	Is Urgent: Is Corrected:	NO NO
	Description:	DIRT ACCUMU	LATION ON BOTTOM FLANGES	110	15 00110000	110
	Worse Comment:	no comment				
				Estimated	Cost:	\$500
1011	Date Discovered:	07-DEC-2009	There is a stored image: Is Worse:	NO NO	Is Urgent: Is Corrected:	NO NO
	Description:	SPAN 1 FROM T 2 FROM SOUTH OF 4MM LOCAT DIAPHRAGM	THE SOUTH AT THE WEST FASCIA GIR I, THERE IS A .13M LONG CRACK WITH TED OUTSIDE OF A WELDED TRANSIT	DER 2.6M I HORIZO ION CHA	I SOUTH OF F NTAL OFF SH NNEL	PIER ET
	Worse Comment:	no comment				
				Estimated	Cost:	\$500
1012	Date Discovered:	07-DEC-2009	There is a stored image: Is Worse:	NO NO	Is Urgent: Is Corrected:	NO NO
	Description:	TWISTED BRID EACH; LONGIT UP TO 10MM	GE RAILING SPACERS WITH LOOSE B UDINAL RUNNING PLANKS HAVE RAI	OLTS AT NDOM VE	WEST SIDE 2 ERTICAL OFF	SET
	Worse Comment:	no comment				
				Estimated	Cost:	\$500
1002	Date Discovered:	29-NOV-2007	There is a stored image: Is Worse:	NO NO	Is Urgent: Is Corrected:	NO NO
	Description:	DIRT ON DECK	AT BRIDGE ENDS; UP TO 1M DEEP AT	SOUTH F	END	
	Worse Comment:	no comment				
				Estimated	Cost:	\$500
1003	Date Discovered:	29-NOV-2007	There is a stored image: Is Worse:	NO NO	Is Urgent: Is Corrected:	NO NO
	Description:	SOUTH END RU WERE REPLAC	JNNING PLANKS ARE IN POOR CONDI' ED	TION OR 1	MISSING. SO	ME
	Worse Comment:	no comment				
				Estimated	Cost:	\$500
1004	Date Discovered:	29-NOV-2007	There is a stored image: Is Worse:	YES NO	Is Urgent: Is Corrected:	YES NO
		DAIL DAMACE	AT NORTHWEST CORNER 4.7M LONG			
	Description:	KAIL DAMAGE				
	Worse Comment:	NW APPROACH	I RAIL IS OVERGROWN WITH VEGETA	TION CA	N'T SEE	



1005	Date Discovered:	29-NOV-2007	There is a stored image:	NO NO	Is Urgent:	NO NO
	Description:	6 RUNNING PLA	ANKS ARE WORN AND DECAYED- 3 FC	DR EACH	WHEEL. ADD	
	Worse Comment:	no comment	W OF KUNNING FLANKS ON INSIDE FC		ICT VEHICLI	LO
	worse comment.	no comment		Estimated (Cost:	\$2,000
1001	Date Discovered:	20-MAR-2002	There is a stored image:	NO	Is Urgent:	NO
			Is Worse:	NO	Is Corrected:	NO
	Description:	CHANNEL HAS SCOUR AT PIER	MOVED AND IS ATTACKING THE BRI 2 1,2, AND 3 FROM THE NORTH AND NO	DGE AT 90 ORTH BEF) DEGREES - RM	
	Worse Comment:	CHANNEL IS FL	OWING BETWEEN PIERS 1 AND 2, NO	NE AT 3.		
				Estimated	Cost: \$	510,000
N16	Date Discovered:	08-OCT-1998	There is a stored image: Is Worse:	NO NO	Is Urgent: Is Corrected:	NO NO
	Description:	SMALL TREES	GROWING FROM CHANNEL BOTTOM	UP THROU	JGH RAILING	G
	Worse Comment:	no comment				
				Estimated	Cost:	\$500
P5A	Date Discovered:	02-AUG-1994	There is a stored image: Is Worse:	YES NO	Is Urgent: Is Corrected:	YES NO
	Description:	NOT ADEQUAT	E LENGTH APPROACH GUARDRAIL;3.	9M LONG		
	Worse Comment:	NEEDS UPGRAI	DES			
				Estimated (Cost: \$	520,000
P8	Date Discovered:	02-AUG-1994	There is a stored image: Is Worse:	YES YES	Is Urgent: Is Corrected:	NO NO
	Description:	DEBRIS AT BEN	NTS.; ADDITIONAL DEBRIS AT NORTH	END		
	Worse Comment:	BRANCHES ARI	E HALFWAY UP THE PIERS			
				Estimated	Cost:	\$1,200
P5	Date Discovered:	12-NOV-1979	There is a stored image: Is Worse:	NO NO	Is Urgent: Is Corrected:	NO NO
	Description:	AREAS OF PAIN CORROSION	T FAILURE THROUGHOUT WITH MIN	OR TO MO	DERATE	
	Worse Comment:	no comment				
				Estimated	Cost:	\$6,000



