

ITEM #: 36
 DATE: 03-14-23
 DEPT: P&H

COUNCIL ACTION FORM

SUBJECT: TEXT AMENDMENT TO STANDARDS FOR ROOF-MOUNTED SOLAR ENERGY SYSTEMS IN ALL ZONING DISTRICTS

BACKGROUND:

The City Council received a request in fall 2022 to consider removing zoning permitting requirements and standards relating to residential solar energy system installations. On November 22, 2022, City Council reviewed the current requirements and permitting process and directed staff to initiate a text amendment to remove zoning requirements related to rooftop solar energy systems for all uses.

The proposed Zoning Ordinance changes do not alter the requirements that roof-mounted systems comply with building and electrical codes or electric service provider requirements. Only roof-mounted systems are addressed by this proposed text amendment; freestanding and wall-mounted facilities are not affected.

The current regulations for solar energy systems (Attachment A) were added to the Zoning Ordinance in 2009 and were most recently updated in 2017. The regulations pertain to solar panels on both residential and non-residential properties and address free-standing, wall-mounted, and roof-mounted installations. Roof-mounted panels are by far the most common choice.

The current process for approval of solar energy system includes coordination between multiple departments. To construct or place a system, a property owner must obtain the following approvals in sequence:

ORDER	NEEDED APPROVAL	RESPONSIBLE ENTITY
1	Interconnection Permit	Ames Electric or Other Provider
2	Solar Energy System Zoning Permit	Planning & Housing Department
3	Building Permit	Inspections Division
4	Electrical Permit	Inspections Division

Internal coordination of permitting was updated administratively in 2018 as part of the SolSmart process. It should be noted that due to the presence of multiple electric providers in the City, not all permits involve Ames Electric with the review. Since the beginning of 2018, 56 Solar Energy System Zoning Permits (SESZPs) have been approved by the Planning Division. In 2022, 21 permits were approved.

Solar Energy System Zoning Permit – by Application Submittal Year
 (These number do not include large, commercial arrays such as the one on Airport Road.)

Year	Residential	Multifamily	Commercial	Total
2018	2	0	1	3
2019	5	0	1	6
2020	6	0	1	7
2021	15	0	1	16
2022	21	0	0	21
2023 (to date)	3*	0	0	3
Total	52	0	4	56

* One additional residential SESZP has been submitted at the time of this report but has not yet been approved. This permit is excluded from the table.

PROPOSED ORDINANCE:

The proposed ordinance removes several regulations for roof-mounted solar panels and eliminates the requirement to have a Solar Energy System Zoning Permit. These changes relate to Section 29.1309 (4) and (5) in the existing Zoning Ordinance. As a result of the changes, the standards have also been reorganized for clarity. A summary of the key changes is below:

1. Remove roof top solar energy system height limitations and requirements that the equipment be flush with the roof.
2. Eliminate the Special Use Permit process for approval of systems that are not flush mounted, including the maximum height projection of 5 feet.
3. Eliminate the need for a Solar Energy System Zoning Permit for roof-mounted systems (all other permits are still required).
4. Allow for roof top systems regardless of the nonconforming status of a residential use or structure.
5. Reorganize some of the information for clarity by location type on the site as opposed to use.
6. Modify formatting, such as creating subsections for blocks of text with multiple regulations.

It should be noted that the proposed changes do not modify requirements in Chapter 31 for historic properties. Approval of alterations will still apply for properties affected by this Chapter of Municipal Code.

PLANNING AND ZONING COMMISSION RECOMMENDATION:

The Planning and Zoning Commission met on February 1, 2023, to consider the proposed text amendment. The Commissioners discussed the merits of removing the height limitations, the flush-mounting requirement, the Special Use Permit, and the Zoning Permit. Commissioners disagreed regarding the correct approach and there were discussions about what could be attached to roof that is out of character for a neighborhood.

Some Commissioners believed the current rules and process were reasonable and should remain. Other Commissioners considered the special use permit process to be burdensome and felt that changes to the standards would be acceptable. Multiple motions were made, which did not receive a majority of votes for approval. **Ultimately, the Commission voted 6-0-0 to recommend that the City Council amend ONLY the Solar Energy System regulations in accordance with items 4, 5, and 6 in the Summary of Changes (above). The Commission made no recommendation regarding the other changes proposed by staff.**

The text amendment recommended by the Commission makes minor changes to the roof top solar regulations: 1) allowing installations on nonconforming structures and 2) reorganizing the regulations for clarity. The Commission's recommendation does not materially alter the permitting process or the allowance for rooftop installations. As an alternative to the staff-proposed ordinance, Attachment C contains the amended text as proposed by the Planning and Zoning Commission.

ALTERNATIVES:

1. Approve on first reading a text amendment regarding Solar Energy System regulations to eliminate roof top standards and permitting process as presented in Attachment B (original staff proposal).
2. Approve on first reading a text amendment regarding Solar Energy System regulations as presented in Attachment C (Planning and Zoning Commission proposal).
3. Direct staff to prepare modifications to the proposed text amendment that modify the roof height standards, special use permit process, or other standard and return for Council consideration at a later date.
4. Do not approve the proposed text amendment.

CITY MANAGER'S RECOMMENDED ACTION:

Many community members and the City Council desire to see more solar panels installed in the community to support sustainability goals. In Ames, mounting the panels on the

roofs of homes is by far the most common way to site them. Since the adoption of the original standards, solar panel placement has become more common.

The current City code for Solar Energy Systems (solar panels) has few regulations for roof-mounted systems and no fee is required to obtain the zoning permit. The current regulations require that the panels are parallel to the slope of the roof and that the panels be no further than six (6) inches from the roof. Any deviation from the code requires a Special Use Permit. **Eliminating these requirements will make installing roof-mounted solar panels simpler within Ames and hopefully will encourage property owners to invest in them.**

Staff does not believe there is likely any impact to community character between having the current standards and process compared to removing the roof top standards. The most common installation type is consistent with the intent of the current “flush” mounted standard and staff does not anticipate a change in style of installations with the change of rules. Therefore, it is the recommendation of the City Manager that the City Council approve Alternative #1.

Attachment A
Current Zoning Code Requirements for Solar Energy Systems

Sec. 29.1309 SOLAR ENERGY SYSTEMS (SES).

