Grant Application
Montana Land Information Act
Fiscal Year 2017

McCone County Road Inventory Phase 2 of 3

Produced by the Grant Review Subcommittee of the
Montana Land Information Advisory Council in cooperation
with the Montana State Library

Pursuant to Section 4 (c) of the Montana Land Information
Act (Senate Bill 98) and Administrative Rule IV of the
Montana Land Information Act.

January 16, 2016

APPLICATION FOR GRANT FUNDING

STEP 1 – Applicant and Partner Information

Primary Applicant (Required):
Name principle individual: Nancy Stempel
Name of agency: McCone County GIS
Street: PO Box 199
City: Circle
County: McCone
State: MT
Zip Code: 59215
Contact email address:mcongis@midrivers.com
Contact fax address: 406.485.2689
Contact phone: 406.485.2347
Organizational Unit (if applicable)
Department:
Division:

Other Project Partners – complete for each partner (copy box as needed):
Name of contact: Allen Rosaaen
Name of Agency: McCone Road Department
Street: PO Box 199
City: Circle
County: McCone
State: MT
Zip Code 59215
Contact email address mcconerds@midrivers.com
Contact phone:

Date Submitted (Required):Feb 16	Date Received by State:

Descriptive Title of Applicant's Project (Required): McCone County Asset Inventory And Road Status Phase 2 of 3

STEP 2 – Relevance and Public Benefit

"Localized GIS solutions that demonstrate the value of GIS in improving the quality of life for Montana citizens and build grass roots support for location based services." This proposal will allow McCone County's Road Department to inventory specifications of all road assets in 1 of 3 Road Districts to collect and share centralized geo-referenced information being developed over a 3 year process. The collected information will build grass roots support by publishing the information through ArcGIS Online. This information will improve the Road Department's ability to share information between 3 Road Districts, the County Commissioners, the County Planner, Disaster Emergency Services, Emergency Medical Services, the Fire Department and Law Enforcement who will use this information to improve their individual services and responsibilities. PASER (PAvement Surface Evaluation and Rating) is the road status standard we be using to collect this information. PASER is a road status system orchestrated and collected by MACRS (Montana Association of County Road Supervisors). Since the road department crew will have the type and condition of the sites and roads on-hand it will reduce the number of site recons to repair an item. This benefits the citizens of McCone County by making their tax dollars go further.

This information can be contained in geodatabases and published in the dispatch center so every response agency can quickly see where road conditions are affecting essential travel routes. This information will highlight the roads that are impacted by floods or other natural conditions that make certain roads impassable thus establishing priorities of work for maintenance. It will also be communicated to all departments through ArcGIS Online and printed maps to assist with Planning, Budgeting and for informed decision-making. The PASER road information will be distributed to the Montana Association of County Road Supervisors (MACRS).

STEP 3 – Scope of Work Narrative

Scope of Work (Required)

The Goal of Phase II of this project is to finish the Geo-tagged inventory of McCone County Road Assets (culverts, cattle guards, road signs, low water crossings and bridges) in a geodatabase and publish to other County Departments and to apply the PASER (PAvement Surface Evaluation and Rating) to each county maintained road. And to develop a continual process to maintain this system. This phase takes place between July 1, 2016-June 1, 2017

 i. **Objective #1. Create collection process from Terraflex to Collector and collect points and pictures of culverts, cattle guards, road signs, other key inventory and bridges.**
 1. Tasks:
    a. Receive approval of project by July 15
    b. Purchase 6 Samsung tablets at $350 ea and 1 Netgear WIFI Access point at $300. Increase current ArcGIS Online for 5 more users ($2500) and 2000 more credits ($200).
    c. Transition Data Collection from Trimble Terraflex/Insphere to ESRI Collector/ ArcgisOnline. Setup Collector on Tablets.
    d. Hire Temporary workers and Road Crew by August 15, 2016
    e. Train Temporary workers to use Tablets, and collect all data. Dependent on all of the above tasks.
    f. Drive and collect all road assets and their attributes by September 15, 2016
    g. Upload collected data to ArcGIS Online nightly.

 ii. **Objective #2 Create a feature class of roads evaluated using the Pavement PASERS for 2008, and 2014, and new Collector App 2017.**
    a. Design Road Feature Class Data Dictionary with each years PASERS Designation in ArcGIS online and Collector that includes ditches, width, crown, drainage, material and angle.
    b. Setup Collector on South Foreman's Tablet.
    c. Train Foreman on Tablet use.
    d. Upload data to ArcGIS Online.

iii. **Objective #3: Download collected points to current inventory database and PASER Road Line Assignments into to county's road geodatabase to update Road Feature class and distribute to county departments and to MACRS.**
1. Tasks:
   a. Download and organize the information into a geodatabase.
   b. Collect any points that need clarification or places missed by April 30 2017.
   c. Design service to ArcGIS Online to depict changes in the PASERS Data from all years collected.
   d. Publish Culvert and Bridge information in the McCone County Dispatch Center Mapping system by May 15 2017.
   e. Train Departments on use of information for their areas of interest by May 30 2017.

iv. **Objective #4: Evaluate Project and Needs for the next phase.**
1. Tasks:
   a. Evaluate what we did well and what we need to do better and what we do not need to do by Jan 15, 2017.
   b. Develop requirement and responsibilities for collecting, updating and publishing updated information by May 15 2017.

