CITY OF NOVI CITY COUNCIL MARCH 20, 2023



SUBJECT:

Adoption of Resolutions requesting the Michigan Department of Transportation (MDOT) include the existing bridges on 9 Mile Road over Thornton Creek and on Ashbury Drive over the Middle Rouge River in the State Local Bridge Program List for Replacement. If MDOT selects one or both bridges, the City of Novi will accept 100% of the design engineering costs and 5% of the total construction cost.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

BACKGROUND INFORMATION:

The City of Novi retained OHM Advisors to complete the 2022 Annual Bridge Inspection of the twelve City-owned and maintained bridges. This round of inspections identified two bridges recommended for replacement. The first being the bridge on 9 Mile Road over Thornton Creek, recommended for replacement in the next 3-5 years. This bridge was identified in previous inspections. The second bridge is on Ashbury Drive over the Middle Rouge River. Both bridges will be inspected on a more frequent basis (annually vs. bi-annually) until replacement occurs.

These bridges qualify as candidates for the Michigan Department of Transportation (MDOT) Local Bridge Program for replacement. MDOT is currently accepting applications for the (FY 2026) Local Bridge Program. OHM would submit applications to MDOT to include these bridges in the Local Bridge Program. If the bridge is selected, the City would only be responsible for 5% of the construction costs. These projects are currently estimated at \$3,214,000 for the Nine Mile bridge and \$2,168,000 for the Ashbury bridge, for a total of \$5,382,000. The City would be responsible for 100% of the associated design engineering fees in the amount of \$349,830 (6.5% of \$5,382,000). The estimated construction cost the City would be responsible for is \$269,100 (5% of \$5,382,000).

As part of the application process, the applicant is required to provide a current resolution, signed, and dated, from the governing board supporting the project. The adoption of the proposed resolution would demonstrate support from the City to MDOT for the replacement of the bridge and that the City will make the reasonable effort necessary to accomplish this effort. Any application not containing a signed resolution will be considered incomplete and will be rejected.

The City Attorney has reviewed the resolution and sees no legal impediment (Beth Saarela, March 9, 2023).

RECOMMENDED ACTION:

Adoption of Resolutions requesting the Michigan Department of Transportation (MDOT) include the existing bridges on 9 Mile Road over Thornton Creek and on Ashbury Drive over the Middle Rouge River in the State Local Bridge Program List for Replacement. If MDOT selects one or both bridges, the City of Novi will accept 100% of the design engineering costs and 5% of the total construction cost.

CITY OF NOVI

COUNTY OF OAKLAND, MICHIGAN

RESOLUTION REQUESTING THAT THE MICHIGAN DEPARTMENT OF TRANSPORTATION INCLUDE THE BRIDGE ON ASHBURY DRIVE OVER THE MIDDLE ROUGE RIVER IN THE STATE LOCAL BRIDGE PROGRAM LIST FOR REPLACEMENT

Minutes of a Meeting of the City Council of the City of Novi, County of Oakland, Michigan, held in the City Hall of said City on March 20, 2023, at 7 o'clock P.M. Prevailing Eastern Time.

PRESENT: Councilmembers
ABSENT: Councilmembers
7.502. (1) GGG1/GIII/16(1) GG1/G
The following preamble and Resolution were offered by Councilmember
,
The following preamble and Resolution were offered by Councilmemberand supported by Councilmember

WHEREAS; OHM Advisors, Consulting Engineers for the City of Novi, completed the 2022 annual inspection of twelve bridges in the City; and

WHEREAS; based on the 2022 inspection, OHM Advisors prepared a 2022 Bridge Inspection Report for the bridge on Ashbury Drive over the Middle Rouge River; and

WHEREAS; the 2022 Bridge Inspection Report concludes that the bridge on Ashbury Drive over the Middle Rouge River is in need of replacement; and

WHEREAS; based on the findings and recommendations of OHM Advisors, the DPW Director recommends that City Council authorize OHM Advisors to submit the LAP Bridge Applications to the Michigan Department of Transportation for the bridge on Ashbury Drive over the Middle Rouge River on the Local Bridge Program for Replacement funding; and

WHEREAS; the City of Novi's cost participation amount would be 5% of the total cost and 100% of the design and construction engineering cost; and

WHEREAS; the Mayor and City Clerk are authorized to execute said resolution.

NOW THEREFORE, IT IS THEREFORE RESOLVED that the City of Novi is actively seeking financial participation to replace the bridge on Ashbury Drive over the Middle Rouge River and authorizes OHM Advisors to submit the LAP Bridge application to the Michigan

Department of Transportation to include this bridge on the State Local Bridge Program List for Replacement, to make application for financial assistance from the State of Michigan and Federal Government and to do those things reasonably necessary or required in order to accomplish the replacement of this bridge.

AYES:	
NAYS:	
RESOLUTION DECLARED ADOPTED.	
	Cortney Hanson, City Clerk
CERTIFIC	ATION
I hereby certify that the foregoing is a true are by the City Council of the City of Novi, Council of No	ty of Oakland, and State of Michigan, at a, 2023, and that public notice of said ampliance with Act No. 267, Public Acts of aid meeting have been kept and made
	Cortney Hanson, City Clerk City of Novi

CITY OF NOVI

COUNTY OF OAKLAND, MICHIGAN

RESOLUTION REQUESTING THAT THE MICHIGAN DEPARTMENT OF TRANSPORTATION INCLUDE THE BRIDGE ON 9 MILE ROAD OVER THORNTON CREEK IN THE STATE LOCAL BRIDGE PROGRAM LIST FOR REPLACEMENT

Minutes of a Meeting of the City Council of the City of Novi, County of Oakland, Michigan, held in the City Hall of said City on March 20, 2023, at 7 o'clock P.M. Prevailing Eastern Time.

PRESENT: Councilmembers
ABSENT: Councilmembers
Abstri. Coonclinembers
The following preamble and Resolution were offered by Councilmember
and supported by Councilmember

WHEREAS; OHM Advisors, Consulting Engineers for the City of Novi, completed the 2022 annual inspection of twelve bridges in the City; and

WHEREAS; based on the 2022 inspection, OHM Advisors prepared a 2022 Bridge Inspection Report for the bridge on 9 Mile Road over Thornton Creek; and

WHEREAS; the 2022 Bridge Inspection Report concludes that the bridge on 9 Mile Road over Thornton Creek is in need of replacement; and

WHEREAS; based on the findings and recommendations of OHM Advisors, the DPW Director recommends that City Council authorize OHM Advisors to submit the LAP Bridge Applications to the Michigan Department of Transportation for the bridge on 9 Mile Road over Thornton Creek on the Local Bridge Program for Replacement funding; and

WHEREAS; the City of Novi's cost participation amount would be 5% of the total cost and 100% of the design and construction engineering cost; and

WHEREAS; the Mayor and City Clerk are authorized to execute said resolution.

NOW THEREFORE, IT IS THEREFORE RESOLVED that the City of Novi is actively seeking financial participation to replace the bridge on 9 Mile Road over Thornton Creek and authorizes OHM Advisors to submit the LAP Bridge application to the Michigan Department of Transportation to include this bridge on the State Local Bridge Program

AYES:
NAYS:
RESOLUTION DECLARED ADOPTED.
Cortney Hanson, City Clerk
CERTIFICATION
hereby certify that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Novi, County of Oakland, and State of Michigan, at a egular meeting held this day of, 2023, and that public notice of said meeting was given pursuant to and in full compliance with Act No. 267, Public Acts of Michigan, 1976, and that the minutes of said meeting have been kept and made available to the public as required by said Act.
Cortney Hanson, City Clerk City of Novi

List for Replacement, to make application for financial assistance from the State of Michigan and Federal Government and to do those things reasonably necessary or

required in order to accomplish the replacement of this bridge.