Purpose. Solar energy is a clean, readily available and renewable energy source. This section establishes regulations to facilitate the installation and construction of Solar Energy Systems so that systems are safe, effective, and efficient, as well as harmonious with the character of the adjacent area where located. The provisions of this Section apply to the placement, construction and use of “solar energy systems” as defined in this chapter.

The following standards shall apply to the development of Solar Energy Systems:

- (1) **Allowed Use.** Solar Energy Conversion is an allowed accessory use in all zoning districts pursuant to the standards in this section.
- (2) **District Classifications.**
 - (a) Residential Properties. As used in this subsection residential properties include those Zoned RL, RM, UCRM, RH, RLP, FS-RL, FS-RM, and also F-VR, F-PRD, and S-SMD.
 - (b) Non-residential Properties. As used in this subsection, all properties not zoned in the residential classifications above shall be classified as non-residential property.
- (3) **Freestanding Solar Energy Systems:**
 - (a) Setbacks
 - (i) Front. Solar Energy Systems shall not be located within any required front setback. They may be located in a front yard (beyond the required front setback line) subject to approval of a Solar Energy System Special Use Permit by the Zoning Board of Adjustment, except as noted in (d), below.
 - (a) Front yard, as used in this section, is the space between the principal building on the lot and the front lot line. See definition and graphic in Section 29.406(7)(e).
 - (ii) Side and Rear. Six (6) feet from all property lines and other structures.
 - (iii) Corner and Through Lots. The definition and requirements for a front yard in Section 29.406(7)(e) shall prevail when the subject lot is not an interior lot.
 - (iv) Easements, Utilities, Rights of Way. No portion of any solar energy system shall extend into any easement, right of way or public way, regardless of above stated exceptions and regulations for setback and yard requirements.
 - (b) Location. Systems shall be located on the same lot as the building being served. Where there is no principal building, the system is not allowed.
 - (c) Height in Zoning Districts other than General Industrial: Six (6) feet in height maximum in side and rear yards. Four (4) feet in height maximum in front yards. The height shall be measured from the grade at system base to the highest peak, including the highest position of any adjustable system.
 - (d) Height in General Industrial zones: Twenty (20) feet in height maximum in front yard provided the front setback of the zoning district is met. Twenty (20) feet in height maximum in side and rear yards provided the required side and rear setbacks (Section 3(a)(ii), above) are met. The height shall be measured from the grade at system base to the highest peak, including the highest position of any adjustable system.

- (e) Height in Non-Residential zones if placed over a parking area: Twenty (20) feet in height provided the required setbacks of the zoning district are met.
- (f) Freestanding System Size:
 - (i) Residential Properties. Systems shall not exceed one-tenth (1/10) the footprint of the principal building served or one hundred (100) square feet, whichever is greater.
 - (ii) Non-Residential Properties. Systems shall not exceed the footprint of the Principal building served. Within the General Industrial zone: the footprint of systems may exceed the footprint of the principal building subject to meeting all other development standards.
 - (iii) Lot Coverage. Freestanding systems shall be included in the maximum lot coverage except that up to 40 square feet is allowed regardless of total lot coverage.
 - (iv) Measurement of the system shall be based upon the area of the solar receiving panel, regardless of the adjustment angle of the panel.
- (4) **Residential Attached Solar Energy Systems** are permitted to be located on the roof or attached to a building, subject to all of the following:
 - (a) In the case of wall mounting, no part of the system shall project more than five (5) feet from the building.
 - (b) In the case of front wall mounting, attached systems are only allowed subject to approval of a Solar Energy System Special Use Permit by the Zoning Board of Adjustment. The front wall, as used in this section is defined as any wall coincident with the front yard as defined in Section 29.406(7) (e).
 - (c) No part of the system shall extend more than 50 percent into any required side or rear setback. No part of the system shall extend into any required front setback.
 - (d) No portion of any solar energy system shall extend into any easement, right of way or public way, regardless of above stated exceptions and regulations for setback and yard requirements.
 - (e) Systems shall not exceed the maximum height in the zone, for the structure to which it is attached except for projections allowed in (g) below.
 - (f) The building must have a conforming principal use.
 - (g) Roof attached systems may be mounted on principal and accessory building roofs provided they conform to the maximum height standards established in the zone. Additionally, systems shall be mounted parallel to the pitch of the roof and be no higher than 6 inches from the roof surface except that systems not meeting the flush mount requirement may be allowed subject to approval of a Solar Energy System Special Use Permit, provided they do not project more than 5 feet from the roof surface. A system or a portion of a system not visible from abutting street rights of way is exempt from the flush mount requirement, but no part of the system shall project higher than 5 feet from the roof surface.
 - (h) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
 - (i) Section 29.402(2), pertaining to exceptions for projections into required setbacks shall not apply.
 - (j) There is no surface area size limitation on attached systems, unless otherwise required by a Solar Energy System Special Use Permit.

- (5) **Non-Residential Attached Solar Energy Systems** are permitted on the roof of, or attached to a non-residential building, subject to all of the following:
 - (a) For wall mounting, no part of the system shall project more than five (5) feet from the wall.
 - (b) For roof mounting, no part of the system shall project more than ten (10) feet from the roof.
 - (c) No part of the system shall extend more than 50 percent into any required side or rear setback. No part of the system shall extend more than 20 percent into any required front setback.
 - (d) No part of the system shall exceed the maximum height permitted in the zone, for the structure to which it is attached except for the projections allowed in (b) and (c) above.
 - (e) The building must have a conforming principal use.
 - (f) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
 - (g) Section 29.402(2), pertaining to exceptions for projections into required setbacks shall not apply.
- (6) **Zoning Permit-Exempt systems.** The following systems are exempt from zoning permit requirements:
 - (a) Systems in which the cumulative surface area of the system is four (4) square feet or less
 - (b) Systems or building parts integral to the structure, that are passive (Passive Solar Energy Systems) in nature and do not project from the structure
- (7) **Code Compliance.** Solar Energy Systems shall comply with all applicable building codes and are not exempt from any such inspections and permits. The applicant or designee is encouraged to meet with the regulatory and utility agencies before purchasing equipment to understand feasibility and code requirements prior to applying for a zoning permit.
- (8) **Solar Access.** A property owner who has installed or intends to install a solar energy system shall be responsible for negotiating with other property owners in the vicinity for any necessary solar easement. The granting of a zoning permit or Special Use Permit by the City does not constitute solar access rights.
- (9) **Historic Districts.** All solar energy systems within a historic overlay district are not permitted unless a Certificate of Appropriateness has been granted by the Historic Preservation Commission pursuant to Chapter 31, Municipal Code. None are exempt.
- (10) **Application for Solar Energy System Zoning Permit (SES ZP)**
 The Planning & Housing Director shall prescribe the application form and any necessary submittal requirements, as needed, to determine compliance with this section. The Zoning Permit application shall include, but not be limited to:
 - (a) A plot plan drawn to scale, showing:
 - (i) Existing structures on the lot
 - (ii) Proposed system
 - (iii) Property lines
 - (iv) Setbacks of existing and proposed structures
 - (v) Rights of way
 - (vi) Utility diagram applicable to proposed system
 - (b) Elevation views and dimensions
 - (c) Manufacturer's photographs

