

# Monona County IRVM Plan - 2018

## PREFACE

The following is a plan for the Monona County Roadside Management. The plan includes history, structure, and technical elements. Our program is in its beginning stages.

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### Attached:

- Roadside Operator Position Description
- Monona County Work within ROW Permit
- Monona County Driveway Permit

## **2) CONTRIBUTORS TO THE PLAN:**

Monona County Operator II / Spray Technician, Brandon Vogt

Monona County Engineer / Weed Commissioner, Dustin Wallis

Day to day decisions are made by the county engineer with input from the secondary roads foremen. Budgeting, grant writing and equipment needs are decided between the engineer, spray technician and road foremen.

## **3) SUMMARY**

Monona County has 1,060 miles of roads consisting of paved, rock and earth surfaces. This equates into thousands of acres of roadside ditches and areas that need managed for trees and brush, noxious weeds, and invasive species. Contractors and county crews doing roadwork projects also disturb hundreds of acres of vegetation each year that needs reseeded. The Monona County Roadside Management Department is in charge of all aspects of vegetation management including spraying roadsides for trees, noxious weeds and invasive plants, and reseeding all construction projects.

## **4) GOALS**

The goal for Monona County IRVM is to control erosion and control the spread of trees, brush, noxious and invasive species while providing safe and scenic roadsides. Most of the time this is all achieved by planting and maintaining native vegetation.

## **5) HISTORY**

Monona County Roadside Management was established in 2018 after finding the county needed a more efficient way of controlling noxious weeds in the right-of-ways. There was also a savings projected in the revegetation projects the county had been previously contracting for and a savings projected in less ditch cleanout projects by stabilizing soils.

Initially, the entire seeding, spraying program, and Weed Commissioner activities for the county were not being performed! The Supervisors were getting tired of complaints and tasked the Secondary Roads Department and the County Engineer to clean up the ROW's. Since then, we have started a spray program, tree removal efforts throughout fall/winter, and regular mowing. These are a large part of the puzzle to help achieve the goals that have been set forth in the IRVM program.

**6) MAP OF MONONA COUNTY**

# MONONA COUNTY IOWA



Office of Systems Planning  
Phone: (515) 239-1664  
www.IOWADOT.GOV/MAPS



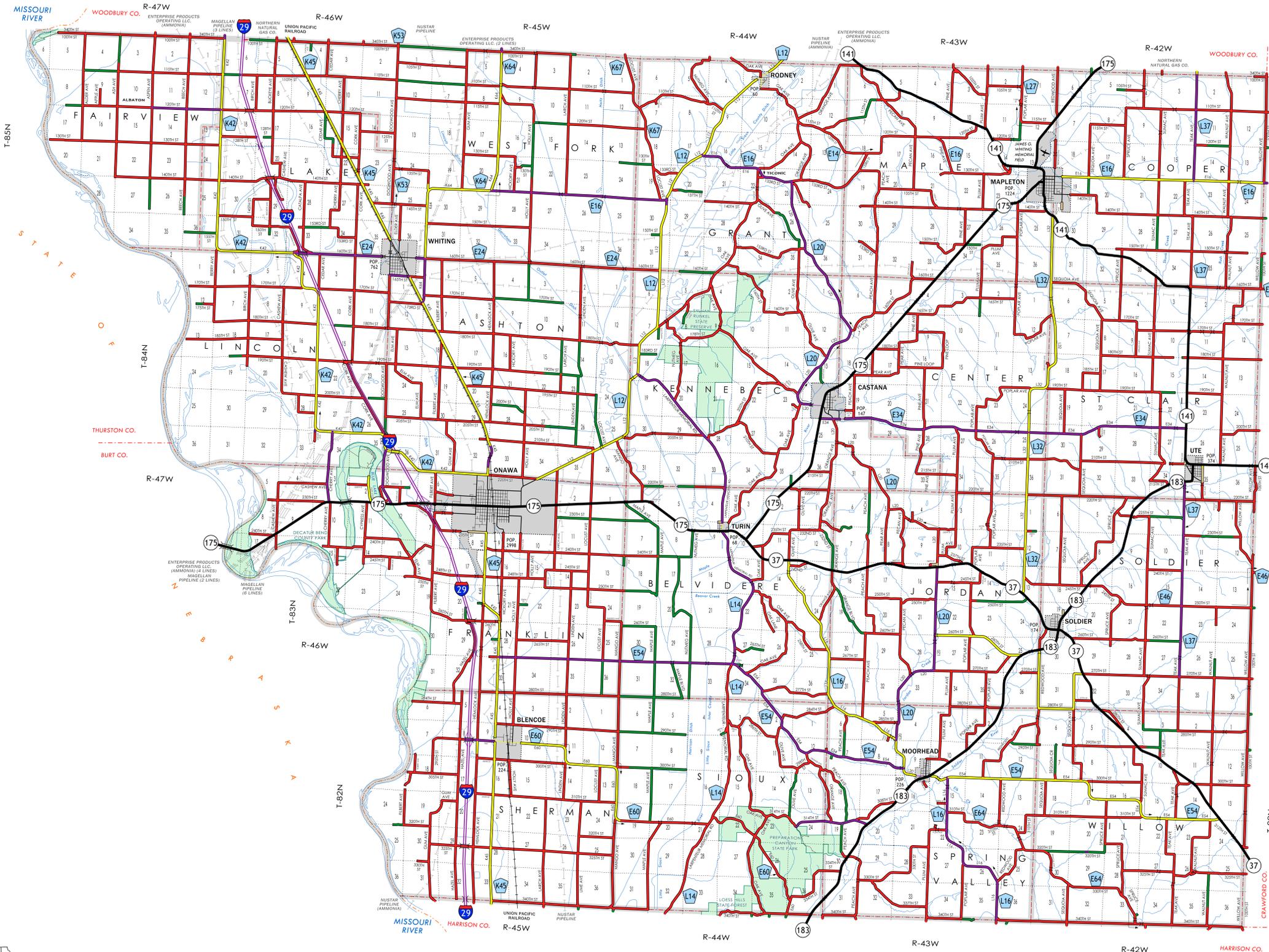
In Cooperation With  
United States  
Department of Transportation

