Project Name: Cake St.

Agency: Cass CRC

Proposed Year: 2020

Criteria	Points	
System Preservation	21 points	
a. Most recent PASER rating	max	
3-4	(11)	- deceased
5-6	8	
1-2	5	
b. Extension of Remaining Service Life (RSL) based on MDOT Geometric Guidelines		
Extends RSL by 15 years or more (4R project)	10	
Extends RSL by 10-14 years (3R Project)	6	
Extends RSL by 5-9 years (Preventative Maintenance)	<b>(4)</b>	4
Extends RSL by 2-4 years (Preventative Maintenance)	2	
Safety	10 points max	
a. Expected Crash Reduction - Based on MDOT approved Crash Reduction Factors		
50% or greater	7	
40%-49.9%	6	
30% - 39.9%	5	
20% - 29.9%	4	
10% - 19.9%	2	
Less than 10%	0	
b. Addressing High Crash Locations.		
Number of crashes is 20% higher than MPO median (4 or more)	3	
Number of crashes are within 20% of MPO median (2-3)	1	1
Number of crashes is lower than 20% of the MPO median (0-1)	0	
Non-motorized Transportation	4 points max	
a. Project provides pedestrian or bicycle facilities	2	2
b. Pedestrian and bicycle elements of the project connect to existing bicycle and pedestrian facilities or those that can reasonably be expected to be completed between 2019-2023.	2	2

Criteria	Points	
Regional Connectivity	5 points max	
a. Traffic Count based on the average daily traffic (ADT)		
ADT is 10,000 or more	5	
ADT is 5,000 – 9,999	4	
ADT is 2,000 – 4,999	3	3
Strategic Investment/ Project Planning	10 points max	
a. Project is identified in an Asset Management or Capital Improvement Plan	3	
b. Project is identified as a priority in another planning document such as a master plan or parks and recreation plan	1	
c. Project crosses jurisdictional boundaries (i.e. city to township) and is arranged in such a way to be bid as a single project.	1	
d. Project continues resurfacing, reconstruction or Preventative Maintenance on a segment of roadway adjacent to a resurfacing, reconstruction or Preventative project done during the 2017-2020 TIP cycle or through Rural Task Force funding.	2	
e. Additional Local Match		
Agency will proved 40% or more local match	3	
Agency will provide 30% to 39.9% local match	2	
Note: An 18.15% local match is the minimum required		
Project Readiness (no points)	Yes	
Coordination with Sewer (no points)	Yes	

Tatal Cooks /out of CO	73
Total Score (out of 50)	discovering systems



Click "Enable Editing" to begin filling out this form. You may save this form at any time.

Section 1. Applicant Information	tion				
Agency Name Cass County	County Road Commission				
Contact Name Joe Bellina		Title Chief Engineer			
Phone Number 269-445-861	.1 `	Email jbellina@casscoroad.com			
Section 2. Project Informatio	n				
Project Name/Road Name	Lake Street				
Project Limits (e.g. Oak St. to Regent St.)	Airport Road to H	luntly Road			
Project Length (nearest hundredth of a mile)	1.51	Proposed Year of Funding 2020			
Primary Work Type	☐ Reconstruct ☐ Restore & Rehabilitate ☐ Roadside Facility ☐ Resurface ☐ Traffic Operations/Safety ☐ Other				
Project Description (Please provide major work items including sidewalks, utility work, ADA upgrades etc.)	Mill and replace s pavement markin	surface to travel lanes and paved shoulders and ngs.			
Was this project awarded funding for the 2017-2020 TIP, but was either canceled or failed to be obligated	⊠Yes □No If y	es, please explain:			
Section 3. Project Funding					
Federal Funding Requested		\$ 233,190.65			
Local Match (18.15% minimum)		\$ 51,709.35			
Total		\$ 284,900			
Local Match Percentage (local match/total cost)		18.15%			
Does your agency have the financial capacity to Advance Construct (AC) all or part of this project if necessary? If yes, what is the maximum dollar amount your agency is willing to Advance Construct (AC)?		☐ Yes ☐ No Maximum Dollar Amount you can AC? \$			

Section 4. System Pres	ervation			
2017 PASER rating		3		,
Current state of drainage	Adequate  Minor and tolerable drainage problems  Occasional drainage problems with some maintenance required  Inadequate drainage, frequent flooding, excessive maintenance required			
Expected increase in Rema	nining	0-3 years	4-6 🛛 7-9 🔲 10-3	14 15-20
Service life (RSL)		· ·	elines for Geometrics	on Local Projects
What MDOT guidelines do	es the	☐ Reconstruction	(4R)	
project conform to?		☐ Resurfacing, re	storation, and Rehab	ilitation (3R)
		⊠Preventative M	aintenance (PM)	
Section 5. Safety				
Please list the number and (2013-2017) (see Michiga	<ul> <li>In the second of the property of</li></ul>	rando reconoción de la constante de la constant	roposed project limit	s over the last 5 yrs.
Total Crashes	19	Pe	destrian & Bicycle ashes	0
Fatalities	0	Sei	ious Injuries	0
Using the attached Crash F	Reduction Fac	tors sheet, please	check each safety co	unter measure that will be
included in the project				
Describe any other safety improvements this project provide	will		,	
Section 6. Non-motoriz	zed Improvr	ments		
Please explain any pedestr		Alignas.		
bicycle improvements are				
Does this project connect pedestrian/bicycle facility	The second section of the second section is a second section of the	I I res i niv	0	
planned to be completed f	rom 2020-20	23? If yes, please	e provide a map of the	e connecting facilities
Section 7. Regional Co	anactivity			
				N
What is the most current of this project?	laily traffic co	unt for the limits	Less than 2000 5000-10,000 Year of count: 200	∑2000-5000 ☐Above 10,000 3 Source: CCRC
National Functional Classif (Berrien County NFC Map,			Minor Arterial	

Section 8. Strategic Planning & Investment	
Is the project identified in a Asset Management Plan, or Capital Improvement Plan	☐Yes ☑No If yes, please cite the plan and page number:
Is the project identified in another planning documents such as a master plan or parks and recreation plan	☐Yes ☑No If yes, please cite the plan and page number:
Does the project cross jurisdictional boundaries?	Yes No
If yes, will it be bid as a single project?	Yes No NA
Will this project coordinate with other infrastructure projects (i.e. utility, water, sewer, etc.)	Yes No If yes, please indicate the project type and construction year:
How many water main breaks have you had at this location in the past five years?	None
Is there a completed a utilities assessment that included televising the sewers in the project area?	☐ Yes ⊠ No
Will this project require environmental mitigation, purchase of Right of Way (ROW), or railroad permits?	☐ Yes ☑ No ☐ Not Sure If yes, which items are required:
Does this project perform Resurfacing, Reconstruction, or Preventative Maintenance on a segment adjacent to a segment where a federally-funded project was done during the 2017-2020 NATS TIP cycle or RTF cycle?	Yes No What segment was the PREVIOUS project done on?

Section 9. Existing and Proposed Roadway Design							
	Existing			Existing Proposed			
Number of Vehicle Lanes	Through Traffic Lanes	Center Turn Lar	ıe	On Street Parking	Through Traffic Lanes	Center Turn Lane	On Street Parking
	2			☐ Yes ⊠ No	2		☐ Yes ⊠ No
Shoulder Surface	Paved Unpaved		Wid 6	dth (ft.)	Paved Unpaved		Width (ft.) 6
Sidewalk/ path information	Placement One Side Both Sides Intermittent None		Wi	dth (ft.)	Placement One Side Both Sides Intermittent None		Width (ft.)
On road bicycle facilities	Bike Lane Other (specify) Sharrows Wide Shoulders None			Bike Lane Other (specify) Sharrows Wide Shoulders None			
Utilities, Sewer and Water	Utilities Upgrades Needed  Sewer and water work needed		Replaced Utilities Relocating Utilities Sewer and Water Line Work				
Please describe ar made as part of th crosswalks, signag streetscape eleme project description	nis project to se or signals, or ents not discuss						
Does this project enhance connectivity of pedestrian or bicyclists to fixed route or Dial-A-Ride transit?		destruction of the design of the later of th		Yes ⊠No es, how?			

Section 10. Estimated Project Schedule	
Activity	Estimated Date
Resolution of Support for□ Local Match Submitted to SWMPC	November 2019
Project Application Submitted to MOT	November 2019
Grade Inspection Package Submitted to MDOT	November 2019
Grade Inspection Meeting Scheduled	December 2019
Final Plan and Estimate to MDOT	January 2020
Right of Way (ROW) certified*	NA
Rail Road Permits*	NA
Environmental Mitigation*	NA
Project Obligated	February 2020
Project Letting	April 2020
Construction Start□	May 2020
Project Completion	September 2020

<sup>\*</sup>Enter NA if these items will not be required.

Project Name: Mason St.

