



# Wapello County Renewable Energy Ordinance

Board of Supervisors Public Hearing for First Reading of Ordinance

September 3, 2025





Introductions



Project Overview



Key Components of Ordinance



Discussion



---

# Introductions

# Introductions

**Chris Janson, AICP**

*Principal in Charge*



**Sarah Runkel, AICP**

*Project Manager*



**Jenna Gilliam**

*Project Planner*

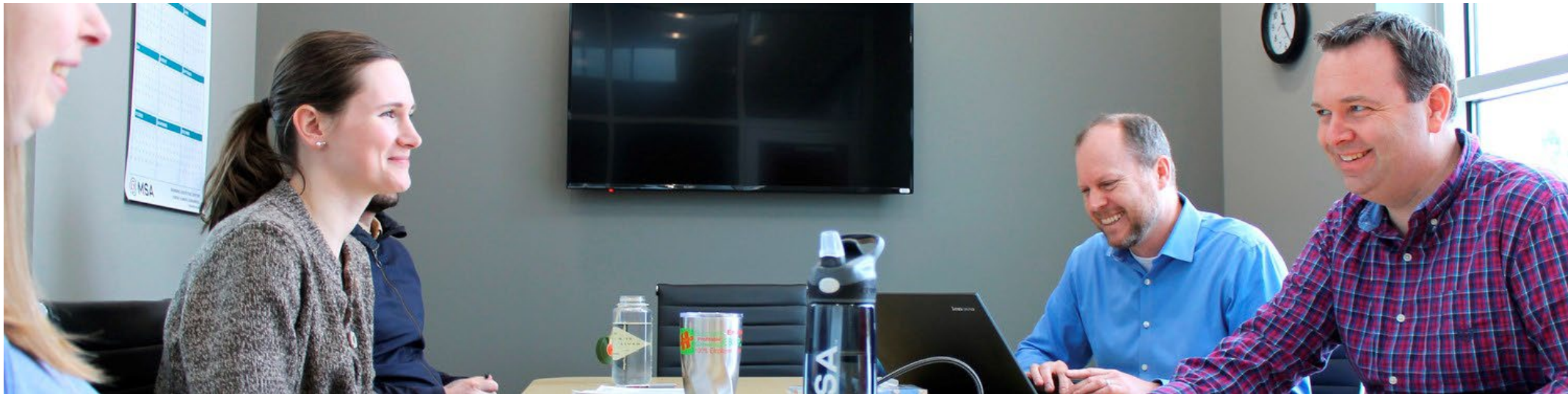


**Kristina Tranel, AICP**

*Project Planner*



# Introduction to MSA



At MSA, we know that every project starts with a plan – a clear and consensus-driven vision for the future that can be realistically implemented. We're here dedicated to helping you maximum the value of some of your most powerful assets.



**63**  
INDUSTRY AWARDS  
EARNED SINCE 2010

**400 +**  
TEAM MEMBERS




**17** OFFICE  
LOCATIONS

WE'RE PROUD TO BE 100%  
**EMPLOYEE-OWNED**

**\$500+ MILLION**  
GRANTS & LOW-INTEREST LOANS  
We've helped our clients secure to help offset the cost of infrastructure projects



ENABLING PEOPLE TO  
**POSITIVELY IMPACT** THE LIVES  
OF OTHERS SINCE 1962



**7** AICP LICENSED  
PLANNERS AND  
SPECIALISTS

---

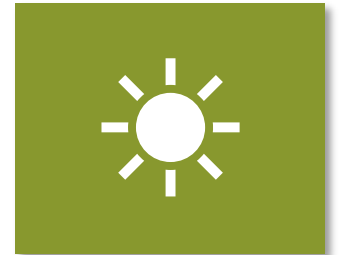
# Project Overview

# Project Overview – The Need

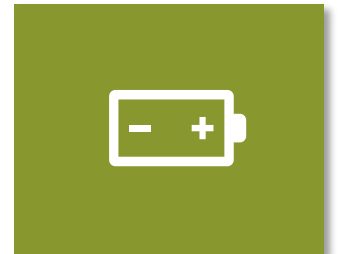
- Clean energy
- Economic development in Wapello County
- Proposed siting for wind energy
- Lack of State regulations
- Protection of land
- Landowner rights



**Wind Energy**



**Solar Energy**



**Battery Energy  
Storage**

# Project Overview – The Process



---

Wapello County has recognized the need for a renewable energy ordinance. The County entered into agreement with MSA Professional Services Inc. in 2024 to develop the ordinance. MSA has researched the needs of the County, successful cases, and state, federal and local laws to comprise an ordinance that will work for Wapello County. A public hearing was held in July to ask for recommendation of the ordinance from the Planning and Zoning Commission to the Board of Supervisors. Tonight is the first reading of the ordinance for the Board.