JANUARY 1, 2017



### LEGEND

- INTERSTATE HIGHWAY
- PRIMARY HIGHWAY-DIVIDED
- FORESLAND CEMENT CONCRETE ROAD
- ASPHALT ROAD
- BITUMINOUS ROAD
- GRAVEL ROAD
- EARTHEN ROAD
- INTERSTATE HIGHWAY
- UNITED STATES HIGHWAY
- STATE HIGHWAY
- COUNTY HIGHWAY
- RAILROAD
- PIPELINE
- AIRPORT
- HYDROLOGY
- BRIDGE
- STATE BOUNDARY
- COUNTY BOUNDARY
- CORPORATE BOUNDARY
- TOWNSHIP LINE
- SECTION LINE
- ROAD NAMES
- UNINCORPORATED PLACE
- STATE PARKS
- STATE INSTITUTIONS
- FEDERAL LAND



## **7) JURISDICTIONAL RECOGNITION AND APPROVAL**

Management: The Monona County Roadside Manager is in charge of the Monona County IRVM program. The day to day duties of the Roadside Manager are set by the Roadside Manager with input from the County Engineer. The Board of Supervisors set budgets with inputs from the Engineer and Roadside Manager and oversee that all of the counties citizens are happy with the production from the various departments. Rules and Regulations that must be followed by the Roadside Manager:

- Section 314.22 Integrated Roadside Vegetation Management
- Section 317.11 Weeds on Roads - Harvesting of Grass
- Section 318.3 Obstructions in ROW / Destruction of plants placed in ROW / Crops in ROW
- Chapter 317 Iowa Weed Law – Noxious Weeds and Enforcement Procedures
- Local Laws: Monona County has Ordinances relating to Roadsides that can be viewed at: (URL's to these laws can be found in the Appendices)

## **8) INVENTORY AND ANALYSIS**

An initial plant inventory of Monona County Roadsides has not been conducted.

Monona County Roadside uses GPS electronic records for spraying records. These are mapped on google earth and available to view at any time.

## **9) PROGRAM STRUCTURE**

Flow chart: Monona County Board of Supervisors -> County Engineer-> Road Foreman & Spray Technician-> Roadside Operator (seasonal help).

The Monona County Roadside Department employs three part time Roadside Operators and a full time Operator II/Spray Technician. Our staffing needs are adequate at this time with the current budget level. There are no future plans to hire additional help.

