

COMMISSION ACTION FORM

**SUBJECT: AMENDMENT TO LIGHTING STANDARDS ASSOCIATED WITH
ALTERNATIVE LANDSCAPE PROVISIONS FOR AUTO AND MARINE
CRAFT TRADE USES**

BACKGROUND:

On July 20, 2012, the City Council received a request from Dan Levi of Levi Architecture, representing Deery Brothers, to reevaluate lighting provisions in the recently adopted alternative landscape standards for auto dealers. The request expressed concern that the standards have no provisions for the lighting of a “merchandise lot”, and expressed hope that the Council would consider constructive changes to the lighting level allowed for their dealership. In response, the City Council directed staff to provide a brief report on the lighting issue.

Prior to reporting back to the Council, staff met with Deery Brother’s lighting consultant Bob Brown, KJWW Engineering Consultants, who provided information on the output of lighting associated with a typical commercial development, as follows:

City Hall Parking Lot - 2 foot candles average

High Volume Retail – 3 to 5 foot candles average

Auto Dealers:

* *Standard lighting* - 3 foot candles average. These would provide standard lighting levels around customer and employee parking and storage areas.

* *Sales Display Lights* - 15 foot candles average. These are for the balance of the display lot not otherwise lighted with dazzle or highlight levels.

* *Highlight Display Lights* - 150 foot candles at a point. – These are higher lighting levels located along the perimeter to give added focus to cars viewed from the street.

* *Dazzle Display Lights* - 300 foot candles at a point. These are high intense lights in high accent areas, such as near dealership signs or over cars on elevated or rotating platforms.

Mr. Brown emphasized the only standard under the adopted alternative standards that the Deerys could comply with without affecting desired light levels is the requirement to shield the view of fixture lenses from public rights-of-way. This entails attaching what are called glare shields on the bottom side of the fixtures. These shields extend down

approximately 6 to 8 inches below the fixture housing, and are located on the public right-of-way side of each fixture visible from the right-of-way. The view angles shown on cross sections submitted by Mr. Brown provided compelling evidence that this requirement could be met. Staff believes that compliance with this standard will significantly mitigate one of the greater glare factors of outdoor lighting by shielding the visual “hot spots” of light around fixture lenses.

Options Considered by City Council:

In response to Mr. Levi’s request, staff provided the following options to Council:

Option 1. Retain Status Quo – leave the standards as they are.

Option 2. Amend the standards to:

- a. Allow typical sales display light levels (15-foot candles average) in all auto display areas (no dazzle or highlight levels)
- b. Retain lower lighting levels of code in all non-display parking areas
- c. Retain glare shield requirements for all lights
- d. Require security lighting levels in all areas after 10:00 p.m. (2 foot candles average)

Option 3. Amend the standards to:

- a. Allow full levels of auto dealers preferred lighting (e.g., standard, sales, highlight, and dazzle) in all auto display areas
- b. Retain lower lighting levels in all non-display parking areas
- c. Retain glare shield requirements for all lights

Option 4. Any combination of the above.

In deliberating on these options, the Council considered the impacts that high intensity lighting associated with auto dealer parking lots may have on the visual effectiveness of the light columns planned for installation along Highway 30 just east of the Deery Brothers site. Staff suggested that without some means of mitigating or softening the light typically associated with auto dealer parking lots, the visual effectiveness of the light columns could be significantly diminished. With that in mind, the Council directed staff to prepare an ordinance incorporating the elements of Option 2. While this option would not allow for the most intense light auto dealers would choose if left unregulated, it would allow light commensurate with what dealers typically provide in their display sale areas while providing reasonable mitigation of lighting impacts on the community.

With that background, staff has prepared the attached draft ordinance (See Attachment 1) for the Commission’s consideration. The ordinance encompasses the changes listed in Option 2 above, except that it further clarifies how the average lighting levels are to be achieved. Specifically, it allows up to 45 foot candles *at a point* on a 10 X 10 foot

grid to achieve 15-foot candles average in the sales areas, and it allows up to 6 foot candles *at a point* on a 10 X 10 foot grid to achieve 2-foot candles average in non sales areas and in all areas after 10:00 pm. This clarification is needed to ensure that the display sales area will not include the highlight and dazzle lighting levels that the Council wished to avoid. **Allowing an average level without placing a maximum level at a point could facilitate extremely high light levels in some areas if they were off-set by extremely low light levels in other areas.**

There are other ranges that can be specified that will still achieve the 15 foot candle average target, and in fact Deery Brothers representative Fred Rose has indicated that they will need a range that allows up to 90 foot candles on the upper end to achieve their 15-foot candle average across the sales area. This would result in approximately 2.5 foot candles on the low end, and up to 90 foot candles on the high end. The Commission and Council will need to determine if this is an acceptable level on the upper end. To help determine this, Mr. Brown will provide lighting information and pictures from actual sites to help illustrate what this might look like.