# Project Schedule

## 2025

February	March	April	May
<ul style="list-style-type: none"><li>• Project Kick-Off</li><li>• Initial Research</li></ul>	<ul style="list-style-type: none"><li>• Project Research Cont'd</li><li>• Start Drafting Ordinance</li></ul>	<ul style="list-style-type: none"><li>• Joint Commission/Board Workshop</li></ul>	<ul style="list-style-type: none"><li>• Continue Drafting Ordinance</li></ul>
June	July	August	September-October
<ul style="list-style-type: none"><li>• Ordinance Revisions</li><li>• Joint Commission/Board Workshop</li></ul>	<ul style="list-style-type: none"><li>• Ordinance Revisions</li><li>• Zoning Commission Review and Consider Recommendation</li></ul>	<ul style="list-style-type: none"><li>• Ordinance Revisions</li></ul>	<ul style="list-style-type: none"><li>• Sept. 3: BoS 1st Reading to Review + Consider Adoption</li><li>• Sept. 9: BoS 2nd Reading to Review + Consider Adoption</li><li>• Sept. 17: BoS 3rd Reading to Review + Consider Adoption</li></ul>



# July 28 – Zoning Commission Recap

## Resident Feedback

Generally strong support for wind and solar-- highlighting lower property taxes, more clean energy, bringing needed economic development. Farmers and heritage farms also stated support for such projects. Some concerns regarding desire to increase (commercial) solar setbacks and powerline distance from homes

## Developer(s) and State Input

Wind and solar developers/ reps stressed their commitment to environmental responsibility and upholding contracts; noted significant land already secured in county for potential projects; cautioned that excessive setbacks could jeopardize projects and supported the variance process for potentially reducing setbacks as proposed in current draft Ordinance; State representative urged county-level adoption to ensure local control before state regulations and commended staff and the commission for balanced work

## Commission Discussion and Action

At the close of the meeting, the Commission discussed some hesitation about advancing the Ordinance due to the potential for stricter setbacks. Several public members noted that the Commission's role is to review and recommend the draft to the Board of Supervisors, leaving final decisions on setbacks and standards to the Board. With that in mind, the Commission voted to recommend approval of the Renewable Energy Ordinance, requesting that the Board further review setback and standard provisions

---

# Key Components of Ordinance

# Key Components of Ordinance



**Purpose**



**Definitions**



**Permitting**

*Interim Use Permit for Commercial Renewable Energy System Application*



**General Standards**

*Bulk Regulations*



**Decommissioning Standards**

---

# Definitions

Definitions	
<b>Personal Wind Energy Conversion System (P-WECS)</b>	A Wind Energy Conversion System that has a rated capacity of up to one hundred (100) kilowatts intended to produce electricity primarily for use on-site.
<b>Commercial Wind Energy Conversion System (C-WECS)</b>	A Wind Energy Conversion System with a <b><u>generating capacity of one hundred (100) kilowatts (kW) or greater</u></b> that is intended to <b><u>produce electricity primarily for sale to an electric utility, other third-party commercial or industrial users, or for distribution into the electric grid.</u></b> A C-WECS includes, but is not limited to, the wind turbines, connection, and interconnection infrastructure, operation and maintenance building, fencing, roads and driveways, project substation, interconnection substation, related energy storage infrastructure (if any), and any necessary or related accessory or ancillary facilities including meteorological towers.
<b>Personal Solar Energy Conversion System (P-SECS)</b>	A Solar Energy Conversion System that produces electricity from solar energy <b><u>primarily for use on-site.</u></b>
<b>Commercial Solar Energy Conversion System (C-SECS)</b>	A Solar Energy Conversion System that generates electricity from solar energy <b><u>primarily for sale to an electric utility or other third-party commercial or industrial user.</u></b> C-SECS shall include, but are not limited to, solar panels, support structures, inverters/transformers, operations and maintenance buildings, electrical collector systems, energy storage technologies, wiring, communications, roads, substations, and other equipment necessary for the generation, storage, and delivery of electricity.
<b>Accessory Battery Energy Storage System (A-BESS)</b>	A Battery Storage System that is incidental and subordinate to a Wind Energy Conversion System (WECS) or Solar Energy Conversion System (SECS) as a principal use on the same parcel and intended to primarily to store and supply electrical power generated by the associated WECS or SECS for <b><u>use on-site.</u></b> For the purposes of this Ordinance, an A-BESS shall not be construed to serve or accompany any other use type unrelated to wind or solar energy generation.
<b>Commercial Battery Energy Storage System (C-BESS)</b>	A bank of batteries or capacitors used to store electricity for later use <b><u>primarily off-site</u></b> through the electrical grid or export to the wholesale market – sometimes called a Battery Storage Power Station.