## **10) ANNUAL OPERATIONS**

The Monona County Roadside Department performs the following duties:

- Seeding of road projects and other county projects as needed. Projects include ditch cleanings, culverts, and bridge replacements.
- Spraying of all county owned areas including roadsides, lawns, and some conservation areas. We spray for brush control, noxious weeds and invasive plant control.
- Organize crews for brush cutting and brush mowing. Crew members include loader, skid loader, truck, and excavator operators cutting mainly in the winter months.
- Mowing of highway shoulders and other roadside areas for sight distance safety and weed / brush control.

- Native species seed harvesting. (We plan to start this fall)
- Grant writing and record keeping.
- Purchase seed, chemicals and mulch.
- Perform daily and scheduled maintenance on equipment and make repairs as needed.

#### Timing of Duties:

- Spring time is started observing roadsides, drilling and hydroseeding seed, scouting for weeds
- Spring/Summer is drilling and hydroseeding as conditions allow, spraying for brush and noxious weeds, and mowing including new seeding sites and road shoulders.
- Fall is drilling and hydroseeding seed as time permitted, finishing up mowing, harvesting native species, and hooking up the brush mower and mowing brush. Also winterizing equipment and getting ready for winter.
- Winter we organize brush cutting operations and cut brush and danger trees with a crew of secondary roads workers. We also keep the brush mower going when conditions allow.

## 11) METHODS

All of our seeding methods are outlined in the IRVM Technical Manual found at:

<http://www.uni.edu/~irvm/techmanual/IRVM-Technical-Manual.pdf>.

We do not vary from this manual very often except for a few examples:

- We will drill every area we can, but if it is too steep or wet, we will hydroseed. Drilling is cost effective and has greater establishment rate because of the increased seed to soil contact.
- Seed selection is based on the site. Most ditch cleanings and new construction are seeded to natives or cool season grasses with cover crops.
- We mulch in most situations where there are sensitive areas, steep slopes, or residential and commercial lawns.

All other methods are followed in the IRVM Technical Manual.

## 12) MATERIAL PROCUREMENT

### a. Sourcing

Seed, herbicide, mulch, and any other materials necessary to perform IRVM functions are purchased as needed at fair market value through reliable vendors. Prices for seed, herbicide, and mulch are reviewed annually by the roadside manager, vendors are contacted, and pricing made available. Materials are then purchased at the lowest price.

**b. Material Handling and Storage**

- Seed is stored in a secondary roads shed bay. We would like to retrofit our seed room in the future to make it climate controlled and mouse proof.
- Herbicide is stored at our seed shed that houses our spray truck and attachments.
- Mulch is stored in a secondary roads shed bay. We would like to incorporate this with our seed room in the future.

**13) EQUIPMENT**

<b>Equipment</b>	<b>Condition</b>
2018 Ford F-550 Truck with 725 gallon Norstar Spray System and GPS mapping	10
2000 Bowie 800 gallon Hydroseeder	0
2000 Truax drill	4
2016 Bobcat T770 Compact Track Loader	9
2017 Kubota SVL95-2S Compact Track Loader (2)	9
1995 Case IH 5230	2
2001 John Deere 7230 Tractor (3)	3
2013 Case IH 120A	6
2010 John Deere 6230 Tractor	7
2001 Diamond DSR-60 Mower (2)	2
1999 Landpride RCM 5010 Mower	1
2014 Landpride RCM 5610 Mower	7
2014 Landpride RCM 5610 Mower	7
2015 Landpride RCM 5610 Mower	8
2017 Landpride RCM 5610 Mower	9
2017 Landpride RCM 5610 Mower	9
2001 Diamond Boom Mower (2)	2
2017 Bobcat Brushcat	10
2017 Denis Cimaf DAH-150E Excavator Mulcher	10
2003 Turbo Hop Spreader	5
2001 Seed Stripper	5
2001 Seed Cleaner	5
2001 Seed Mill	5

**LRTF Grants Received:**

Applicant	Award	Fiscal Year	Description
Monona County	\$4,500	1997	Inventory
Monona County	\$4,500	1998	Inventory
Monona County	\$15,000	2000	Equipment - Hydroseeder
Monona County	\$10,000	2000	Equipment - Drill
Monona County	\$7,200	2001	Equipment - Seed Stripper
Monona County	\$4,779	2001	Equipment - Eclipse 324 Cleaner
Monona County	\$3,575	2001	Equipment - Hammer Mill
Monona County	\$1,500	2001	Equipment - Clipper Office Tester
Monona County	\$4,694	2005	Equipment - GIS/GPS
Monona County	\$13,000	2012	IRVM Equipment / Seed Storage Building
Total LRTF Grants	\$68,748		FY1990 - FY2018