- (d) Manufacturer’s spec sheet including capacity
 - (e) Demarcation of dimensions. For systems claiming exemption due to “no-visibility” from abutting street rights of way, the applicant shall place demarcation posts, rods or balloons and schedule an appointment for staff to confirm no visibility.
 - (f) Certificate of Appropriateness from Historic Preservation Commission, if applicable
- (11) **Issuance of Solar Energy System Zoning Permit (SES ZP)**
 The Planning & Housing Director shall review the permit application. If the application is compliant, an approval shall constitute a Solar Energy System Zoning Permit (SES ZP) and the applicant shall then be authorized to seek any other necessary building permits and approvals before installation. Any decision of denial shall be in writing and supported by substantial evidence contained in a written record. The Zoning Permit can be revoked if there is evidence that the system does not comply with the permit.
- (12) **Solar Energy System Special Use Permit (SES SUP):**
- (a) Application. The Planning & Housing Director shall prescribe the application form and any necessary submittal requirements, as required in this Section and Section 29.1503. The Director can waive any of the submittal requirements of a SES SUP upon request of the applicant, which the Director deems not applicable.
 - (b) Procedure. The procedure shall follow Section 29.1503(a), Special Use Permits. Sections 29.1503(b-d), (Residential Zone Standards, Commercial Zone Standards and Functional Families) shall not apply to the review of SES SUP applications.
 - (c) Review Criteria. To approve a SES SUP, the Zoning Board of Adjustment must find that the proposal conforms to all of the following five criteria (i-v) and either vi. OR vii.:
 - (i) The system will be harmonious with the character of the neighboring properties as they exist on the date of approval, which is defined as properties within 200 feet of the system property
 - (ii) Access to open space (air and light) from the neighboring properties is not significantly reduced
 - (iii) If in a historic district, a Certificate of Appropriateness has been granted by the Historic Preservation Commission
 - (iv) The predominate pattern of building placement, height, orientation and scale among the neighboring properties and general area beyond the neighboring properties will not be negatively impacted or altered by the system
 - (v) The system conforms with all other city, state and federal regulations

AND EITHER

 - (vi) Unique topography, vegetation or lot conditions exist which help to shield the system from the view of neighboring properties and from the street.

OR

 - (vii) Placement of the principal building allows the system to be located and operated in a way that helps to shield the system from the view of neighboring properties and from the street.

- (d) Review and Approval. The Zoning Board of Adjustment can request additional information if insufficient information is presented to determine conformance with the criteria. If approved, the SES SUP can be revoked after a public hearing, if there is evidence that the system does not comply with the provisions of the Special Use Permit. The Board may impose conditions as it deems necessary for the general welfare of the public and for ensuring that the intent and objectives of this Ordinance will be observed. The application shall include the same information required for a SES ZP, and shall also include statements addressing how the application meets the criteria of subsection C above. When a Solar Energy System Special Use Permit is approved, it shall constitute the equivalent of the Solar Energy System Zoning Permit.
- (13) **Site Development Plan Exemption.** A Freestanding Solar Energy System is exempt from Site Development Plan requirements if the surface area of the system is less than 150 square feet as measured in this Section.
- (14) **Exception Provisions Not Applicable.** An Exception for a Minor Area Modification, as defined in Section 29.1506 shall not be allowed or applicable to Solar Energy Systems.
- (15) **Interconnection:** Interconnected Solar Energy Systems are allowed subject to the standards in this section. The applicant is encouraged to work with the applicable utility before purchasing equipment.
- (16) **Abandonment:** System use shall be determined abandoned under the provisions of Section 29.307, which requires notice by the Zoning Enforcement Officer to the property owner. The system shall be removed within 90 days of the termination date, at the cost of the property owner.
- (17) **Signage:** Any signs on the system shall be limited to one square foot.
- (18) **Commercial systems:** A Commercial Solar Energy System is not allowed in the City of Ames.
- (19) **Appearance.** The property owner of any solar energy system shall maintain such system in a safe and attractive manner, including replacement of defective parts, painting, cleaning, and other acts that may be required for the maintenance and upkeep of the function and appearance of such a system. The owner shall also maintain the ground upon which the system is located in an orderly manner, such that is free of debris, tall grass and weeds, and any associated structures remain quality in appearance.
- (20) **Underground Wire Requirement.** Wires shall be underground or otherwise concealed, to the greatest extent possible, where crossing open areas.
- (21) **Industry standard:** Before any Solar Energy System zoning permit is issued for a Solar Energy System, evidence shall be shown that the system and parts meet industry standards, such as Underwriters Laboratories (UL), or another standard applicable to the technology and materials of the system.

Attachment B
Proposed Zoning Code Requirements for Solar Energy Systems
(Staff Recommendation)

Sec. 29.1309 SOLAR ENERGY SYSTEMS (SES).

Purpose. Solar energy is a clean, readily available and renewable energy source. This section establishes regulations to facilitate the installation and construction of Solar Energy Systems so that systems are safe, effective, and efficient, as well as harmonious with the character of the adjacent area where located. The provisions of this Section apply to the placement, construction and use of “solar energy systems” as defined in this chapter.

