

**CITY OF MONTROSE
ORDINANCE #2015-06**

**AN ORDINANCE AMENDING THE ZONING ORDINANCE OF THE CITY OF
MONTROSE CITY CODE RELATING TO SOLAR ENERGY SYSTEMS (SES)**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MONTROSE THAT THE FOLLOWING CHAPTERS AND SECTIONS OF THE ZONING ORDINANCE, RELATING TO SOLAR ENERGY SYSTEMS ARE AMENDED TO READ AS FOLLOWS:

CHAPTER 1002 RULES AND DEFINITIONS

Section 1002-2 Rules and Definitions. The following definitions shall be amended or added as follows:

"ACTIVE SOLAR ENERGY SYSTEM" – A solar energy system whose primary purpose is to harvest energy by transforming solar energy into another form of energy or transferring heat from a collector to another medium using mechanical, electrical, or chemical means.

"BUILDING INTEGRATED SES" - An active solar energy system that is an integral part of a principal or accessory building, rather than a separate mechanical device, replacing or substituting for an architectural or structural component of the building. Building-integrated systems include, but are not limited to, photovoltaic or thermal solar systems that are contained within roofing materials, windows, skylights and awnings.

"COMMUNITY SES" - A solar-electric (photovoltaic) array that provides retail electric power (or a financial proxy for retail power) to multiple community members or businesses residing or located off-site from the location of the solar energy system.

"GROUND MOUNTED SES" - Freestanding solar energy system (panels) that are mounted to the ground by use of stabilizers or similar apparatus.

"PHOTOVOLTAIC SYSTEM" - An active solar energy system that converts solar energy directly into electricity.

"RENEWABLE ENERGY SYSTEM" – An easement that limits the height or location or both, of permissible development on the burdened land in terms of a structure or vegetation, or both, for the purpose of providing access for the benefited land to wind or sunlight passing over the burdened land.

"ROOF OR BUILDING MOUNTED SES" - A solar energy system (panels) that are mounted to the roof or building using brackets, stands or other apparatus.

"ROOF PITCH" - The final exterior slope of a building roof calculated by the rise over the run, typically, but not exclusively, expressed in twelfths such as 3/12, 9/12 or 12/12.

"SOLAR ACCESS" - A view of the sun, from any point on the collector surface that is not obscured by any vegetation, building, or object located on parcels of land other than the parcel upon which the solar collector is located, between the hours of 9:00 AM and 3:00 PM Standard time on any day of the year.

"SOLAR COLLECTOR" - A device, or combination of devices, structure, or part of a device or structure that transforms direct solar energy into thermal, mechanical, chemical or electrical energy.

"SOLAR ENERGY" - Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

"SOLAR ENERGY SYSTEMS (SES)" - An active solar energy system that collects or stores solar energy and transforms solar energy into another form of energy or transfers heat from a collector to another medium using mechanical, electrical, thermal or chemical means.

"SOLAR FARM" - A commercial facility that converts sunlight into electricity, whether by photovoltaics (PV), concentrating solar thermal devices (CST), or other conversion technology, for the primary purpose of wholesale sales of generated electricity. A solar farm is the primary land use for the parcel on which it is located.

"SOLAR MOUNTING DEVICES" – Racking, frames, or other devices that allow the mounting of a solar collector onto a roof surface or ground.

"SOLAR SKYSPACE" - The space between a solar energy collector and the sun, which must be free of obstructions that shade the collector to an extent which precludes its cost effective operation.

"SOLAR SKYSPACE EASEMENT" - A right, expressed as an easement, covenant, condition, or other property interest in any deed or other instrument executed by or on behalf of any landowner, which protects the solar skyspace of an actual, proposed, or designated solar energy collector at a described location by forbidding or limited activities or land uses that interfere with access to solar energy. The solar skyspace must be described as the three dimensional space in which obstruction is prohibited or limited, or as the times of day during which direct sunlight to the solar collector may not be obstructed, or as a combination of the two methods.

"SOLAR STORAGE UNIT" – A component of a solar energy device that is used to store solar generated electricity for later use.