P6	Date Discovered:	12-NOV-1979		There is a stored image: Is Worse:	NO NO Is	Is Urgent: s Corrected:	NO NO
	Description:	SUPPORT CHA TO PREVENT	NNELS NEEDED FIPPING"- APPEA	AT NORTH ABUTMEN RS STABLE	T/RAIL CAR	CORNERS	5
	Worse Comment:	no comment					
					Estimated Co	ost:	\$0
P7	Date Discovered:	12-NOV-1979		There is a stored image: Is Worse:	NO NO Is	Is Urgent: s Corrected:	NO NO
	Description:	EROSION AT B EXPOSING THI BENT	RIDGE CORNERS E NORTH END BE	S AND NORTH BERM; ENT, 3.8M L X 1.2M D X	9.0M L X 4.2 K 4.7M W AT	M W X 1.8N SOUTH EN	M D ND
	Worse Comment:	no comment					
					Estimated Co	ost:	\$1,000
		Total o Total estin	estimated urgent manated non-urgent mated	aintenance costs for previ aintenance costs for previ	ous deficienci	ies: S	\$42,800 \$23,700
		NEW DEI	FICIENCIES FO	UND AT THIS TIME	E		
1017				There is a stored image:	YES	Is Urgent:	NO
	Description:	SPAN 1, FIRST SOUTH EDGE,	FLOORBEAM SO 1.5MM W. SIMILA	UTH OF PIER 1; CRAC ARLY, AT PIER 6 ON E	K IN THE TA ACH SIDE O	ACK WELD F THE PIEI	r, R
					Estimated Co	ost:	\$0
1019				There is a stored image:	YES	Is Urgent:	NO
	Description:	PIER 1, SOUTH 2MM W. SIMIL DUE TO PACK	FACE, CRACK W AR CRACKED WI RUST.	ITH PACK RUST ABO ELDS AT PIERS 6 AND	VE COLUMN 8 ABOVE T	N 2, 0.2M L HE COLUM	X INS
					Estimated Co	ost:	\$0
1020				There is a stored image:	YES	Is Urgent:	NO
	Description:	LONGITUDINA	L RUNNERS HAV	E CHECKS UP TO 30N	/M W X 35M	IM D.	
					Estimated Co	ost:	\$0
		To Total estin	otal estimated urgen nated non-urgent ma	at maintenance costs for r aintenance costs for previ	new deficienci ious deficienc	es: ies:	\$0 \$0



EXISTING SIGNS

Type Sign	# Signs	Statement	Up To	Condition	Comments	Cost to
			Date			Correct
CLEARANCE	4	BLACK/YELLOW	YES	GOOD, Graffi		\$0
OTHER SIGN	1	ONE LANE BRID	NO	Poor, Bullet ho	INSTALL (2) "ONE LANE	\$600
					BRIDGE" SIGNS	
LOAD LIMIT	2	20 TONS	NO	POOR, Bullet	"WEIGHT LIMIT 14 TONS" SIGNS	\$600

Total sign costs (urgent maintenance item): \$1,200

COST SUMMARY

Total urgent maintenance or safety related costs: \$44,000

Total routine maintenance costs: \$23,700

MAINTENANCE/REPAIRS PERFORMED SINCE LAST INSPECTION

No Maintenance work since the last inspection.