On October 10, 2012, a workgroup met with Mr. Brown to address the proposed alternative lighting text. The group consisted of Bob Brown, KJWW Engineering Consultants, Scott Renaud, Fox Engineering, and representatives from the Ames Area Amateur Astronomers, including Al Johnson, Ed Engle, Joe Kollasch and Jim Bonser. Mr. Brown showed examples of average foot candle levels for other sites in Ames, including Ames City Hall, First National Bank, Kum N Go, Target, BP Swift Shop, and George White Chevrolet (See Attachment 2). The group generally agreed that the proposed language, in comparison to examples given by Mr. Brown, helps to address the concern for light hot spots, glare and the concern over the typical light levels associated with the auto dealers. There was still some concern about exceeding a maximum 45 foot candle lighting level. However, there was some degree of comfort in seeing the comparison light source point values already existing at a dealership in Ames and knowing a 15 foot candle average would be maintained in sales areas.

ALTERNATIVES:

1. The Planning and Zoning Commission can recommend that the City Council approve the attached draft ordinance amending lighting standards associated with the alternative landscape standards for auto and marine craft trade uses. (This alternative would recommend approval of a maximum 45 foot candles on the high end of the allowable lighting range.)

2. The Planning and Zoning Commission can recommend that the City Council approve the attached draft ordinance amending lighting standards associated with the alternative landscape standards for auto and marine craft trade uses with modifications (which might include Deery's preferred 90 foot candles on the high end of the allowable lighting range).
3. The Planning and Zoning Commission can recommend that the City Council not adopt the proposed text amendments.
4. The Planning and Zoning Commission can refer this issue back to staff for further information.

RECOMMENDED ACTION:

Staff believes that the proposed amendments reasonably reflect the lighting level targets specified in the Council's referral of these amendments and that they provide reasonable lighting levels for auto and marine craft trade uses. This option was also found to be acceptable to representatives of the Ames Area Amateur Astronomers, who played a pivotal role in development of the City's current "dark sky" ordinance.

Staff therefore recommends that the Commission act in accordance with Alternative 1, which is to recommend that the City Council approve the attached draft ordinance amending lighting standards associated with the alternative landscape standards for auto and marine craft trade uses.

Attachment 1

(PDF of Draft Ordinance to revised Section 29.403(4)(b)(i)(i))

Attachment 2

(PDF file of Examples of Average Foot Candle Measurements in Ames)

ORDINANCE NO. ____

AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY REPEALING SECTION 29.403(4)(b)(i)(i), AND ADOPTING A NEW SECTION 29.403(4)(b)(i)(i) TO AMEND LIGHTING STANDARDS ASSOCIATED WITH ALTERNATIVE LANDSCAPE PROVISIONS FOR AUTO AND MARINE CRAFT TRADE USES; REPEALING ANY AND ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT TO THE EXTENT OF SUCH CONFLICT; PROVIDING A PENALTY; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, the City has adopted landscaping standards for the following purposes:

- i. Reduce heat-generating pavement.
- ii. Provide greater space for trees to shade and cool pavement.
- iii. Provide more space for trees to shade and cool buildings, thereby reducing energy consumption for air conditioning.
- iv. Reduce the number of lights needed to illuminate parking lots and thereby reduce energy consumption and facilitate Dark Sky objectives
- v. Reduce stormwater runoff from impervious surfaces; and

WHEREAS, the City's general landscaping standards for parking lots do not differentiate between parking lots serving different types of uses; and

WHEREAS, parking lots for auto and marine craft trade are not only for purposes of providing parking for individuals that visit or frequent the site, they also serve to display products for sale; and

WHEREAS, alternative landscaping standards for auto and marine craft trade parking lots have recently been adopted that address the marketing needs of the auto sales industry while also ensuring that the stated purposes of landscape standards are achieved; and