"STRUCTURE HEIGHT" - A distance to be measured from the mean ground level to the top of the structure.

CHAPTER 1018. ACCESSORY BUILDINGS, STRUCTURES, AND USES

Section 1018-13. Active Solar Energy Systems. Active Solar Energy Systems shall be allowed as an accessory use in all zoning classifications where structures of any sort are allowed, subject to the requirements set forth below and within Chapter 1031.

1. **Height** – Active solar energy systems must meet the following height requirements.
 - a. Building or roof mounted solar energy systems shall not exceed the maximum allowed height in any zoning district. For purposes for height measurement, solar energy systems other than building integrated systems shall be given an equivalent

exception to height standards as building mounted mechanical devices or equipment.

- b. Ground or pole mounted solar energy systems shall only be allowed on lots one acre or greater in size, and shall not exceed 20 feet in height when oriented at maximum tilt.
2. **Setback** – Active solar energy systems must meet the accessory structure setback for the zoning district and primary land use associated with the lot on which the system is located.
 - a. **Roof-mounted Solar Energy Systems** – In addition to the building setback, the collector surface and mounting devices for roof-mounted solar energy systems shall not extend beyond the exterior perimeter of the building on which the system is mounted or built, unless the collector and mounting system have been explicitly engineered to safely extend beyond the edge, and setback standards are not violated. Exterior piping for solar hot water systems shall be allowed to extend beyond the perimeter of the building on a side yard exposure.
 - b. **Ground mounted Solar energy Systems**- Ground mounted solar energy systems may not extend into the side yard or rear yard setback when oriented at minimum design tilt.
3. **Visibility** – Active solar energy systems shall be designed to blend into the architecture of the building or be screened from routine view from public right-of-ways other than alleys. The color of the solar collector is not required to be consistent with other roofing materials.
 - a. **Building Integrated Photovoltaic Systems** - Building integrated photovoltaic solar energy systems shall be allowed regardless of whether the system is visible from the public right-of-way, provided the building component in which the system is integrated meets all required setback, land use or performance standards for the district in which the building is located.
 - b. **Solar Energy Systems with Mounting Devices** - Solar energy systems using roof mounting devices or ground-mount solar energy systems shall not be restricted if the system is not visible from the closest edge of any public right-of-way other than an alley. Roof-mount systems that are visible from the nearest edge of the street frontage right-of-way shall not have a highest finished pitch steeper than the roof pitch on which the system is mounted, and shall be no higher than twelve (12) inches above the roof.
 - c. **Coverage** - Roof or building mounted solar energy systems, excluding building-integrated systems, shall allow for adequate roof access to the south-facing or flat roof upon which the panels are mounted. The surface area of pole or ground mount systems shall not exceed 35% of the building footprint of the principal structure.
4. **Approved Solar Components** - Electric solar energy system components must have a UL listing and solar hot water systems must have an SRCC rating.
5. **Plan Approval Required** - All solar energy systems shall require administrative plan approval by City zoning official.

- a. **Plan Applications** - Plan applications for solar energy systems shall be accompanied by to-scale horizontal and vertical (elevation) drawings. The drawings must show the location of the system on the building or on the property for a ground-mount system, including the property lines.
 - i. **Pitched Roof Mounted Solar Energy Systems** - For all roof-mounted systems other than a flat roof the elevation must show the highest finished slope of the solar collector and the slope of the finished roof surface on which it is mounted.
 - ii. **Flat Roof Mounted Solar Energy Systems** - For flat roof applications a drawing shall be submitted showing the distance to the roof edge and any parapets on the building and shall identify the height of the building on the street frontage side, the shortest distance of the system from the street frontage edge of the building, and the highest finished height of the solar collector above the finished surface of the roof.
 - b. **Plan Approvals** - Applications that meet the design requirements of this ordinance, and do not require an administrative variance, shall be granted administrative approval by the zoning official and shall not require Planning Commission review. Plan approval does not indicate compliance with Building Code or Electric Code.
6. **Compliance with Building Code** - All active solar energy systems shall meet approval of local building code officials, consistent with the State of Minnesota Building Code, and solar thermal systems shall comply with HVAC-related requirements of the Energy Code.
 7. **Compliance with State Electric Code** - All photovoltaic systems shall comply with the Minnesota State Electric Code.
 8. **Compliance with State Plumbing Code** - Solar thermal systems shall comply with applicable Minnesota State Plumbing Code requirements.
 9. **Utility Notification** - All grid-intertie solar energy systems shall comply with the interconnection requirements of the electric utility. Off-grid systems are exempt from this requirement.
 10. **Minimum Design Standards** - The following design thresholds are necessary for efficient operation of a solar energy system:
 - a. **Fixed-Mounted Active Solar Energy Systems** must be mounted to face within 45 degrees of south (180 degrees azimuth).
 - b. **Solar Electric (photovoltaic) Systems** - Solar collectors must have a pitch of between 20 and 65 degrees.
 - c. **Solar Hot Water Systems** - Solar collectors need to be mounted at a pitch between 40 and 60 degrees.