Have all previously reported deficiencies been corrected? NO (223)

Have accidents occured on this structure since the last inspection? NO (222)



BRIDGE SAFETY FEATURES

Bridge railing exists: YES

Bridge railing height: 0.53 m

Bridge railing meets AASHTO standards: NO

Bridge railing not to AASHTO standards remark: TOO LOW, NOT STANDARD, DAMAGE TO NW CORNER

- Transition railing exists: NO
- The transition railing is firmly attached to both the bridge rails and the approach rails: NO
- The transition railing and supports are gradually stiffened/stronger prior to the bridge rail attachment: NO
 - All curb and sidewalk ends are are either tapered or shielded by the transition rails: NO
 - There exist pockets along the transition rail that create a hazard: NO

Approach guardrailing exists: YES

- Approach guardrail height: 0.35 m
- The approach guardrails are compatible with the construction / shape of the transition rails: NO
 - The approach guardrails have adequate length for the current traffic speeds: NO
 - The approach guardrails are effective in funneling traffic to the bridge lanes: NO
 - The approach guardrails meet current AASHTO design criteria: NO

The most appropriate description of the rail ends is: FLARED

Comments about the rail system's adequacy: UPGRADE COMPLETE RAIL SYSTEM IF BRIDGE IS NOT SCHEDULED FOR REPLACEMENT.

ESTIMATED IMPROVEMENT COSTS

Type of Estimate: REPLACE

Description: BRIDGE SHOULD BE REPLACED DUE TO LOW LOAD CARRYING CAPACITY AND NARROWNESS.

Improvement Length: 125.0 m (76)

Replacement

		Cost (\$1000)
Description of other replacement cost	Design / Construction Engineering:	\$20
	Demolition:	\$30
	Substructure (94):	\$900
	Superstructure (94):	\$1,000
	Approaches (95):	\$50
	Other:	\$0
	Total (96):	\$2,000

Rehabilitation

Deficiency Fixed		Cost (\$1000)
	Total (96):	



SUPERSTRUCTURE CONDITION

Item	Mater-	Condition Description	on	Defor-	Defects	Deter-	Cracks	Rating
rail system		I OW WEAK TRAFFIC DAMAGE		mation BN T	т	foration		1
ran system	6	CONDITION	L, FOOK	DIN, I	L	C		4
curbs or barriers		NONE						
deck overlay	Т	RUNNING PLANKS; SPLIT, WOR	N AND	Т	K	S		4
		DECAYING						
deck	Т	NAIL LAMINATE TRANSVERSE	TIMBER		K	W,S		5
		DECKING						
drainage system	Т	OFF EDGES OF DECK						6
expansion joints	~	NONE				~		
stringers or girders	S	STANDARD BOXCAR FRAMES,	SOME			C		5
		RUSTING; SEVERAL CRACKED	WELDS AT					
1	C	FLOOR BEAMS NEAR PIERS 1,6,				C		6
diaphragm	5	PART OF BOXCAR FRAMES, SOI	ME KUSTING;					6
expansion bearings		NONE						
fixed bearings	S	STEEL BOXCAR FRAMES ON ST	FFL I-BFAM			C		6
inica ocanigo	5	CAPS' EXTERNAL CAPS HAVEN	JO SUPPORT			C		0
		WELDED OR BOLTED	to som onn,					
		Deck Overlay Thickness:	38 mm					J
		Deck Thickness:	150 mm					
Th	is structu	re has a continuous drainage system:	YES					
When not c	ontinuou	s. the number of drainage systems is:	120					
When not con	ntinuous,	the sizes of the drainage systems are:						
		Expansion Joint Type:	NONE					
		Expansion Joint Average Gap:	0 mm					
		Expansion Joint Amount Movement:	0 mm					
	Expa	ansion Joint Inspection Temperature:	73 deg F					
	String	ers or Girders Number of Members:	2					
	2	Stringers or Girders Spacing:	2.61					
		Stringers or Girders Size of Each:	2.61M WIDE FLA	ATCAR				
	Exp	ansion Bearings Amount Movement:	0 mm					
MATERIAL: Prestres	ssed Concrete	e = PC; Concrete = C; Timber = T; Asphalt = AS; A	uminum = AL; Masonr	y = M; Dirt	= D; Rock	= R; Sand	= S; Wire =	
DEFOSI	ATION C	W; Elastomeric = EL	; Other = O.		D T (**	D	т	
DEFORM	ATION: She CTS: Knots ii	ared = S; Permanent Deflection = D; Buckled = B; n Timber = K: Excessive Timber Grain Slope = G	Bent = BN; Crushed = C Loose Bolts or Rivets = 1	; Ruptured :	= R; Traffic nbs in Con	c Damage = crete = H	- 1	
DETERIORATION	: Decay = D;	Insect Attack = I; Chemical Attack (Rust) = C; Un	even or Excessive Wear	= W; Season	ning of Tin	iber (Check	s, Splits,	
CRACKS: Crack	s in Concrete	: (Shakes) e (Not Overstress) = C: Concrete Overstress - Shear	= S = CS: Concrete Overstr	ess - Flexur	e = CF: Cor	ncrete Over	stress -	
Compression = CC: Weld Crack = CW: Steel Crack - Fatigue or Other = SC								