Agency: Cass CRC

Proposed Year: 2021

Criteria	Points	
System Preservation	21 points max	
a. Most recent PASER rating		
3-4	11	
5-6	8	
1-2	5	S
b. Extension of Remaining Service Life (RSL) based on MDOT Geometric Guidelines		
Extends RSL by 15 years or more (4R project)	10	<u> </u>
Extends RSL by 10-14 years (3R Project)	6)	6
Extends RSL by 5-9 years (Preventative Maintenance)	4	
Extends RSL by 2-4 years (Preventative Maintenance)	2	
Safety	10 points max	
a. Expected Crash Reduction - Based on MDOT approved Crash Reduction Factors		
50% or greater	7	
40%-49.9%	6	
30% - 39.9%	5	
20% - 29.9%	4	
10% - 19.9%	2	
Less than 10%	6)	0
b. Addressing High Crash Locations.		
Number of crashes is 20% higher than MPO median (4 or more)	. 3	
Number of crashes are within 20% of MPO median (2-3)	1	
Number of crashes is lower than 20% of the MPO median (0-1)	0	0
Non-motorized Transportation	4 points max	
a. Project provides pedestrian or bicycle facilities	2	
b. Pedestrian and bicycle elements of the project connect to existing bicycle and pedestrian facilities or those that can reasonably be expected to be completed between 2019-2023.	2	

	•	
Criteria	Points	
Regional Connectivity	5 points max	
a. Traffic Count based on the average daily traffic (ADT)		
ADT is 10,000 or more	5	
ADT is 5,000 – 9,999	4	
ADT is 2,000 – 4,999	3	
Strategic Investment/ Project Planning	10 points max	
a. Project is identified in an Asset Management or Capital Improvement Plan	3	
b. Project is identified as a priority in another planning document such as a master plan or parks and recreation plan	1	
c. Project crosses jurisdictional boundaries (i.e. city to township) and is arranged in such a way to be bid as a single project.	1	
d. Project continues resurfacing, reconstruction or Preventative Maintenance on a segment of roadway adjacent to a resurfacing, reconstruction or Preventative project done during the 2017-2020 TIP cycle or through Rural Task Force funding.	2	
e. Additional Local Match		
Agency will proved 40% or more local match	3	
Agency will provide 30% to 39.9% local match	2	2
Note: An 18.15% local match is the minimum required		
Project Readiness (no points)	Yes	

Total Score (out of 50)		13
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Coordination with Sewer (no points)

Yes

2.2

## Niles-Buchanan-Cass Area Transportation Study 2020-2023 Transportation Improvement Program (TIP) Federal Surface Transportation Block Grant Funds Project Application

Click "Enable Editing" to begin filling out this form. You may save this form at any time.

Section 1. Applica	ant inionnat	1011			
Agency Name	Cass County	Road Commission			
Contact Name	Joe Bellina	Joe Bellina		Chief Engineer	r .
Phone Number	269-445-861	.1	Email	jbellina@casso	coroad.com
Section 2. Project	t Informatio	h			
Project Name/Road	Name	Mason Street			
Project Limits (e.g. Oak St. to Rege	ent St.)	Calvin Center Ro	ad to Tharp Lake	Road	
Project Length (near	rest	.99	Proposed	Year of Funding	2021
Primary Work Type			☑ Restore & Reha Traffic Operations	bilitate □ Roadsi s/Safety □ Other	•
(Please provide major work items including sidewalks, utility work, ADA upgrades etc.)			and Resurfacing		gnage, and pavement
Was this project awarded			,		
Section 3. Project	t Funding				
Federal Funding Red	quested		\$ 229,000.00		
Local Match (18.15% minimum)			\$ 100,000.00		
Total		\$ 329,000.00			
Local Match Percen	tage (local ma	tch/total cost)	30.40%		-
Does your agency have the financial capacity to Advance Construct (AC) all or part of this project if necessary? If yes, what is the maximum dollar			☐ Yes ☐ No Maximum Dolla \$	ır Amount you car	n AC?

amount your agency is willing to Advance

Construct (AC)?

Section 4. System Pres	ervation				•
2017 PASER rating		2			
Current state of drainage		Occasional dra		lems n some maintenance required oding, excessive maintenance	
Expected increase in Rema	ining	0-3 years	4-6 7-9 10-	14 15-20	_
Service life (RSL)		Use MDOT's <u>Guid</u>	lelines for Geometrics	s on Local Projects	
What MDOT guidelines do	es the	☐ Reconstruction	ı (4R)		
project conform to?		🛮 Resurfacing, re	estoration, and Rehab	oilitation (3R)	
		□Preventative M	laintenance (PM)		
Section 5. Safety					
Please list the number and (2013-2017) (see Michiga	and the state of the state of the state of	医电子乳性电影 化二氯化二二二甲酚 电电子电影 法作用的现代 医肾髓	roposed project limit	ts over the last 5 yrs.	
Total Crashes	3	Pe	destrian & Bicycle ashes	0	<u> 10</u> 0000
Fatalities	0	Sei	rious Injuries	0	
Using the attached Crash Reduction Fa-		tors sheet, please	check each safety co	unter measure that will be	
Describe any other safety improvements this project provide	will				
Section 6. Non-motoriz	ed Improvi	ments			
Please explain any pedestr bicycle improvements are	ian and/or				
Does this project connect to pedestrian/bicycle facility of planned to be completed f	or one that is	□res ⊠in		e connecting facilities	
Saction 7 Degional Cor	an a ctivita t				
Section 7. Regional Cor		p_ divergence of supposition (***) is		Processing	
What is the most current of this project?	laily traffic cc	ount for the limits	Less than 2000 5000-10,000 Year of count: 201	Above 10,000	
National Functional Classif (Berrien County NFC Map,		4. 经产品通过的 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Minor Collector		

Section 8. Strategic Planning & Investment	
Is the project identified in a Asset Management Plan, or Capital Improvement Plan	☐Yes ☑No If yes, please cite the plan and page number:
Is the project identified in another planning documents such as a master plan or parks and recreation plan	Yes No If yes, please cite the plan and page number:
Does the project cross jurisdictional boundaries?	Yes No
If yes, will it be bid as a single project?	Yes No NA
Will this project coordinate with other infrastructure projects (i.e. utility, water, sewer, etc.)	Yes No If yes, please indicate the project type and construction year:
How many water main breaks have you had at this location in the past five years?	None .
Is there a completed a utilities assessment that included televising the sewers in the project area?	☐ Yes ☑ No
Will this project require environmental mitigation, purchase of Right of Way (ROW), or railroad permits?	☐ Yes ☑ No ☐ Not Sure If yes, which items are required:
Does this project perform Resurfacing, Reconstruction, or Preventative Maintenance on a segment adjacent to a segment where a federally-funded project was done during the 2017-2020 NATS TIP cycle or RTF cycle?	Yes No What segment was the PREVIOUS project done on? Cassopolis Road to Calvin Center Road

Section 9. Existi	ng and Propo	sed Road	dway Design			
		Existir	ng		Proposed	1
Number of Vehicle Lanes	Through Traffic Lanes	Center Turn Land	On Street e Parking  □ Yes ⊠ No	Through Traffic Lanes	Center Turn Lane	On Street Parking  □ Yes ⊠ No
Shoulder Surface	Paved Unpaved	1	Width (ft.)	Paved Unpaved		Width (ft.)
Sidewalk/ path information	Placement One Side Both Sides Intermitte None		Width (ft.)	Placement One Side Both Sides Intermitte None		Width (ft.)
On road bicycle facilities	Bike Lane Sharrows Wide Shou		ther (specify) _ None	Bike Lane Sharrows Wide Shoo		er (specify) one
Utilities, Sewer and Water	Utilities Up Sewer and	_		Replaced Relocating Sewer and		Work
Please describe an made as part of th crosswalks, signag streetscape eleme project description	is project to e or signals, or ents not discuss					
Does this project e of pedestrian or bi or Dial-A-Ride tran	enhance connec lcyclists to fixed		☐Yes ⊠No If yes, how?			

Section 10. Estimated Project Schedule	
Activity	Estimated Date
Resolution of Support for ☐ Local Match Submitted to SWMPC	November 2020
Project Application Submitted to MOT	November 2020
Grade Inspection Package Submitted to MDOT	November 2020
Grade Inspection Meeting Scheduled	December 2020
Final Plan and Estimate to MDOT	January 2021
Right of Way (ROW) certified*	NA
Rail Road Permits*	NA
Environmental Mitigation*	NA
Project Obligated	February 2021
Project Letting	April 2021
Construction Start □	May 2021
Project Completion	September 2021

<sup>\*</sup>Enter NA if these items will not be required.