- d. **System Location** - The system is located where the lot or building has a solar resource.

11. Standards for an Administrative Variance - A variance shall be granted by the zoning official if the applicant meets the following safety, performance and aesthetic conditions:

- a. **Aesthetic Conditions** - The solar energy system must be designed to blend into the architecture of the building or be screened from routine view from public right-of-ways other than alleys to the maximum extent possible while still allowing the system to be mounted for efficient performance.
- b. **Safety Conditions** - All applicable health and safety standards are met.

CHAPTER 1031. ALTERNATIVE ENERGY SYSTEMS

Section 1031-1. Purpose and Intent. Montrose finds that it is in the public interest to encourage the use and development of renewable energy systems (including SES) that have a positive impact on energy conservation with limited adverse impact on nearby properties. As such, the City supports the use of Solar Collection systems and the development of Solar Farms. The City intends the following standards to ensure that Solar Farms can be constructed within the City while also protecting public safety and the natural resources. The City of Montrose finds that the development of Solar Farms should be balanced with the protection of the public health of the City. Consistent with the Comprehensive Plan, it is the intent of the City with this section to create reasonable standards for households and businesses to use Solar Energy resources.

Section 1031-2. Severability. The provisions of this section shall be severable and the invalidity of any paragraph, subparagraph or subdivision thereof shall not make void any other paragraph, subparagraph or subdivision of this section.

Section 1031.3. Applicability. These regulations are for all SES and Solar Farms on properties and structures under the jurisdiction of the zoning ordinance except that the City requires the owner or operator of solar farms that would generate more than fifty (50) megawatts of power to get approval for such a system from the Minnesota Public Utilities Commission (PUC).

Section 1032.4. Types of SES.

1. **Roof or Building Mounted SES:** accessory to the primary land use, designed to supply energy for the primary use.
 - a. Roof or Building Mounted SES are permitted accessory uses in all districts in which buildings are permitted.
 - b. The owner or contractor shall receive a building or mechanical permit before installing a Roof or Building Mounted SES.
2. **Ground Mounted SES:** accessory to the primary land use, designed to supply energy for the primary use.
 - a. Ground Mounted SES are permitted accessory uses in all districts in which

buildings are permitted, provided the lot is one acre or greater in size.

b. Ground Mounted SES require a City land use or site permit and are subject to the accessory use standards for the district in which it is located, including setback, height and impervious surface coverage limits.

c. The City does not consider the collector surface of a Ground Mounted SES that is not in a DNR designated Shoreland District as impervious surface. Any collector surface of a Ground Mounted SES foundation that is in a DNR designated Shoreland District and compacted soil or other component of the solar installation that rests on the ground is considered impervious surface.

d. The height of a Ground Mounted SES shall not exceed twenty (20) feet at maximum tilt.

e. No Ground Mounted SES shall cover or encompass more than ten percent (10%) of the total property area or lot size.