The following standards shall apply to the development of Solar Energy Systems:

- (1) **Allowed Use.** Solar Energy Conversion is an allowed accessory use in all zoning districts pursuant to the standards in this section.
- (2) **District Classifications.**
 - (a) Residential Properties. As used in this subsection residential properties include those Zoned RL, RM, UCRM, RH, RLP, FS-RL, FS-RM, and also F-VR, F-PRD, and S-SMD.
 - (b) Non-residential Properties. As used in this subsection, all properties not zoned in the residential classifications above shall be classified as non-residential property.
 - (c) Properties within a Historic District Overlay or a Landmark as identified with Chapter 31, may have additional Certificate of Appropriateness requirements as defined within Chapter 31.
- (3) **Freestanding Solar Energy Systems.**
 - (a) Setbacks
 - (i) Front. Solar Energy Systems shall not be located within any required front setback. They may be located in a front yard (beyond the required front setback line) subject to approval of a Solar Energy System Special Use Permit by the Zoning Board of Adjustment, except as noted in (d), below.
 - (a) Front yard, as used in this section, is the space between the principal building on the lot and the front lot line. See definition and graphic in Section 29.406(7)(e).
 - (ii) Side and Rear. Six (6) feet from all property lines and other structures.
 - (iii) Corner and Through Lots. The definition and requirements for a front yard in Section 29.406(7)(e) shall prevail when the subject lot is not an interior lot.
 - (iv) Easements, Utilities, Rights of Way. No portion of any solar energy system shall extend into any easement, right of way or public way, regardless of above stated exceptions and regulations for setback and yard requirements.
 - (b) Location. Systems shall be located on the same lot as the building being served. Where there is no principal building, the system is not allowed.
 - (c) Height in Zoning Districts other than General Industrial:
 - (i) Six (6) feet in height maximum in side and rear yards.
 - (ii) Four (4) feet in height maximum in front yards.
 - (iii) The height shall be measured from the grade at system base to the highest peak, including the highest position of any adjustable system.

- (d) Height in the General Industrial zones Zoning District:
 - (i) Twenty (20) feet in height maximum in front yard provided the front setback of the zoning district is met.
 - (ii) Twenty (20) feet in height maximum in side and rear yards provided the required side and rear setbacks (Section 3(a)(ii), above) are met.
 - (iii) The height shall be measured from the grade at system base to the highest peak, including the highest position of any adjustable system.
- (e) Height in Non-Residential zones if placed over a parking area: Twenty (20) feet in height provided the required setbacks of the zoning district are met.
- (f) Freestanding System Size:
 - (i) Residential Properties. Systems shall not exceed one-tenth (1/10) the footprint of the principal building served or one hundred (100) square feet, whichever is greater.
 - (ii) Non-Residential Properties.
 - (a) Systems shall not exceed the footprint of the Principal building served.
 - (b) Within the General Industrial zone: the footprint of systems may exceed the footprint of the principal building subject to meeting all other development standards.
 - (iii) Lot Coverage. Freestanding systems shall be included in the maximum lot coverage except that up to 40 square feet is allowed regardless of total lot coverage.
 - (iv) Measurement of the system shall be based upon the area of the solar receiving panel, regardless of the adjustment angle of the panel.

(4) Wall-Mounted Solar Energy Systems.

- (a) Residential
 - (i) ~~In the case of wall mounting, no~~ No part of the system shall project more than five (5) feet from the building.
 - (ii) In the case of front wall mounting, attached systems are only allowed subject to approval of a Solar Energy System Special Use Permit by the Zoning Board of Adjustment. The front wall, as used in this section is defined as any wall coincident with the front yard as defined in Section 29.406(7)(e).
 - (iii) No part of the system shall extend more than 50 percent into any required side or rear setback. No part of the system shall extend into any required front setback.
 - (iv) No portion of any solar energy system shall extend into any easement, right of way or public way, regardless of above stated exceptions and regulations for setback and yard requirements.
 - (v) Systems shall not exceed the maximum height in the zone, for the structure to which it is attached ~~except for projections allowed in (g) below.~~
 - (vi) The building must have a conforming principal use.
 - (vii) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
 - (viii) Section 29.402(2), pertaining to exceptions for projections into required setbacks shall not apply.
 - (ix) There is no surface area size limitation on attached systems, unless otherwise required by a Solar Energy System Special Use Permit.

- (b) Non-Residential
- (i) ~~For wall mounting, no~~ No part of the system shall project more than five (5) feet from the wall.
~~For roof mounting, no part of the system shall project more than ten (10) feet from the roof.~~
 - (ii) Setbacks.
 - (a) No part of the system shall extend more than 50 percent into any required side or rear setback.
 - (b) No part of the system shall extend more than 20 percent into any required front setback.
 - (iii) No part of the system shall exceed the maximum height permitted in the zone for the structure to which it is attached except for the projections allowed in ~~(b) and (c)-(ii)~~ (b) above.
 - (iv) The building must have a conforming principal use.
 - (v) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
 - (vi) Section 29.402(2), pertaining to exceptions for projections into required setbacks shall not apply.
- (5) Roof-Mounted Solar Energy Systems. Residential and non-residential roof mounted are subject to the following standards.
- (a) No Roof-Mounted Solar Energy System may project beyond the edge of the roof or eaves.
 - (b) Roof-Mounted Solar Energy Systems are allowed on structures that project into minimum setbacks.
~~Roof attached systems may be mounted on principal and accessory building roofs provided they conform to the maximum height standards established in the zone. Additionally, systems shall be mounted parallel to the pitch of the roof and be no higher than 6 inches from the roof surface except that systems not meeting the flush mount requirement may be allowed subject to approval of a Solar Energy System Special Use Permit, provided they do not project more than 5 feet from the roof surface. A system or a portion of a system not visible from abutting street rights of way is exempt from the flush mount requirement, but no part of the system shall project higher than 5 feet from the roof surface.~~
- (6) **Zoning Permit-Exempt Systems.** The following systems are exempt from zoning permit requirements:
- (a) Systems in which the cumulative surface area of the system is four (4) square feet or less.
 - (b) Systems or building parts integral to the structure, that are passive (Passive Solar Energy Systems) in nature and do not project from the structure.
 - (c) Roof-Mounted Systems for all uses.
- (7) **Code Compliance.** Solar Energy Systems shall comply with all applicable building codes and are not exempt from any such inspections and permits. The applicant or designee is encouraged to meet with the regulatory and utility agencies before purchasing equipment to understand feasibility and code requirements prior to applying for a zoning permit.
- (8) **Solar Access.** A property owner who has installed or intends to install a solar energy system shall be responsible for negotiating with other property owners in the vicinity for any

necessary solar easement. The granting of a zoning permit or Special Use Permit by the City does not constitute solar access rights.