	Proposed Improvement	% Reduction	Associated Crash Types
<b>-</b>		SEGMENT CRASH REDUCTION FACTORS	
penteriol/2	Geomet	Geometric Safety Enhancements	ments
		80%	Rear-End Left-Turn
Ę		20%	Head-On Left-Turn
]	Center Lett-Lurn Lane - Construct	20%	Head-On, Angle, Sideswipe*
		15%	Non Left-Turn Rear-End, Other*
		65%	Rear-End Right-Turn
E	Dieb Turn I am I	30%	Angle
]	Kignt-Turn Lane - Construct	15%	Rear-End
		10%	Other*
	Horizontal Curve Flattening	30%	Lane Departure***
	Shoulders - Widen to Standard Width (add 1' each side)	2%	Lane Departure***
	Shoulders - Widen to Standard Width (add 2' each side)	10%	Lane Departure***
	Shoulders - Widen to Standard Width (add 3' each side)	15%	Lane Departure***
	Shoulders - Widen to Standard Width (add 4' each side)	20%	Lane Departure***
	Shoulders - Widen to Standard Width (add 5' each side)	25%	Lane Departure***
	Shoulders - Widen to Standard Width (add 6' each side)	30%	Lane Departure***
	Shoulders - Widen to Standard Width (add 7' each side)	35%	Lane Departure***
	Vertical Curve Modification	20%	All Applicable Crash Types +++
	General	<b>General Segment Enhancements</b>	ments
	Access Management - Improve	15%	Drive-way Related Applicable Crashes
		44%	K and A injury Applicable Crashes
Г	I what I would be a second of the second	46%	Single Vehicle Run off Road Left Crashes
]	Centerline Kumble Strips - 1/15/dil	43%	Sideswipe Same Crashes
		25%	Sideswipe Opposite Crashes
Е	11 th Putation Confess Transmiss I have all	35%	Wet Crashes
	nign Friction Suriace Treatment - Mstall	20%	All Other Applicable Crashes
	Recessed Durable Pavement Markings	2%	All Applicable Crashes
	Pedestrian Refuge - Install	20%	Pedestrian Crashes (Review NCHRP Report 841)
	Road Diet (4-3 Lane Conversion) - Install	20%	Suburban - All Applicable Crashes
	Shoulder Rumble Strips	20%	Run-Off the Road Right Crashes
	Signing/Delineation on Horizontal Curves (Including Recessed Durable Pavement Markings) - Install	70%	Lane Departure***
	Safety Edge Improvement	13%	All non-intersection crashes (CMF Clearing House ID 8658)

☐ Bicycle Lanes - Install per standards	20%	Bicycle Crashes
Shared Use Path - Install	33%	Bicycle and Pedestrian Related Crashes
☐ Fixed Objects From Clearzone (Trees, Culverts, Etc.) - Removal	75%	Fixed-Object Applicable Crashes
☐ Guardrail - Install	25%	Lane Departure ***Fatalities and "A" Injury Applicable Crashes
Sidewalk for Pedestrians - Construct	85%	Pedestrian Crashes
☐ Slope Flattening	15%	Fixed-Object, Overturn Applicable Crashes
☐ Living Snow Fence	20%	Crashes due to wintry surface conditions
☐ Lighting - install on segment	20%	Dark Unlighted Crashes

INTERSECTION CRASH REDUCTION FACTORS

Pedestria	Pedestrian / Bicycle Enhancements	cements
□ Bump Out / Curb Extension - Remove Parking / Install	30%	All Crashes
☐ Bicycle Lanes - Install per standards	25%	Bicycle Crashes
Sidewalk for Pedestrians - Construct	85%	Pedestrian Crashes
	75%	Pedestrian Fatal - Dark Unlighted Crashes
Intersection Lighting - install	40%	Pedestrian A-Injury - Dark Unlighted Crashes
	30%	All Applicable Dark Unlighted Crashes
Rectangular Rapid Flashing Beacons	47%	Pedestrian Crashes
Ped. Countdown Signals - Install new Pedestrian signal	30%	Pedestrian Crashes
Ped. Countdown Signals - Upgrade from existing Pedestrian signal	25%	Pedestrian Crashes
Signal Timin	Signal Timing / Hardware Enhancements	hancements
	3%	Rear-End
☐ Multiple Low-Cost Improvements	12%	Right-Angle
	3%	Nighttime
Install Reflectorized Backplates	15%	All Applicable Crashes
☐ Add All-Red Clearance Interval - Add per ITE	20%	Head-On Left-Turn, Angle
☐ Yellow-Change Interval - Increase	10%	All Crash Types
	%59	Angle
Box Span Signal - Upgrade from Stop Control	-25%	Rear-End (Increases Crashes)
	20%	All Other Non Rear-End Crashes
Box Span Signal - Upgrade from Diagonal Span	10%	All Applicable Crashes+
Protected Left-Turn Signal Phase - Add	30%	Left-Turn
Signal Head Size - Increase to 12 "	10%	All Applicable Crashes +
Signal Optimization & Timing Updates	10%	All Applicable Crashes +
Removing Night Flash from Signal Timing	20%	Nighttime Flash mode Related Crashes

Intersection Geometric Enhancements	seometric Enl	iancements
	%08	Rear-End Left-Turn
	20%	Head-On Left-Turn
Center Lett- I urn Lane - Construct	20%	Head-On, Angle, Other
	15%	Non Left-Turn Rear-End
	30%	Angle
Intersection improvements (Realignment, Sight-Distance improvements,   Dadii improvements   Dadii improvements	15%	Rear-End
יאמון ווואוסגפוופווס דיניי	10%	Head-On, Sideswipe, Pedestrian, Bicycle, Left-Turn Related
	%59	Angle-Turn, Head-On Left-Turn
Oliset Left-1 urn Lane - Colistruct	20%	Rear-End Left-Turn
	%59	Angle-Turn
Offset Right-Turn Lane - Construct	20%	Other Applicable Crashes
	20%	Rear-End Right Turn
# 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	65%	Rear-End Right-Turn
Night-Tuffi Lane - Coffstruct	20%	Applicable Rear-End Crashes, Sideswipe Same Direction
	78%	Fatal and A-Injury Reduction
Koundabout	21%	Minor Crash Reduction
☐ Lighting	1	See MDOT Interchange Warranted Lighting Guidance and overall MDOT Lighting Guidance
General Intersection Enhan	cements (No	section Enhancements (Non-Signalized Intersections)
☐ All-Way Stop Control - New Installation	%09	All Applicable Crashes
☐ Ground Mounted Flashing Beacons (Red)- Install **	30%	All Crashes On Install Approach
☐ Ground Mounted Flashing Beacons(Amber) - Install **	20%	All Crashes On Install Approach
Signing - Improve/Upgrade	30%	Angle, Rear-End Crashes
☐ Pavement Markings - Improve/Upgrade	30%	Angle, Rear-End Crashes
Reflective Sheeting on Sign Posts (Iollipops)	15%	All Applicable Crashes

		* · · · · ,

Project Name: Barron Lake Rd,

Agency: Cass CRC

Proposed Year: 2022

Criteria	Points	
System Preservation	21 points max	
a. Most recent PASER rating		
3-4	(11)	-
5-6	8	
1-2	5	
b. Extension of Remaining Service Life (RSL) based on MDOT Geometric Guidelines		
Extends RSL by 15 years or more (4R project)	10	
Extends RSL by 10-14 years (3R Project)	6	
Extends RSL by 5-9 years (Preventative Maintenance)	4	4
Extends RSL by 2-4 years (Preventative Maintenance)	2	
Safety	10 points max	
a. Expected Crash Reduction - Based on MDOT approved Crash Reduction Factors		
50% or greater	7	
40%-49.9%	6	
30% - 39.9%	5	
20% - 29.9%	4	
10% - 19.9%	2	
Less than 10%	0	0
b. Addressing High Crash Locations.		
Number of crashes is 20% higher than MPO median (4 or more)	3	3
Number of crashes are within 20% of MPO median (2-3)	1	
Number of crashes is lower than 20% of the MPO median (0-1)	0	
Non-motorized Transportation	4 points max	
a. Project provides pedestrian or bicycle facilities	2	
b. Pedestrian and bicycle elements of the project connect to existing bicycle and pedestrian facilities or those that can reasonably be expected to be completed between 2019-2023.	2	

Criteria	Points	
Regional Connectivity	5 points max	
a. Traffic Count based on the average daily traffic (ADT)		
ADT is 10,000 or more	5	
ADT is 5,000 – 9,999	4	
ADT is 2,000 – 4,999	3	3
Strategic Investment/ Project Planning	10 points max	
a. Project is identified in an Asset Management or Capital Improvement Plan	3	
b. Project is identified as a priority in another planning document such as a master plan or parks and recreation plan	1	1
c. Project crosses jurisdictional boundaries (i.e. city to township) and is arranged in such a way to be bid as a single project.	1	
d. Project continues resurfacing, reconstruction or Preventative Maintenance on a segment of roadway adjacent to a resurfacing, reconstruction or Preventative project done during the 2017-2020 TIP cycle or through Rural Task Force funding.	2	
e. Additional Local Match		
Agency will proved 40% or more local match	3	
Agency will provide 30% to 39.9% local match	2	2
Note: An 18.15% local match is the minimum required		
Project Readiness (no points)	Yes	
Coordination with Sewer (no points)	Yes	

Total Score (out of 50)		Z3
-------------------------	--	----



Click "Enable Editing" to begin filling out this form. You may save this form at any time.