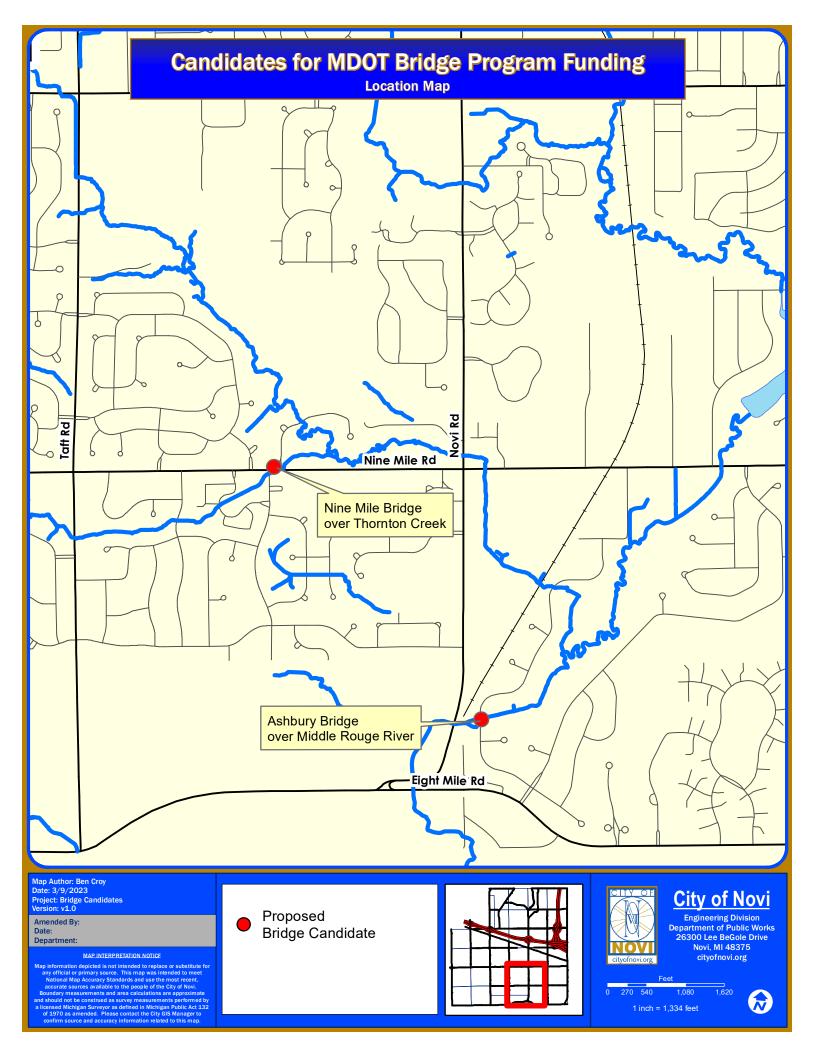


Exhibit 4 - Cost Estimating Worksheet

	2023		BRIDGE	COST ESTIMATE WOR	RKSHEET			REV. 01/31/2023
OMMED	NO.			CPM, REHAB, REPLAC			DATE:	3/13/2023
OWNER: REGION:	Metro	FISCAL Y		LENGTH	Out to Out WIDTH	Curb to Curb WIDTH	ENGINEER:	AJR
TSC:	Oakland	PR: 633603	MP: 5.699	26.6	0.0	24.0	STRUCTURE ID: BRIDGE ID:	14274 N/A
PRIM	LOCATION MARY WORK ACTIVIT OTHER WORK	Y Culvert Replacement	OVER THORNTON CREEK	DECK AREA: CLEAR ROADWAY:	N/A 638	SFT SFT	STR. TYPE: Ste Cu	eel livert
NEW BRI	WORK AC		MDOT Bridge Design G	Guides n standards and hydraulic requirements)	QUANTITY	<u>UNIT</u>	UNIT COST	<u>TOTAL</u>
Sin	gle or Multiple Spans,	Grade Separation	(add demo, approach	, MOT)	,	SFT	\$415.00 /SFT	
	igle Span, Over Water litiple Spans, Over Wat		Oft (add demo, approach Oft (add demo, approach			SFT SFT	\$500.00 /SFT \$450.00 /SFT	
Pre	ecast Culvert	Length < 40	ft (add demo, approach	i, MOT)	3,360.0	SFT	\$540.00 /SFT	\$1,814,400.00
Nev	PERSTRUCTURE w Superstructure, Grac w Superstructure, Over		(incl. remove exist deck/sup (incl. remove exist deck/sup			SFT SFT	\$295.00 /SFT \$300.00 /SFT	
WIDENIN	IG							
Stru NEW DEC	ucture Widening, CK	_ ft	(incl. deck/super/sub widen	ing, add approach transition)		SFT	\$630.00 /SFT	
	w Bridge Deck & Barrie	er	(incl. remove exist deck/rail	ing, add approach, MOT)		SFT	\$150.00 /SFT	
Ent	tire Structure, Grade Se					SFT	\$75.00 /SFT	
	tire Structure, Over Wa ner (Culvert Removal				1.0	SFT LSUM	\$95.00 /SFT \$30,000.00 LSUM	\$30,000.00
	EPAIR / TREATMENTS						700,000.00	+,
Brio	dge Railing Replaceme	ent	(incl. removal and replacem			FT	\$750.00 /FT	
	ncrete Brush Block / Co ncrete Barrier Patch		(incl. hand chipping and for (incl. hand chipping and for	mwork)		FT SFT	\$29.00 /FT \$85.00 /SFT	
Cor	ncrete Deck Patch		(incl. hand chipping)	mworky		SFT	\$68.00 /SFT	
	ep Overlay		(incl. joint repl & hydro)			SFT SYD	\$46.00 /SFT	
	oxy Overlay pansion Joint Gland Re	placement	(incl. warranty) (remove and replace elasto	meric gland)		FT	\$48.00 /SYD \$125.00 /FT	
Exp	pansion Joint Replacer		(incl. removal)	Ğ ,		FT	\$860.00 /FT	
	ll Depth Patch aler / Sealer		(penetrates cracks in bridge	deck)		SFT SYD	\$140.00 /SFT \$30.00 /SYD	
HM	1A Overlay with WP me					SYD	\$60.00 /SYD	
	erlay Removal seal Bridge Joints		(Epoxy: \$22/syd Latex: \$2	6/syd HMA: \$7/syd		SYD	\$22.00 /SYD	
	allow Overlay		(incl. joint repl & hydro)			FT SFT	\$28.00 /FT \$46.00 /SFT	
SUPERST	TRUCTURE REPAIR							
Bea	aring Realignment / Re	placement	(incl. temporary supports)			EA	\$6,450.00 EA	
	at Straightening ck Rust Repair		(incl. clean and coat) (greater than 3/8" separation	in)		EA FT	\$57,000.00 EA \$1,150.00 /FT	
Pai	int - Complete		(incl. clean & coat)			SFT	\$30.00 /SFT	
	int - Partial / Spot / Zon	е	(incl. clean & coat - \$20k m	inimum)		SFT	\$60.00 /SFT	
	Beam End Blockout & Hanger Replaceme	nt	(incl. temporary supports) (incl. temporary supports)			EA EA	\$7,200.00 EA \$17,000.00 EA	
	uctural Steel Repair		(based on 6ft repair length)			EA	\$4,000.00 EA	
	Structural Steel Repa	ir - Stiffener	(includes each side of bean	n)		EA	\$1,500.00 EA	
	UCTURE REPAIR bstructure Patching		(measured x 2) replace if r	enair area > 30%		CFT	\$360.00 /CFT	
	bstructure Replacemer	nt	(incl. temporary supports, e			CFT	\$375.00 /CFT	
	bstructure Horizontal S	urface Sealer	/- dd 04	Oriffe and for a second second		SYD	\$75.00 /SYD	
	mporary Supports ANEOUS		(add Structural Steel Repai	r - Stiffener for ea steel beam)		EA	\$4,000.00 EA	
	iculating Concrete Bloc	k System (ACB)				SYD	\$320.00 /SYD	
	ncrete Surface Coating					SYD	\$47.00 /SYD	
	lvert Cleanout oxy Crack Injection		(structural crack repair)			FT FT	\$125.00 /FT \$70.00 /FT	
Met	tal Mesh Panels		(48" width, max 6'-6" length)		SFT	\$28.00 /SFT	
	essure Relief Joint orap		(use when approach concre	ete roadway exceeds 1,000ft] nd perimeter of substructure)		FT SYD	\$110.00 /FT \$275.00 /SYD	
	ane Treatment		(penetrating sealer for cond			SFT	\$7.00 /SFT	
Slo	pe Protection Repairs		(Scour Countermeasures)		1.0	SYD LSUM	\$150.00 /SYD \$25,000.00 LSUM	\$25,000.00
Oth	iei		(Scour Countermeasures)				RUCTION BUDGET	\$1,869,400
ROAD W	OPK			· · · · · · · · · · · · · · · · · · ·				\$1,000,400
App	proach Pavement, 12"	RC	(incl. removal; add curb, gu	tter, guardrail) 40' ea. end		SYD	\$230.00 /SYD	
App	proach Curb & Gutter	ridao	(incl. removal) 40' ea. quad	drant		FT	\$57.00 /FT \$2,540.00 /EA	
	ardrail Anchorage to B ardrail	nuge	(each quadrant) (incl. removal) < 200ft beyon	ond reference line		EA FT	\$2,540.00/EA \$41.00/FT	
Gua	ardrail Terminal		(each quadrant)			EA	\$3,900.00 /EA	
	adway Approach Work lities		(beyond approach paveme	nt)	1.0 1.0	LSUM	\$200,000.00 LSUM \$30,000.00 LSUM	\$200,000.00 \$30,000.00
	CONTROL	Unit Cost to be determine	d by Region or TSC Traffic	& Safety			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$00,000.00
Par	rt Width Construction					LSUM	LSUM	
	ossovers mporary Traffic Signals					EA set	/EA	
RR	Flagging					LSUM	LSUM	
Det	tour				1.0	LSUM	\$75,000.00 LSUM	\$75,000.00
				RELATED RO	AD/TRAFF	C CONSTR	RUCTION BUDGET	\$305,000
CONTING			contingency for small project	ots)	20	%	\$2,174,000.00	\$435,000
MOBILIZA		(estimate at 10%) (assume 4% per year, beg	ainning in 2024)		10 12	%	\$2,609,000.00 \$2,870,000.00	\$261,000 \$344,000
EATIC		(_Source : por your, be(,g 2027)		12	,0	φ2,0.0,000.00	ψο++,000
				(Does not include PE or CE)			RUCTION BUDGET	\$3,214,000
		Approximate City Out of Poo	ket Costs	APPROXIMATE CITY RESPON				\$160,700 \$483,400
					15 '	% CE	INSPECTION BUDGET	\$482,100