**Signatures:**

  
\_\_\_\_\_

Monona County Engineer

  
\_\_\_\_\_

Date

  
\_\_\_\_\_

Monona County Supervisors, Chairperson

  
\_\_\_\_\_

Date

**14) APPENDIX**

- Iowa Code 314.22 Integrated Roadside Vegetation Management <http://coolice.legis.iowa.gov/Cool-ICE/default.asp?category=billinfo&service=iowaCode&ga=83&input=314#314.22>
- Local Laws: Monona County has permits relating to Roadsides that can be viewed at: <http://www.mononacounty.org/Engineer.html>

Supervisor Bramley introduced and moved to adopt the following Resolution, seconded by Supervisor Brouillette :

### **RESOLUTION NO. SR 18-23**

**WHEREAS:** The Board of Supervisors is empowered under authority of Chapter 317 of the Code of Iowa to establish policies, practices and funding to control noxious weeds,

**WHEREAS:** The Board of Supervisors desire to establish a plan for the long term management of the roadside vegetation within the county.

**NOW THEREFORE BE IT RESOLVED** by the Monona County Board of Supervisors that the county establish the following Roadside Vegetation Management Plan:

1. Improve public relations image on roadside management practices and procedures.
2. Inventory county roadsides to determine weed populations and concentrations, native prairie indicators, populations and concentrations, and brush problems.
3. Restore native prairie grass and flower species where appropriate.
4. Protect county roadsides from erosion, slump and siltation.
5. Take advantage of unique funding, management, and seed procuring opportunities.
6. Control brush and other vegetation that could interfere with snow removal and/or public safety.
7. Promote economic advantages of better roadside management throughout the county.
8. Investigate alternative methods for controlling weeds within the county right of way.
9. Evaluate program periodically to identify strengths and weaknesses.

Date: June 12, 2018

Ayes:  Nays: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

  
Chairman, Board of Supervisors

ATTEST:   
Monona County Auditor

## POSITION DESCRIPTION

**Class Title: Roadside Operator (Seasonal)**

**Department: Secondary Roads Department**

**Bargaining Unit: Yes**

**Date: March 22, 2018**

**Location: Any Shops**

### **GENERAL PURPOSE:**

Under the general direction of an Area Road Foreman, operates county trucks and other equipment as part of highway construction, maintenance programs and roadside maintenance.

### **SUPERVISION RECEIVED:**

Works under the guidance and direction of an Area Road Foreman or designated employee.

### **SUPERVISION EXERCISED:**

None.

### **ESSENTIAL DUTIES AND RESPONSIBILITIES:**

Performs skillfully in the many functions involving truck and equipment operations and the routine maintenance of trucks and equipment.

- Mowing and maintaining roadside shoulders.
- IRVM seeding, hydro mulching, seed collection, brush cutting
- Hauling gravel and dirt.
- Hauling chunk material such as field rock, broken concrete, brush, and logs.
- Dumping and/or spreading various materials as required.
- Knowing and practicing the many precautionary and safety steps that avert damage to equipment, property, and personnel.

Is capable of performing all routine maintenance functions on the item of equipment he regularly operates and provides responsible assistance on repairs.

Operates and maintains the materials handling equipment owned by County.

- Tractor/Mowing Tractor
- Sprayer
- Backhoe
- Pay Loader
- Truck/Semi
- Other equipment as required to complete tasks.

Operates, maintains, and repairs minor equipment, including but not limited to:

- Chain Saws
- Pumps
- Concrete Saws
- Pneumatic Tools
- Compressors

Works at a wide variety of road-related assignments and duties, including but not limited to:

- Bridge removal, construction, repair
- Concrete pavement patching
- Asphalt pavement repairs
- Fence removal/replacement
- Culvert removal/replacement
- Painting building/bridges
- Construction signing
- Tile and inlet installation and repair
- Roller, disc operation
- Submits material and labor records

Other duties as assigned

Will be required to perform skilled and unskilled labor required in the repair, replacement and maintenance of roadway structures, culverts, bridges, weirs, traffic control devices as required by an Area Road Foreman or designated employees.

### **PERIPHERAL DUTIES**

Serves as a member of various employee committees.

Serves as a member of survey crew or flagging as needed.

### **DESIRED MINIMUM QUALIFICATIONS**

Education and Experience:

- A. High School Diploma or GED.
- B. Experience in the operation of heavy and light construction equipment.
- C. Possession of a Class B CDL with Air Brake Endorsement required.