Section 1. Applicant Inform	ation					
Agency Name Cass Count	Agency Name Cass County Road Commission					
Contact Name   Joe Bellina		Title	Chief Engineer			
Phone Number 269-445-86	511	Email jbellina@casscoroad.com				
Section 2. Project Informati	on					
Project Name/Road Name		1				
	Barron Lake Road					
Project Limits	M 60 to Cook Str	reet				
(e.g. Oak St. to Regent St.)						
Project Length (nearest hundredth of a mile)	2.63	Proposed Y	ear of Funding 2022			
Primary Work Type ☐ Reconstruct ☐ Restore & Rehabilitate ☐ Roadside F ☐ Resurface ☐ Traffic Operations/Safety ☐ Other			•			
			Safety in Other Shoulder, signage, and pavement			
(Please provide major work markings.		rialies alla pavea s	Houlder, signage, and pavement			
items including sidewalks, utility						
work, ADA upgrades etc.)						
Was this project awarded	Yes No If y	es, please explain:				
funding for the 2017-2020 TIP,						
but was either canceled or failed		,				
to be obligated						
Section 3. Project Funding						
Federal Funding Requested		\$ 279,250				
Local Match (18.15% minimum)		\$ 120,000				
Total		\$ 399,250				
Local Match Percentage (local m	atch/total cost)	30.06%				
Does your agency have the finar		☐ Yes ☐ No				
Advance Construct (AC) all or pa			Amount you can AC?			
necessary? If yes, what is the ma		\$				
amount your agency is willing to	Advance					

Section 4. System Pres	ervation					
2017 PASER rating		3				
Current state of drainage		Adequate  Minor and tolerable drainage problems  Occasional drainage problems with some maintenance required  Inadequate drainage, frequent flooding, excessive maintenance required				
Expected increase in Rema	aining	0-3 years	4-6 🛛 7-9	10-14 15-20		
Service life (RSL)		Use MDOT's <u>Guidelines for Geometrics on Local Projects</u>				
What MDOT guidelines do project conform to?	☐ Reconstruction (4R) ☐ Resurfacing, restoration, and Rehabilitation (3R) ☑ Preventative Maintenance (PM)					
Section 5. Safety						
Please list the number and (2013-2017) (see Michigan)				ct limits over the last 5 yrs	j.	
Total Crashes	63 w/anima	l crashes	Pedestrian & Bicy Crashes	/cle 0		
Fatalities			Serious Injuries	0		
Using the attached Crash I included in the project Describe any other safety improvements this project provide		tors sheet, ple	ease check each saf	fety counter measure that	will be	
Section 6. Non-motori	zed Improvi	nents				
Please explain any pedesti bicycle improvements are	ian and/or					
Does this project connect pedestrian/bicycle facility planned to be completed to	∐res	<u>—</u>	p of the connecting faciliti	es		
Saction 7 Pagional Co	anactivity					
Section 7. Regional Co			HERRARIUS			
What is the most current of this project?	laily traffic co	unt for the lin	hits Less thar 5000-10	,000 Above 10,000		
National Functional Classif (Berrien County NFC Map,			/ay Minor Arter	rial		

Section 8. Strategic Planning & Investment	
Is the project identified in a Asset Management Plan, or Capital Improvement Plan	☐Yes ☑No If yes, please cite the plan and page number:
Is the project identified in another planning documents such as a master plan or parks and recreation plan	Yes No If yes, please cite the plan and page number:
Does the project cross jurisdictional boundaries?	☐ Yes ☒ No
If yes, will it be bid as a single project?	Yes No NA
Will this project coordinate with other infrastructure projects (i.e. utility, water, sewer, etc.)	Yes No If yes, please indicate the project type and construction year:
How many water main breaks have you had at this location in the past five years?	None
Is there a completed a utilities assessment that included televising the sewers in the project area?	Yes No
Will this project require environmental mitigation, purchase of Right of Way (ROW), or railroad permits?	☐ Yes ☑ No ☐ Not Sure If yes, which items are required:
Does this project perform Resurfacing, Reconstruction, or Preventative Maintenance on a segment adjacent to a segment where a federally-funded project was done during the 2017-2020 NATS TIP cycle or RTF cycle?	Yes No. What segment was the PREVIOUS project done on?

		Existing		Proposed		
Number of Vehicle Lanes	Through Traffic Lanes	Center Turn Lane	On Street Parking	Through Center O		On Street Parking
	2		☐ Yes ⊠ No	2		☐ Yes ⊠ No
Shoulder Surface	Paved Unpaved	W 3	idth (ft.)	Paved Unpaved		Width (ft.) 3
Sidewalk/ path information	Placement One Side Both Sides Intermitte None		idth (ft.)	Placement One Side Both Sides Intermitte None		Width (ft.)
On road bicycle facilities	Bike Lane Other (specify) Sharrows Wide Shoulders None		Bike Lane Other (specify) Sharrows Wide Shoulders None			
Utilities, Sewer and Water	Utilities Upgrades Needed  Sewer and water work needed		Replaced Utilities Relocating Utilities Sewer and Water Line Work			
Please describe ar made as part of the crosswalks, signage streetscape element project description. Does this project of pedestrian or bor Dial-A-Ride transport of the control of the con	nis project to ge or signals, or ents not discuss n enhance connec icyclists to fixec	ed in	]Yes ⊠No yes, how?			
Section 10. Est		ct Schedule	2			
Activity	innaced i roje	<del>oc ochedan</del>			Estimated Da	te
	pport for Loca	al Match Sub	mitted to SWMP		November 20	
Project Application	· · · · · · · · · · · · · · · · · · ·				November 20	
Grade Inspection			DT		November 20	
Grade Inspection					December 20	21

Final Plan and Estimate to MDOT

Right of Way (ROW) certified\*

Environmental Mitigation\*

Rail Road Permits\*

Project Obligated

Construction Start□

**Project Completion** 

**Project Letting** 

Section 9 Existing and Proposed Roadway Design

January 2022

February 2022

September 2022

April 2022

May 2022

NA

NA

NA

<sup>\*</sup>Enter NA if these items will not be required.

	Proposed Improvement	% Reduction	Associated Crash Types
		SEGMENT CRASH REDUCTION FACTORS	
	Geometr	<b>Geometric Safety Enhancements</b>	ements
		%08	Rear-End Left-Turn
Е	Contor of Tires I and Constants	20%	Head-On Left-Turn
]	Center Leit-Turn Lane - Construct	20%	Head-On, Angle, Sideswipe*
		15%	Non Left-Turn Rear-End, Other*
		65%	Rear-End Right-Turn
E	Dieta T. Inna Construction	30%	Angle
]	Ngnt-Turn Lane - Construct	15%	Rear-End
		10%	Other*
	Horizontal Curve Flattening	30%	Lane Departure***
	Shoulders - Widen to Standard Width (add 1' each side)	2%	Lane Departure***
	Shoulders - Widen to Standard Width (add 2' each side)	10%	Lane Departure***
	Shoulders - Widen to Standard Width (add 3' each side)	15%	Lane Departure***
	Shoulders - Widen to Standard Width (add 4' each side)	20%	Lane Departure***
П	Shoulders - Widen to Standard Width (add 5' each side)	25%	Lane Departure***
	Shoulders - Widen to Standard Width (add 6' each side)	30%	Lane Departure***
	Shoulders - Widen to Standard Width (add 7' each side)	35%	Lane Departure***
	Vertical Curve Modification	20%	All Applicable Crash Types +++
	General S	<b>General Segment Enhancements</b>	ements
	Access Management - Improve	15%	Drive-way Related Applicable Crashes
		44%	K and A injury Applicable Crashes
C	Contouling Drimble String	46%	Single Vehicle Run off Road Left Crashes
]		43%	Sideswipe Same Crashes
		25%	Sideswipe Opposite Crashes
С	High Eriction Surface Trantmont - (notal)	35%	Wet Crashes
]	ngii riictioli suriace rieatiileiit - <i>mstail</i>	20%	All Other Applicable Crashes
	Recessed Durable Pavement Markings	%5	All Applicable Crashes
	Pedestrian Refuge - Install	20%	Pedestrian Crashes (Review NCHRP Report 841)
	Road Diet (4-3 Lane Conversion) - Install	20%	Suburban - All Applicable Crashes
	Shoulder Rumble Strips	20%	Run-Off the Road Right Crashes
	Signing/Delineation on Horizontal Curves (Including Recessed Durable Pavement Markings) - Install	20%	Lane Departure***
	Safety Edge Improvement	13%	All non-intersection crashes (CMF Clearing House ID 8658)