Exhibit 4 - Cost Estimating Worksheet

	2023		BF	RIDGE COST	ESTIMATE WOR	RKSHEET			REV. 01/31/2023
OWNER:	NOVI	FISCAL YEAR	R: 2026	- CPM, I	REHAB, REPLAC	Out to Out	Curb to Curb	DATE: ENGINEER:	3/13/2023 AJR
EGION: SC:	Metro Oakland	PR: #N/A MF	: #N/A		LENGTH 46.1	WIDTH 44.4	WIDTH 28.0	STRUCTURE ID: BRIDGE ID:	13828 N/A
PRIMA	LOCATION ARY WORK ACTIVIT OTHER WORK	Y Bridge Replacement	MIDDLE BR ROL	JGE RIVER	DECK AREA: CLEAR ROADWAY:	2,047 1,291	SFT SFT	STR. TYPE: Pr	estressed Concrete ox Beam or Girders - M
IEW BRIDO	WORK AC			Design Guides	and hydraulic requirements	QUANTITY	<u>UNIT</u>	UNIT COST	<u>TOTAL</u>
Single	e or Multiple Spans,	Grade Separation	(add demo, a	approach, MOT)	and nydraulic requirements		SFT	\$415.00 /SFT	
	e Span, Over Water ple Spans, Over Wat	Length < 100ft er Length > 100ft	(add demo, a	approach, MOT) approach, MOT)		2,046.8	SFT SFT	\$500.00 /SFT \$450.00 /SFT	\$1,023,420.00
	ast Culvert	Length < 40ft	(add demo, a	approach, MOT)			SFT	\$540.00 /SFT	
New S	Superstructure, Grac			deck/super; add Modeck/super; add Modeck/super;			SFT	\$295.00 /SFT	
IDENING		,					SFT	\$300.00 /SFT	
EW DECK		<u> </u>		ub widening, add ap			SFT	\$630.00 /SFT	
EMOLITIC			I. remove exist	deck/railing, add ap	pproach, MOT)		SFT	\$150.00 /SFT	
	e Structure, Grade Se e Structure, Over Wa					2,046.8	SFT SFT	\$75.00 /SFT \$95.00 /SFT	\$194,449.8
	AIR / TREATMENTS		I. removal and i	ronlocoment)		1	FT	\$750.00/FT	
Conci	rete Brush Block / Co	urb Patch (inc	l. hand chipping	g and formwork)			FT	\$29.00 /FT	
	rete Barrier Patch rete Deck Patch	(inc	 hand chipping 	g and formwork)			SFT SFT	\$85.00 /SFT \$68.00 /SFT	
	Overlay		 hand chipping joint repl & hy 				SFT	\$46.00 /SFT	
	y Overlay	(inc	I. warranty)				SYD	\$48.00 /SYD	
Expai	nsion Joint Gland Re nsion Joint Replacer	placement (rer	nove and replac I. removal)	ce elastomeric glan	d)		FT FT	\$125.00 /FT \$860.00 /FT	
Full D	Depth Patch		,				SFT	\$140.00 /SFT	
	er / Sealer		netrates cracks	in bridge deck)			SYD	\$30.00 /SYD	
	Overlay with WP me lay Removal		oxv: \$22/svd I	atex: \$26/syd HM	A: \$7/svd		SYD SYD	\$60.00 /SYD \$22.00 /SYD	
Resea	al Bridge Joints						FT	\$28.00 /FT	
	ow Overlay	(inc	I. joint repl & hy	/dro)			SFT	\$46.00 /SFT	
	RUCTURE REPAIR	nlacement (inc	l tommorom, ou	nuncuta)			ΕΛ.	#C 4E0 00 FA	
	ing Realignment / Re Straightening		I. temporary su I. clean and coa				EA EA	\$6,450.00 EA \$57,000.00 EA	
Pack	Rust Repair	(gre	ater than 3/8" s	separation)			FT	\$1,150.00 /FT	
	- Complete		I. clean & coat)				SFT	\$30.00 /SFT	
	: - Partial / Spot / Zon Beam End Blockout		i. ciean & coat - I. temporary su	- \$20k minimum)			SFT EA	\$60.00 /SFT \$7,200.00 EA	
Pin &	Hanger Replaceme	nt (inc	I. temporary su	pports)			EA	\$17,000.00 EA	
	tural Steel Repair		sed on 6ft repai				EA	\$4,000.00 EA	
	Structural Steel Repa	ır - Sunener (ınd	ludes each side	e or bearin)			EA	\$1,500.00 EA	
	tructure Patching	/me	acured v 2\ rei	place if repair area	> 30%	1	CFT	\$360.00 /CFT	
	tructure Replacemer			pports, excavation)	> 30 /6		CFT	\$375.00 /CFT	
Subst	tructure Horizontal S	urface Sealer					SYD	\$75.00 /SYD	
	porary Supports	(ad	d Structural Ste	el Repair - Stiffene	for ea steel beam)		EA	\$4,000.00 EA	
/ISCELLAI	NEOUS ulating Concrete Bloc	k System (ACP)					SYD	\$320.00 /SYD	
	rete Surface Coating						SYD	\$47.00 /SYD	
	ert Cleanout						FT	\$125.00 /FT	
	y Crack Injection I Mesh Panels		uctural crack re width, max 6'-				FT SFT	\$70.00 /FT \$28.00 /SFT	
	sure Relief Joint			ch concrete roadwa	y exceeds 1,000ft)		FT	\$110.00 /FT	
Ripra				nce around perimet		188.9	SYD	\$275.00 /SYD	\$51,944.44
	e Treatment e Protection Repairs	(per	netrating sealer	for concrete surface	es)		SFT SYD	\$7.00 /SFT \$150.00 /SYD	
Other									
ROAD WOF	RK					STRUCTUR	E CONSTR	UCTION BUDGET	\$1,269,814
Appro	oach Pavement, 12"			curb, gutter, guard	rail) 40' ea. end	248.9	SYD	\$230.00 /SYD	\$57,244.44
Appro	oach Curb & Gutter drail Anchorage to B		I. removal) 40' ch quadrant)	ea. quadrant		160.0 4.0	FT EA	\$57.00 /FT \$2,540.00 /EA	\$9,120.00 \$10,160.00
Guard				00ft beyond referer	ice line	4.0	FT	\$41.00 /FT	φ10,100.0
	drail Terminal	(ea	ch quadrant)			4.0	EA	\$3,900.00 /EA	\$15,600.0
Utilitie			ond approach			1.0	LSUM LSUM	\$75,000.00 LSUM LSUM	\$75,000.00
	Width Construction	Unit Cost to be determined by	Region or TSC	C Traffic & Safety			LSUM	LSUM	
	sovers oorary Traffic Signals						EA set	/EA	
RR FI	lagging						LSUM	LSUM	
Detou						1.0	LSUM	\$30,000.00 LSUM	\$30,000.0
					RELATED RO	AD/TRAFF	C CONSTR	RUCTION BUDGET	\$197,124
ONTINGE	NCY	(10% - 20%) (use higher con	ingency for sm	all projects)	I	20	%	\$1,467,000.00	\$293,000
IOBILIZAT	TION	(estimate at 10%)		, -,, -,		10	%	\$1,760,000.00	\$176,00
NFLATION	l	(assume 4% per year, beginn	ing in 2024)			12	%	\$1,936,000.00	\$232,000
					(Does not include PE or CE)	TOTA	L CONSTR	UCTION BUDGET	\$2,168,000
		Approximate City Out of Pocket	Costs		PPROXIMATE CITY RESPON				\$108,400
		, , , , , , , , , , , , , , , , , , , ,				15	% CE	INSPECTION BUDGET	\$325,200
						10	% PE	DESIGN BUDGET	\$216.800

ELIZABETH KUDLA SAARELA

esaarela@rsjalaw.com

27555 Executive Drive, Suite 250 Farmington Hills, Michigan 48331 P 248.489.4100 | F 248.489.1726 rsjalaw.com



March 9, 2023

Ben Croy, City Engineer City of Novi Department of Public Works Field Services Complex 26300 Lee BeGole Drive Novi, MI 48375

Re: MDOT Local Bridge Program - Asbury Bridge over Middle Rouge River

Dear Mr. Croy:

You have indicated that the City will be resubmitting its application for participation in MDOT's 2023 Local Bridge Program using the same Resolution as approved for the 2020 submittal. We previously reviewed and approve use of the proposed Resolution Requesting that the Michigan Department of Transportation Include the Asbury Bridge over the Middle Rouge River in the State Local Bridge Program List .The Resolution is provided for the limited purpose of acknowledging that the City agrees pay 5% of the bridge replacement cost and 100% of the design and construction engineering cost in the event that a grant is awarded by MDOT.

Based on the limited purpose of the Resolution, we see no legal impediment to City Council approving the enclosed version of the Resolution.

If you have any questions regarding the above, please do not hesitate to contact me.

Very truly yours,

ROSATI SCHULTZ JOPPICH

& AMTSBUECHLER PC

Elizabeth Kudla Saarela

Enclosure

C: Cortney Hanson, Clerk (w/Enclosure)

Jeffrey Herczeg, Director of Public Works (w/Enclosure)

Thomas R. Schultz, Esquire (w/Enclosure)

ELIZABETH KUDLA SAARELA

esaarela@rsjalaw.com

27555 Executive Drive, Suite 250 Farmington Hills, Michigan 48331 P 248.489.4100 | F 248.489.1726 rsjalaw.com



March 9, 2023

Ben Croy, City Engineer City of Novi Department of Public Works Field Services Complex 26300 Lee BeGole Drive Novi, MI 48375

Re: MDOT Local Bridge Program – 9 Mile Road Over Thornton Creek

Dear Mr. Croy:

You have indicated that the City will be resubmitting its application for participation in MDOT's 2023 Local Bridge Program using the same Resolution as approved for the 2020 submittal. We previously reviewed and approve use of the proposed Resolution Requesting that the Michigan Department of Transportation Include the 9 Mile Road Over Thornton Creek in the State Local Bridge Program List .The Resolution is provided for the limited purpose of acknowledging that the City agrees pay 5% of the bridge replacement cost and 100% of the design and construction engineering cost in the event that a grant is awarded by MDOT.

Based on the limited purpose of the Resolution, we see no legal impediment to City Council approving the enclosed version of the Resolution.

If you have any questions regarding the above, please do not hesitate to contact me.