WHEREAS, information has been provided demonstrating that the maximum light levels associated with, and required under, the recently adopted alternative landscape standards are not adequate for outdoor display areas;

NOW THEREFORE, 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 adopting a new Section 29.403(4)(b)(i)(i), to read as follows:

- i. Landscaped area between parking lot pavement and property lines.
 - a. Minimum Landscape Width – 20 feet along all property lines abutting public right-of-way lines, 10-feet along all other property lines along a zoning boundary, and 5 feet along all other property lines of properties within the same zone, landscaped as follows:
 - i. Five feet of the landscaped setback shall be landscaped according to the L2 , Low Screen landscaping standards of this Section, with the balance landscaped according to subsection (d) below; or
 - ii. Landscaped according to L1 standards, except that required numbers of trees and shrubs may be strategically clustered to allow visual openings into the site. Trees and shrubs must be clustered in regular intervals within required landscaped areas, spaced no greater than 200 feet apart. Each cluster shall include no less than three trees spaced no greater than 15 feet apart (center to center) with the trunk of at least one tree in the cluster located within 8 feet of the parking lot edge (to ensure some shading of abutting pavement).

Because landscaping under this option is less effective at softening impacts of lighting common to parking areas, all outdoor lighting shall conform to the following regulations:

1. Lighting in sales display parking lots is limited to 15 foot candles average, with a maximum 45 foot candles at a point on a 10 X 10 foot grid; except that after 10:00 p.m. lighting shall be reduced to 2 foot candles average with a maximum 6 foot candles at a point on a 10 X 10 foot grid.*
2. Lighting in non-display parking lots (e.g., customer parking, employee parking, storage areas) is limited to 2 foot candles average with a maximum 6 foot candles at a point on a 10 X 10 foot grid.*
3. All lighting fixtures shall be shielded in such a manner that the lenses of the fixtures are not visible from public rights-of-way

* Photometric layouts to utilize mean lumen output of light source design.

- b. Setback areas beyond the minimum setbacks shall be fully landscaped applying the landscape element ratios in the LI General Landscaping standards of this Section.

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 _____, _____.

ATTEST:

Diane R. Voss, City Clerk

Ann H. Campbell, Mayor

Ames City Hall East Parking lot – (4.4 Foot-Candle Average)



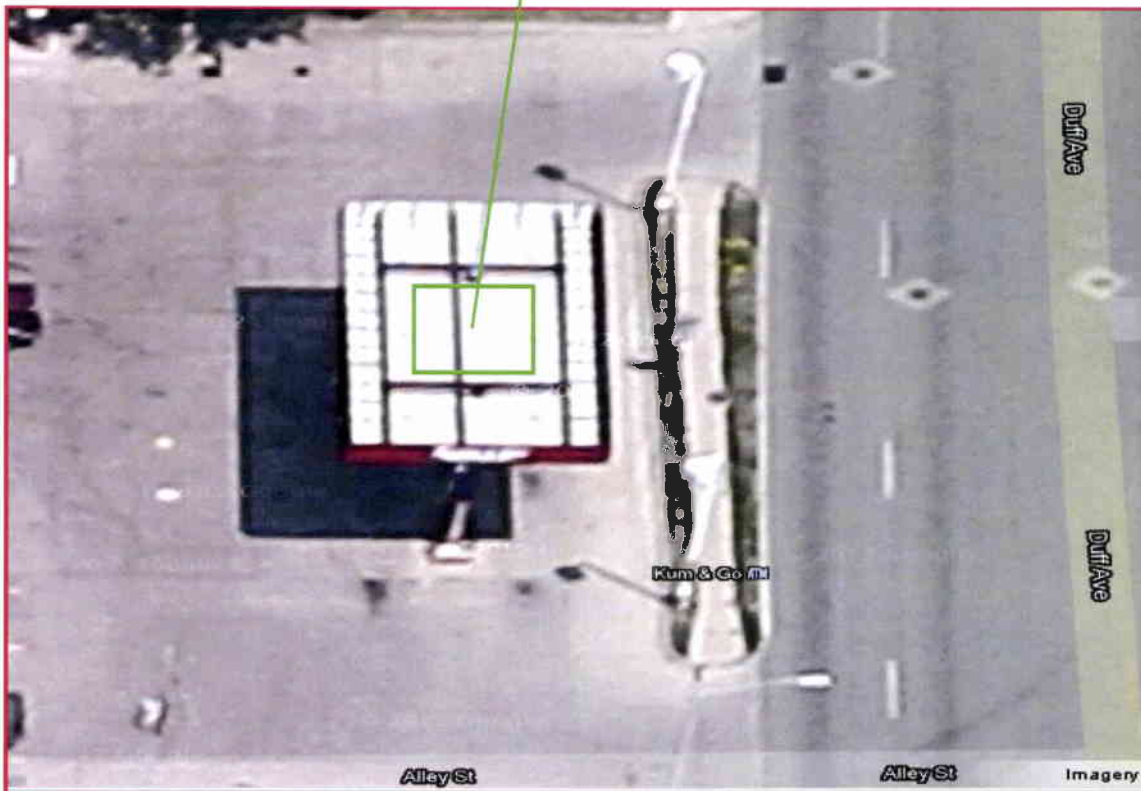
First National Bank Canopy – (23 Foot-Candle Average)