Roa	Roadside Enhancements	nents
Bicycle Lanes - Install per standards	20%	Bicycle Crashes
Shared Use Path - Install	33%	Bicycle and Pedestrian Related Crashes
Fixed Objects From Clearzone (Trees, Culverts, Etc.) - Removal	75%	Fixed-Object Applicable Crashes
Guardrail - Install	25%	Lane Departure ***Fatalities and "A" Injury Applicable Crashes
Sidewalk for Pedestrians - Construct	85%	Pedestrian Crashes
Slope Flattening	15%	Fixed-Object, Overturn Applicable Crashes
Living Snow Fence	20%	Crashes due to wintry surface conditions
Lighting - install on segment	70%	Dark Unlighted Crashes
	NTERSECTION CRASH REDUCTION FACTORS	CTION FACTORS
Pedestria	Pedestrian / Bicycle Enhancements	incements
Bump Out / Curb Extension - Remove Parking / Install	30%	All Crashes
☐ Bicycle Lanes - Install per standards	25%	Bicycle Crashes
Sidewalk for Pedestrians - Construct	85%	Pedestrian Crashes
	75%	Pedestrian Fatal - Dark Unlighted Crashes
Intersection Lighting - install	40%	Pedestrian A-Injury - Dark Unlighted Crashes
	30%	All Applicable Dark Unlighted Crashes
☐ Rectangular Rapid Flashing Beacons	47%	Pedestrian Crashes
☐ Ped. Countdown Signals - Install new Pedestrian signal	30%	Pedestrian Crashes
☐ Ped. Countdown Signals - Upgrade from existing Pedestrian signal	25%	Pedestrian Crashes
	Signal Timing / Hardware Enhancements	nhancements
	3%	Rear-End
☐ Multiple Low-Cost Improvements	12%	Right-Angle
	3%	Nighttime
☐ Install Reflectorized Backplates	15%	All Applicable Crashes
☐ Add All-Red Clearance Interval - Add per ITE	20%	Head-On Left-Turn, Angle
☐ Yellow-Change Interval - Increase	10%	All Crash Types
	%59	Angle
Box Span Signal - Upgrade from Stop Control	-25%	Rear-End (Increases Crashes)
	70%	All Other Non Rear-End Crashes
☐ Box Span Signal - Upgrade from Diagonal Span	10%	All Applicable Crashes+
☐ Protected Left-Turn Signal Phase - Add	30%	Left-Turn
Signal Head Size - Increase to 12 "	10%	All Applicable Crashes +
☐ Signal Optimization & Timing Updates	10%	All Applicable Crashes +
☐ Removing Night Flash from Signal Timing	20%	Nighttime Flash mode Related Crashes

	Intersection Geometric Enhancements	Seometric Enl	nancements
		%08	Rear-End Left-Turn
Г	Center left-Turn lane - Construct	20%	Head-On Left-Turn
]	כבונכן בכור ומון בפווב - בכוונים ובכור בפווב - בכוונים ובכור בפווב - בכוונים ובכור בפווב - בכוונים ובכור בפווב -	20%	Head-On, Angle, Other
		15%	Non Left-Turn Rear-End
		30%	Angle
	Intersection improvements (Realignment, Signt-Distance Improvements, Radii Improvements, Ftc.)	15%	Rear-End
		10%	Head-On, Sideswipe, Pedestrian, Bicycle, Left-Turn Related
Ĺ	Officet   off Tirm   can Construct	%59	Angle-Turn, Head-On Left-Turn
]	Ouser reining raile - Construct	20%	Rear-End Left-Turn
		%59	Angle-Turn
	Offset Right-Turn Lane - Construct	20%	Other Applicable Crashes
		20%	Rear-End Right Turn
Г	Right-Tirm lang - Construct	65%	Rear-End Right-Turn
]		20%	Applicable Rear-End Crashes, Sideswipe Same Direction
Г	Roundshout	78%	Fatal and A-Injury Reduction
]	Notification:	21%	Minor Crash Reduction
	Lighting	F	See MDOT Interchange Warranted Lighting Guidance and overall
	General Intersection Enhance	cements (Nor	Section Enhancements (Non-Signalized Intersections)
	All-Way Stop Control - New Installation	%09	All Applicable Crashes
	Ground Mounted Flashing Beacons (Red)- Install **	30%	All Crashes On Install Approach
	Ground Mounted Flashing Beacons(Amber) - Install **	20%	All Crashes On Install Approach
	Signing - Improve/Upgrade	30%	Angle, Rear-End Crashes
	Pavement Markings - Improve/Upgrade	30%	Angle, Rear-End Crashes
	Reflective Sheeting on Sign Posts (lollipops)	15%	All Applicable Crashes

Project Name: Maky Start Ri Proposed Year: 2023

Agency: Coss Courty RC

Criteria	Points	
System Preservation	21 points max	
a. Most recent PASER rating		
3-4	11)	****
5-6	8	
1-2	5	
b. Extension of Remaining Service Life (RSL) based on MDOT Geometric Guidelines	,	
Extends RSL by 15 years or more (4R project)	10	
Extends RSL by 10-14 years (3R Project)	6	
Extends RSL by 5-9 years (Preventative Maintenance)	4	4
Extends RSL by 2-4 years (Preventative Maintenance)	2	
Safety	10 points max	
a. Expected Crash Reduction - Based on MDOT approved Crash Reduction Factors		
50% or greater	7	
40%-49.9%	6	
30% - 39.9%	5	
20% - 29.9%	4	
10% - 19.9%	2	
Less than 10%	0	
b. Addressing High Crash Locations.		
Number of crashes is 20% higher than MPO median (4 or more)	3	
Number of crashes are within 20% of MPO median (2-3)	<u>(1)</u>	otossad
Number of crashes is lower than 20% of the MPO median (0-1)	0	
Non-motorized Transportation	4 points max	
a. Project provides pedestrian or bicycle facilities	2	
b. Pedestrian and bicycle elements of the project connect to existing bicycle and pedestrian facilities or those that can reasonably be expected to be completed between 2019-2023.	2	

Criteria	Points	
Regional Connectivity	5 points max	
a. Traffic Count based on the average daily traffic (ADT)		
ADT is 10,000 or more	5	
ADT is 5,000 – 9,999	4	
ADT is 2,000 – 4,999	3	
Strategic Investment/ Project Planning	10 points max	
a. Project is identified in an Asset Management or Capital Improvement Plan	3	
b. Project is identified as a priority in another planning document such as a master plan or parks and recreation plan	1	
c. Project crosses jurisdictional boundaries (i.e. city to township) and is arranged in such a way to be bid as a single project.	1	
d. Project continues resurfacing, reconstruction or Preventative Maintenance on a segment of roadway adjacent to a resurfacing, reconstruction or Preventative project done during the 2017-2020 TIP cycle or through Rural Task Force funding.	2	
e. Additional Local Match		
Agency will proved 40% or more local match	3	
Agency will provide 30% to 39.9% local match	2	
Note: An 18.15% local match is the minimum required		
Project Readiness (no points)	Yes	
Coordination with Sewer (no points)	Yes	

	,	
Total Score (out of 50)		16

24

Click "Enable Editing" to begin filling out this form. You may save this form at any time.

Section 1. Applica	ant Informat	ion			
Agency Name	Cass County	Road Commission			
Contact Name	Joe Bellina		Title	Chief Enginee	r
Phone Number	269-445-861	1	Email	jbellina@cass	coroad.com
Saction 2 Project	Informatio	^			
Section 2. Project Project Name/Road					
	( <b>4</b> G)))C	May Street			
Project Limits (e.g. Oak St. to Rege	nt St.)	Conrad Road to E	.o Brizandine Road		
Project Length (near hundredth of a mile	est	.52	Proposed Ye	ear of Funding	2023
Primary Work Type			☐ Restore & Rehabilitate ☐ Roadside Facility  Traffic Operations/Safety ☐ Other		
Project Description (Please provide major work items including sidewalks, utility work, ADA upgrades etc.)  Mill and replace pavement mark			surface to travel la ngs.	nes and paved :	shoulders and
			es, please explain:		
Costion 2 Dunion	. F. va elive e				
Section 3. Project	Funding		4		
Federal Funding Red	uested		\$ 82,668.50		
Local Match (18.15%	6 minimum)		\$ 18,331.50		
Total			\$ 101,000		
Local Match Percent	age (local ma	tch/total cost)	18.15%		
Does your agency have the financial capacity to Advance Construct (AC) all or part of this project if necessary? If yes, what is the maximum dollar amount your agency is willing to Advance		☐ Yes ☐ No Maximum Dollar Amount you can AC? \$			

Construct (AC)?

