

ITEM #: 36  
DATE: 04-25-23  
DEPT: P&H

**COUNCIL ACTION FORM**

**SUBJECT: ZONING TEXT AMENDMENTS FOR SETBACKS AND SCREENING OF ELECTRIC VEHICLE CHARGERS AND RELATED EQUIPMENT**

**BACKGROUND**

Ames Electric Services is working with vehicle charging companies regarding locating equipment for Level 2 and Level 3 fast electric vehicle chargers on existing commercial sites within the City. The City has also installed its own Level 2 chargers in various locations around the community, including the City Hall Parking Lot M. Zoning standards regulate placement of equipment in relation to setbacks and landscaped areas.

As part of these discussions, questions have arisen about what allowances could be applied to these chargers to encourage their placement in Ames. **City Council reviewed a staff report about chargers on February 23 and directed staff to draft zoning text amendments to allow for chargers within setbacks when parking lots are located within setbacks where there is at least 10 feet of landscaped front yard area. Additionally, Council directed staff to allow for charging equipment to occupy up to two existing parking spaces to support charging of vehicles.**

While locating chargers seems to be a minor issue within a parking lot, there is in fact a substantial amount of infrastructure and equipment needed to power Level 3 Fast Chargers. Commonly, the charging company will need to deploy new infrastructure, including transformers, to be able to power the new chargers. Note that Level 3 fast chargers require additional equipment compared to Level 2 chargers. Level 2 chargers typically are only the charging pedestal and do not have substantial ancillary equipment.

Staff consulted with representatives from Tesla and has learned that its chargers are typically deployed in packages for fast charging in groups of four chargers with ancillary equipment. Below is an example of eight fast charging stations in Altoona that depicts the amount of equipment necessary to support such an installation. Depending on the manufacturer, fewer cabinets may be necessary. Tesla believes its current generation of equipment requires fewer cabinets than the Altoona example shown below. Staff also notes that not all companies use the same types of equipment and ratios of equipment as Tesla.



When this equipment and chargers are located internal to a site, there are no conflicts with zoning standards. **However, on existing sites staff has received requests to place equipment in front yards, which is prohibited by the zoning standards. There is no stated exception for projecting into setbacks for front yard mechanical equipment or vehicle chargers.**

Many existing commercial sites have 5 to 10 feet of front yard landscaped area before their parking lot paving begins. The amount of equipment could easily take up all front yard area. Although all the equipment can be placed within a site subject to the minimum setback of 20 feet, companies may find that more difficult to accomplish with other site planning factors of the property owner or more expensive for the charging company. In some cases the property owners have their own parameters about where equipment may be situated that are different than the City's zoning allowances.

Charging companies are also conscious of cost and how dispersal of cabinets away from chargers would result in higher costs. Cabinets and transformers can be set further away from the chargers; however, this results in higher costs for wiring. There are also some limitations in accessing transformers and connecting to transmission lines.

**PROPOSED ORDINANCE:**

**Staff is proposing to address vehicle chargers by allowing for encroachments within setbacks related to commercial parking lots and specific standards for their installation as Additional Requirements for Specific Uses within Zoning Ordinance Chapter 13. It allows for an unlimited number of charger encroachments, but only allows for one cabinet per four chargers to encroach.**

In February, staff described allowing for only the chargers and optionally to allow for ancillary cabinet. Staff ultimately prepared the draft ordinance allowing for the one ancillary cabinet with the chargers. Staff was comfortable with the dispersal of equipment

and use of landscaping to minimize the appearance of the installations. Note that not all companies might have a 1:4 ratio of chargers to equipment, and additional cabinets would have to meet setbacks. Transformers must also meet setbacks. **The draft ordinance related to setbacks, screening, and additional standards is attached. The proposed changes do not affect residential parking lots.**

**The proposed change will not allow for fast charger installations on many existing sites because often older parking lots were not built with more than a 10-foot front yard setback.** Staff has also adjusted the Mechanical Unit screening section to include a reference to transformers for clarity and the intent of the screening regulations. Transformers are covered by definition, but currently not stated in the standards. The new ordinance allows the screening of transformers to be accomplished by front yard landscaping as well.

### **OTHER CITIES:**

City staff contacted other Iowa cities (Ankeny, Marion, Iowa City, Des Moines, West Des Moines, Waukee, Urbandale, Grimes) to discuss their approach to setbacks for equipment related to vehicle charging. The equipment is commonly treated as accessory buildings or equipment, with each city having variations in how setbacks, landscaping, and permitting applies to such structures and equipment within their city. Generally, the equipment is not permitted to fully occupy a front setback if it is permitted to encroach within a landscaped setback. New development is accommodating the equipment within sites and not needing exceptions. Retrofitting of existing sites has not been a common issue for most cities. Iowa City is in the process of updating its standards specifically for chargers.

Ultimately, landscaping buffering appears to be expected in all situations and some cities make specific design review process to make a case by case determination of how to situate accessory structures on a site.

### **PLANNING AND ZONING COMMISSION:**

The Planning and Zoning Commission reviewed the proposed changes at its April 5 meeting. Staff described the types of equipment used for charging and the allowances would work for existing sites. The Commission discussed how many charger installations would be allowed on site, how would landscaping be impacted, are chargers universally available to all types of electric vehicles, and to what degree we are facilitating electric vehicle charging infrastructure. Ultimately, the Commission voted 6-0 to approve the staff recommendation.

