

S-12 Monroe Co Flume Bridge

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Motorized Recreation Grant Application

For: (choose all that apply)

Form 8700-159 (R 02/2024)

Page 1 of 5

☐ ATV/UTV Trail Aid

☒ Snowmobile Trail Aid

Due Date: April 15

Notice: Completion of this form is required under Wisconsin Statutes 23.09(26) and 23.33. Failure to complete this form will result in denial of financial assistance. Personally identifiable information found on this form is not intended to be used for any other purpose. The Department of Natural Resources (DNR) may provide this information to requesters as required by Wisconsin's Public Records law {ss. 19.31 – 19.39, Wis. Stats.}.

Instructions: Applications may combine more than one source of funds. They may be submitted for consideration of traditional ATV, UTV, Snowmobile and Motorized Stewardship funding. Submit one copy of all forms and attachments. See Page 2 for necessary attachments. Send applications to your Community Services Specialist.

DNR Use Only

Category	Number
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Section 1: Applicant Information

Applicant / Organization Name			Check Recipient: Individual other than authorized individual to act on behalf of the applicant. <input type="checkbox"/> Select if the same as applicant.				
Monroe County			Check Recipient Name (Name to Appear on Check)				
Individual Authorized to Act on Behalf of Applicant per Resolution			Monroe County Treasurer				
Chad Ziegler			Title				
Title			Address				
Snowmobile Coordinator			777 S. Black River Street				
Address			777 S. Black River Street				
City		State	ZIP Code	City		State	ZIP Code
Sparta		WI	54656	Sparta		WI	54656
Telephone Number		Email Address					
(608) 269-8635		chad.ziegler@co.monroe.wi.us					

Section 2: Project Information Required for all Projects

Project Title					Current Funded Miles	New Miles (if applicable)	
Flume Bridge					323.5		
County	Township	Range	Section	1/4 1/4	1/4	GPS Coordinates:	
Monroe	16 N	2	18	NE	SE	Lat. 43.860835	
						Long. -90.653642	

Project Description Summary

Replace aging and damaged bridge that is at the end of it's life. Bridge has structural damage from corrosion. The railings and deck are in poor condition. Structural damage from grooming equipment is present due to the severe angle of the bridge in relation to the trail. The deck of the bridge needs to be replaced. The certified bridge inspector recommended to close the bridge or to perform a load rating on the bridge at a cost of \$9,500.

☒ I certify that all maintenance land use agreements are on file.

Estimated Cost

Maintenance	Acquisition	Insurance	Development	Bridge Rehab.	Trail Rehab.	Total Estimated Cost
				\$50,000.00		\$50,000.00

Leave Blank – DNR Use Only

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Applicant Certification

Printed Name of Authorized Official	Official's Title
Chad Ziegler	Snowmobile Coordinator

As the applicant's authorized official, I certify that, to the best of my knowledge, the information in this application is true and correct.


Signature of Authorized Official

4-7-25
Date Prepared

Appendix A – Required for Bridge Rehab/Replace, New, or Reroute with New Bridge
☒ Bridge Rehab/Replace ☐ New Bridge ☐ Reroute with new bridge