Very truly yours,

ROSATI SCHULTZ JOPPICH

& AMTSBUECHLER PC

Elizabeth Kudla Saarela

Enclosure

C: Cortney Hanson, Clerk (w/Enclosure)

Jeffrey Herczeg, Director of Public Works (w/Enclosure)

Thomas R. Schultz, Esquire (w/Enclosure)

STR 14274 CULVERT SAFETY INSPECTION REPORT								
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition					
9 MILE ROAD	42.4519 / -83.4841	634489000010C02	Poor Condition(4)					
Feature	Length / Width / Spans	Owner						
THORNTON CREEK	26.6 / 0 / 2	City: NOVI(4890)						
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status					
0.5 MI W OF NOVI RD	1970 / / /	Oakland(23)	A Open, no restriction(A)					
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation					
Metro(7) / Oakland(63)	3 Steel / 19 Culvert	09/15/2022 / AZ6H	8 Stable Above Footing					

CULVERT INSPECTION			AZ6H
Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
Adam Rychwalski	Orchard, Hiltz & McCliment Inc	12	09/15/2022

GENERAL NOTES

Adjacent CMP arch pipe approximately 280' long each at heavy skew to 9 Mile road. Heavy corrosion and deterioration in first 40-70 feet of each pipe from inlet. Pipe shape change from CMP arch to CMP ellipse leaving exposed joint. Several blind taps with heavy corrosion at taps. Rust and scaling along the waterline for full length with the exception of the last 30 feet or so which appears to be new pipe. Large area of deflected pipe in east pipe at approximately 166' in from inlet. detailed inspection is difficult without robotics due to low rise of pipe. Deflection in north pipe approximately 25 feet from inlet and in south pipe approximately 24 feet from inlet. Assisted by Nick Aukerman (2022).

NBI INSPECTION

	09/20	09/21	09/22	
1. Culvert Rating (SIA-62)	4	4	4	(09/22) (09/21) (09/20)
2. Channel (SIA-61)	6	6	6	Upstream and downstream ends are aligned with channel. there is a 45 degree kink in the pipe approximately 30' from outlet. upstream end has rock ladder controlling stream profile. (09/22) Upstream and downstream ends are aligned with channel. there is a 45 degree kink in the pipe approximately 30' from outlet. upstream end has rock ladder controlling stream profile. (09/21) Upstream and downstream ends are aligned with channel. there is a 45 degree kink in the pipe approximately 30' from outlet. upstream end has rock ladder controlling stream profile. (09/20)
3. Scour	7	7	7	armoring at both ends. no scour noted. full invert on pipe throughout. (09/22) armoring at both ends. no scour noted. full invert on pipe throughout. (09/21) armoring at both ends. no scour noted. full invert on pipe throughout. (09/20)

AASHTO	ELEMENTS					(Engl	ish Units)
Element Number	Element Name	Total Quantity	Unit	Good CS1	Fair CS2	Poor CS3	Severe CS4
Culvert							
240	Steel Culvert	560	ft	60	350	140	10
				11%	62%	25%	2%

Adjacent CMP arch pipe approximately 280' long each at heavy skew to 9 Mile road. Heavy corrosion and deterioration in first 40-70 feet of each pipe from inlet. Pipe shape change from CMP arch to CMP ellipse leaving exposed joint subject to attacking water from normal flow. Several blind taps with heavy corrosion at taps. Rust and scaling along the waterline for full length with the exception of the last 30 feet or so which appears to be new pipe. Large area of deflected pipe in east pipe at approximately 166' in from inlet. detailed inspection is difficult without robotics due to low rise of pipe. Robotic inspection is still difficult due to small riprap that has washed into pipe. Deflection in north pipe approximately 25 feet from inlet and in south pipe approximately 24 feet from inlet.

Scour C	ountermeasure						
830	Plain Riprap	400	sq.ft	400	0	0	0
				100%	0%	0%	0%
new ripra	ap at outlet in good condition. New rip	rap and slope paving	at inlet in goo	d condition.			
837	Other Scour Protect	20	ft	20	0	0	0
				100%	0%	0%	0%
Slope pa	aving at upstream end has been replac	ed.					

STR 14274	CULVERT SAFETY I	NSPECTION REPORT			
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition		
9 MILE ROAD	42.4519 / -83.4841	634489000010C02	Poor Condition(4)		
Feature	Length / Width / Spans	Owner			
THORNTON CREEK	26.6 / 0 / 2	City: NOVI(4890)			
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status		
0.5 MI W OF NOVI RD	1970 / / /	Oakland(23)	A Open, no restriction(A)		
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation		
Metro(7) / Oakland(63)	3 Steel / 19 Culvert	09/15/2022 / AZ6H	8 Stable Above Footing		
MISCELLANEOUS Guard Rail		Other Items			
<u>Item</u>	Rating	<u>Item</u>	Rating		
36A. Bridge Railings	N	71. Water Adequacy	6		
36B. Transitions	N	72. Approach Alignment	4		
36C. Approach Guardrail	N	Special Insp. Equipment	9		
36D. Approach Guardrail Ends	N	Underwater Insp. Method	1		
RECOMMENDATIONS & ACTI	ON ITEMS				
Recommendation Type	Priority	1	Description		
	Н	Replace culvert due to poor condition, pipe damage, pipe alignme			

STR 14274	S	STRUCTURE INVENTOR	Y AND APPRAISA	L	
Facility	Latitu	de / Longitude	MDOT Structure ID	Structure Condition	V
9 MILE ROAD		19 / -83.4841	634489000010C02	Poor Condition(4)	32
Feature	_	h / Width / Spans	Owner		_
THORNTON CREEK	_	/ 0 / 2			
			City: NOVI(4890)		
Location		Recon. / Paint / Ovly.	TSC	Operational Status	
0.5 MI W OF NOVI RD	1970		Oakland(23)	A Open, no restriction(A)
Region / County	Mater	ial / Design	Last NBI Inspection	Scour Evaluation	
Metro(7) / Oakland(63)	3 Stee	el / 19 Culvert	09/15/2022 / AZ6H	8 Stable Above Footing	1
Bridge History, Type,	Matorials	Route Carried By Struc	cture(ON Pecerd)	Route Under Structure (UN	IDED Pacard
27 - Year Built	1970	5A - Record Type	1	5A - Record Type	VDER Record
106 - Year Reconstructed	1970	5B - Route Signing	5	5B - Route Signing	
202 - Year Painted		5C - Level of Service	1	5C - Level of Service	
203 - Year Overlay		5D - Route Number	00000	5D - Route Number	
43 - Main Span Bridge Type	3 19	5E - Direction Suffix	0	5E - Direction Suffix	
44 - Appr Span Bridge Type		10L - Best 3m Unclr-Lt	0 0	10L - Best 3m Unclr-Lt	
77 - Steel Type		10R - Best 3m Unclr-Rt	0 0	10R - Best 3m Unclr-Rt	
78 - Paint Type		PR Number		PR Number	
79 - Rail Type	0	Control Section		Control Section	
80 - Post Type		11 - Mile Point	0	11 - Mile Point	
107 - Deck Type	N	12 - Base Highway Network		12 - Base Highway Network	
108A - Wearing Surface	6	13 - LRS Route-Subroute	0000006336 03	13 - LRS Route-Subroute	
108B - Membrane	0	19 - Detour Length	3	19 - Detour Length	
108C - Deck Protection		20 - Toll Facility 26 - Functional Class	16	20 - Toll Facility 26 - Functional Class	
Structure Dimens		28A - Lanes On	2	28B - Lanes Under	
34 - Skew	64	29 - ADT	8260	29 - ADT	
35 - Struct Flared	N	30 - Year of ADT	2014	30 - Year of ADT	
45 - Num Main Spans	2	32 - Appr Roadway Width	24	42B - Service Type Under	5
46 - Num Apprs Spans	0	32A/B - Ap Pvt Type/Width	4 24	47L - Left Horizontal Clear	
48 - Max Span Length 49 - Structure Length	12.2 26.6	42A - Service Type On	1	47R - Right Horizontal Clear	
50A - Width Left Curb/SW	0	47L - Left Horizontal Clear	0.0	54A - Left Feature	
50B - Width Right Curb/SW	0	47R - Right Horizontal Clear		54B - Left Underclearance	99 99
33 - Median	0	53 - Min Vert Clr Ov Deck	99 99	54C - Right Feature	
51 - Width Curb to Curb	0	100 - STRAHNET	0	54D - Right Clearance	99 99
52 - Width Out to Out	0	102 - Traffic Direct	2	Under Clearance Year 55A - Reference Feature	0
112 - NBIS Length	Υ	109 - Truck % 110 - Truck Network	0		N 0
Inspection Date	ta	114 - Future ADT	9500	55B - Right Horiz Clearance 56 - Left Horiz Clearance	0
90 - Inspection Date	09/15/2022	115 - Year Future ADT	2034	100 - STRAHNET	0
91 - Inspection Freq	12	Freeway	0	102 - Traffic Direct	
92A - Frac Crit Reg/Freg	N	•		109 - Truck %	
93A - Frac Crit Insp Date		Structure Ap		110 - Truck Network	
92B - Und Water Reg/Freg	N	36A - Bridge Railing	N N	114 - Future ADT	
93B - Und Water Insp Date		36B - Rail Transition	N	115 - Year Future ADT	
92C - Oth Spec Insp Req/Freq	N	36C - Approach Rail 36D - Rail Termination	N	Freeway	
93C - Oth Spec Insp Date		67 - Structure Evaluation	4	Proposed Improve	ments
92D - Fatigue Req/Freq	N	68 - Deck Geometry	N	75 - Type of Work	
93D - Fatigue Insp Date		69 - Underclearance	N	76 - Length of Improvement	'
176A - Und Water Insp Method	1	71 - Waterway Adequacy	6	94 - Bridge Cost	
58 - Deck Rating	N	72 - Approach Alignment	4	95 - Roadway Cost	
58A/B - Deck Surface/Bottom 59 - Superstructure Rating	N	103 - Temporary Structure		96 - Total Cost	
59A - Paint Rating	IN .	113 - Scour Criticality	8	97 - Year of Cost Estimate	
60 - Substructure Rating	N	Miscellane	eous	Load Rating and P	osting
61 - Channel Rating	6	37 - Historical Significance	5	31 - Design Load	0
62 - Culvert Rating	4	98A - Border Bridge State		41 - Open, Posted, Closed	A
Navigation Da	ta	98B - Border Bridge %	0	63 - Fed Oper Rtg Method	6
38 - Navigation Control		101 - Parallel Structure	N	64F - Fed Oper Rtg Load	2.03
39 - Vertical Clearance	0	EPA ID		64MA - Mich Oper Rtg Method	6
40 - Horizontal Clearance	0	Stay in Place Forms		64MB - Mich Oper Rtg	3.61
111 - Pier Protection		143 - Pin & Hanger Code	0	64MC - Mich Oper Truck	19
116 - Lift Brdg Vert Clear	0	148 - No. of Pin & Hangers	0	65 - Inv Rtg Method	6
				66 - Inventory Load	1.22
				70 - Posting 141 - Posted Loading	5
				193 - Overload Class	A N
				190 - Overillau Class	