			5-1-1-1-2	
Section 4. System Preservation				
2017 PASER rating	3			
Current state of drainage	Occasional dra		ems some maintenance required ding, excessive maintenance	
Expected increase in Remaining	0-3 years	4-6 🔲 7-9 🔲 10-1	1415-20	
Service life (RSL)	Use MDOT's Guid	elines for Geometrics	on Local Projects	
What MDOT guidelines does the	☐ Reconstruction	(4R)		
project conform to?	☐ Resurfacing, re	storation, and Rehab	ilitation (3R)	
		aintenance (PM)		
Section 5. Safety				
Please list the number and severity of (2013-2017) (see Michigan Crash Fac	and the contract of the contra	roposed project limit	s over the last 5 yrs.	
Total Crashes 6	Ped	destrian & Bicycle Ishes	0	
Fatalities 0	Ser	ious Injuries	0	
Using the attached Crash Reduction Fa	ctors sheet, please	check each safety co	unter measure that will be	
included in the project				
Describe any other safety improvements this project will provide				
Section 6. Non-motorized Improv	yments			
	Westernamen			
Please explain any pedestrian and/or bicycle improvements are included				
Does this project connect to an existing	THE ITES IN INC	0		
pedestrian/bicycle facility or one that i planned to be completed from 2020-20				
•	in the second se			
Section 7. Regional Connectivity				
What is the most current daily traffic c	ount for the limits	Less than 2000	2000-5000	
of this project?		5000-10,000	Above 10,000	
		Year of count: 201	8 Source: MACOG	
National Functional Classification (NFC (Berrien County NFC Map, Cass County	表示的 经收益 化二氯甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	Major Collector		

Section 8. Strategic Planning & Investment	
Is the project identified in a Asset Management Plan, or Capital Improvement Plan	☐Yes ☑No If yes, please cite the plan and page number:
Is the project identified in another planning documents such as a master plan or parks and recreation plan	☐Yes ☑No If yes, please cite the plan and page number:
Does the project cross jurisdictional boundaries?	Yes No
If yes, will it be bid as a single project?	Yes No NA
Will this project coordinate with other infrastructure projects (i.e. utility, water, sewer, etc.)	Yes No If yes, please indicate the project type and construction year:
How many water main breaks have you had at this location in the past five years?	None
Is there a completed a utilities assessment that included televising the sewers in the project area?	☐ Yes ⊠ No
Will this project require environmental mitigation, purchase of Right of Way (ROW), or railroad permits?	☐ Yes ☑ No ☐ Not Sure If yes, which items are required:
Does this project perform Resurfacing, Reconstruction, or Preventative Maintenance on a segment adjacent to a segment where a federally-funded project was done during the 2017-2020 NATS TIP cycle or RTF cycle?	Yes No What segment was the PREVIOUS project done on?

Section 9. Existing and Proposed Ro				ay Design				
		Existi	ng		Proposed			
Number of Vehicle Lanes	Through Traffic Lanes	Center Turn Lan	ne	On Street Parking	Through Traffic Lanes	Center Turn Lane	On Street Parking	
	2			☐ Yes ⊠ No	2		☐ Yes ⊠ No	
Shoulder Surface	Paved Unpaved		Wid 3	dth (ft.)			Width (ft.) 3	
Sidewalk/ path information	Placement  One Side  Both Sides  Intermittent  None			dth (ft.)	Placement  ☐ One Side ☐ Both Sides ☐ Intermittent ☐ None			
On road bicycle facilities	Bike Lane Other (specify) Sharrows Wide Shoulders None			Bike Lane Other (specify) Sharrows Wide Shoulders None				
Utilities, Sewer and Water	Utilities Upgrades Needed  Sewer and water work needed			Replaced Utilities Relocating Utilities Sewer and Water Line Work				
Please describe any improvements being made as part of this project to crosswalks, signage or signals, or streetscape elements not discussed in project description								
Does this project of pedestrian or bor Dial-A-Ride tran	icyclists to fixed			Yes ⊠No es, how?	- Anna - N			

Activity	Estimated Date
Resolution of Support for□ Local Match Submitted to SWMPC	November 2022
Project Application Submitted to MOT	November 2022
Grade Inspection Package Submitted to MDOT	November 2022
Grade Inspection Meeting Scheduled	December 2022
Final Plan and Estimate to MDOT	January 2023
Right of Way (ROW) certified*	NA
Rail Road Permits*	NA
Environmental Mitigation*	NA
Project Obligated	February 2023
Project Letting	April 2023
Construction Start□	May 2023
Project Completion	September 2023

<sup>\*</sup>Enter NA if these items will not be required.

Proposed Improvement	% Reduction	Accordated Crack Tymes
	SEGMENT CRASH BEDICTION EACTORS	
Geometri	Geometric Safety Enhancements	ments
	%08	Rear-End Left-Turn
Center left-Turn lane - Construct	20%	Head-On Left-Turn
	20%	Head-On, Angle, Sideswipe*
	15%	Non Left-Turn Rear-End, Other*
	859	Rear-End Right-Turn
Dicht T. us. Jan Constant	30%	Angle
Night-Luff cane - Collstruct	15%	Rear-End
	10%	Other*
☐ Horizontal Curve Flattening	30%	Lane Departure***
Shoulders - Widen to Standard Width (add 1' each side)	5%	Lane Departure***
Shoulders - Widen to Standard Width (add 2' each side)	10%	Lane Departure***
Shoulders - Widen to Standard Width (add 3' each side)	15%	Lane Departure***
Shoulders - Widen to Standard Width (add 4' each side)	20%	Lane Departure***
Shoulders - Widen to Standard Width (add 5' each side)	25%	Lane Departure***
Shoulders - Widen to Standard Width (add 6' each side)	30%	Lane Departure***
Shoulders - Widen to Standard Width (add 7' each side)	35%	Lane Departure***
☐ Vertical Curve Modification	20%	All Applicable Crash Types +++
General S	<b>General Segment Enhancements</b>	ments
☐ Access Management - Improve	15%	Drive-way Related Applicable Crashes
	44%	K and A injury Applicable Crashes
Centerline Rumble Strins - Install	46%	Single Vehicle Run off Road Left Crashes
	43%	Sideswipe Same Crashes
	25%	Sideswipe Opposite Crashes
High Friction Curface Treatment - Install	35%	Wet Crashes
	20%	All Other Applicable Crashes
☐ Recessed Durable Pavement Markings	2%	All Applicable Crashes
☐ Pedestrian Refuge - Install	20%	Pedestrian Crashes (Review NCHRP Report 841)
Road Diet (4-3 Lane Conversion) - Install	20%	Suburban - All Applicable Crashes
☐ Shoulder Rumble Strips	20%	Run-Off the Road Right Crashes
Signing/Delineation on Horizontal Curves (Including Recessed Durable Pavement Markings) - <i>Install</i>	70%	Lane Departure***
☐ Safety Edge Improvement	13%	All non-intersection crashes (CMF Clearing House ID 8658)

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Bicvcle Lanes - Install per standards	20%	Bicycle Crashes
Shared Use Path - Install	33%	Bicycle and Pedestrian Related Crashes
Fixed Objects From Clearzone (Trees, Culverts, Etc.) - Removal	75%	Fixed-Object Applicable Crashes
Guardrail - Install	25%	Lane Departure ***Fatalities and "A" Injury Applicable Crashes
Sidewalk for Pedestrians - Construct	85%	Pedestrian Crashes
☐ Slope Flattening	15%	Fixed-Object, Overturn Applicable Crashes
Living Snow Fence	20%	Crashes due to wintry surface conditions
☐ Lighting - install on segment	20%	Dark Unlighted Crashes

**INTERSECTION** CRASH REDUCTION FACTORS

		/ District Tuber	
	Pedestrar	Pedestrian / Bicycle Ennancements	ICEMENTS
Bump	Bump Out / Curb Extension - Remove Parking / Install	30%	All Crashes
Bicycle	Bicycle Lanes - Install per standards	25%	Bicycle Crashes
Sidewa	Sidewalk for Pedestrians - Construct	85%	Pedestrian Crashes
		75%	Pedestrian Fatal - Dark Unlighted Crashes
Interse	Intersection Lighting - install	40%	Pedestrian A-Injury - Dark Unlighted Crashes
		30%	All Applicable Dark Unlighted Crashes
Rectan	Rectangular Rapid Flashing Beacons	47%	Pedestrian Crashes
Ped. C	Ped. Countdown Signals - Install new Pedestrian signal	30%	Pedestrian Crashes
Ped. C	Ped. Countdown Signals - Upgrade from existing Pedestrian signal	25%	Pedestrian Crashes
	Signal Timing	Signal Timing / Hardware Enhancements	nancements
		3%	Rear-End
	Multiple Low-Cost Improvements	12%	Right-Angle
		3%	Nighttime
Install	Install Reflectorized Backplates	15%	All Applicable Crashes
□   Add Al	Add All-Red Clearance Interval - Add per ITE	70%	Head-On Left-Turn, Angle
Yellow	Yellow-Change Interval - Increase	10%	All Crash Types
		%59	Angle
Box Sp	Box Span Signal - Upgrade from Stop Control	-25%	Rear-End (Increases Crashes)
		20%	All Other Non Rear-End Crashes
Box Sp	Box Span Signal - Upgrade from Diagonal Span	10%	All Applicable Crashes+
Protec	Protected Left-Turn Signal Phase - $\mathcal{A}dd$	30%	Left-Turn
Signal	Signal Head Size - Increase to 12 "	70%	All Applicable Crashes +
Signal	Signal Optimization & Timing Updates	10%	All Applicable Crashes +
Remov	Removing Night Flash from Signal Timing	20%	Nighttime Flash mode Related Crashes