TRUSSES (59) - section suppressed because this structure has no trusses

SUBSTRUCTURE CONDITION (60) (Abutments, Piers, and Retaining Walls)

Abutments							
Item	Mater-	Condition Description	Defor-	Defects	Deter-	Cracks	Rating
	ial		mation		ioration		
abutment type	C,S,T	CONCRETE FILLED STEEL PIPE PILE,			C		7
		MOSTLY BURIED, WITH TIMBER					
		BACKWALLS					
movement		NONE OBSERVED					
backwall beam seats	T,X	TIMBER BACKWALL WITH STANDARD			S		7
		MILITARY I-BEAM STEEL CAPS; DEBRIS					
wingwall		NONE					
foundation	C,S	CONCRETE FILLED STEEL PIPE PILES			C		7
	A	Abutment Type: SPILL_THRU					
Description of	f Other A	Abutment Type:					
Abu	tment Fo	oundation Type: PILES					
Abutment Found	lation Ot	her Description:					
	Abutn	nent Piles Type: CONCRETE FILLED STEEL PIPE	Ξ				
	Abut	ment Piles Size: .33M DIAMETER					

Abutment Spread Footing Size:

Abutment Bearing Material: SAND,



SUBSTRUCTURE CONDITION (60) (Abutments, Piers, and Retaining Walls)

<u>Piers</u>							
Item	Mater-	Condition Description	Defor-	Defects	Deter-	Cracks	Rating
	ial		mation		ioration		
type of pier(s)	C,S	CONCRETE FILLED STEEL PILES WITH			С	C,W	6
		STANDARD MILITARY STEEL I-BEAM CAP					
		AND STEEL CHANNEL CROSS BRACING;					
		SURFACE RUST; CRACKED WELD SOUTH					
		SIDE OF PIERS 1,6, AND 8					
pier cap	S	STANDARD MILITARY I-BEAM CAPS,			C	C,W	6
	<u>.</u>	SURFACE RUST;CRACKED WELD SOUTH					
		SIDE OF PIERS 1,6, AND 8					
shaft below pier cap	S,C	CONCRETE FILLED PIPE PILES, SURFACE			С		7
		RUSTING					
movement		NONE OBSERVED					
foundation	C,S	CONCRETE FILLED PIPE PILES, SURFACE			С		7
		RUSTING					
	Pier F	oundation Type: PILES					
Pier Foun	dation Ot	her Description:					
		Pier Piles Type: CONCRETE FILLED PIPE PILE					
		Pier Piles Size: 0.33M DIAMETER					

Pier Spread Footing Size:

Pier Bearing Material: SAND,

Retaining Walls - section suppressed because this structure has no retaining walls



CHANNEL (61) and WATERWAY CONDITION (71)

Waterway

Item	Material	Condition Description	Rating
bridge slopes by abutments	D,R	SOME SCOUR AND EROSION OCCURING AT NORTH SLOPE	5
slope protection	D,R	SOME ROCK AT NORTH ABUTMENT, MORE PROTECTION NEEDED	5
waterway adequacy		CHANCE OF OVERTOPPING	6

Approximate Bridge Slope Ratio 2 to 1.