STR 14274 WORK RECOMMENDATIONS				
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	Y
9 MILE ROAD	42.4519 / -83.4841	634489000010C02	Poor Condition(4)	
Feature	Length / Width / Spans	Owner		
THORNTON CREEK	26.6 / 0 / 2	City: NOVI(4890)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
0.5 MI W OF NOVI RD	1970 / / /	Oakland(23)	A Open, no restriction(A)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Metro(7) / Oakland(63)	3 Steel / 19 Culvert	09/15/2022 / AZ6H	8 Stable Above Footing	

WORK RECOMMENDATIONS AZ6H

STR 14275 CULVERT SAFETY INSPECTION REPORT				
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
9 MILE ROAD	42.4522 / -83.4729	634489000010C03	Good Condition(7)	
Feature	Length / Width / Spans	Owner		
THORNTON CREEK	21.5 / 104 / 2	City: NOVI(4890)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
0.06 MI E OF NOVI RD	1990 / / /	Oakland(23)	A Open, no restriction(A)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Metro(7) / Oakland(63)	3 Steel / 19 Culvert	09/15/2022 / KM5A	8 Stable Above Footing	

CULVERT INSPECTION			KM5A
Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
Adam Rychwalski	Orchard, Hiltz & McCliment Inc	24	09/15/2022

GENERAL NOTES

Dual CMP arch pipe. Pipe in overall good to fair condition with minor puncture under westbound lane. Assisted by Nick Aukerman (2022).

NBI INSPECTION

INDI IIIOI LOTIOII				
	11/18	09/20	09/22	
1. Culvert Rating (SIA-62)	7	7	7	(09/22) (09/20) (11/18)
2. Channel (SIA-61)	5	5	5	Main channel is in east bore with stream entering from northeast. west bore is mainly an overflow. Debris has been cleared from the west bore. Stream conditions do not appear to affect the pipe. (09/22) Main channel is in east bore with stream entering from northeast. west bore is mainly an overflow as debris has built up between the pipes up to approximately bankful height. debris dam causes approximate 1.5' waterfall 30' downstream. stream conditions do not appear to affect the pipe. (09/20) Main channel is in east bore with stream entering from northeast. west bore is mainly an overflow as debris has built up between the pipes up to approximately bankful height. debris dam causes approximate 1.5' waterfall 30' downstream. stream conditions do not appear to affect the pipe. (11/18)
3. Scour	6	6	6	no natural bottom at upstream end of pipe but no scour noted. (09/22) no natural bottom at upstream end of pipe but no scour noted. (09/20) no natural bottom at upstream end of pipe but no scour noted. (11/18)

AASHTO	ASHTO ELEMENTS (English Units)						
Element Number	Element Name	Total Quantity	Unit	Good CS1	Fair CS2	Poor CS3	Severe CS4
Culvert							
240	Steel Culvert	240	ft	220	20	0	0
				92%	8%	0%	0%
861	Culvert Wingwall	2	(EA)	2	0	0	0
				100%	0%	0%	0%
863	Culvert Headwall	1	(EA)	1	0	0	0
				100%	0%	0%	0%

MISCELLANEOUS			
Guard Rail		Other Items	
<u>Item</u>	Rating	<u>Item</u>	Rating
36A. Bridge Railings	N	71. Water Adequacy	8
36B. Transitions	N	72. Approach Alignment	6
36C. Approach Guardrail	N	Special Insp. Equipment	
36D. Approach Guardrail Ends	N	Underwater Insp. Method	1

RECOMMENDATIONS & ACTION ITEMS

Recommendation Type Priority Description

Modified by: RYCHWALSKIA4444 on 09/15/2022 Printed on 09/15/2022 Page 1 of 2

STR 14275 CULVERT SAFETY INSPECTION REPORT				
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
9 MILE ROAD	42.4522 / -83.4729	634489000010C03	Good Condition(7)	
Feature	Length / Width / Spans	Owner		
THORNTON CREEK	21.5 / 104 / 2	City: NOVI(4890)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
0.06 MI E OF NOVI RD	1990 / / /	Oakland(23)	A Open, no restriction(A)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Metro(7) / Oakland(63)	3 Steel / 19 Culvert	09/15/2022 / KM5A	8 Stable Above Footing	

Other

L

plug puncture hole in culvert with grout during the next project in the area.