			2016						2017					
			JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
	i. Objective #1. Create collection process from Terraflex to Collector and collect points and pictures of culverts, cattle guards, road signs, other key inventory and bridges.													
	a. Receive approval of project by July 15, 2016		X											
	b.Purchase 6 Samsung tablets at $350 each and 1 Netgear WIFI Access point at $300. Increase current ArcGIS Online for 5 more users($2500) and 2000 more credits($200).		X											
	c.Transition Data Collection from Trimble Terraflex/Insphere to ESRI Collector/ Arcgisonline. Setup Collector on Tablets.		X											
	d. Hire Temporary workers and Road Crew by August 15, 2016			X										
*	e.Train Temporary workers to use Tablets, and collect all data. Dependent on all of the above tasks.			X										
*	f.Drive and collect all road assets and their attributes by October 15, 2016.			X	X		M	M	M	M	M	M	M	
*	g.Upload collected data to ArcGIS Online nightly.			X	X	X	X	M	M	M	M	M	M	
	ii. Objective #2 Create a feature class of roads evaluated using the Pavement PASERS for 2008, and 2014, and new Collector App 2017.													
	a. Design Road Feature Class Data Dictionary with each years PASERS Designation in ArcGIS online and Collector that includes ditches, width, crown, drainage, material and angle.		X											
*	b. Setup Collector on South Foreman's Tablet.			X										
*	c. Train Foreman on Tablet use.			X										
	d. Upload data to ArcGIS Online Recurring for maintenance.			X	X	X	X	M	M	M	M	M	M	
	iii. Objective #3: Download collected points to current inventory database and PASER Road Line Assignments into to county's road geodatabase to update Road Feature class and distribute to county departments and to MACRS.													
*	a. Download and organize the information into a geodatabase.						X	M	M	M	M	M	M	M
*	b. Collect any points that need clarification or places missed by June 1.						X	M	M	M	M	M	M	M
*	c. Design service to ArcGIS Online to depict changes in the PACERS Data from all years collected.						X	X					X	
*	d. Publish Culvert and Bridge information in the McCone County Dispatch Center Mapping system by May 15.						X						X	M
*	e. Train Departments on use of information for their areas of interest by May 30, 2017												X	M
	iv. Objective #4: Evaluate Project and Needs for the next phase.													
*	a. Evaluate what we did well and what we need to do better and what we do not need to do by Jan 15, 2017 and Do it By March 30, 2017.								X	X	X			
*	b. Develop requirement and responsibilities for collecting, updating and publishing updated information by and ensure all are put into Maintenance May 15,2017											X		
	c. Ensure all Reports are Filed to the State by September 1, 2017													X
	*= Recurring Task, X= task done on this month M= initial task completed switched into Maintenance													

January 15, 2016

STEP 4 – Project Management and Organizational Capability Narrative

Allen Rosaaen, South Road Crew Foreman

Although Allen is new to McCone County, he has already hired a full road crew for the first time in many years. He worked with Richland County Road Department for 8 years the Sub Road Foreman prior to joining McCone. He managed the Department in the Foreman's absence and the Construction Crews and Landowner relations on a daily basis. He helped Richland County assess the roads using PASER (PAvement Surface Evaluation and Rating). He has managed budgets as a Farmer/Rancher for 28 years. He has many projects as a trustee on the school board and as President of the Redwater Valley Ambulance Association.

Nancy Stempel, McCone County GIS Coordinator

Nancy has over 10 years of experience in Information Systems and Geographic Information Systems. She currently manages the GIS system and does all GPS collection, address assigning, and integrates data into the address database for McCone County. This address geodatabase includes the Town of Circle as well as the rural areas within McCone County. She has worked with the road department to improve the road data and worked with emergency services to provide them the information they need.

Nancy has over 20 years of experience as a leader, manager and project manager as an officer in the Army Reserve. She has of experience meeting deadlines, setting and following budgets, planning and executing projects and completing all reports as required. She always ensures that everyone involved in a project is kept well informed to ensure each project is a success. Nancy also has years of experience with hiring and promoting people to fill critical positions.

STEP 5 – Budget Justification Narrative and Tables

This project phase is expected to cost $37,975 with McCone County will contribute $13,010 and we are requesting a total of $24,965 for this Phase 2 of 3.