### **ALTERNATIVES**

1. Approve on first reading of a zoning text amendment to allow for encroachment of charger pedestals and one ancillary cabinet within setbacks for commercial parking lots or front yards when there is at least a 10-foot landscaped front yard

and allow for charging equipment to occupy parking spaces and modify mechanical unit screening.

2. Approve on first reading a zoning text amendment with different standards for vehicle chargers, such as allowing a greater encroachment than 10 feet.
3. Take no action to approve a zoning text amendment and continue to apply setback requirements.

**CITY MANAGER RECOMMENDED ACTION:**

Staff believes it would be beneficial to identify vehicle charging facility standards within the Zoning Ordinance to communicate standards to charging companies. The changes also would require a permit for any type of charger installation on commercial site. The proposed encroachment allowances appear to be a reasonable balance of encouraging installations and addressing minimum compatibility requirements. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative #1, as described above.

Other Examples:



**ORDINANCE NO.**

**AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY AMENDING SECTIONS 29.402(c)(XIX), 29.408(4)(a)(i), AND 29.408(4)(a)(iv), AND ENACTING A NEW SECTION 29.1316 THEREOF, FOR THE PURPOSE OF ELECTRICAL VEHICLE CHARGERS WITHIN SETBACKS AND PARKING AREAS; 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 amended by amending Sections 29.402(c)(xix), 29.408(a)(i), and 29.408(a)(iv), and enacting a new Section 29.1316 as follows:

**“Section 29.402. SETBACKS.**

(1) **Building Setback Standard.** Except as provided below, all buildings and structures, Principal and Accessory, shall be located to comply with the minimum and maximum Building Setbacks established for Principal and Accessory Buildings listed in each Zone Development Standards Table, Supplemental Development Standards Table, condition, or other regulation applicable to the lot or the use being employed at the site.

...

(c) **Full projections allowed.** In addition to the minor projections listed in the previous section, the following features are allowed to fully project into required setbacks:

...

(xix) Electric vehicle chargers for nonresidential uses that comply with standards set out in Article 13.

...

**Sec. Sec. 29.408. OTHER GENERAL DEVELOPMENT STANDARDS.**

...

(4) **Mechanical Units and Transformers.**

(a) Screening Required.

(i) For all uses, except for single-family and two-family dwellings, all mechanical units located on the ground shall be screened from ground level view from abutting streets by a sight obscuring fence and/or shrubs that achieve a minimum opacity of approximately 75%. Such shrubs shall be at least 75% the height of the mechanical equipment at the time of installation. Screening shall be at least 6 inches higher than the average height of the mechanical equipment at full growth. Fences shall be equal to the average height of the equipment. Electric vehicle chargers and their associated cabinets are not a mechanical unit and are not subject to screening.

...

(iv) Sites with front yard landscaping as required within Section 29.403 and where mechanical units are located behind the centerline of a building. Where front yard landscaping is not in place, screening is required. For industrial and commercial sites, the Planning Director may approve screening to meet the requirements of this section solely based upon front yard landscaping and other site features that obscure equipment when equipment is set internal to a site and set back from a street at a distance substantially greater than minimum setback requirements.

...

### **Sec. 29.1316. VEHICLE CHARGERS WITHIN SETBACKS AND PARKING AREAS**

(1) Approval of a Zoning Permit is required prior to the placement of an electric vehicle charger and related equipment on a site. Placement of residential electric vehicle chargers at a single-family and two-family dwelling site is exempted from the Zoning Permit requirement. If additional paving is required for the proposed use, it is subject to the procedures of a Minor Site Development Plan. Vehicle Chargers are subject to conformance with this section, when a standard is not addressed by this section all other zoning standards apply.

(2) Electric Vehicle Charging equipment consisting of charger pedestals and one (1) ancillary cabinet per four (4) charger pedestals is permitted within a setback when located within a commercial parking lot. Transformers are not permitted within the setback.

(3) Charger pedestals and one cabinet per four chargers may be placed within the front yard landscaped area when there is a minimum of 10 feet of clear front yard landscape area between the chargers and related equipment and the front property line. The Planning Director may authorize placement within side and rear yard setbacks subject to review of the landscape plan. Placement of the equipment is subject to review of related landscaping for aesthetics and screening. Installation of the chargers and equipment shall not substantially impact or remove healthy existing mature trees within the front yard when feasible alternatives exist.

(4) Placement of vehicle chargers and related equipment may substitute for up to two vehicle parking spaces on a site to meet minimum parking requirements.

(5) Signage for a charger is allowed to be applied to or integrated with the charger casing in addition to other signage allowances for a site to identify the charging stations and provide instructional information. "Applied or integrated with the charger" does not allow for signage greater than the profile of the charger or use of the charger as a support for additional signage."

Section Two. Violation of the provisions of this ordinance shall constitute a municipal infraction punishable as set out by law.

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

Section Four. This ordinance shall be in full force and effect from and after its passage and

publication as required by law.

Passed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

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Renee Hall, City Clerk

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John A. Haila, Mayor