9 MILE ROAD 42 Feature Le THORNTON CREEK 21 Location Bu 0.06 MI E OF NOVI RD 19 Region / County Ma	itude / Longitude 4522 / -83.4729 ngth / Width / Spans 5 / 104 / 2 ilt / Recon. / Paint / Ovly. 30 / / terial / Design teel / 19 Culvert Route Carried By Struct 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m Unclr-Lt 10R - Best 3m Unclr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	1 5 1 000000 0 0 0 0 0 0 0 0 0 0		g
Patter	ngth / Width / Spans 5 / 104 / 2 ilt / Recon. / Paint / Ovly. 20 / / terial / Design teel / 19 Culvert Route Carried By Struct 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	634489000010C03 Owner City: NOVI(4890) TSC Oakland(23) Last NBI Inspection 09/15/2022 / KM5A cture(ON Record) 1 5 1 00000 0 0 0 0 0 0 0 0 0 0 0 0 0	Good Condition(7) Operational Status A Open, no restriction() Scour Evaluation 8 Stable Above Footing Route Under Structure (UI) 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	NDER Record)
THORNTON CREEK	ngth / Width / Spans 5 / 104 / 2 ilt / Recon. / Paint / Ovly. ilt / Recon. / Paint / Ovly. iterial / Design iteel / 19 Culvert Route Carried By Struct 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m Unclr-Lt 10R - Best 3m Unclr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	Owner City: NOVI(4890) TSC Oakland(23) Last NBI Inspection 09/15/2022 / KM5A cture(ON Record) 1 5 1 00000 0 0 0 0 0 0 0 0 0 0 0 0 0	Operational Status A Open, no restriction() Scour Evaluation 8 Stable Above Footing Route Under Structure (UI) 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m Unclr-Lt 10R - Best 3m Unclr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	NDER Record)
Conting County	ilt / Recon. / Paint / Ovly. ilt / Recon. / Paint / Ovly. ilt / Recon. / Paint / Ovly. ilterial / Design iteel / 19 Culvert Route Carried By Struct 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m Unclr-Lt 10R - Best 3m Unclr-Lt 10R - Best 3m Unclr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	City: NOVI(4890) TSC Oakland(23) Last NBI Inspection 09/15/2022 / KM5A Cture(ON Record) 1 5 1 00000 0 0 0 0 0 0 0 0000006336 03 0 3 16 4 11126 2012 52 4 52 1 0.0	A Open, no restriction() Scour Evaluation 8 Stable Above Footing Route Under Structure (UI) 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear	NDER Record)
Docation But Docation Doc	ilt / Recon. / Paint / Ovly. 20 / / / terial / Design Steel / 19 Culvert Route Carried By Struct 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m Unclr-Lt 10R - Best 3m Unclr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	TSC Oakland(23) Last NBI Inspection 09/15/2022 / KM5A cture(ON Record) 1 5 1 00000 0 0 0 0 0 0 0 0 0000006336 03 0 3 16 4 11126 2012 52 4 52 1 0.0	A Open, no restriction() Scour Evaluation 8 Stable Above Footing Route Under Structure (UI) 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear	NDER Record)
Netro(7)	Route Carried By Struct Steel / 19 Culvert Route Carried By Struct 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	Oakland(23) Last NBI Inspection 09/15/2022 / KM5A cture(ON Record) 1 5 1 00000 0 0 0 0 0 0 0 0 0 0 0 0 0	A Open, no restriction() Scour Evaluation 8 Stable Above Footing Route Under Structure (UI) 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear	NDER Record)
Metro(7) / Oakland(63) 3 3 3 3 5 5 5 5 5 5	Route Carried By Struct 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	Last NBI Inspection 09/15/2022 / KM5A cture(ON Record) 1 5 1 00000 0 0 0 0 0 0 0 0 0 0 0 0 0	Route Under Structure (UIII 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	NDER Record)
Metro(7) / Oakland(63) 3 S	Route Carried By Struct 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear	09/15/2022 / KM5A cture(ON Record) 1 5 1 00000 0 0 0 0 0 0 0000006336 03 0 3 16 4 11126 2012 52 4 52 1 0.0	Route Under Structure (UII 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m Unclr-Lt 10R - Best 3m Unclr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	NDER Record)
Bridge History, Type, Materials 1990	Route Carried By Struct 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear	0000006336 03 0 000006336 03 0 16 4 11126 2012 52 4 52 1 0.0	Route Under Structure (UI 5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	NDER Record)
27 - Year Built 1990 106 - Year Reconstructed 202 - Year Painted 203 - Year Overlay 3 19 43 - Main Span Bridge Type 3 19 44 - Appr Span Bridge Type 77 - Steel Type	5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear	1 5 1 00000 0 0 0 0 0 0 0 0 0 0 0	5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear	
27 - Year Built 1990 106 - Year Reconstructed 202 - Year Painted 203 - Year Overlay 3 19 43 - Main Span Bridge Type 3 19 44 - Appr Span Bridge Type 77 - Steel Type	5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear	1 5 1 00000 0 0 0 0 0 0 0 0 0 0 0	5A - Record Type 5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear	
106 - Year Reconstructed 202 - Year Painted 203 - Year Overlay 43 - Main Span Bridge Type 44 - Appr Span Bridge Type 77 - Steel Type 78 - Paint Type 79 - Rail Type 0 0 0 0 0 0 0 0 0	5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear	1 00000 0 0 0 0 0 0 0 0 0 000000	5B - Route Signing 5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
202 - Year Painted 203 - Year Overlay 43 - Main Span Bridge Type 44 - Appr Span Bridge Type 77 - Steel Type 78 - Paint Type 79 - Rail Type 80 - Post Type 108A - Wearing Surface 108B - Membrane 108C - Deck Protection Structure Dimensions 34 - Skew 35 - Struct Flared 45 - Num Main Spans 46 - Num Apprs Spans 48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length Inspection Data 90 - Inspection Freq 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Req/Freq 93B - Und Water Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear	1 00000 0 0 0 0 0 0 0 0 0 000000	5C - Level of Service 5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
203 - Year Overlay 43 - Main Span Bridge Type 44 - Appr Span Bridge Type 77 - Steel Type 78 - Paint Type 99 - Rail Type 107 - Deck Type 108A - Wearing Surface 108B - Membrane 108C - Deck Protection Structure Dimensions 34 - Skew 35 - Struct Flared 45 - Num Main Spans 46 - Num Apprs Spans 48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length 90 - Inspection Data 90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear	00000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0000	5D - Route Number 5E - Direction Suffix 10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
43 - Main Span Bridge Type 44 - Appr Span Bridge Type 77 - Steel Type 78 - Paint Type 79 - Rail Type 80 - Post Type 107 - Deck Type 108A - Wearing Surface 108B - Membrane 108C - Deck Protection Structure Dimensions 34 - Skew 35 - Struct Flared 45 - Num Main Spans 46 - Num Apprs Spans 48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length 90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Req/Freq 93C - Oth Spec Insp Req/Freq 93D - Fatigue Insp Date	10L - Best 3m Unclr-Lt 10R - Best 3m Unclr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	0 0 0 0 0 0 0 0000006336 03 0 3 16 4 11126 2012 52 4 52 1	10L - Best 3m UncIr-Lt 10R - Best 3m UncIr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
77 - Steel Type 78 - Paint Type 79 - Rail Type 80 - Post Type 107 - Deck Type 108A - Wearing Surface 108B - Membrane 108C - Deck Protection Structure Dimensions 34 - Skew 35 - Struct Flared 45 - Num Main Spans 46 - Num Apprs Spans 48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length V Inspection Data 90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	10R - Best 3m Unclr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	0 0 0 0 0000006336 03 0 3 16 4 11126 2012 52 4 52 1 0.0	10R - Best 3m Unclr-Rt PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
77 - Steel Type 78 - Paint Type 79 - Rail Type 80 - Post Type 107 - Deck Type 108A - Wearing Surface 108B - Membrane 108C - Deck Protection Structure Dimensions 34 - Skew 35 - Struct Flared 45 - Num Main Spans 46 - Num Apprs Spans 48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length V Inspection Data 90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	0 0 0000006336 03 0 3 16 4 11126 2012 52 4 52 1	PR Number Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
79 - Rail Type 80 - Post Type 107 - Deck Type 108A - Wearing Surface 108B - Membrane 108C - Deck Protection Structure Dimensions 34 - Skew 35 - Struct Flared 45 - Num Main Spans 246 - Num Apprs Spans 48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length 10 - 112 - NBIS Length 10 - 114 - NBIS Length 10 - 115	Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	0 0000006336 03 0 3 16 4 11126 2012 52 4 52 1	Control Section 11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
80 - Post Type 107 - Deck Type 108A - Wearing Surface 108B - Membrane 108C - Deck Protection Structure Dimensions 34 - Skew 35 - Struct Flared 45 - Num Main Spans 46 - Num Apprs Spans 48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length 90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Req/Freq 93C - Oth Spec Insp Req/Freq 93D - Fatigue Req/Freq 93D - Fatigue Insp Date	11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	0 0000006336 03 0 3 16 4 11126 2012 52 4 52 1	11 - Mile Point 12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
107 - Deck Type N 108A - Wearing Surface 6 108B - Membrane N 108C - Deck Protection 0 Structure Dimensions 34 - Skew 0 35 - Struct Flared N 45 - Num Main Spans 2 46 - Num Apprs Spans 0 48 - Max Span Length 10 49 - Structure Length 21.5 50A - Width Left Curb/SW 8 33 - Median 0 51 - Width Curb to Curb 52 52 - Width Out to Out 104 112 - NBIS Length Y Inspection Data 90 - Inspection Freq 99/15/2022 91 - Inspection Freq 24 92A - Frac Crit Req/Freq N 93B - Und Water Req/Freq N 93B - Und Water Insp Date N 92C - Oth Spec Insp Req/Freq N 93C - Oth Spec Insp Date N 92D - Fatigue Req/Freq N 93D - Fatigue Insp Date	12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	0 0000006336 03 0 3 16 4 11126 2012 52 4 52 1	12 - Base Highway Network 13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
108A - Wearing Surface 6 108B - Membrane N 108C - Deck Protection 0 Structure Dimensions 34 - Skew 0 35 - Struct Flared N 45 - Num Main Spans 2 46 - Num Apprs Spans 0 48 - Max Span Length 10 49 - Structure Length 21.5 50A - Width Left Curb/SW 0 50B - Width Right Curb/SW 8 33 - Median 0 51 - Width Curb to Curb 52 52 - Width Out to Out 104 112 - NBIS Length Y Inspection Data 90 - Inspection Date 09/15/2022 91 - Inspection Freq 24 92A - Frac Crit Req/Freq N 93B - Und Water Req/Freq N 93B - Und Water Insp Date N 92C - Oth Spec Insp Req/Freq N 93C - Oth Spec Insp Date N 92D - Fatigue Req/Freq N 93D - Fatigue Insp Date	13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	0000006336 03 0 3 16 4 11126 2012 52 4 52 1 0.0	13 - LRS Route-Subroute 19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
108B - Membrane	19 - Detour Length 20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	0 3 16 4 11126 2012 52 4 52 1 0.0	19 - Detour Length 20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
108C - Deck Protection	20 - Toll Facility 26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	3 16 4 11126 2012 52 4 52 1 0.0	20 - Toll Facility 26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
Structure Dimensions 34 - Skew 0 35 - Struct Flared N 45 - Num Main Spans 2 46 - Num Apprs Spans 0 48 - Max Span Length 10 49 - Structure Length 21.5 50A - Width Left Curb/SW 0 50B - Width Right Curb/SW 8 33 - Median 0 51 - Width Curb to Curb 52 - Width Out to Out 104 112 - NBIS Length Y Inspection Data 90 - Inspection Date 91 - Inspection Freq 24 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date 92D - Fatigue Insp Date 93D - Fatigue Insp Date 94D - 94D	26 - Functional Class 28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	16 4 11126 2012 52 4 52 1 0.0	26 - Functional Class 28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
34 - Skew 35 - Struct Flared 45 - Num Main Spans 2	28A - Lanes On 29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	4 11126 2012 52 4 52 1 0.0	28B - Lanes Under 29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
35 - Struct Flared 45 - Num Main Spans 2 46 - Num Apprs Spans 48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length Y Inspection Data 90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	29 - ADT 30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	11126 2012 52 4 52 1 0.0	29 - ADT 30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
45 - Num Main Spans 46 - Num Apprs Spans 48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length Inspection Data 90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	30 - Year of ADT 32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	2012 52 4 52 1 0.0	30 - Year of ADT 42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
46 - Num Apprs Spans 48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length Inspection Data 90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	32 - Appr Roadway Width 32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	52 4 52 1 0.0	42B - Service Type Under 47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	5
48 - Max Span Length 49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length Inspection Data 90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	32A/B - Ap Pvt Type/Width 42A - Service Type On 47L - Left Horizontal Clear 47R - Right Horizontal Clear	4 52 1 0.0	47L - Left Horizontal Clear 47R - Right Horizontal Clear 54A - Left Feature	
49 - Structure Length 50A - Width Left Curb/SW 50B - Width Right Curb/SW 33 - Median 51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length V Inspection Data 90 - Inspection Data 90 - Inspection Freq 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	47L - Left Horizontal Clear 47R - Right Horizontal Clear	0.0	54A - Left Feature	
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33 - Median 0 51 - Width Curb to Curb 52 52 - Width Out to Out 104 112 - NBIS Length Y Inspection Data 90 - Inspection Date 91 - Inspection Freq 24 92A - Frac Crit Req/Freq N 93A - Frac Crit Insp Date 92B - Und Water Req/Freq N 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date				99 99
51 - Width Curb to Curb 52 - Width Out to Out 112 - NBIS Length Inspection Data	53 - Min Vert Clr Ov Deck	99 99	54C - Right Feature	l
52 - Width Out to Out 112 - NBIS Length Inspection Data	100 - STRAHNET	0	54D - Right Clearance	99 99
Inspection Data 90 - Inspection Date 91 - Inspection Freq 924 - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	102 - Traffic Direct	2	Under Clearance Year	0 N
90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	109 - Truck % 110 - Truck Network	0	55A - Reference Feature	0
90 - Inspection Date 91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	114 - Future ADT	12800	55B - Right Horiz Clearance 56 - Left Horiz Clearance	0
91 - Inspection Freq 92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	115 - Year Future ADT	2032	100 - STRAHNET	0
92A - Frac Crit Req/Freq 93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	Freeway	0	102 - Traffic Direct	
93A - Frac Crit Insp Date 92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date			109 - Truck %	
92B - Und Water Req/Freq 93B - Und Water Insp Date 92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	Structure Ap	-	110 - Truck Network	
92C - Oth Spec Insp Req/Freq 93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date	36A - Bridge Railing 36B - Rail Transition	N	114 - Future ADT	
93C - Oth Spec Insp Date 92D - Fatigue Req/Freq 93D - Fatigue Insp Date		N N	115 - Year Future ADT	
92D - Fatigue Req/Freq N 93D - Fatigue Insp Date	36C - Approach Rail 36D - Rail Termination	N	Freeway	
93D - Fatigue Insp Date	67 - Structure Evaluation	7	Proposed Improve	ments
	68 - Deck Geometry	4	75 - Type of Work	
	69 - Underclearance	N	76 - Length of Improvement	'
	71 - Waterway Adequacy	8	94 - Bridge Cost	
58 - Deck Rating N	72 - Approach Alignment	6	95 - Roadway Cost	
58A/B - Deck Surface/Bottom 59 - Superstructure Rating	103 - Temporary Structure		96 - Total Cost	
59 - Superstructure Rating 59A - Paint Rating	113 - Scour Criticality	8	97 - Year of Cost Estimate	
60 - Substructure Rating N	Miscellane	eous	Load Rating and P	osting
61 - Channel Rating 5	37 - Historical Significance	5	31 - Design Load	5
62 - Culvert Rating 7	98A - Border Bridge State		41 - Open, Posted, Closed	A
Navigation Data	98B - Border Bridge %	0	63 - Fed Oper Rtg Method	6
38 - Navigation Control	101 - Parallel Structure	N	64F - Fed Oper Rtg Load	3.59
39 - Vertical Clearance 0	EPA ID		64MA - Mich Oper Rtg Method	6
40 - Horizontal Clearance 0			64MB - Mich Oper Rtg	6.38
111 - Pier Protection	Stay in Place Forms	0	64MC - Mich Oper Truck	19
116 - Lift Brdg Vert Clear 0	Stay in Place Forms 143 - Pin & Hanger Code		65 - Inv Rtg Method	6
	Stay in Place Forms	0	00	2.15
	Stay in Place Forms 143 - Pin & Hanger Code	0	66 - Inventory Load	
	Stay in Place Forms 143 - Pin & Hanger Code	0	66 - Inventory Load 70 - Posting 141 - Posted Loading	5