Necessary Knowledge, Skills and Abilities:

- A. Ability to obtain a Class A CDL with Air Brake Endorsement within six (6) months of employment.

- B. Ability to work with diesel fuel, gasoline, oil, transmission fluids, antifreeze and other equipment fluids.

**SPECIAL REQUIREMENTS:**

- A. Must be physically capable of moving about on construction work sites.

**TOOLS AND EQUIPMENT USED:**

Heavy construction equipment, a variety of power and non-powered hand tools phone, mobile radio.

**PHYSICAL EXPECTATIONS:**

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job.

Work is performed equally in an office setting as well as outdoor work in the inspection of various construction sites or Secondary Roads Department facilities. Hand-eye coordination is necessary to operate drafting instruments, computers and various pieces of office equipment.

While performing the duties of this job, the employee is occasionally required to stand; walk; use hands to finger, handle, feel or operate objects, tools, or controls; and reach with hands and arms. The employee is occasionally required to sit; climb or balance; stoop, kneel, crouch, or crawl; talk or hear.

Ability to lift a minimum of 100 pounds, stoop, bend, walk at least ½ mile, climb and perform other physical activities involved in normal maintenance operations. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus.

**WORK ENVIRONMENT:**

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee may be required to work in inclement weather temperatures, -50° to 120°. The employee occasionally works near moving mechanical parts and in high, precarious places and is occasionally exposed to wet and/or humid conditions, fumes or airborne particles, toxic or caustic chemicals, risk of electrical shock, and vibration. The noise level in the work environment is usually moderate to high.

**SELECTION GUIDELINES:**

Formal application, rating of education and experience; oral interview and reference check; job related tests and pre-employment physicals may be required.

The duties listed above are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

The job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.

**COMPLIANCE:**

Compliance with the employee handbook, county policies, department work rules, and supervisor directives, is required; and abide by any applicable terms of the collective bargaining agreement.

Monona County is an Equal Opportunity Employer. In compliance with the Americans with Disabilities Act, the County will provide reasonable accommodations to qualified individuals with disabilities and encourages both prospective and current employees to discuss potential accommodations with the employer. Please refer to the employee handbook and union contract for additional information.

Approval: \_\_\_\_\_  
**County Engineer**

Approval: \_\_\_\_\_  
**Chairman, Board of Supervisors**

Effective Date: \_\_\_\_\_

Revision History: \_\_\_\_\_



**Monona County Secondary Road Department  
Request to Perform Work within County Right of Way**



Requested By:  
Name (Last, First)

Address:  
911 Number & Street  
Or P.O. Box Number

City, State,  
Zip Code:

Daytime Phone Number: (     )

Applicant is hereby requesting to enter the County right-of-way and to complete the proposed work as detailed on the attachments and further described as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Site Location:

The requested work will be performed within the right-of-way for County Road:

\_\_\_\_\_  
(Name of Road)

Generally located \_\_\_\_\_ feet / miles N S E W from \_\_\_\_\_  
Cross Road/City limits line.

Work area will be \_\_\_\_\_ feet / miles long.

Adjacent to or associated with parcel: *mononaia.mygisonline.com*

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

**Applicant's Signature and Agreement**

The undersigned has read the stipulations of this permit agreement as well as attachments which may be included and by signing this application agree to all stipulations and to complete work as proposed in compliance with the stipulations and attachments. Failure on the part of the applicant to abide by the stipulations or to construct the work desired as stipulated and within the time frame stated shall render this agreement and request null and void. The undersigned also agrees to save harmless Monona County and the Monona County Secondary Road Department from any damages or losses that may be sustained by any persons, or person, on account of the conditions and requirements of this agreement.

\_\_\_\_\_  
Applicant

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

**Official County Use Only**

Secondary Roads Department Approval:

Approved Expires \_\_\_\_\_

Denied - Reason for Denial \_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_  
Signature

\_\_\_\_\_ Title

\_\_\_\_\_ Print Name

\_\_\_\_\_ Date







**Monona County Secondary Road Department  
Request for Driveway or Field Entrance**

Name: \_\_\_\_\_.

Mailing Address: \_\_\_\_\_.

Daytime Phone: \_\_\_\_\_.

Applicant requests permission to install a driveway or field entrance to be located as follows:

The proposed access will located on County Road: \_\_\_\_\_.

To access parcel #: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Parcel Information: **mononaia.mygisonline.com**

Distance/Direction from parcel line: \_\_\_\_\_ feet, **N S E W** from, **N S E W** parcel line.