---

# Permitting

Where Permitted		
<b>Wind</b>	<b>Personal Wind Energy Conversion System (P-WECS)</b>	Permitted as an accessory use to a principal permitted use in any zoning district subject to the supplemental standards
	<b>Commercial Wind Energy Conversion System (C-WECS)</b>	Permitted with Interim Use Permit in A-1 Agricultural District/Prime Farmland and I-2 Heavy Industrial zoning districts
<b>Solar</b>	<b>Personal Solar Energy Conversion System (P-SECS)</b>	Permitted as an accessory use to a principal permitted use in any zoning district subject to the supplemental standards
	<b>Commercial Solar Energy Conversion System (C-SECS)</b>	Permitted with Interim Use Permit in A-1 Agricultural District/Prime Farmland and I-2 Heavy Industrial zoning districts
<b>Battery</b>	<b>Accessory Battery Energy Storage System (A-BESS)</b>	Permitted as an accessory use to a principal permitted WECS or SECS in any zoning district subject to supplemental standards
	<b>Commercial Battery Energy Storage System (C-BESS)</b>	Permitted with Interim Use Permit in A-1 Agricultural District/Prime Farmland and I-2 Heavy Industrial zoning districts



# Interim Use Permit for Commercial Renewable Energy Systems

**Applicability:** Required for commercial wind, solar, and battery storage ( $\geq 100$  kW)

**Exemptions:** Like-kind replacements, personal/accessory systems, or  $\geq 25$  MW certified by Iowa Utilities Board

**Application Fees:** \$2,500 base + \$750 per MW capacity; \$150 per meteorological tower; \$1,500 for modifications

**Application Materials:** Ownership proof, site plan, environmental/safety studies, interconnection agreements, decommissioning plan w/ financial security

**Participating Parties:** Must include list with property owner names, signatures, addresses, and parcel numbers

**Agreements:** Road Use Agreement (approved by County Engineer) and Emergency Response Plan (approved by EMA/fire dept)

**Review Process:** Pre-application meeting  $\rightarrow$  submission  $\rightarrow$  staff review  $\rightarrow$  Board of Adjustment public hearing & decision

**Permit Conditions:** Valid for 12 months; lapses if inactive  $> 6$  months; subject to revocation for violations

---

# General Standards

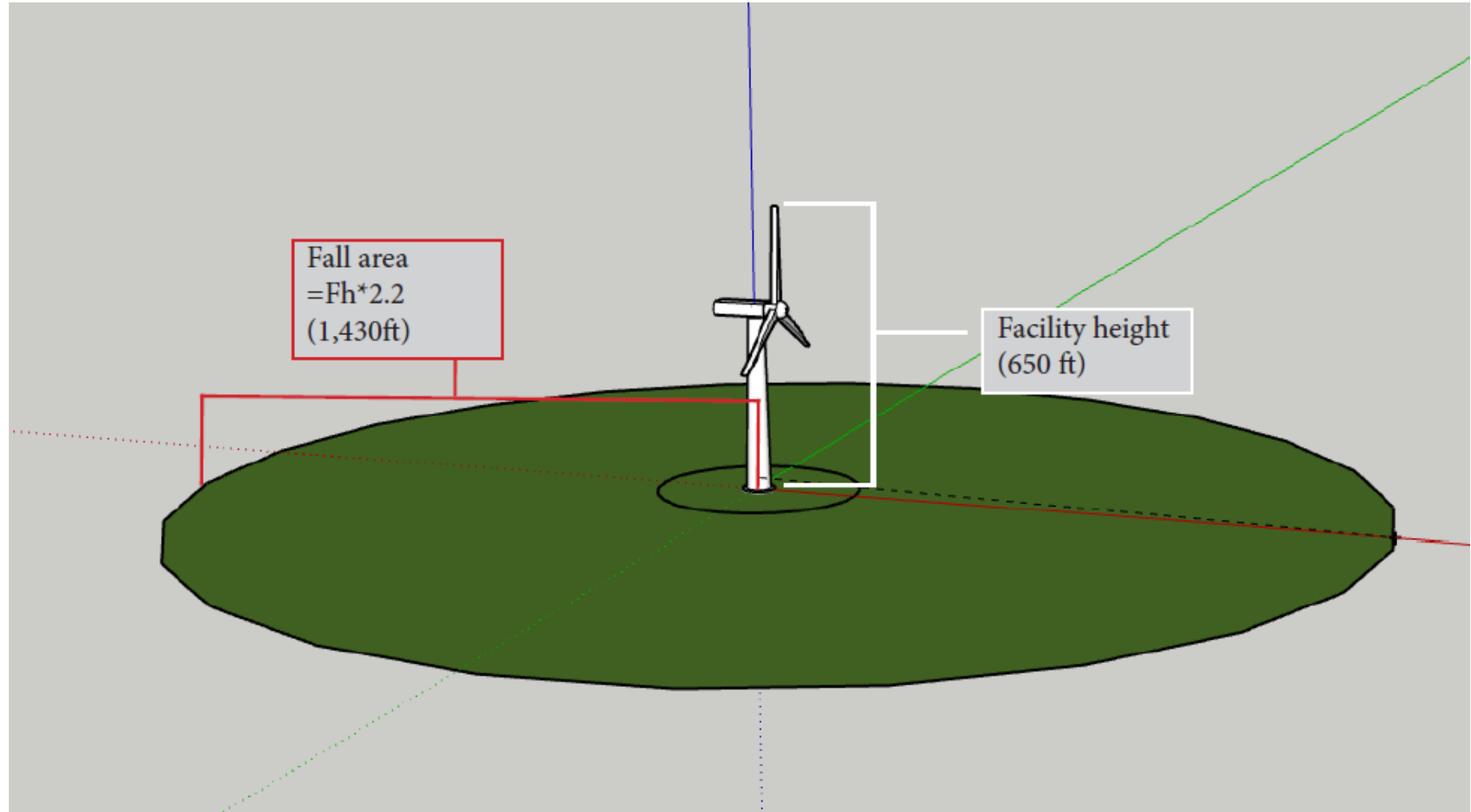
Setbacks

Wind	<b>Personal Wind Energy Conversion System (P-WECS)</b>	<ul style="list-style-type: none"> <li>•Total height of facility from any abutting dwelling, occupied structure, community building, non-participating property, overhead utility line, electric substation, public ROW, railroad ROW, or unoccupied structure, unless a variance waiving property line setback is obtained from the Board of Adjustment</li> <li>•No required setback between a P-WECS and any existing abutting dwelling, occupied structure, or unoccupied structure located on the applicant’s property</li> </ul>	<ul style="list-style-type: none"> <li>•As measured from the center of the foundation of the wind energy conversion facility</li> <li>•Not to exceed 80 ft in height or height allowed under determination of no hazard for that turbine from the FAA obstruction evaluation under 14 CFR 77</li> <li>•Wind energy conversion facility height measured from ground level to tip of facility’s blade at highest vertical point</li> </ul>
	<b>Commercial Wind Energy Conversion System (C-WECS)</b>	<ul style="list-style-type: none"> <li>•2.2 x height of facility from existing abutting dwellings, occupied structures, or community buildings</li> <li>•1.5 x height of facility from existing non-participating properties, existing overhead utility lines, electric substations, railroad ROW, unoccupied structure</li> <li>•1.1 x height of facility from public ROW</li> </ul>	<ul style="list-style-type: none"> <li>•As measured from the center of the foundation of the wind energy conversion facility</li> <li>•Not to exceed allowable height under determination of no hazard for that turbine from the FAA obstruction evaluation under 14 CFR 77</li> <li>•Wind energy conversion facility height measured from ground level to tip of facility’s blade at highest vertical point</li> </ul>
Solar	<b>Personal Solar Energy Conversion System (P-SECS)</b>	<ul style="list-style-type: none"> <li>•3 ft from any roof edge, ridge, or valley for structure-mounted P-SECS and components, unless otherwise permitted by County, state, and national building and fire codes</li> <li>•Meet accessory structure setback requirements of applicable zoning district for ground-mounted P-SECS and components</li> </ul>	<ul style="list-style-type: none"> <li>•The surface and mounting system of a structure-mounted P-SECS may exceed the maximum allowable height of any structure within the zoning district in which the P-SECS is to be installed by up to 4 ft, measured at the system’s maximum tilt</li> <li>•Ground-mounted are permitted in rear yard only and require at least 2 ft off the ground and not exceed 20 ft in height at maximum tilt of the solar panel(s) in any zoning district</li> </ul>
	<b>Commercial Solar Energy Conversion System (C-SECS)</b>	<ul style="list-style-type: none"> <li>•120 ft from existing abutting dwellings, occupied structures, community buildings, existing non-participating properties</li> <li>•50 ft from existing overhead utility lines, electric substations, public row, railroad ROW, unoccupied structure</li> </ul>	<ul style="list-style-type: none"> <li>•Site distance measured from the nearest aboveground point of a Solar Energy Conversion System, not including any fencing, to the nearest point of the applicable feature specified for the setback</li> <li>•All structures (including solar arrays) must meet the minimum principal setback for the zoning district the project is located in</li> </ul>
Battery	<b>Accessory Battery Energy Storage System (A-BESS)</b>	<ul style="list-style-type: none"> <li>•100 ft from existing abutting dwellings, occupied structures, community buildings, existing non-participating properties</li> <li>•50 ft from existing overhead utility lines, electric substations, railroad ROW, unoccupied structure, public ROW</li> </ul>	<ul style="list-style-type: none"> <li>•As measured from the nearest storage container edge to the nearest point of the applicable feature specified for the setback</li> <li>•All structures must meet the minimum principal setback for the zoning district the project is located in</li> </ul>
	<b>Commercial Battery Energy Storage System (C-BESS)</b>	<ul style="list-style-type: none"> <li>•200 ft from existing abutting dwellings, occupied structures, community buildings</li> <li>•500 ft from existing non-participating properties</li> <li>•100 ft from existing overhead utility lines, electric substations, railroad ROW, unoccupied structure, public ROW</li> </ul>	<ul style="list-style-type: none"> <li>•As measured from the nearest storage container edge to the nearest point of the applicable feature specified for the setback</li> <li>•All structures must meet the minimum principal setback for the zoning district the project is located in</li> </ul>

*Typically no setbacks for participating property lines and/or dwellings.*

## Wind Turbine Visual Example

- 2.2x 700 ft high wind turbine = 1,540 ft from abutting dwelling, occupied structure, community building
- 1.5x 700 ft high wind turbine = 1,050 ft from non-participating property, existing overhead utility line, electric substation, railroad right-of-way, or unoccupied structure
- 1.1x 700 ft high wind turbine = 770 ft from public right-of-way



---

# Decommissioning Standards

# Decommissioning (and Reclamation Plan) Standards

- **For:** Commercial Wind, Solar, and Battery Projects ( $\geq 100$  kW)
- **Plan Required:** Submitted with Interim Use Permit; reviewed by Planning & Zoning Dept. (and other entities as needed); Board of Adjustment review/approval required before construction
- **Contents:**
  - Project life, recycling/reuse of components, site restoration steps
  - Engineer-certified cost estimate (updated every 5 years)
  - Removal of all structures/debris to  $\geq 4$  ft below surface
  - Soil regraded/reseeded for agricultural use; environmental monitoring for erosion, invasive species, and debris
- **Binding Terms:** Obligations apply to owners, operators, and successors; landowner must grant access/easements
- **Financial Assurance:**
  - Surety equal to decommissioning cost +10% contingency
  - Accepted forms: bond, escrow, LOC, cash, corporate guarantee, etc.
  - Adjusted every 5 years to match updated cost estimate
  - Released only after inspection confirms full compliance

---

# General Discussion and Next Steps

## Upcoming Meeting Dates

### **Tuesday, September 9, 9:30 am:**

Board of Supervisors Public Hearing for Second Reading of Ordinance

Location: Board of Supervisors Meeting 3<sup>rd</sup> Floor Courtroom

215 N Court St., Ottumwa, IA 52501

### **Wednesday, September 17, 7:00 pm:**

Board of Supervisors Public Hearing for Third (Final) Reading of Ordinance

Location: Eddyville School

1301 Berdan St., Eddyville, IA 52553

---

**Final Questions?**

# Thank you!

**Chris Janson, AICP**

[cjanson@msa-ps.com](mailto:cjanson@msa-ps.com)



**Sarah Runkel, AICP**

[srunkel@msa-ps.com](mailto:srunkel@msa-ps.com)



**Jenna Gilliam**

[jgilliam@msa-ps.com](mailto:jgilliam@msa-ps.com)



**Kristina Tranel, AICP**

[ktranel@msa-ps.com](mailto:ktranel@msa-ps.com)