In Phase 1, we collected points on about 70 percent of the county. The Road Department was short personnel so they were able to donate use a pickup and money for labor. We did not budget enough for salary for two temporary workers to collect points. We collected the data using Terraflex and Insight with a Trimble Juno. The Data in distrusted in ArcGIS Online, but will need to be changed based on the needs of the new Foreman, Allen Rosaaen.

Allen Rosaaen will contribute funds, time and equipment to hire, train, and manage temporary workers to collect the specifications of all assets. Allen will help implement QA/QC Measures and setup maps. Nancy Stempel needs 20 hours a month to design the process of collecting the data, to transition data collection from Terraflex and InSphere/ ArcGIS Online Database she will also need to setup tablets, train temporary workers, and Road Department Crew and download the data. Into a geodatabase, and to publish the maps and services to other departments. She will develop a geodatabase and a map to publish for Collector App to collect the necessary settings for the PASER system and that works with the app. She will publish the information to all the other departments. Nancy will need to create a Map that delineates the old data and the maintenance progress of the new data. The temporary workers will have to traverse 500 miles at approximately 10 MPH to spot all of the essential points. We estimate it will take 5 minutes, on average, to record each site. We will measure each site and collect a geo-tagged photo. We estimate there are 8 assets per mile. It will take longer to collect data on culverts and take less time on other sites. Two workers are needed to work together to measure culverts and determine type. There must be two workers due to safety considerations. The area has rattlesnakes and other wildlife. Cell phone coverage is limited so they must work as a team. They will need 66 hours to drive as well as another 1250 hours to measure services. Mileage is figured at current rate of $.54 per mile. It will take more hours to drive because the points are further out.

Allen Rosaaen will contribute in-kind funds of averaging of 15 hours a month manage and train to all drive and evaluate all of the roads in McCone County's Districts 2 & 3 according to the PASER (PAvement Surface Evaluation and Rating). He will train the road crew and use this information for management and budgets needs for the county. He will have to traverse 500 miles to collect the districts road information stopping to measure the road widths every 2 miles at 10 minutes to measure. Allen will contribute 33 hours of his time to drive plus another 41 to collect the road information.

The county needs the 6 tablets for maintenance this project. Every person on the road crew will have a tablet to collect the inventory condition while it is being updated. The wireless access point in needed to sync Collector with ArcGIS Online. ArcGIS Online subscription will contain the information that other departments can use. We estimate the 200 credits will augment our current credits support this project.

This project will be maintained in the future as a joint project between the McCone County Road Department Foreman and the McCone County GIS Coordinator. The McCone County Road Crew will collect change in the site information and the McCone County GIS Department will maintain it. The

County's portion of the 25% MLIA Collection is currently used for all needs of the GIS department but mostly assigning addresses. We work with the MSDI Framework to improve our GIS information.

Applicant budget summary

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Category	MLIA Share	Applicant Share(In-kind)	Other Share	Total
a. Personnel **Nancy Stempel** **Temporary Workers** **Road Crew** **Supervisor** **Departments using** **Data**	**3720** **13820**	 **7250** **750**		**25,540**
a.1 Fringe Benefits **Nancy Stempel** **Temporary Workers** **Road Crew** **Supervisor** **Departments using** **Data**	**$1305** **$**	 **2250** **262**		**3817**
b. Travel	**500 mi@.54=$270**	**358 for gas**		**628**
c. Equipment	**6 Tablets at $2100** **WIFI Access point $300** **ArcGIS Online $2500** ** 200 credits $200**	**1 Pickup** **For PASER** **19.45per** **Hour** **2140**		**7240**
d. Supplies	**Printing Maps $300**			**300**
e. Contractual				
f. Other				
Admin	**450**			**450**
Totals	**24,965**	**13,010**		**37,975**

STEP 6 – Statements of Support

Statements of support must be included from any party listed as a project partner (see page six for the definition of a project partner). DO NOT include other statements of support as they will not be evaluated.

STEP 7 – Renewable Grant Accountability Narrative

We received a grant of this project in 2015. We completed Phase I in 2015. Due to a road crew personnel shortage, we were able to keep the temporary workers on for another month. We were able to collect with Teffaflex/Insphere approximately 70 % of the County. Secondary Highways and the Northwest part of the county are roads left to do which equates to approximately 200 miles. Due to personnel change the South Foreman needs to reevaluate the roads using PASER for MACRS.

STEP 8 – Sign the Application

Authorizing Statement
I hereby certify that the information and all statements in this application are true, complete and accurate to the best of my knowledge and that the project or activity complies with all applicable state, local and federal laws and regulations.
I further certify that this project will comply with applicable statutory and regulatory standards.
I further certify that I am (by my signature) authorized to enter into a binding agreement with the Montana State Library to obtain a grant if this application receives approval.

_____
Name (James Moos)

_____
Title (County Commission Presiding Officer)

_____
Signature and Title of Authorized Representative(s) of Public Entity Applicant

_____
Date