New Driveway \_\_\_\_\_ Replacement \_\_\_\_\_ Moving Driveway \_\_\_\_\_ Other \_\_\_\_\_.

**Applicant's Signature and Agreement**

The undersigned has read the stipulations of this permit agreement as well as attachments which may be included and by signing this application agree to all stipulations and to complete work as proposed in compliance with the stipulations and attachments. Failure on the part of the applicant to abide by the stipulations or to construct the work desired as stipulated and within the time frame stated shall render this agreement and request null and void. The undersigned also agrees to save harmless Monona County and the Monona County Secondary Road Department from any damages or losses that may be sustained by any persons, or person, on account of the conditions and requirements of this agreement.

\_\_\_\_\_  
Applicant/Owner Signature

\_\_\_\_\_  
Applicant Signature  
(If different from Owner)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

**Official County Use Only**

Secondary Roads Department Approval:

Approved

Denied - Reason for Denial \_\_\_\_\_

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

*Permit Expiration:* \_\_\_\_\_

Notice of Intention to commence activities on road rights-of-way shall be submitted by the applicant a minimum of 48 hours prior to actually commencing the activities as herein granted by this application:

Failure to Contact representative will voids permit:

Notice is to be given to the following Monona County representative:

\_\_\_\_\_  
Name



\_\_\_\_\_  
Phone No.

AGREEMENTS

The owner and applicant agrees that if granted a permit to construct the access as requested, the following stipulations shall govern:

A. GENERAL

- 1. Stipulations and requirements contained herein are not intended to waive greater requirements of the local zoning ordinances.
2. Owner's attention is directed to the fact that a private property may not be used as to obstruct or encumber the public road right of way, or interfere with the safety, comfort and rights of the public road users.
3. A copy of the approved permit shall be available on the job site at all times for examination by County Officials.
4. Subject to the approval of this application and upon completion of the construction of the entrance in compliance with the terms agreed upon in this document and attachments, no changes in the entrance or its location shall be undertaken without prior written approval from the County Engineer.
5. Except in the cases where the entrance also serves as a school Bus turnaround, the owner shall be responsible for all future maintenance costs associated with maintaining the access in a safe state of repair from the traveled way of the road to the right-of-way line.
6. That all provisions herein relating to the construction, repair or maintenance of the entrance shall be binding on all successors or assigns of the owner.

B. LIABILITY

- 1. The applicant shall carry on all work within the right-of-way with serious regard to the safety of the traveling public and adjacent property owners and shall save Monona County and the Monona County Secondary Road Department harmless of any damage or losses that may be sustained by the traveling public on account of any and all associated activities within the County Right-of-way or covered by this permit.
2. The applicant shall indemnify and save harmless Monona County and the Monona County Secondary Road Department and their employees, from any and all actions, suits at law or in equity, for losses, damages, claims or demands, and from any and all liability and expense of whatsoever nature, arising out of or in connection with the applicant's use of the public road and rights-of-ways.
3. The applicant shall hold Monona County and the Monona County Secondary Road Department harmless of any damage that may result to said road because of the activities associated with this permit, and shall reimburse Monona County or the Monona County Secondary Road Department for any expenditures Monona County or the Monona County Secondary Road Department may have to make on said road rights of way on account of said applicant's activities or lack thereof.
4. If the applicant should fail to comply with any of the conditions and requirements of this agreement, the County may terminate it, where upon the owner(s) shall immediately, remove any construction undertaken pursuant to this agreement and restore the access(es) previously existing and any rights granted the owner(s) by this agreement shall end.

C. NOTIFICATION

- 1. Before beginning any work within the road rights-of-way, it is the responsibility of the owner/applicant to:
a. Contact utility companies which may be located in the area. Contact should be made at Iowa One Call (1-800-292-8989), a minimum of 48 hours in advance of starting activities. If the agricultural activities requested in this application should cause a need to relocate or modify an existing utility, any cost associated shall be as negotiated between the applicant and the utility owner.
b. Contact County's Representative as noted in this document 48 hours prior to the start of construction.