STR 14275 WORK RECOMMENDATIONS				
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
9 MILE ROAD	42.4522 / -83.4729	634489000010C03	Good Condition(7)	
Feature	Length / Width / Spans	Owner		
THORNTON CREEK	21.5 / 104 / 2	City: NOVI(4890)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
0.06 MI E OF NOVI RD	1990 / / /	Oakland(23)	A Open, no restriction(A)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Metro(7) / Oakland(63)	3 Steel / 19 Culvert	09/15/2022 / KM5A	8 Stable Above Footing	

WORK RECOMMENDATIONS KM5A

STR 13828 BRIDGE SAFETY INSPECTION REPORT				
Facility	Latitude / Longitude	MDOT Structure ID	Structure Condition	
ASHBURY DRIVE	42.4427 / -83.4728	635489000067B01	Poor Condition(4)	
Feature	Length / Width / Spans	Owner		
MIDDLE BR ROUGE RIVER	46.1 / 44.4 / 1	City: NOVI(4890)		
Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status	
CHASE FARMS SUBDIVISION	1991 / / /	Oakland(23)	A Open, no restriction(A)	
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation	
Metro(7) / Oakland(63)	5 Prestressed Concrete / 05 Box Bm/Gird- Multiple	09/15/2022 / 9LGY	8 Stable Above Footing	

NBI INSPECTION			9LGY
Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date
Adam Rychwalski	Orchard, Hiltz & McCliment Inc	12	09/15/2022

GENERAL NOTES

Assisted by Nick Aukerman.

DECK				
	09/18	09/20	09/22	
1. Surface (SIA-58A)	6	6	6	HMA surface with sealed longitudinal crack at centerline. Two other sealed longitudinal cracks near mid span. Previously unsealed crack have been sealed. SE quad has break up of HMA at east curb line. General scaling of HMA surface along west curb line. (09/22) HMA surface with sealed longitudinal crack at centerline. Two other sealed longitudinal cracks near mid span. A few unsealed cracks. SE quad has break up of HMA at east curb line. General scaling of HMA surface along west curb line. (09/20) HMA surface with sealed longitudinal crack at centerline. Two other sealed longitudinal cracks near mid span. A few unsealed cracks. SE quad has break up of HMA at east curb line. (09/18)
2. Expansion Joints	7	7	7	Sealed cracks at reference lines. Sealant sinking in areas but still intact. Some drying of HPJS. (09/22) Sealed cracks at reference lines. Sealant sinking in areas but still intact. Some drying of HPJS. (09/20) Sealed cracks at reference lines. Sealant sinking in areas but still intact. (09/18)
3. Other Joints	N	N	N	(09/22) (09/20) (09/18)
4. Railings	7	7	7	Concrete rail with painted timber insets and wood rail on top. Concrete has some vertical cracks at 5-6' spacing. Timber has been recently replaced. (09/22) Concrete rail with painted timber insets and wood rail on top. Concrete has some vertical cracks at 5-6' spacing. Timber has been recently replaced. (09/20) Concrete rail with painted timber insets and metal rail on top. Concrete has some vertical cracks at 5-6' spacing. Timber and metal with no deficiencies. (09/18)
5. Sidewalks or Curbs	7	7	7	A few longitudinal and transverse cracks on sidewalk. (09/22) A few longitudinal and transverse cracks on sidewalk. (09/20) A few longitudinal and transverse cracks on sidewalk. (09/18)
6. Deck Bottom Surface (SIA-58B)	N	N	N	Side-by-side box beams. Leaking between all beams. Stalactites present at most beam lines and leachate at all of them. (09/22) Side-by-side box beams. Leaking between all beams. Stalactites present at most beam lines and leachate at all of them. (09/20) Side-by-side box beams. Leaking between all beams. Stalactites present at most beam lines and leachate at all of them. (09/18)
7. Deck (SIA-58)	6	6	6	Surface has some cracking and there is leaking between all beams. Top of beams exposed at sidewalk face near midspan on both sides of bridge. (09/22) Surface has some cracking and there is leaking between all beams. (09/20) Surface has some cracking and there is leaking between all beams. (09/18)
8. Drainage				(09/22) (09/20) (09/18)

SUPERSTRUCTURE

STR 13828				BRIDGE SAFETY INS	PECTION REPORT	
Facility ASHBURY DRIVE Feature			Latitude / Longitude 42.4427 / -83.4728 Length / Width / Spans		MDOT Structure ID 635489000067B01 Owner	Structure Condition Poor Condition(4)
MIDDLE BR ROUGE RIVER Location CHASE FARMS SUBDIVISION Region / County				/ 44.4 / 1 / Recon. / Paint / Ovly. / / / ial / Design	City: NOVI(4890) TSC Oakland(23) Last NBI Inspection	Operational Status A Open, no restriction(A) Scour Evaluation
Metro(7) / Oakland(63)			5 Prestressed Concrete / 05 Box Bm/Gird- Multiple		09/15/2022 / 9LGY	8 Stable Above Footing
	09/18	09/20	09/22			
9. Stringer (SIA-59)	7	7	7	leaching. (09/22) Leaching between beams leaching. (09/20)	but no distress to beams.	Few cracks on fascias at 4' spacing with Few cracks on fascias at 4' spacing with Few cracks on fascias at 4' spacing with
10. Paint (SIA-59A)	N	N	N	(09/22) (09/20) (09/18)		
11. Section Loss	N	N	N	(09/22) (09/20) (09/18)		
12. Bearings	7	7	7	Not visible but not no signs	s of issues. Appear to be	functioning as intended. (09/22) functioning as intended. (09/20) functioning as intended. (09/18)
SUBSTRUCTURE						
	09/18	09/20	09/22			
13. Abutments (SIA-60)	5	5	4	progressed since the previous fleaking from ends. Hole Pack rust and scaling on n loss is minor and there is le (09/22) Steel sheet piling has pack there is leaching between leaking from ends. (09/20) Steel sheet piling has pack	ous inspection. Some vertes in sheet piling of north a orth abutment is allowing eaching between the sheet rust at base and at top not the sheets. Some vertical crust at base and at top not the sheets.	s evident on both abutments and has tical cracks in concrete pile cap. Evidence abutment near the middle of the base. water through but no material. Section ets of the southern abutment sheet piling. ear beams. Section loss is minor and cracks in concrete pile cap. Evidence of ear beams. Section loss is minor and cracks in concrete pile cap. (09/18)
14. Piers (SIA-60)	N	N	N	(09/22) (09/20) (09/18)		
15. Slope Protection	N	N	N	(09/22) (09/20) (09/18)		
16. Channel (SIA-61)	6	6	6	is relatively flat (09/22) Banks eroded ~2' high alor is relatively flat (09/20)	ng the waterline. vegetation	on sloughing into channel. Main channel on sloughing into channel. Main channel on sloughing into channel. Main channel
17. Scour Inspection	7	7	7	No scour evident. Flat rock No scour evident. Flat rock No scour evident. (09/18)		
APPROACH						
	09/18	09/20	09/22			
18. Approach Pavement	7	7	7	HMA. (09/22)	north approach. No cracl	ks in south approach. General wear in