Intersection Geometric Enhancements	Seometric En	hancements
	80%	Rear-End Left-Turn
T.T.T.	20%	Head-On Left-Turn
Center Lett-1 urn Lane - Collstruct	20%	Head-On, Angle, Other
	15%	Non Left-Turn Rear-End
	30%	Angle
Intersection improvements (Realignment, Sight-Distance improvements, Padii improvements Ft. )	15%	Rear-End
Nadii ilipi Oveliielis), Etc.)	10%	Head-On, Sideswipe, Pedestrian, Bicycle, Left-Turn Related
T to Too	65%	Angle-Turn, Head-On Left-Turn
Ouset Leit-Lurn Lane - Construct	20%	Rear-End Left-Turn
	65%	Angle-Turn
Offset Right-Turn Lane - Construct	20%	Other Applicable Crashes
	20%	Rear-End Right Turn
Dicht Tium I one Construct	65%	Rear-End Right-Turn
Night-Turil Lane - Construct	20%	Applicable Rear-End Crashes, Sideswipe Same Direction
do d	78%	Fatal and A-Injury Reduction
	21%	Minor Crash Reduction
Lighting	I	See MDOT Interchange Warranted Lighting Guidance and overall MDOT Lighting Guidance
General Intersection Enhan	cements (No	rsection Enhancements (Non-Signalized Intersections)
☐ All-Way Stop Control - New Installation	%09	All Applicable Crashes
Ground Mounted Flashing Beacons (Red)- Install **	30%	All Crashes On Install Approach
Ground Mounted Flashing Beacons(Amber) - Install **	70%	All Crashes On Install Approach
☐ Signing - Improve/Upgrade	30%	Angle, Rear-End Crashes
☐ Pavement Markings - Improve/Upgrade	30%	Angle, Rear-End Crashes
☐ Reflective Sheeting on Sign Posts (lollipops)	15%	All Applicable Crashes

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Project Name: Conrad Rd.

Agency: Cass CRC

Proposed Year: 2023

Criteria	Points	
System Preservation	21 points max	
a. Most recent PASER rating	max	
3-4	11)	1
5-6	8	
1-2	5	
b. Extension of Remaining Service Life (RSL) based on MDOT Geometric Guidelines		
Extends RSL by 15 years or more (4R project)	10	
Extends RSL by 10-14 years (3R Project)	6	
Extends RSL by 5-9 years (Preventative Maintenance)	<b>D</b>	4
Extends RSL by 2-4 years (Preventative Maintenance)	2	
Safety	10 points max	
a. Expected Crash Reduction - Based on MDOT approved Crash Reduction Factors		
50% or greater	7	
40%-49.9%	6	
30% - 39.9%	5.	
20% - 29.9%	4	
10% - 19.9%	2	
Less than 10%	6)	0
b. Addressing High Crash Locations.		
Number of crashes is 20% higher than MPO median (4 or more)	3	3
Number of crashes are within 20% of MPO median (2-3)	1	
Number of crashes is lower than 20% of the MPO median (0-1)	0	
Non-motorized Transportation	4 points max	
a. Project provides pedestrian or bicycle facilities	2	
b. Pedestrian and bicycle elements of the project connect to existing bicycle and pedestrian facilities or those that can reasonably be expected to be completed between 2019-2023.	2	

Criteria	Points	
Regional Connectivity	5 points max	
a. Traffic Count based on the average daily traffic (ADT)		
ADT is 10,000 or more	5	
ADT is 5,000 – 9,999	4	
ADT is 2,000 – 4,999	3	3
Strategic Investment/ Project Planning	10 points max	
a. Project is identified in an Asset Management or Capital Improvement Plan	3	
b. Project is identified as a priority in another planning document such as a master plan or parks and recreation plan	1	
c. Project crosses jurisdictional boundaries (i.e. city to township) and is arranged in such a way to be bid as a single project.	1	
d. Project continues resurfacing, reconstruction or Preventative Maintenance on a segment of roadway adjacent to a resurfacing, reconstruction or Preventative project done during the 2017-2020 TIP cycle or through Rural Task Force funding.	2	
e. Additional Local Match		
Agency will proved 40% or more local match	3	
Agency will provide 30% to 39.9% local match	2	
Note: An 18.15% local match is the minimum required		
Project Readiness (no points)	Yes	/
Coordination with Sewer (no points)	Yes	

Total Score (out of 50)	
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Click "Enable Editing" to begin filling out this form. You may save this form at any time.

Section 1. Applicant Informat	tion				
Agency Name Cass County	Road Commission				
Contact Name Joe Bellina		Title	Chief Engineer		
Phone Number 269-445-861	.1	Email	jbellina@casscoroad.com		
Castian 2 Duainet Information					
Section 2. Project Informatio	n				
Project Name/Road Name	Conrad Road				
Project Limits	May Street to US:	512			
(e.g. Oak St. to Regent St.)	Professional Manager				
Project Length (nearest hundredth of a mile)	.71	Proposed Year of Funding 2023			
Primary Work Type		Restore & Rehabi	itate □ Roadside Facility afety □ Other		
Project Description (Please provide major work items including sidewalks, utility work, ADA upgrades etc.)		surface to travel lanes and paved shoulders and ngs.			
Was this project awarded funding for the 2017-2020 TIP, but was either canceled or failed to be obligated	☐Yes ⊠No If ye	es, please explain:			
Section 3. Project Funding	A CONTRACTOR SOCIETY	5.000			
Federal Funding Requested		\$ 112,461.90			
Local Match (18.15% minimum)		\$ 24,938.10			
Total		\$ 137,400			
Local Match Percentage (local mat	tch/total cost)	18.15%			
Does your agency have the financi Advance Construct (AC) all or part necessary? If yes, what is the max amount your agency is willing to A Construct (AC)?	of this project if imum dollar	☐ Yes ☐ No Maximum Dollar Amount you can AC? \$			

Section 4. System Preservation			
2017 PASER rating	4		:
Current state of drainage  Expected increase in Remaining Service life (RSL)	Occasiona Inadequat required O-3 years		some maintenance required oding, excessive maintenance
What MDOT guidelines does the	Reconstruc		on Local riojects
project conform to?		g, restoration, and Rehak	pilitation (3R)
	1	e, restoration, and Kenat e Maintenance (PM)	Sintation (Sity
	_	re mantenance (i m)	
Section E Sefety			
Section 5. Safety			0.000 mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/m
Please list the number and severity of (2013-2017) (see Michigan Crash Fac			ts over the last 5 yrs.
Total Crashes 12		Pedestrian & Bicycle Crashes	0
Fatalities 0		Serious Injuries	0
Using the attached Crash Reduction Fa	actors sheet, ple	ase check each safety co	ounter measure that will be
included in the project			
Describe any other safety			
improvements this project will			
provide			
		A September 1997	30,000
Section 6. Non-motorized Impro	vments		
	Halanstonian.		
Please explain any pedestrian and/or bicycle improvements are included			
bicycle improvements are included			
Does this project connect to an existir	g Yes [	No.	
pedestrian/bicycle facility or one that	is	<del></del>	
planned to be completed from 2020-2	.023?   If yes, p	lease provide a map of th	ne connecting facilities
Section 7. Regional Connectivity			
What is the most current daily traffic	count for the lim	nits 📗 Less than 2000	2000-5000
of this project?		5000-10,000	Above 10,000
		Year of count: 20:	17 Source: CCRC
National Functional Classification (NFC		Major Collector	
(Berrien County NFC Map, Cass Count	y NEC IVIAD)		

Section 8. Strategic Planning & Investment	
Is the project identified in a Asset Management Plan, or Capital Improvement Plan	☐Yes ☑No If yes, please cite the plan and page number:
Is the project identified in another planning documents such as a master plan or parks and recreation plan	☐Yes ☑No If yes, please cite the plan and page number:
Does the project cross jurisdictional boundaries?	☐ Yes ☑ No
If yes, will it be bid as a single project?	Yes No NA
Will this project coordinate with other infrastructure projects (i.e. utility, water, sewer, etc.)	Yes No If yes, please indicate the project type and construction year:
How many water main breaks have you had at this location in the past five years?	None
Is there a completed a utilities assessment that included televising the sewers in the project area?	☐ Yes ☑ No
Will this project require environmental mitigation, purchase of Right of Way (ROW), or railroad permits?	☐ Yes ☑ No ☐ Not Sure If yes, which items are required:
Does this project perform Resurfacing, Reconstruction, or Preventative Maintenance on a segment adjacent to a segment where a federally-funded project was done during the 2017-2020 NATS TIP cycle or RTF cycle?	Yes No What segment was the PREVIOUS project done on?