D. CONSTRUCTION

- 1. The construction shall be completed prior to the permit expiration otherwise this permit is null and void.
2. Unless specifically noted, all work activities performed within the right-of-way shall be restricted to a time frame of 30 minutes after sunrise and 30 minutes before sunset.
3. The access, including drainage structure, grading and surfacing and entrance configuration shall be constructed by the owner/applicant at the owner/applicant's expense, in accordance with exhibit and attachments hereto, and in conformity with the specifications of the County and the Current Version of the Statewide Urban Specifications.
a. All culverts installed within the County right-of-way shall be New Galvanized Corrugated Metal Pipe with a Minimum Gauge of 14 and have a Minimum 18" Diameter.
b. CMP must be installed to the manufactures specifications.
4. That the construction, future repair or maintenance of said access shall be carried on in such away as not to interfere with traffic on said roadway, and owner shall take all reasonable precautions to protect and safeguard the entrance or as specifically lives and property of any person or persons, on account of such construction, repair or maintenance operation.
5. That no filling will be permitted in the right-of-way of the County road other than necessary to construct the proposed access or as specifically stated herein.
6. Side slope of the requested entrance shall be constructed as a minimum of 8:1 slope where no culvert is required and 6:1 slope when a culvert is required.
7. Applicant will take necessary precautions to prevent the tracking of dirt and mud onto the roadway during construction. The owner/applicant will be responsible for the removal of any material from the roadway by generally acceptable practices prior to the end of the work day.
8. The following special requirements shall apply to this permit:

\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_

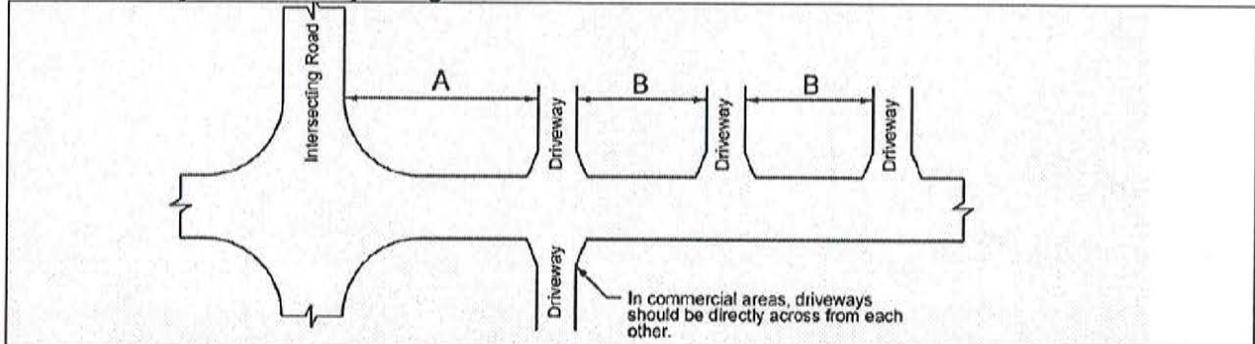
- 9. In Rural-designated areas, the finished surface elevation of the access over the culvert shall be 6 to 9 inches below the roadway shoulder elevation.
In urban designated areas, the access shall rise to a finished surface elevation of 6 to 9 inches above the gutter elevation.
10. Access Dimensions:

Minimum Driveway Width: \_\_\_\_\_feet Maximum Driveway Width: \_\_\_\_\_feet
Distance/Direction from Closest Intersection/Access: \_\_\_feet \_\_\_\_\_ from Intersection/Access
Distance/Direction from parcel line: \_\_\_\_\_feet \_\_\_\_\_ from \_\_\_\_\_ parcel line.

New Culvert Required
Minimum Culvert Diameter: \_\_\_\_\_inches. Length of culvert to be determined by applicant according to access width and required side slopes.