~~(9) **Historic Districts.** All solar energy systems within a historic overlay district are not permitted unless a Certificate of Appropriateness has been granted by the Historic Preservation Commission pursuant to Chapter 31, Municipal Code. None are exempt.~~

(10) **Application for Solar Energy System Zoning Permit (SES ZP)**

The Planning & Housing Director shall prescribe the application form and any necessary submittal requirements, as needed, to determine compliance with this section. The Zoning Permit application shall include, but not be limited to:

- (a) A plot plan drawn to scale, showing:
 - (i) Existing structures on the lot
 - (ii) Proposed system
 - (iii) Property lines
 - (iv) Setbacks of existing and proposed structures
 - (v) Rights of way
 - (vi) Utility diagram applicable to proposed system
- (b) Elevation views and dimensions
- (c) Manufacturer's photographs
- (d) Manufacturer's spec sheet including capacity
- (e) Demarcation of dimensions. For systems claiming exemption due to "no-visibility" from abutting street rights of way, the applicant shall place demarcation posts, rods or balloons and schedule an appointment for staff to confirm no visibility.
- (f) Certificate of Appropriateness from Historic Preservation Commission, if applicable

(11) **Issuance of Solar Energy System Zoning Permit (SES ZP)**

The Planning & Housing Director shall review the permit application. If the application is compliant, an approval shall constitute a Solar Energy System Zoning Permit (SES ZP) and the applicant shall then be authorized to seek any other necessary building permits and approvals before installation. Any decision of denial shall be in writing and supported by substantial evidence contained in a written record. The Zoning Permit can be revoked if there is evidence that the system does not comply with the permit.

(12) **Solar Energy System Special Use Permit (SES SUP):**

- (a) Application. The Planning & Housing Director shall prescribe the application form and any necessary submittal requirements, as required in this Section and Section 29.1503. The Director can waive any of the submittal requirements of a SES SUP upon request of the applicant, which the Director deems not applicable.
- (b) Procedure. The procedure shall follow Section 29.1503(a), Special Use Permits. Sections 29.1503(b-d), (Residential Zone Standards, Commercial Zone Standards and Functional Families) shall not apply to the review of SES SUP applications.
- (c) Review Criteria. To approve a SES SUP, the Zoning Board of Adjustment must find that the proposal conforms to all of the following five criteria (i-v) and either vi. OR vii.:
 - (i) The system will be harmonious with the character of the neighboring properties as they exist on the date of approval, which is defined as properties within 200 feet of the system property
 - (ii) Access to open space (air and light) from the neighboring properties is not significantly reduced

- (iii) If in a historic district, a Certificate of Appropriateness has been granted by the Historic Preservation Commission
- (iv) The predominate pattern of building placement, height, orientation and scale among the neighboring properties and general area beyond the neighboring properties will not be negatively impacted or altered by the system
- (v) The system conforms with all other city, state and federal regulations

AND EITHER

- (vi) Unique topography, vegetation or lot conditions exist which help to shield the system from the view of neighboring properties and from the street.

OR

- (vii) Placement of the principal building allows the system to be located and operated in a way that helps to shield the system from the view of neighboring properties and from the street.
- (d) Review and Approval. The Zoning Board of Adjustment can request additional information if insufficient information is presented to determine conformance with the criteria. If approved, the SES SUP can be revoked after a public hearing, if there is evidence that the system does not comply with the provisions of the Special Use Permit. The Board may impose conditions as it deems necessary for the general welfare of the public and for ensuring that the intent and objectives of this Ordinance will be observed. The application shall include the same information required for a SES ZP, and shall also include statements addressing how the application meets the criteria of subsection C above. When a Solar Energy System Special Use Permit is approved, it shall constitute the equivalent of the Solar Energy System Zoning Permit.
- (13) **Site Development Plan Exemption.** A Freestanding Solar Energy System is exempt from Site Development Plan requirements if the surface area of the system is less than 150 square feet as measured in this Section.
 - (14) **Exception Provisions Not Applicable.** An Exception for a Minor Area Modification, as defined in Section 29.1506 shall not be allowed or applicable to Solar Energy Systems.
 - (15) **Interconnection:** Interconnected Solar Energy Systems are allowed subject to the standards in this section. The applicant is encouraged to work with the applicable utility before purchasing equipment.
 - (16) **Abandonment:** System use shall be determined abandoned under the provisions of Section 29.307, which requires notice by the Zoning Enforcement Officer to the property owner. The system shall be removed within 90 days of the termination date, at the cost of the property owner.
 - (17) **Signage:** Any signs on the system shall be limited to one square foot.
 - (18) **Commercial systems:** A Commercial Solar Energy System is not allowed in the City of Ames under this Section.
 - (19) **Appearance.** The property owner of any solar energy system shall maintain such system in a safe and attractive manner, including replacement of defective parts, painting, cleaning, and other acts that may be required for the maintenance and upkeep of the function and appearance of such a system. The owner shall also maintain the ground upon which the

system is located in an orderly manner, such that is free of debris, tall grass and weeds, and any associated structures remain quality in appearance.

(20) **Underground Wire Requirement.** Wires shall be underground or otherwise concealed, to the greatest extent possible, where crossing open areas.

~~(21) **Industry standards:** Before any Solar Energy System zoning permit is issued for a Solar Energy System, evidence shall be shown that the system and parts meet industry standards, such as Underwriters Laboratories (UL), or another standard applicable to the technology and materials of the system.~~

Attachment C
Proposed Zoning Code Requirements for Solar Energy Systems
(Planning and Zoning Commission Recommendation)

Sec. 29.1309 SOLAR ENERGY SYSTEMS (SES).