County Monroe	Township 16 N	Range 2	<input type="radio"/> E <input checked="" type="radio"/> W	Section 18	¼ ¼ NE	¼ SE	GPS Coordinates: Lat. 43.86 Long. -90.65
Water Body Name Flume - diverts run off away from Elroy-Sparta Trail				Bridge Name Flume Bridge		County Inventory Number	
Funded Trail Name or Number (SNARS if applicable) Corridor 27				Has this bridge site ever received development or rehabilitation funds in the past? <input type="radio"/> Yes <input checked="" type="radio"/> No Year: _____ \$ _____			
Bridge is located on: <input type="radio"/> Private property <input checked="" type="radio"/> Public property				Old Bridge/Culvert Size 11' x 27'		New Bridge/Culvert Size 12' x 70'	
Landowner Where Bridge is Located Town of Little Falls - Tom Stuessel, Chair				Telephone Number (608) 272-3807		Length of Trail Use Agreement (5 year minimum) 5	
Current maximum load 2,000 lbs.		Age of Bridge 25		Bridge Material steel/wood			
Proposed maximum load 25,000 lbs.							
Sponsoring Club Name Norwalk Trail Riders				Club Contact Niel Friske		Telephone Number (608) 769-7681	
Do you have your trail bridges posted as to maximum load? <input checked="" type="radio"/> Yes <input type="radio"/> No				What is the maximum load of the other bridges on the system if groomed with this bridge? 25000			
What is the weight of your puller & drag/grading equipment? 22000							
What other recreational trail uses are planned for this bridge? none							
If there are other Recreational uses planned, how much of the bridge cost will be paid for by non-snowmobile or non-ATV users? none							
<input checked="" type="radio"/> Yes <input type="radio"/> No Have you contacted your local DNR Water Management Specialist (WMS) regarding a permit? <input checked="" type="radio"/> Yes <input type="radio"/> No Is a permit needed? (Please provide any written correspondence from WMS.) <input checked="" type="radio"/> Yes <input type="radio"/> No Have you contacted your County Zoning Dept. regarding a floodplain determination? <input type="radio"/> Yes <input checked="" type="radio"/> No Will an H & H (hydrologic and hydraulic) study be required?							

Bridge Project Detailed Description

The Flume Bridge is a 12' x 28' bridge fabricated with steel I-beams; the railings and deck are wood. According to our certified bridge inspection the materials used to construct the bridge are undersized. The railings have been beaten up from the drags hitting it to due to the severity of the corners entering and exiting the bridge. About 5 years ago we got permission from the WDNR to adjust the trail location and construct a new trail approach off of the Elroy - Sparta trail to allow for a straighter approach to the bridge. This has decreased the amount of abuse to the railings.

There are two options to help increase the life of the bridge (decrease the damage to railings). The first option would be to widen the bridge to 14' wide, this would provide more room for the groomer to navigate the corners and for the drag to line up with the center of the bridge.

The second option would be to increase the length of the bridge from 28' to 40' to improve the turning radius for entering and exiting the bridge.

The existing bridge barely sits on the bridge abutments on two of the corners; a 30' bridge would be more adequate to fit over the abutments.

Appendix A (continued)**Summarize Costs in Appropriate Categories:**

Bridge Structure			
		Quote 1	Quote 2
		<input checked="" type="radio"/> Steel <input type="radio"/> Wooden	<input checked="" type="radio"/> Steel <input type="radio"/> Wooden
Bridge Dimensions:		12' x 30'	12' x 30'
Bridge Manufacturer:		Eby's Portable Welding & Fabrication	Custom Manufacturing, Inc.
Design Weight Load		25,000 lbs.	25,000 lbs.
Cost of Structure:	1. Engineering	\$ 3,000	\$ 2,800
	2. Structure	\$ 39,000	\$ 41,600
	Subtotal	\$ 42,000	\$ 44,400
		Quote 1	Quote 2
		<input checked="" type="radio"/> Contractor or <input type="radio"/> Sponsor Estimate	<input checked="" type="radio"/> Contractor or <input type="radio"/> Sponsor Estimate
Installation Costs:			
1. Engineering		\$	\$
2. Site Preparation		\$ 2,000	\$ 7,200
3. Abutments		\$	\$
4. Pilings/Piers		\$	\$
5. Approaches		\$	\$
6. Riprap		\$	\$
7. Labor		\$	\$
8. Equipment Rental		\$ 3,000	\$ 2,000
9. Culverts		\$	\$
10. H & H Study		\$	\$
11. Wetland Delineation		\$	\$
12. Other <u>Permits/delivery/admin</u>		\$ 3,000	\$ 6,900
	Subtotal	\$ 8,000	\$ 16,100
	Total Cost	\$ 50,000	\$ 60,500

For the application grant, you must take the lowest of the two quotes.