3. Community SES: Roof or Building Mounted and Ground Mounted Community SES shall be accessory to the primary land use and designed to supply energy for off-site uses on the distribution grid, but not for export to the wholesale market or connection to the electric transmission grid. These systems shall be subject to the following conditions:

a. Roof or Building Mounted and Ground Mounted Community SES are permitted accessory uses in all districts in which buildings are permitted.

b. Prohibitions: The City prohibits Community SES within:

(1). Shoreland Districts as designated by the Department of Natural resources (DNR) and the Montrose Zoning Map.

(2) Wetlands to the extent required by the Minnesota Wetland Conservation Act,

(3) The Floodplain Overlay District.

(4) Residential Districts

d. An interconnection agreement must be submitted to the utility company and proof be provided to the City that the utility company has deemed the agreement "complete".

e. All structures must meet the setback, height and coverage limitations for the zoning district in which the system is located.

f. Ground Mounted SES must meet all required standards for structures in the district in which the system is located.

g. Site Plan Required: The owner or operator shall submit to the City a detailed site plan for both existing and proposed conditions. These plans shall show the location of all areas where solar arrays would be placed, the existing and proposed structures, property lines, access points, fencing, landscaping, surface water drainage patterns, floodplains, wetlands,

the ordinary high water mark for all water bodies, any other protected resources, topography, electric equipment and all other characteristics requested by the City.

h. Power and communication lines. Power and communication lines running between banks of solar panels and to electric substations or interconnections with buildings shall be buried underground. The City may grant exemptions to this requirement in instances where shallow bedrock, water courses or other elements of the natural landscape interfere with the ability to bury lines.

i. Decommissioning Plan: The City requires the owner or operator to submit a decommissioning plan for Community SES to ensure that the owner or operator properly removes the equipment and facilities upon the end of project life or after their useful life. The owner or operator shall decommission the solar panels in the event they are not in use for twelve (12) consecutive months. The plan shall include provisions for the removal of all structures and foundations, the removal of all electrical transmission components, the restoration of soil and vegetation and a soundly-based plan ensuring financial resources will be available to fully decommission the site. The disposal of structures and/or foundations shall meet all City requirements. The City also may require the owner or operator to post a bond, letter of credit or establish an escrow account to ensure property decommissioning.

4. Solar Farms: Solar Farms shall be Ground Mounted SES arrays that are the primary use on parcel on which it is located and are designed for providing energy to off-site uses or export to the wholesale market. Solar Farms, including those that are not permitted or regulated by the State of Minnesota Public Utilities Commission (PUC), shall be subject to the following conditions:

a. Solar Farms shall be permitted as an interim use in the Urban Reserve (UR), Institutional (INS) and Industrial (I-1 and I-2) zoning districts, and shall be processed according to the standards of Chapter 1006 of the Zoning Ordinance.

b. Shall be on properties of at least five (5) acres in size.

c. Stormwater management and erosion and sediment control shall meet the requirements of the City and best management practices.

d. Prohibitions: The City prohibits Solar Farms within:

(1). Shoreland Districts as designated by the Department of Natural resources (DNR) and the Montrose Zoning Map.

(2) Wetlands to the extent required by the Minnesota Wetland Conservation Act,

(3) The Floodplain Overlay District.

e. Foundations. The manufacturer's engineer or another qualified engineer shall certify that the foundation and design of the solar panels meets the accepted professional standards, given local soil and climate conditions.

f. Other standards and codes. All Solar Farms shall meet all applicable local, state and

federal regulatory standards, including the State of Minnesota Building Code, as amended; and the National Electric Code, as amended.

g. Power and communication lines. All power and communication lines running between banks of solar panels and to electric substations or interconnections with buildings shall be buried underground. The City may grant exemptions to this requirement in instances where shallow bedrock, water courses or other elements of the natural landscape interfere with the ability to bury lines.

h. Interconnection. The owner or operator of the Solar Farm must complete an interconnection agreement with the electric utility in whose service territory the system is located.

i. Site Plan Required. The owner or operator of the Solar Farm must submit to the City a detailed site plan for both existing and proposed conditions. These plans shall show the location of all areas where solar arrays would be placed, the existing and proposed structures, property lines, access points to the site, fencing, landscaping, surface water drainage patterns, floodplains, wetlands, the ordinary high water mark for all water bodies, any other protected resources, topography, electric equipment and all other characteristics requested by the City. The Plan shall be reviewed and approved by the City's Emergency Management Director.