Purpose. Solar energy is a clean, readily available and renewable energy source. This section establishes regulations to facilitate the installation and construction of Solar Energy Systems so that systems are safe, effective, and efficient, as well as harmonious with the character of the adjacent area where located. The provisions of this Section apply to the placement, construction and use of “solar energy systems” as defined in this chapter.

The following standards shall apply to the development of Solar Energy Systems:

- (1) **Allowed Use.** Solar Energy Conversion is an allowed accessory use in all zoning districts pursuant to the standards in this section.
- (2) **District Classifications.**
 - (a) Residential Properties. As used in this subsection residential properties include those Zoned RL, RM, UCRM, RH, RLP, FS-RL, FS-RM, and also F-VR, F-PRD, and S-SMD.
 - (b) Non-residential Properties. As used in this subsection, all properties not zoned in the residential classifications above shall be classified as non-residential property.
 - (c) Properties within a Historic District Overlay or a Landmark as identified with Chapter 31, may have additional Certificate of Appropriateness requirements as defined within Chapter 31.
- (3) **Freestanding Solar Energy Systems.**
 - (a) Setbacks
 - (i) Front. Solar Energy Systems shall not be located within any required front setback. They may be located in a front yard (beyond the required front setback line) subject to approval of a Solar Energy System Special Use Permit by the Zoning Board of Adjustment, except as noted in (d), below.
 - (a) Front yard, as used in this section, is the space between the principal building on the lot and the front lot line. See definition and graphic in Section 29.406(7)(e).
 - (ii) Side and Rear. Six (6) feet from all property lines and other structures.
 - (iii) Corner and Through Lots. The definition and requirements for a front yard in Section 29.406(7)(e) shall prevail when the subject lot is not an interior lot.
 - (iv) Easements, Utilities, Rights of Way. No portion of any solar energy system shall extend into any easement, right of way or public way, regardless of above stated exceptions and regulations for setback and yard requirements.
 - (b) Location. Systems shall be located on the same lot as the building being served. Where there is no principal building, the system is not allowed.
 - (c) Height in Zoning Districts other than General Industrial:
 - (i) Six (6) feet in height maximum in side and rear yards.
 - (ii) Four (4) feet in height maximum in front yards.
 - (iii) The height shall be measured from the grade at system base to the highest peak, including the highest position of any adjustable system.

- (d) Height in the General Industrial ~~zones~~ Zoning District:
 - (i) Twenty (20) feet in height maximum in front yard provided the front setback of the zoning district is met.
 - (ii) Twenty (20) feet in height maximum in side and rear yards provided the required side and rear setbacks (Section 3(a)(ii), above) are met.
 - (iii) The height shall be measured from the grade at system base to the highest peak, including the highest position of any adjustable system.
 - (e) Height in Non-Residential zones if placed over a parking area: Twenty (20) feet in height provided the required setbacks of the zoning district are met.
 - (f) Freestanding System Size:
 - (i) Residential Properties. Systems shall not exceed one-tenth (1/10) the footprint of the principal building served or one hundred (100) square feet, whichever is greater.
 - (ii) Non-Residential Properties.
 - (a) Systems shall not exceed the footprint of the Principal building served.
 - (b) Within the General Industrial zone: the footprint of systems may exceed the footprint of the principal building subject to meeting all other development standards.
 - (iii) Lot Coverage. Freestanding systems shall be included in the maximum lot coverage except that up to 40 square feet is allowed regardless of total lot coverage.
 - (iv) Measurement of the system shall be based upon the area of the solar receiving panel, regardless of the adjustment angle of the panel.
- (4) Wall-Mounted Solar Energy Systems.
- (a) Residential
 - (i) ~~In the case of wall mounting, no~~ No part of the system shall project more than five (5) feet from the building.
 - (ii) In the case of front wall mounting, attached systems are only allowed subject to approval of a Solar Energy System Special Use Permit by the Zoning Board of Adjustment. The front wall, as used in this section is defined as any wall coincident with the front yard as defined in Section 29.406(7)(e).
 - (iii) No part of the system shall extend more than 50 percent into any required side or rear setback. No part of the system shall extend into any required front setback.
 - (iv) No portion of any solar energy system shall extend into any easement, right of way or public way, regardless of above stated exceptions and regulations for setback and yard requirements.
 - (v) Systems shall not exceed the maximum height in the zone, for the structure to which it is attached except for projections allowed in (g) below.
 - (vi) The building must have a conforming principal use.
 - (vii) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
 - (viii) Section 29.402(2), pertaining to exceptions for projections into required setbacks shall not apply.
 - (ix) There is no surface area size limitation on attached systems, unless otherwise required by a Solar Energy System Special Use Permit.

- (b) Non-Residential
 - (i) ~~For wall mounting, no~~ No part of the system shall project more than five (5) feet from the wall.
 - (ii) Setbacks.
 - (a) No part of the system shall extend more than 50 percent into any required side or rear setback.
 - (b) No part of the system shall extend more than 20 percent into any required front setback.
 - (iii) No part of the system shall exceed the maximum height permitted in the zone for the structure to which it is attached except for the projections allowed in (ii) above.
 - (iv) The building must have a conforming principal use.
 - (v) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
 - (vi) Section 29.402(2), pertaining to exceptions for projections into required setbacks shall not apply.
- (5) Roof-Mounted Solar Energy Systems.
 - (a) Residential
 - (i) Systems shall not exceed the maximum height in the zone, for the structure to which it is attached except for projections allowed ~~in (g)~~ below.
 - (ii) The building must have a conforming principal use.
 - (iii) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
 - (iv) Roof attached systems may be mounted on principal and accessory building roofs provided they conform to the maximum height standards established in the zone.
 - (v) ~~Additionally, s~~ Systems shall be mounted:
 - (a) parallel to the pitch of the roof and
 - (b) be no higher than 6 inches from the roof surface.
 - (vi) ~~except that s~~ Systems not meeting the flush mount requirement of this section may be allowed subject to approval of a Solar Energy System Special Use Permit, provided they do not project more than 5 feet from the roof surface.
 - (vii) A system or a portion of a system not visible from abutting street rights of way is exempt from the flush mount requirement, but no part of the system shall project higher than 5 feet from the roof surface.
 - (viii) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
 - (ix) Section 29.402(2), pertaining to exceptions for projections into required setbacks shall not apply.
 - (x) There is no surface area size limitation on attached systems, unless otherwise required by a Solar Energy System Special Use Permit.
 - (b) Commercial
 - (i) ~~For roof mounting, no~~ No part of the system shall project more than ten (10) feet from the roof.
 - (ii) Setbacks.