Entire Deck and Railing Projects		<input type="radio"/> Contractor	<input type="radio"/> Sponsor	<input type="radio"/> Club
Bridge Dimensions:				
Design Weight Load				
1. Materials		\$		
2. Labor		\$		
	Total	\$		

Guidelines for Applicant

Complete this form for each bridge structure you are submitting a grant application for. Provide any additional documents not requested on application checklist to substantiate your points, including actual deeded easements.

Category		Possible Points	Actual Points
1	Condition of the Structure (max of 10 points)		
	Has a certified bridge inspection report that supports the project & demonstrates need (see example, must provide copy of report by August 1 for 2024 only)	10	10
2	Permits (maximum points 4)		
	Consultation with DNR Water Mgmt Specialist has occurred & permit is likely, if needed	1	1
	Permit in hand / Bridge already permitted	3	
3	Funding (maximum points 2) Are other funds already committed?		
	50% or greater from other funding source(s)?	2	
	11% - 49% from other funding source(s)?	1	
4	Length of Written Easements or Land Use Agreement (max points 5)(ch. 23.09(26)(am)1 WI Stats)		
	On public land (County, State, Federal)	5	5
	10 or more year deeded easement on private land or other public land, for <u>all portions of</u> that trail to the nearest road on each side of the bridge	5	
	3-9 year deeded easement on private land or other public land, for <u>all portions of that</u> trail to the nearest road on each side of the bridge	4	
	10 or more year deeded easement on private land or other public land, for <u>just the bridge</u> site	3	
	3-9 deeded easement on private land or other public land, for <u>just the bridge</u> site	2	
	10 or more year land use agreement (LUA, not deeded) on private land or other public land	1	
	3-9 year land use agreement (LUA, not deeded) on private land or other public land	0	
5	Miles Impacted – How many miles will need to rerouted if the structure is not replaced? Measured from nearest intersection on both sides of the bridge. (max 4 points)		
	Less than 20 miles <i>15 miles</i>	1	1
	20 miles or more	3	
	No other snowmobile trails connect. Explain:	4	
	DEDUCTIONS		
6	County Active Project Deduction (maximum deduction 1 point) A snowmobile active project is one that has exceeded it's initial grant period.		
	Two or more active projects - deduct 1 point	-1	
GRAND TOTAL			17

Comments/Notes:



Trail Bridge Inspection

Monroe County

Bridge Name

Flume Bridge-Norwalk

Inspected By:

Wm Knaack Jr, P.E.

1/26/25

Prepared By

KBIS, LLC





Bridge Inspection Report

General Information

The structure in this report was inspected by certified Wisconsin Department of Transportation Bridge Inspectors. Inspectors are Bridge Inspection Team Leaders and NSTM certified inspectors.

The bridge was inspected with trail use in mind, using normal vehicle bridge standards to determine the condition of the structure.

All recommendations made in the report are also considering the use of the trail. Trail bridges in general should have a load rating considering all the possible uses of the structure. Even though the bridges may be just for snowmobiles, several types of vehicles may use the structure.

Location information/General Description:

16585 Kellog Ave, Norwalk, WI, Monroe County.
-90.653650,43.860851

Bridge Condition

Condition State (CS) 1-Good, CS2-Fair, CS3-Poor, CS4-Critical

Abutments, pile bents, and spans are numbered along the trail from south to north. Girders are numbered from upstream to downstream.

Bridge has steel / timber railings, timber wearing surface, timber transverse deck planks, 3 steel girders, sitting on the masonry flume walls as abutments.

Length 27', Width 11.0', 8+' clearance from deck to stream bottom.

Wearing surface is gravel and debris covered, has CS3 wear throughout, and CS3 section loss and holes.