Channel

Item	Material	Condition Description			
dikes		NONE			
chan + bank prot	S,R,D	SOME ROCK AT NE ABUT-2 15M; HEAVY VEGETATION UNDER	5		
		BRIDGE; DEBRIS ON NORTHERN PIERS 8 AND 9			
channel alignment		CHANNEL APPROACH STRUCTURE AT 90 DEGREE ANGLE OF	4		
		ATTACK TO THE RIGHT UNDER SPAN 8 AND 9			

Has Scour or Erosion:NOScour Location:Estimated Maximum Scour Depth:mEstimated Scour Area:Angle of Attack:90degreesAttack Location:RIGHT

PROFILE ELEVATIONS

	These measurements were taken on: Reference Elevation:				15-S TOP	15-SEP-2016 TOP OF RAIL				
Streambed cross-section measurements start at				0	m from the	NE	end of the bridge.			
[0	1	2	3	4	5	6	7	8	9
Station (m)	0.0	1.8	3.7	5.5	7.3	9.1	11.0	12.8	14.6	16.5
Vertical (m)	0.6	0.6	0.6	1.0	1.6	2.7	3.7	3.8	4.7	4.6
	10	11	12	13	14	15	16	17	18	19
	18.3	20.1	22.0	23.8	25.6	27.4	29.3	31.1	32.9	34.8
	4.5	4.5	4.5	3.5	2.7	4.7	4.3	4.1	4.0	3.9
	20	21	22	23	24	25	26	27	28	29
	36.6	40.2	43.9	47.6	51.2	57.9	62.5	75.0	87.4	99.9
	3.4	2.5	2.5	2.6	2.7	2.8	2.9	2.9	3.0	3.0
	30	31	32]						
	112.3	117.4	124.5	1						
	2.8	2.8	0.5	1						

CULVERT CONDITION (62) - section suppressed because this structure is not a culvert





PROFILE OF STREAMBED AT UPSTREAM EDGE, LOOKING DOWNSTREAM







SIGNATURE PAGE

A revised Load Rating Analysis is required: NO

Comments about bridge load capacity deterioration: NO SIGNIFICANT CHANGE TO THE STRUCTURE SINCE THE LAST INSPECTION. THEREFORE A REVISED LOAD RATING ANALYSIS IS NOT REQUIRED.

I. LOAD LIMITING (CRITICAL) MEMBER(S) BEING RATED:

Beam(s), Girder(s), Deck(s), Other: Z-SHAPED STRINGER MEMBERS Location of this Member(s): INTERMEDIATE FLATCAR MEMBER PARALLEL TO TRAFFIC Size of this Member and % Reduced (if applicable): 3"X23/4"X6.7 POUNDS/ FEET (U.S. CUSTOMARY UNITS) Condition of this Member: SURFACE CORROSION THROUGHOUT

II. BRIDGE HS TRUCK LOAD CAPACITY & HS RATING:

(HS Rating = HS Load x 0.5556)

OPERATING LEVEL

Gross Weight of HS Truck = 24.7 tons HS Rating = HS-13.7

INVENTORY LEVEL

Gross Weight of HS Truck = 18 tons HS Rating = HS-10

III. REQUIRED SIGNS - EXACT SIGN WORDING

(2) "ONE LANE BRIDGE" SIGNS

(2) "SPEED LIMIT 10 MPH" SIGNS

(2) "WEIGHT LIMIT 14 TONS" SIGNS

IV. REMARKS:

BRIDGE SHOULD BE REPLACED. INSTALL COMPLETE RAIL SYSTEM IF BRIDGE IS NOT SCHEDULED FOR REPLACEMENT. RUNNING PLANKS NEEDS REPAIRED/ REPLACED. REMOVE DEBRIS AT PIERS. INSTALL PROTECTION AT NE EMBANKMENT

Signature Date:14-OCT-2016Quality Review Date:13-OCT-2016



Indian Reservation Roads Program Bridge Inspection Report Inspection Status: FINAL



Images



N656_1609_P01 NORTH APPROACH LOOKING SOUTH



N656_1609_P02 SOUTH APPROACH LOOKING NORTH



N656_1609_P03 CHANNEL VIEW LOOKING EAST



N656_1609_P04 CHANNEL VIEW LOOKING WEST



N656_1609_P05 RUNNERS WITH CHECKS UP TO 30MM W



N656_1609_P06 VEGETATION OVERGROWTH AT NW APPROACH RAIL



Indian Reservation Roads Program Bridge Inspection Report Inspection Status: FINAL





N656_1609_P07 SPAN 1 FLOORBEAM, CRACK IN TACK WELD



N656_1609_P09 CRACK AT PIER 1 WITH PACK RUST