- (a) No part of the system shall extend more than 50 percent into any required side or rear setback.
- (b) No part of the system shall extend more than 20 percent into any required front setback.
- (iii) No part of the system shall exceed the maximum height permitted in the zone for the structure to which it is attached except for the projections allowed in (ii) above.
- (iv) The building must have a conforming principal use.
- (v) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
- (vi) Section 29.402(2), pertaining to exceptions for projections into required setbacks shall not apply.
- (c) All Roof-Mounted
 - (i) No Roof-Mounted Solar Energy System may project beyond the edge of the roof or eaves.
 - (ii) Roof-Mounted Solar Energy Systems are allowed on structures that project into minimum setbacks.
- (6) **Zoning Permit-Exempt Systems.** The following systems are exempt from zoning permit requirements:
 - (a) Systems in which the cumulative surface area of the system is four (4) square feet or less.
 - (b) Systems or building parts integral to the structure, that are passive (Passive Solar Energy Systems) in nature and do not project from the structure.
- (7) **Code Compliance.** Solar Energy Systems shall comply with all applicable building codes and are not exempt from any such inspections and permits. The applicant or designee is encouraged to meet with the regulatory and utility agencies before purchasing equipment to understand feasibility and code requirements prior to applying for a zoning permit.
- (8) **Solar Access.** A property owner who has installed or intends to install a solar energy system shall be responsible for negotiating with other property owners in the vicinity for any necessary solar easement. The granting of a zoning permit or Special Use Permit by the City does not constitute solar access rights.
- ~~(9) **Historic Districts.** All solar energy systems within a historic overlay district are not permitted unless a Certificate of Appropriateness has been granted by the Historic Preservation Commission pursuant to Chapter 31, Municipal Code. None are exempt.~~
- (10) **Application for Solar Energy System Zoning Permit (SES ZP)**
 The Planning & Housing Director shall prescribe the application form and any necessary submittal requirements, as needed, to determine compliance with this section. The Zoning Permit application shall include, but not be limited to:
 - (a) A plot plan drawn to scale, showing:
 - (i) Existing structures on the lot
 - (ii) Proposed system
 - (iii) Property lines
 - (iv) Setbacks of existing and proposed structures
 - (v) Rights of way
 - (vi) Utility diagram applicable to proposed system
 - (b) Elevation views and dimensions

- (c) Manufacturer’s photographs
 - (d) Manufacturer’s spec sheet including capacity
 - (e) Demarcation of dimensions. For systems claiming exemption due to “no-visibility” from abutting street rights of way, the applicant shall place demarcation posts, rods or balloons and schedule an appointment for staff to confirm no visibility.
 - (f) Certificate of Appropriateness from Historic Preservation Commission, if applicable
- (11) **Issuance of Solar Energy System Zoning Permit (SES ZP)**
 The Planning & Housing Director shall review the permit application. If the application is compliant, an approval shall constitute a Solar Energy System Zoning Permit (SES ZP) and the applicant shall then be authorized to seek any other necessary building permits and approvals before installation. Any decision of denial shall be in writing and supported by substantial evidence contained in a written record. The Zoning Permit can be revoked if there is evidence that the system does not comply with the permit.
- (12) **Solar Energy System Special Use Permit (SES SUP):**
- (a) Application. The Planning & Housing Director shall prescribe the application form and any necessary submittal requirements, as required in this Section and Section 29.1503. The Director can waive any of the submittal requirements of a SES SUP upon request of the applicant, which the Director deems not applicable.
 - (b) Procedure. The procedure shall follow Section 29.1503(a), Special Use Permits. Sections 29.1503(b-d), (Residential Zone Standards, Commercial Zone Standards and Functional Families) shall not apply to the review of SES SUP applications.
 - (c) Review Criteria. To approve a SES SUP, the Zoning Board of Adjustment must find that the proposal conforms to all of the following five criteria (i-v) and either vi. OR vii.:
 - (i) The system will be harmonious with the character of the neighboring properties as they exist on the date of approval, which is defined as properties within 200 feet of the system property
 - (ii) Access to open space (air and light) from the neighboring properties is not significantly reduced
 - (iii) If in a historic district, a Certificate of Appropriateness has been granted by the Historic Preservation Commission
 - (iv) The predominate pattern of building placement, height, orientation and scale among the neighboring properties and general area beyond the neighboring properties will not be negatively impacted or altered by the system
 - (v) The system conforms with all other city, state and federal regulations

AND EITHER

 - (vi) Unique topography, vegetation or lot conditions exist which help to shield the system from the view of neighboring properties and from the street.

OR

 - (vii) Placement of the principal building allows the system to be located and operated in a way that helps to shield the system from the view of neighboring properties and from the street.

- (d) Review and Approval. The Zoning Board of Adjustment can request additional information if insufficient information is presented to determine conformance with the criteria. If approved, the SES SUP can be revoked after a public hearing, if there is evidence that the system does not comply with the provisions of the Special Use Permit. The Board may impose conditions as it deems necessary for the general welfare of the public and for ensuring that the intent and objectives of this Ordinance will be observed. The application shall include the same information required for a SES ZP, and shall also include statements addressing how the application meets the criteria of subsection C above. When a Solar Energy System Special Use Permit is approved, it shall constitute the equivalent of the Solar Energy System Zoning Permit.
- (13) **Site Development Plan Exemption.** A Freestanding Solar Energy System is exempt from Site Development Plan requirements if the surface area of the system is less than 150 square feet as measured in this Section.
- (14) **Exception Provisions Not Applicable.** An Exception for a Minor Area Modification, as defined in Section 29.1506 shall not be allowed or applicable to Solar Energy Systems.
- (15) **Interconnection:** Interconnected Solar Energy Systems are allowed subject to the standards in this section. The applicant is encouraged to work with the applicable utility before purchasing equipment.
- (16) **Abandonment:** System use shall be determined abandoned under the provisions of Section 29.307, which requires notice by the Zoning Enforcement Officer to the property owner. The system shall be removed within 90 days of the termination date, at the cost of the property owner.
- (17) **Signage:** Any signs on the system shall be limited to one square foot.
- (18) **Commercial systems:** A Commercial Solar Energy System is not allowed in the City of Ames under this Section.
- (19) **Appearance.** The property owner of any solar energy system shall maintain such system in a safe and attractive manner, including replacement of defective parts, painting, cleaning, and other acts that may be required for the maintenance and upkeep of the function and appearance of such a system. The owner shall also maintain the ground upon which the system is located in an orderly manner, such that is free of debris, tall grass and weeds, and any associated structures remain quality in appearance.
- (20) **Underground Wire Requirement.** Wires shall be underground or otherwise concealed, to the greatest extent possible, where crossing open areas.
- ~~(21) **Industry standards:** Before any Solar Energy System zoning permit is issued for a Solar Energy System, evidence shall be shown that the system and parts meet industry standards, such as Underwriters Laboratories (UL), or another standard applicable to the technology and materials of the system.~~