Decking has CS2 staining throughout underside. Timber rails are CS3 weathered/warped/missing.

Steel superstructure is in poor condition, CS3 corrosion with measurable section loss.

Both abutments are in good condition, CS1.

Channel is in good condition.



W7218 Hickory Lane
Phillips, WI 54555
wknaack@kbiswi.com
715.820.0095

Bridge Inspection Report

Bridge Condition

Approaches are in poor condition with a bump at the bridge ends.

The main issue with this bridge is, short of the owner paying for a load rating, this structure should not be used for anything other than foot traffic. The 3 beams are very small for a 27 foot crossing. In my judgment as a Professional Engineer, this bridge should be closed permanently until replacement, to protect the public and groomer operators.



W7218 Hickory Lane
Phillips, WI 54555
wknaack@kbiswi.com
715.820.0095

Bridge Inspection Report

Report Summary

NBI Ratings: 9-7 Good, 6-5 Fair, 4-3 Poor, 2-1 Critical, 0-Closed

Deck	# 3
Wearing Surface	# 3
Superstructure	# 4
Substructure	# 7
Channel	# 8

Overall Condition Critical-Due to small size of members, spacing, and corrosion.

Recommendations/Maintenance Items:

Replace immediately, keep closed.

Signed By:



Digitally signed by William
S. Knaack Jr.,P.E.

Date: 2025.03.09 15:54:11
-05'00'

William S. Knaack Jr, P.E.

Bridge Inspection Report

Photo Observations



Looking West

Bridge Inspection Report

Photo Observations



Looking South

Bridge Inspection Report

Photo Observations



Hole in Deck

Bridge Inspection Report

Photo Observations



Looking North

Bridge Inspection Report

Photo Observations



Looking East

Bridge Inspection Report

Photo Observations



Looking West

Bridge Inspection Report

Photo Observations



CS3 Corrosion of girders, staining of deck boards.

Bridge Inspection Report

Photo Observations



Hole in SW corner.

Bridge Inspection Report

Photo Observations



Missing Railing.

Bridge Inspection Report

Photo Observations



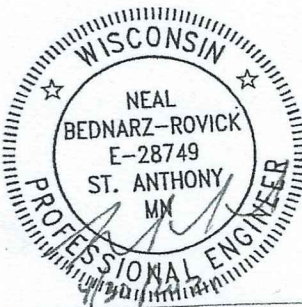
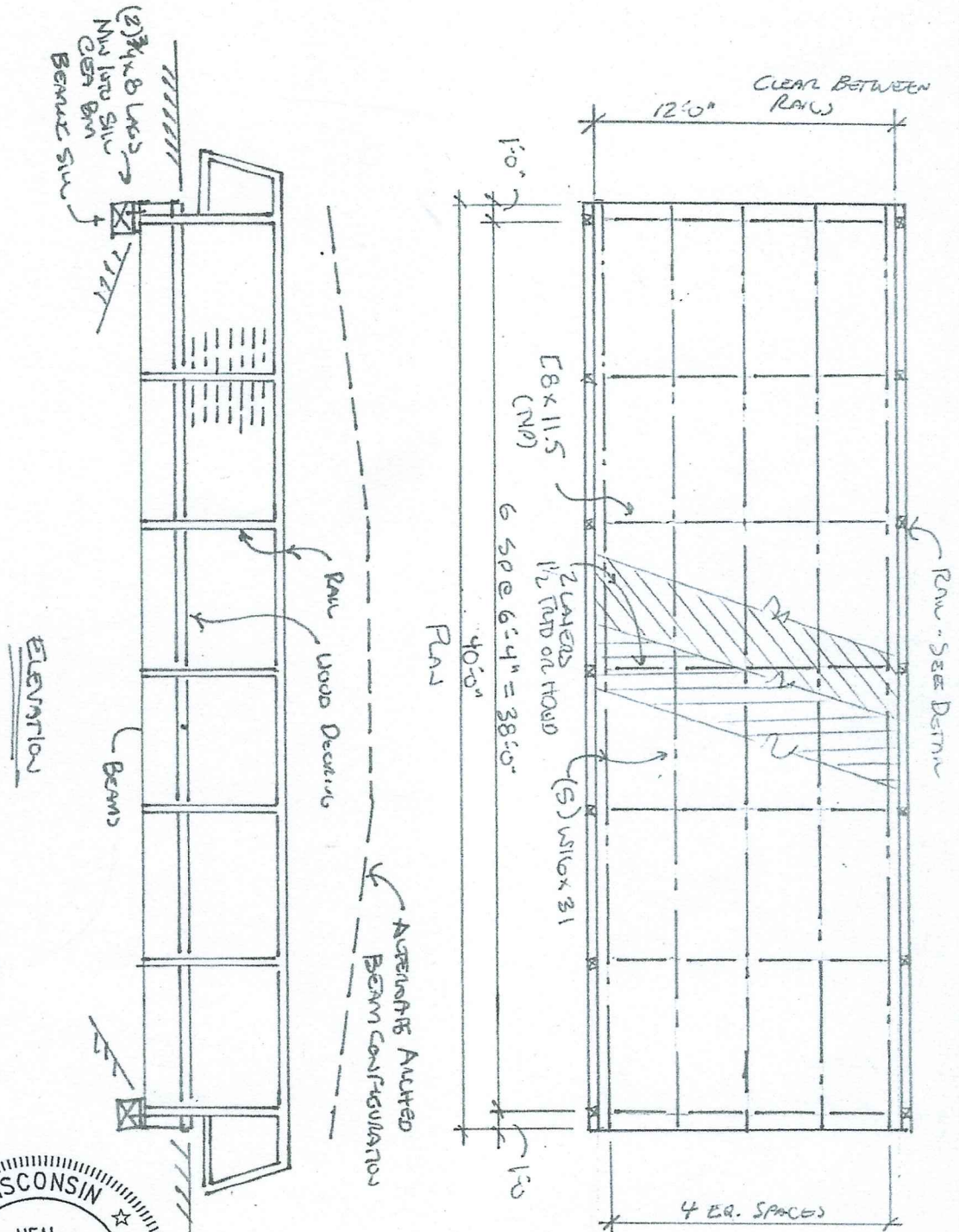
Hole in SW Corner.

Bridge Inspection Report

Photo Observations



Uneven approaches.



REFERENCE ONLY

DRAWN BY: <i>h</i>	DATE: 4/30/2021	FINISH:	
JOB NO.	JOB: 40' SNOWMOBILE BRIDGE 25000# LOAD	SK-	
	CONTR.: EBY	M-1	

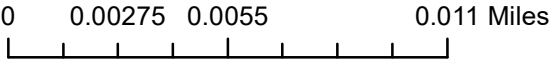
Flume Bridge - Air Photo Monroe County



Legend

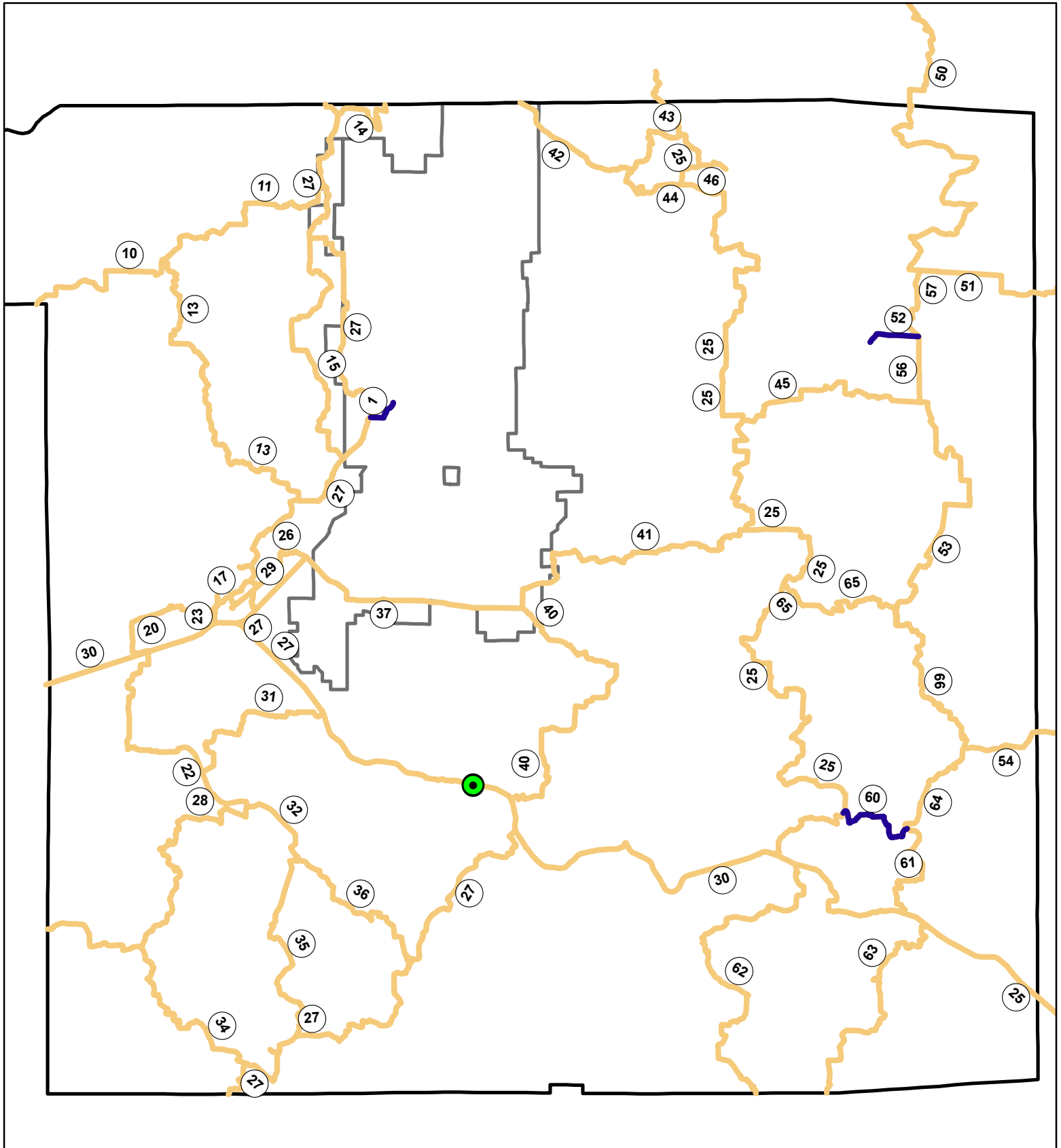
Flume Bridge

- Non_funded_trails
- Monroe County Snowmobile Trails






Flume Bridge - County Wide Map

Monroe County



Legend

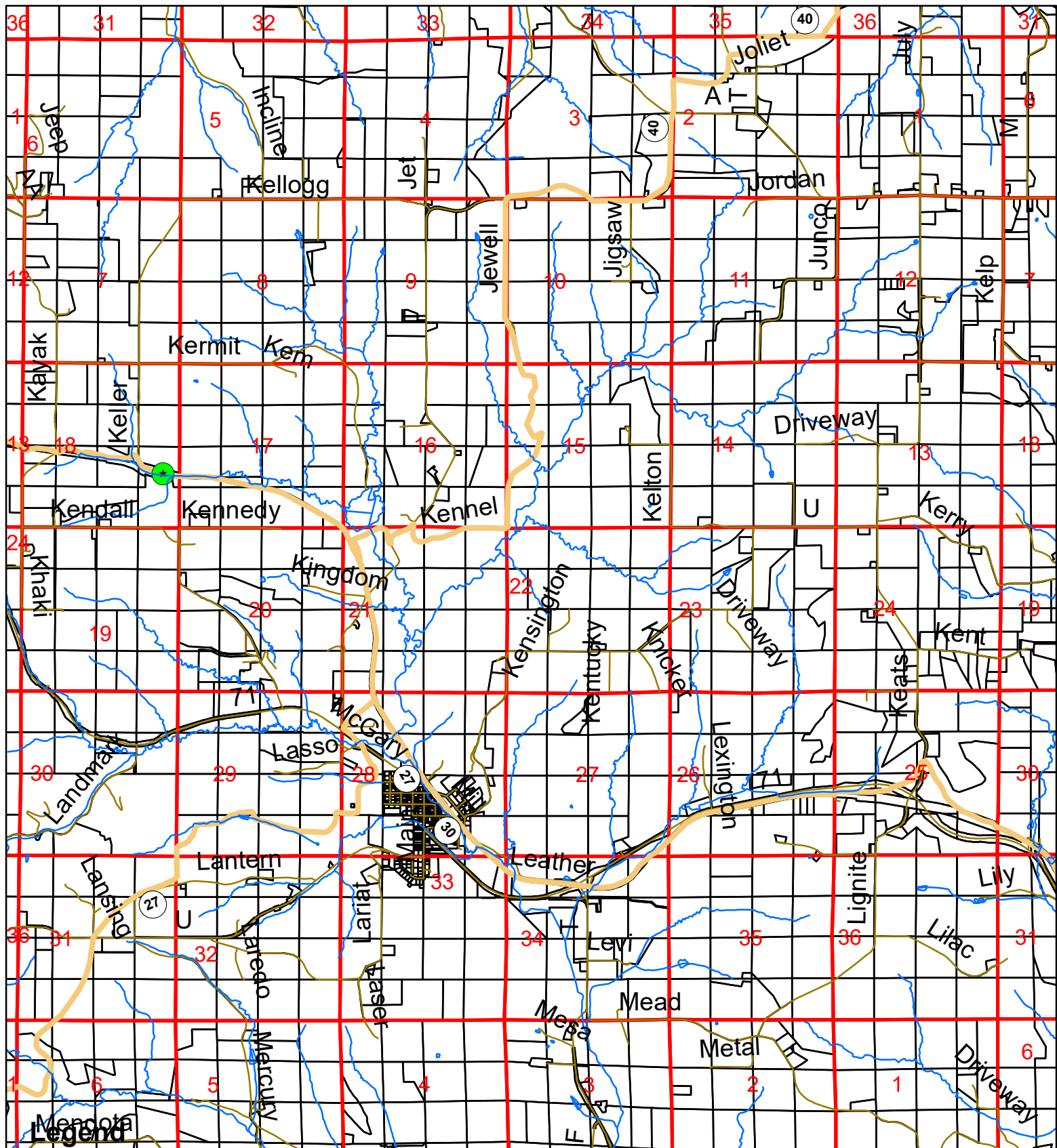
-  Flume Bridge
-  Non_funded_trails
-  Monroe County Snowmobile Trails



0 2.25 4.5 9 Miles

Flume Bridge - Plat Map

Town of Ridgeville - Monroe County

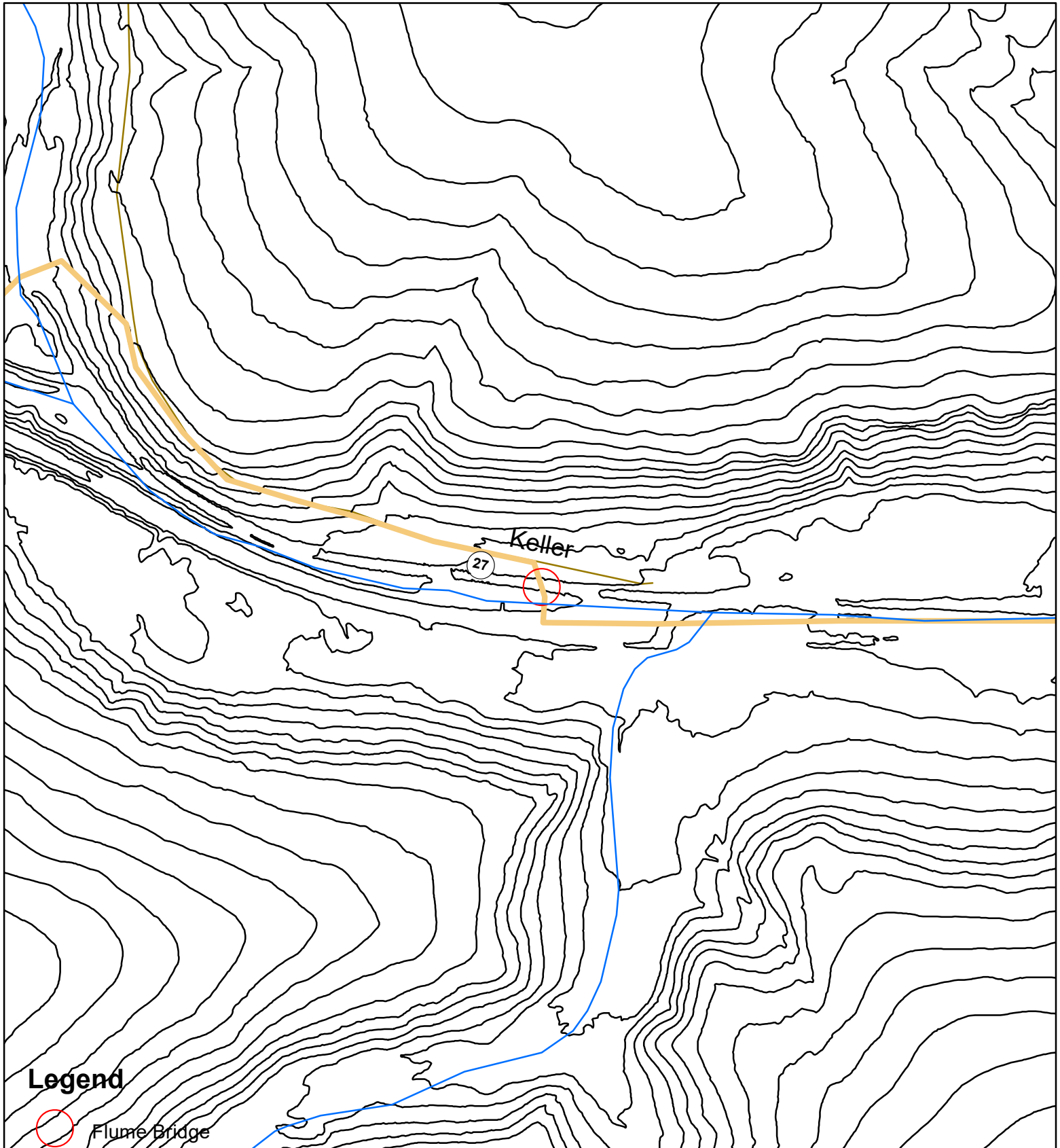


- ★ Flume Bridge
- Non_funded_trails
- Monroe County Snowmobile Trails
- ROADS



0 0.5 1 2 Miles

Flume Bridge - Topo Map Monroe County



Non_funded_trails

Monroe County Snowmobile Trails

ROADS

MonroeGIS.GIS.Contours10Ft



0 0.0275 0.055 0.11 Miles

Flume Bridge - Wetland Map Monroe County