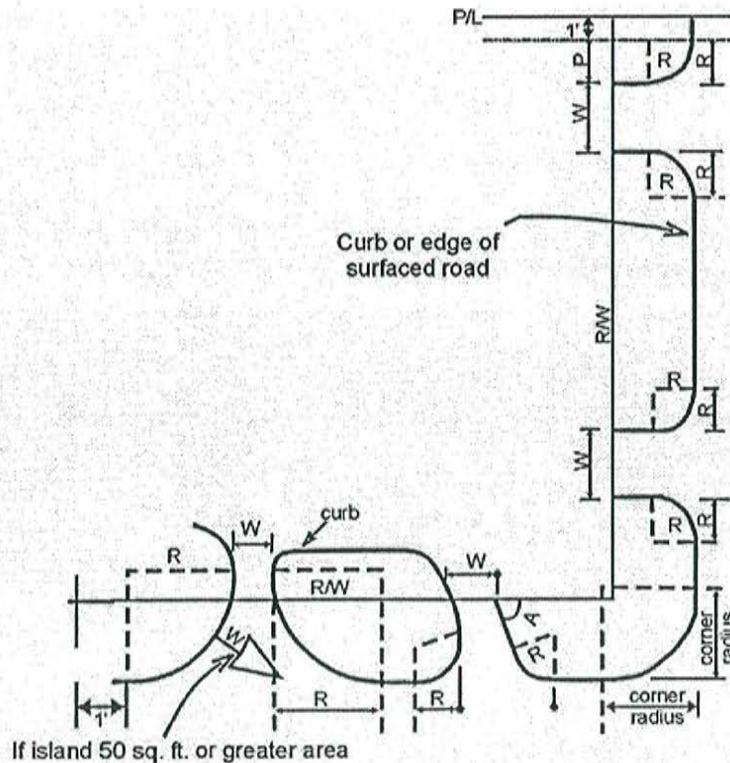
Monona County Secondary Roads Department  
Driveway Permit Requirements

Driveway Location/Spacing



	Minor Arterial			Collector			Local		
	Residential Area	Commercial Area	Ag. Area	Residential Area <sup>2</sup>	Commercial Area	Ag. Area	Residential Area <sup>2</sup>	Commercial Area	Ag. Area
<b>A. Minimum Intersection Clearance<sup>1</sup></b>	145'	170'	300'	100'	100'	300'	75'	75'	150'
<b>B. Minimum Driveway Spacing<sup>2</sup></b>	100'	200'	300'	75'	100'	300'	50'	100'	150'

1. Values are measured from the back of the curb, intersecting road to the adjacent driveway near edge.
2. Values are measured between driveway edges.
3. One access drive allowed per lot. Depending on lot size, an additional drive may be allowed upon approval of the Jurisdiction.



Entrance Type <sup>1</sup>	Dimension Reference (See Section 5I-2, Figure 14)	Major/Principal Arterial Street				Minor/Arterial Street			
		Residential	Commercial	Industrial	Agricultural	Residential	Commercial	Industrial	Agricultural
		C	B	B	C	C	B	B	C
(a) Width	W								
Minimum		15	24	24	20	15	24	24	20
Maximum		30	45	45	30	30	45	45	30
(b) Right-turn Radius <sup>2</sup>	R								
Minimum		10	10	25	25	10	10	25	25
Maximum		25	35	50	35	25	35	50	35
(c) Min. Acute Angle <sup>4</sup>	A								
Preferred Acute Angle		60°	70°	70°	70°	60°	70°	70°	70°
		90°	90°	90°	90°	90°	90°	90°	90°
(d) Min. Pavement Thickness	T								
		6 in / 8 in	7 in / 9 in	*	6 in (If paved)	6 in	7 in	*	6 in (If paved)

1. Type "A" entrance requires special study.
  2. 3 ft Flares (F) may be used for residential & agricultural entrances.
  3. Minimum spacing from corner on resident property that access to a minor arterial street may be adjusted if lot frontage is limited. Larger lots with larger frontage may be required on corner lots.
  4. Any variation from 90° will be evaluated on a case by case basis. The minimum acute angle (measured from the edge of the pavement) is 60°.
- \* Requires special design.

Entrance Type <sup>1</sup>	Dimension Reference (See Section 5I-2, Figure 14)	Collector (Major & Minor)				Local Street			
		Residential	Commercial	Industrial	Agricultural	Residential	Commercial	Industrial	Agricultural
		C	B	B	C	C	B	B	C
(a) Width	W								
Minimum		10	24	24	20	10	24	24	20
Maximum		24	40	45	30	24	32	40	30
(b) Right-turn Radius <sup>2</sup>	R								
Minimum		10	10	25	25	10	10	10	20
Maximum		25	35	50	35	15	20	30	35
(c) Min. Acute Angle <sup>4</sup>	A								
Preferred Acute Angle		60°	70°	70°	70°	60°	70°	70°	70°
		90°	90°	90°	90°	90°	90°	90°	90°
(d) Min. Pavement Thickness	T								
		6 in	7 in	*	6 in (If paved)	6 in	7 in	*	6 in (If paved)

1. Type "A" entrance requires special study.
  2. 3 ft flares (F) may be used for residential & agricultural entrances.
  3. Any variation from 90° will be evaluated on a case by case basis. The minimum acute angle (measured from the edge of the pavement) is 60°.
- \* Requires special design