ORDINANCE NO.

AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY AMENDING SECTION 29.1309 THEREOF, FOR THE PURPOSE OF REGULATING SOLAR ENERGY SYSTEMS AND ROOF-MOUNTED SOLAR PANELS REPEALING ANY AND ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT TO THE EXTENT OF SUCH CONFLICT; AND ESTABLISHING AN EFFECTIVE DATE.

BE IT ENACTED, by the City Council for the City of Ames, Iowa, that:

Section One. The Municipal Code of the City of Ames, Iowa shall be and the same is hereby amending Section 29.1309 as follows:

“ Sec. 29.1309 SOLAR ENERGY SYSTEMS (SES).

...

(2) District Classifications.

...

- (b) Non-residential Properties. As used in this subsection, all properties not zoned in the residential classifications above shall be classified as non-residential property.
- (c) Properties within a Historic District Overlay or a Landmark as identified with Chapter 31, may have additional Certificate of Appropriateness requirements as defined within Chapter 31.

(3) Freestanding Solar Energy Systems:

...

- (c) Height in Zoning Districts other than General Industrial:
 - (i) Six (6) feet in height maximum inside and rear yards.
 - (ii) Four (4) feet in height maximum in front yards.
 - (iii) The height shall be measured from the grade at system base to the highest peak, including the highest position of any adjustable system.
- (d) Height in the General Industrial Zoning District:
 - (i) Twenty (20) feet in height maximum in front yard provided the front setback of the zoning district is met.
 - (ii) Twenty (20) feet in height maximum inside and rear yards provided the required side and rear setbacks (Section 3(a)(ii), above) are met.

- (iii) The height shall be measured from the grade at system base to the highest peak, including the highest position of any adjustable system.

...

- (f) Freestanding System Size:

...

- (ii) Non-Residential Properties.
 - (a) Systems shall not exceed the footprint of the principal building served.
 - (b) Within the General Industrial zone: the footprint of systems may exceed the footprint of the principal building subject to meeting all other development standards.

...

- (4) **Wall-Mounted Solar Energy Systems**

- (a) Residential

- (i) No part of the system shall project more than five (5) feet from the building.
 - (ii) In the case of front wall mounting, attached systems are only allowed subject to approval of a Solar Energy System Special Use Permit by the Zoning Board of Adjustment. The front wall, as used in this section is defined as any wall coincident with the front yard as defined in Section 29.406(7) (e).
 - (iii) No part of the system shall extend more than 50 percent into any required side or rear setback. No part of the system shall extend into any required front setback.
 - (iv) No portion of any solar energy system shall extend into any easement, right of way or public way, regardless of above stated exceptions and regulations for setback and yard requirements.
 - (v) Systems shall not exceed the maximum height in the zone, for the structure to which it is attached.
 - (vi) The building must have a conforming principal use.
 - (vii) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
 - (viii) Section 29.402(2), pertaining to exceptions for projections into required setbacks shall not apply.
 - (ix) There is no surface area size limitation on attached systems, unless otherwise required by a Solar Energy System Special Use Permit.

- (b) Non-Residential

- (i) No part of the system shall project more than five (5) feet from the wall.
 - (ii) Setbacks
 - (a) No part of the system shall extend more than 50 percent into any required side or rear setback.

- (b) No part of the system shall extend more than 20 percent into any required front setback.
 - (iii) No part of the system shall exceed the maximum height permitted in the zone for the structure to which it is attached except for the projections allowed in (ii) above.
 - (iv) The building must have a conforming principal use.
 - (v) Section 29.401(5), pertaining to height exceptions for architectural features and projections shall not apply.
 - (vi) Section 29.402(2), pertaining to exceptions for projections into required setbacks shall not apply.
- (5) **Roof-Mounted Solar Energy Systems.** Residential and non-residential roof-mounted systems are subject to the following standards.
- (a) No Roof-Mounted Solar Energy System may project beyond the edge of the roof or eaves.
 - (b) Roof-Mounted Solar Energy Systems are allowed on structures that project into minimum setbacks.
- (6) **Zoning Permit-Exempt Systems.** The following systems are exempt from zoning permit requirements:
- ...
 - (c) Roof-Mounted Systems for all uses.
 - ...
- ~~(9) **Historic Districts.** All solar energy systems within a historic overlay district are not permitted unless a Certificate of Appropriateness has been granted by the Historic Preservation Commission pursuant to Chapter 31, Municipal Code. None are exempt~~
- ...
- (17) **Commercial systems:** A Commercial Solar Energy System is not allowed in the City of Ames under this Section.
- ...
- ~~(21) **Industry standard:** Before any Solar Energy System zoning permit is issued for a Solar Energy System, evidence shall be shown that the system and parts meet industry standards, such as Underwriters Laboratories (UL), or another standard applicable to the technology and materials of the system.”~~

Section Two. All ordinances, or parts of ordinances, in conflict herewith are hereby repealed to the extent of such conflict, if any.

Section Three. This ordinance shall be in full force and effect from and after its passage and publication as required by law.

Passed this _____ day of _____, _____.

Renee Hall, City Clerk

John A. Haila, Mayor