Section 9. Existing and Proposed Roadway Design								
	Existing				Proposed			
Number of Vehicle Lanes	Through Center On Street Traffic Lanes Turn Lane Parking				Through Traffic Lanes	Center Turn Lane	On Street Parking	
	2			☐ Yes ⊠ No	2		☐ Yes ⊠ No	
Shoulder Surface	Paved Unpaved		Wie	dth (ft.)	Placement Width (ft.)  Width (ft.)  Width (ft.)			
Sidewalk/ path information	Placement One Side Both Sides Intermittent None			dth (ft.)	Land '		Width (ft.)	
On road bicycle facilities	☐ Bike Lane ☐ Other (specify) ☐ Sharrows ☐ Wide Shoulders ☐ None				Bike Lane Other (specify) Sharrows Wide Shoulders None			
Utilities, Sewer and Water	Utilities Upgrades Needed  Sewer and water work needed				Replaced Utilities Relocating Utilities Sewer and Water Line Work			
Please describe any improvements being made as part of this project to crosswalks, signage or signals, or streetscape elements not discussed in project description								
Does this project enhance connectivity of pedestrian or bicyclists to fixed route or Dial-A-Ride transit?				Yes ⊠No res, how?				

Section 10. Estimated Project Schedule Activity	Estimated Date
Resolution of Support for □ Local Match Submitted to SWMPC	November 2022
Project Application Submitted to MOT	November 2022
Grade Inspection Package Submitted to MDOT	November 2022
Grade Inspection Meeting Scheduled	December 2022
Final Plan and Estimate to MDOT	January 2023
Right of Way (ROW) certified*	NA
Rail Road Permits*	NA
Environmental Mitigation*	NA
Project Obligated	February 2023
Project Letting	April 2023
Construction Start□	May 2023
Project Completion	September 2023

<sup>\*</sup>Enter NA if these items will not be required.

P	Proposed Improvement	% Reduction	Associated Crash Types
	SEGMENT	SEGMENT CRASH REDUCTION FACTORS	
	Geometr	Geometric Safety Enhancements	cements
		%08	Rear-End Left-Turn
Center left-Turn lane - Construct		20%	Head-On Left-Turn
	כסופו מבי	70%	Head-On, Angle, Sideswipe*
		15%	Non Left-Turn Rear-End, Other*
		%59	Rear-End Right-Turn
	+44	30%	Angle
	701	15%	Rear-End
		10%	Other*
☐ Horizontal Curve Flattening	ling	30%	Lane Departure***
Shoulders - Widen to Sta	Shoulders - Widen to Standard Width (add 1' each side)	2%	Lane Departure***
Shoulders - Widen to Sta	Shoulders - Widen to Standard Width (add 2' each side)	10%	Lane Departure***
Shoulders - Widen to Sta	Shoulders - Widen to Standard Width (add 3' each side)	15%	Lane Departure***
Shoulders - Widen to Sta	Shoulders - Widen to Standard Width (add 4' each side)	20%	Lane Departure***
Shoulders - Widen to Sta	Shoulders - Widen to Standard Width (add 5' each side)	25%	Lane Departure***
Shoulders - Widen to Sta	Shoulders - Widen to Standard Width (add 6' each side)	30%	Lane Departure***
Shoulders - Widen to Sta	Shoulders - Widen to Standard Width (add 7' each side)	35%	Lane Departure***
☐ Vertical Curve Modification	tion	20%	All Applicable Crash Types +++
	General	<b>General Segment Enhancements</b>	cements
☐ Access Management - Improve	пргоvе	15%	Drive-way Related Applicable Crashes
		44%	K and A injury Applicable Crashes
Centerline Bumble String - Install	s - Install	46%	Single Vehicle Run off Road Left Crashes
		43%	Sideswipe Same Crashes
		25%	Sideswipe Opposite Crashes
High Friction Surface Treatment - Install	satmont - Install	35%	Wet Crashes
	מנוננו - חופנמו	20%	All Other Applicable Crashes
Recessed Durable Pavement Markings	nent Markings	2%	All Applicable Crashes
	all	20%	Pedestrian Crashes (Review NCHRP Report 841)
☐ Road Diet (4-3 Lane Conversion) - Install	version) - Install	20%	Suburban - All Applicable Crashes
Shoulder Rumble Strips		20%	Run-Off the Road Right Crashes
Signing/Delineation on Horiz  Pavement Markings) - Install	Signing/Delineation on Horizontal Curves (Including Recessed Durable Pavement Markings) - Install	20%	Lane Departure***
Safety Edge Improvement	nt	13%	All non-intersection crashes (CMF Clearing House ID 8658)

☐ Bicycle Lanes - Install per standards	20%	Bicycle Crashes
Shared Use Path - Install	33%	Bicycle and Pedestrian Related Crashes
Fixed Objects From Clearzone (Trees, Culverts, Etc.) - Removal	75%	Fixed-Object Applicable Crashes
Guardrail - Install	25%	Lane Departure ***Fatalities and "A" Injury Applicable Crashes
Sidewalk for Pedestrians - Construct	85%	Pedestrian Crashes
Slope Flattening	15%	Fixed-Object, Overturn Applicable Crashes
Living Snow Fence	20%	Crashes due to wintry surface conditions
Lighting - install on segment	20%	Dark Unlighted Crashes
	NTERSECTION CRASH REDUCTION FACTORS	CTION FACTORS
Pedestri	Pedestrian / Bicycle Enhancements	ıncements
□ Bump Out / Curb Extension - Remove Parking / Install	30%	All Crashes
☐ Bicycle Lanes - Install per standards	25%	Bicycle Crashes
Sidewalk for Pedestrians - Construct	85%	Pedestrian Crashes
	75%	Pedestrian Fatal - Dark Unlighted Crashes
☐ Intersection Lighting - instal/	40%	Pedestrian A-Injury - Dark Unlighted Crashes
	30%	All Applicable Dark Unlighted Crashes
☐ Rectangular Rapid Flashing Beacons	47%	Pedestrian Crashes
☐ Ped. Countdown Signals - Install new Pedestrian signal	30%	Pedestrian Crashes
☐ Ped. Countdown Signals - Upgrade from existing Pedestrian signal	25%	Pedestrian Crashes
Signal Timing		/ Hardware Enhancements
	3%	Rear-End
☐ Multiple Low-Cost Improvements	12%	Right-Angle
	3%	Nighttime
☐ Install Reflectorized Backplates	15%	All Applicable Crashes
	70%	Head-On Left-Turn, Angle
	10%	All Crash Types
	%59	Angle
Box Span Signal - Upgrade from Stop Control	-25%	Rear-End (Increases Crashes)
	70%	All Other Non Rear-End Crashes
□ Box Span Signal - Upgrade from Diagonal Span	10%	All Applicable Crashes+
☐ Protected Left-Turn Signal Phase - Add	30%	Left-Turn
Signal Head Size - Increase to 12 "	10%	All Applicable Crashes +
Signal Optimization & Timing Updates	10%	All Applicable Crashes +
☐ Removing Night Flash from Signal Timing	20%	Nighttime Flash mode Related Crashes

Intersection Geometric Enhancements	eometric Enl	lancements
	%08	Rear-End Left-Turn
Contor of Tirm land Construct	20%	Head-On Left-Turn
	70%	Head-On, Angle, Other
	15%	Non Left-Turn Rear-End
	30%	Angle
Intersection improvements (Kealignment, Signt-Distance Improvements,	15%	Rear-End
Machinist Live	10%	Head-On, Sideswipe, Pedestrian, Bicycle, Left-Turn Related
Office   Office   Office	%59	Angle-Turn, Head-On Left-Turn
סוואבר רבור. וחווו רפוופ - כמוואו מכר	20%	Rear-End Left-Turn
	%59	Angle-Turn
Offset Right-Turn Lane - Construct	20%	Other Applicable Crashes
	20%	Rear-End Right Turn
Diabt-Turn lang Conctaurt	65%	Rear-End Right-Turn
	20%	Applicable Rear-End Crashes, Sideswipe Same Direction
Roundsbrit	78%	Fatal and A-Injury Reduction
	21%	Minor Crash Reduction
Lighting	ı	See MDOT Interchange Warranted Lighting Guidance and overall
		MDOT Lighting Guidance
General Intersection Enhance	ements (Nor	rsection Enhancements (Non-Signalized Intersections)
All-Way Stop Control - New Installation	%09	All Applicable Crashes
☐ Ground Mounted Flashing Beacons (Red)- /nsta// **	30%	All Crashes On Install Approach
☐ Ground Mounted Flashing Beacons(Amber) - Install **	20%	All Crashes On Install Approach
Signing - Improve/Upgrade	30%	Angle, Rear-End Crashes
☐ Pavement Markings - Improve/Upgrade	30%	Angle, Rear-End Crashes
☐ Reflective Sheeting on Sign Posts (lollipops)	15%	All Applicable Crashes

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