j. The owner or operator of the Solar Farm must submit to the City a detailed emergency shutdown plan as part of the review process.

k. The City allows the installation of small operations, security and equipment buildings on the site of solar farms as permitted accessory uses to the Solar Farm.

l. The owner or operator shall contain all unenclosed electrical conductors located above ground within structures that control access. In addition solar farms shall be protected from entry by a minimum six (6) foot tall fence. Razor wire is prohibited on all fences. All electrical connections to the utility system must meet or exceed the National Electrical Safety Code.

m. Signage shall be posted at all entrance points to the property the Solar Farm is located on that includes at a minimum, the owner and operator's name, contact information and emergency phone numbers.

n. The Solar Farm owner or operator shall provide access to the Montrose Fire Department either in the form of a lock or key to all access points to the property the Solar Farm is located on.

o. Solar Farms that have panels that are 10 megawatts or more shall meet the review and design standards of the MN Department of Commerce and/or MN Public Utilities Commission (PUC) for Solar Farms, as applicable.

p. Decommissioning Plan: The City requires the owner or operator to submit a decommissioning plan for Solar Farms to ensure that the owner or operator properly removes the equipment and facilities upon the end of project life or after their useful life. The owner or operator shall decommission the solar panels in the event they are not in use for twelve (12) consecutive months. The plan shall include provisions for the removal of

all structures and foundations, the removal of all electrical transmission components, the restoration of soil and vegetation and a soundly-based plan ensuring financial resources will be available to fully decommission the site. The disposal of structures and/or foundations shall meet all City requirements. The City also may require the owner or operator to post a bond, letter of credit or establish an escrow account to ensure property decommissioning.

5. Additional standards. In addition to the standards allowed above, all SES shall meet the following standards.
 - a. The owners or operators of SES that are connected to the electric distribution or transmission system, either directly or through the existing service of the primary use on the site, shall obtain an interconnection agreement with the electric utility in whose service territory the system is located. Off-grid systems are exempt from this requirement.
 - b. Electric SES components that are connected to a building electric system must have an Underwriters Laboratory (UL) listing.
 - c. All SES shall meet the standards of the Minnesota and National Electric Code.
 - d. All Roof or Building Mounted SES shall meet the standards of the Minnesota Building Code.
 - e. All SES using a reflector to enhance solar production shall minimize glare from the reflector that affects adjacent or nearby properties. Steps to minimize glare nuisance may include selective placement of the system, screening of the solar array from the public view, reducing use of the reflector system or other remedies that limit glare.
 - f. Roof or Building Mounted SES shall not exceed the maximum allowed height in any zoning district. For purposes of height measurement, SES other than building-integrated systems shall be considered to be mechanical devices and are restricted consistent with other building mounted mechanical devices for the zoning district in which the system is being installed.
 - g. Roof Mounted SES shall be placed on the roof to limit visibility from the public right-of-way or to blend into the roof design, provided that minimizing visibility still allows the property owner to reasonably capture Solar Energy.
 - h. Setbacks. All equipment and structures shall meet the setback and coverage limitations for the zoning district in which the system is located, except that Solar Farms shall be setback from all property lines at least one hundred (100) feet. In addition, solar farms shall be screened from adjacent residential uses in accordance with Section 1020-5, Required Landscape Screening.

CHAPTER 1051: UR, URBAN RESERVE

Section 1051-3 Accessory Uses

N. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1051-5-5 Interim Uses.

D. Ground Mounted SES and Community SES, provided they are located on a lot one acre in size or greater, as regulated by Chapters 1018 and 1031 of this Ordinance.

E. Solar Farms as regulated by Chapter 1031 of this Ordinance, provided a ghost plat is provided to illustrate future roadways and utilities as identified in the AUAR and how these improvements could be made during the term of the interim use permit.

CHAPTER 1055: R-1 TRADITIONAL SINGLE FAMILY RESIDENTIAL DISTRICT

Section 1055-3 Accessory Uses

M. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1055-5 Interim Uses.