	MICHIGAN DEPARTMEN	II OF TRANSPORTATION				
STR 13828 BRIDGE SAFETY INSPECTION REPORT						
Facility ASHBURY DRIVE Feature MIDDLE BR ROUGE RIVER	Latitude / Longitude 42.4427 / -83.4728 Length / Width / Spans 46.1 / 44.4 / 1	MDOT Structure ID 635489000067B01 Owner City: NOVI(4890)	Structure Condition Poor Condition(4)			
Location CHASE FARMS SUBDIVISION Region / County Metro(7) / Oakland(63)	Built / Recon. / Paint / Ovly. 1991 / / Material / Design 5 Prestressed Concrete / 05 Box Bm/Gird- Multiple	TSC Oakland(23) Last NBI Inspection 09/15/2022 / 9LGY	Operational Status A Open, no restriction(A) Scour Evaluation 8 Stable Above Footing			
19. Approach 7 7 Shoulders Sidewalks	Sidewalk and curb have recently been replaced in all quadrants. (09/20)					
20. Approach Slopes	Gentle grassed slopes with no erosion. (09/22) Gentle grassed slopes with no erosion. (09/20) Gentle grassed slopes with no erosion. (09/18)					
21. Utilities	(09/22) (09/20) (09/18)					
22. Drainage Culverts	(09/22) (09/20) (09/18)					
MISCELLANEOUS						
Guard Rail		Other Items				
<u>Item</u>	Rating	<u>Item</u>	Rating			
36A. Bridge Railings 36B. Transitions 36C. Approach Guardrail 36D. Approach Guardrail Ends	1 0 0 0	71. Water Adequacy 72. Approach Alignment Temporary Support High Load Hit (M) Special Insp. Equipment Underwater Insp. Method	8 8 0 No Temporary Supports No 2 1			
False Decking (Timber) Removed	to Complete Inspection	N/A - No False Decking				
Critical Feature Inspections (S	-	3				
Citada i catale mopeotions (O						

92A. Fracture Critical92B. Underwater92C. Other Special92D. Fatigue Sensitive

Freq

Date

STR 13828		STRUCTURE INVENTO	ORY A	AND APPRAISA	AL .	
Facility		Latitude / Longitude	ME	OOT Structure ID	Structure Condition	1
ASHBURY DRIVE		42.4427 / -83.4728		5489000067B01	Poor Condition(4)	
Feature		Length / Width / Spans		vner	,	_
MIDDLE BR ROUGE RIVER		46.1 / 44.4 / 1		y: NOVI(4890)		
Location		Built / Recon. / Paint / Ovly.		C	Operational Status	
CHASE FARMS SUBDIVISION		1991 / / /		kland(23)	A Open, no restriction(A)	
Region / County				st NBI Inspectio	• • • • • • • • • • • • • • • • • • • •	
Metro(7) / Oakland(63)		5 Prestressed Concrete / 05		/15/2022 / 9LGY		
Wetto(7) 7 Cantana(00)		Box Bm/Gird- Multiple	00/	10/2022 / 0201	o otable Above i oothig	
Bridge History, Type, I 27 - Year Built			ructur	re(ON Record)	Route Under Structure (UN	IDER Record)
106 - Year Reconstructed	1991	5A - Record Type 5B - Route Signing		5	5A - Record Type 5B - Route Signing	
202 - Year Painted		5C - Level of Service		0	5C - Level of Service	
203 - Year Overlay		5D - Route Number		00000	5D - Route Number	
43 - Main Span Bridge Type	5 0			0	5E - Direction Suffix	
44 - Appr Span Bridge Type 77 - Steel Type		10L - Best 3m Unclr-Lt 10R - Best 3m Unclr-Rt		0 0	10L - Best 3m Unclr-Lt 10R - Best 3m Unclr-Rt	
78 - Paint Type		PR Number		99 99	PR Number	1
79 - Rail Type	9	Control Section			Control Section	
80 - Post Type		11 - Mile Point		0	11 - Mile Point	
107 - Deck Type	2	12 - Base Highway Netw	ork	0	12 - Base Highway Network	
108A - Wearing Surface	6	13 - LRS Route-Subrout	е	0000044017 42	13 - LRS Route-Subroute	
108B - Membrane	0	19 - Detour Length		2	19 - Detour Length	
108C - Deck Protection	0	20 - Toll Facility 26 - Functional Class		19	20 - Toll Facility 26 - Functional Class	
Structure Dimensi		28A - Lanes On		2	28B - Lanes Under	
34 - Skew	4	29 - ADT		100	29 - ADT	
35 - Struct Flared 45 - Num Main Spans	1	30 - Year of ADT		1991	30 - Year of ADT	
46 - Num Apprs Spans	0	32 - Appr Roadway Widt		24	42B - Service Type Under	5
48 - Max Span Length	39.5	32A/B - Ap Pvt Type/Wid	dth	24.02	47L - Left Horizontal Clear	
49 - Structure Length	46.1	42A - Service Type On	۰.	5	47R - Right Horizontal Clear	
50A - Width Left Curb/SW	6.8	47L - Left Horizontal Cle 47R - Right Horizontal C		28.0	54A - Left Feature 54B - Left Underclearance	99 99
50B - Width Right Curb/SW	6.8	53 - Min Vert Clr Ov Dec		99 99	54C - Right Feature	99 99
33 - Median	0	100 - STRAHNET	•••	0	54D - Right Clearance	99 99
51 - Width Curb to Curb 52 - Width Out to Out	<u>28</u> 44.4	102 - Traffic Direct		2	Under Clearance Year	
112 - NBIS Length	44.4 Y	109 - Truck %		0	55A - Reference Feature	N
		110 - Truck Network		0	55B - Right Horiz Clearance	
Inspection Date 90 - Inspection Date	а 09/15/202	114 - Future ADT 115 - Year Future ADT		115 2011	56 - Left Horiz Clearance 100 - STRAHNET	
91 - Inspection Freq	12	Freeway		0	102 - Traffic Direct	
92A - Frac Crit Reg/Freg	N		A 10 10 10		109 - Truck %	
93A - Frac Crit Insp Date		Structure	Appra	ıısaı	110 - Truck Network	
92B - Und Water Req/Freq	N	36A - Bridge Railing 36B - Rail Transition		0	114 - Future ADT	
93B - Und Water Insp Date		36C - Approach Rail		0	115 - Year Future ADT	
92C - Oth Spec Insp Req/Freq	N	36D - Rail Termination		0	Freeway	
93C - Oth Spec Insp Date	N	67 - Structure Evaluation	1	5	Proposed Improver	ments
92D - Fatigue Req/Freq 93D - Fatigue Insp Date	IN	68 - Deck Geometry		7	75 - Type of Work	
176A - Und Water Insp Method	1	69 - Underclearance		N	76 - Length of Improvement	
58 - Deck Rating	6	71 - Waterway Adequact	•	8	94 - Bridge Cost 95 - Roadway Cost	
58A/B - Deck Surface/Bottom	6 N	103 - Temporary Structu		8	96 - Total Cost	
59 - Superstructure Rating	7	113 - Scour Criticality	10	8	97 - Year of Cost Estimate	
59A - Paint Rating	<u>N</u>	Miscell	aneou		Load Rating and Po	netina
60 - Substructure Rating 61 - Channel Rating	6	37 - Historical Significan		5	31 - Design Load	4
62 - Culvert Rating	N	98A - Border Bridge Stat		3	41 - Open, Posted, Closed	A
Navigation Date		98B - Border Bridge %			63 - Fed Oper Rtg Method	0
	а 0	101 - Parallel Structure		N	64F - Fed Oper Rtg Load	1.67
38 - Navigation Control 39 - Vertical Clearance	0	EPA ID			64MA - Mich Oper Rtg Method	0
40 - Horizontal Clearance	0	Stay in Place Forms	_	0	64MB - Mich Oper Rtg	1
111 - Pier Protection		143 - Pin & Hanger Code			64MC - Mich Oper Truck	18
116 - Lift Brdg Vert Clear	0	148 - No. of Pin & Hange	515		65 - Inv Rtg Method 66 - Inventory Load	1
					70 - Posting	5
					141 - Posted Loading	
					193 - Overload Class	

STR 13828	WORK RECOM		
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Feature	Length / Width / Spans	Owner	
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Location	Built / Recon. / Paint / Ovly.	TSC	Operational Status
CHASE FARMS SUBDIVISION	1991 / / /	Oakland(23)	A Open, no restriction(A)
Region / County	Material / Design	Last NBI Inspection	Scour Evaluation
Metro(7) / Oakland(63)	5 Prestressed Concrete / 05 Box Bm/Gird- Multiple	09/15/2022 / 9LGY	8 Stable Above Footing

Inspector Name	Agency / Company Name	Insp. Freq.	Insp. Date				
Adam Rychwalski	Orchard, Hiltz & McCliment Inc	12	09/15/2022				
RECOMMENDATIONS & ACTION ITEMS							
Recommendation Type	Priority	Description					
Deck Patching	L	Seal cracks in surface.					

L

WORK RECOMMENDATIONS

HMA Overlay

Bridge Repl.

9LGY

Apply waterproofing underneath HMA overlay.