First National Bank Drive through – (5 Foot-Candle Average)



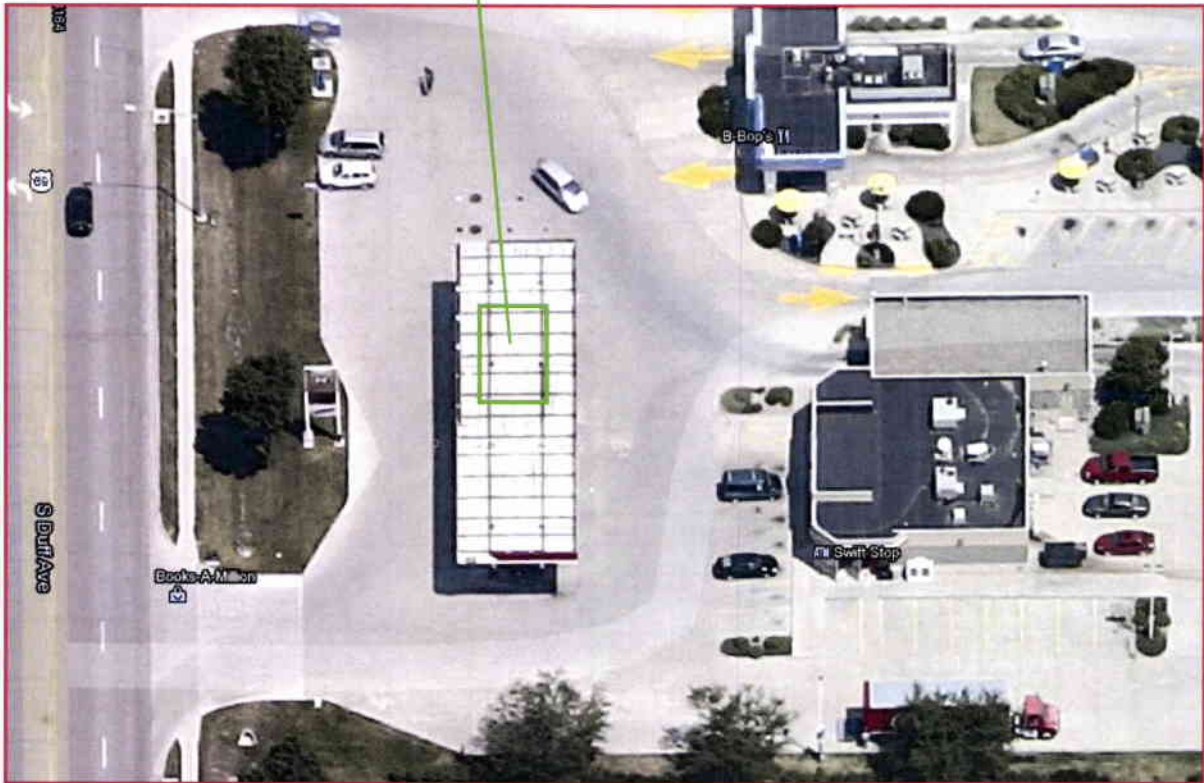
Kum n Go Canopy– (25 Foot-Candle Average)



Target Parking Lot - (5 Foot-Candle Average)



BP Swift Shop - (50 Foot-Candle Average)



George White Chevrolet Sales - (15 Foot-Candle Average)

George White Chevrolet Front Row- (70 Foot-Candle Average)