D. Ground Mounted SES, on lots one acre or larger in size, as regulated by Chapters 1018 and 1031 of this Ordinance.

CHAPTER 1059: R-2, SINGLE FAMILY MANUFACTURED HOME PARK DISTRICT.

Section 1059-3 Accessory Uses

C. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1059-5 Interim Uses.

C. Ground Mounted SES, on lots one acre or larger in size, as regulated by Chapters 1018 and 1031 of this Ordinance.

CHAPTER 1060: R-3, MEDIUM DENSITY RESIDENTIAL DISTRICT

Section 1060-3 Accessory Uses

M. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1060-5 Interim Uses.

C. Ground Mounted SES, on lots one acre or larger in size, as regulated by Chapters 1018 and 1031 of this Ordinance.

CHAPTER 1065: R-4, HIGH DENSITY RESIDENTIAL DISTRICT

Section 1065-3 Accessory Uses

M. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1065-5 Interim Uses.

C. Ground Mounted SES, on lots one acre or larger in size, as regulated by Chapters 1018 and 1031 of this Ordinance.

CHAPTER 1066: R-B RESIDENTIAL BUSINESS DISTRICT

Section 1066-3 Accessory Uses

M. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1066-5 Interim Uses.

D. Ground Mounted SES, on lots one acre or larger in size, as regulated by Chapters 1018 and 1031 of this Ordinance.

CHAPTER 1070: B-1, CENTRAL BUSINESS DISTRICT

Section 1070-3 Accessory Uses

G. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1070-5 Interim Uses.

C. Ground Mounted SES, on lots one acre or larger in size, as regulated by Chapters 1018 and 1031 of this Ordinance.

CHAPTER 1071: B-2 HIGHWAY BUSINESS DISTRICT

Section 1071-3 Accessory Uses

G. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1071-5 Interim Uses.

B. Ground Mounted SES, on lots one acre or larger in size, as regulated by Chapters 1018 and 1031 of this Ordinance.

CHAPTER 1080: I-1, LIGHT INDUSTRIAL DISTRICT

Section 1080-3 Accessory Uses

F. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1080-5 Interim Uses.

B. Ground Mounted SES and Community SES on lots one acre or larger in size, as regulated by Chapters 1018 and 1031 of this Ordinance.

C. Solar Farms as regulated by Chapter 1031 of this Ordinance.

CHAPTER 1081: I-2, GENERAL INDUSTRIAL DISTRICT

Section 1081-3 Accessory Uses

E. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1081-5 Interim Uses.

B. Ground Mounted SES and Community SES on lots one acre or larger in size, as regulated by Chapters 1018 and 1031 of this Ordinance.

C. Solar Farms as regulated by Chapter 1031 of this Ordinance

CHAPTER 1082: INS, INSTITUTIONAL DISTRICT

Section 1082-3 Accessory Uses

H. Roof or Building Mounted Solar Energy System, as regulated by Chapters 1018 and 1031 of this Ordinance.

Section 1082-5 Interim Uses.

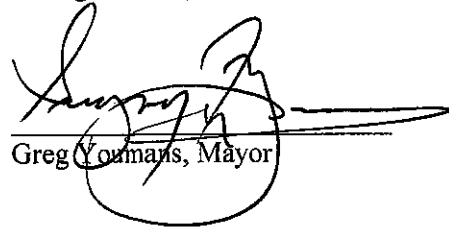
B. Ground Mounted SES and Community SES on lots one acre or larger in size, as regulated by Chapters 1018 and 1031 of this Ordinance.

C. Solar Farms as regulated by Chapter 1031 of this Ordinance

SUBD. 2 EFFECTIVE DATE.

This Ordinance shall become effective upon publication of this Ordinance in the official newspaper of the City.

ORDAINED by the City Council of the City of Montrose, Wright County, Minnesota this 8th day of June, 2015.



Greg Youmans, Mayor

ATTEST:



Wendy Manson, Deputy Clerk

Moved by:
Seconded by:

Published:
Zoning ordinance updated: