



## COMMUNITY DEVELOPMENT DEPARTMENT

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### CITY COUNCIL STAFF REPORT

Meeting: December 1, 2020

#### SUBJECT

Municipal Code Amendments to adopt glazing and lighting regulations to implement the Fiscal Year 2019/20 City Council Work Program items related to Dark Sky and Bird-Safe Design. (Application No. MCA-2019-003 and MCA-2019-004; Applicant: City of Cupertino; Location: City-wide)

#### RECOMMENDED ACTION

That the City Council:

1. Find the proposed actions are exempt from CEQA; and,
2. Conduct the first reading of Ordinance No. 20-\_\_\_\_\_ "An Ordinance of the City Council of the City of Cupertino Amending City Code to Add Chapter 19.102: Glass and Lighting Standards and to Amend Chapter 19.08 Definitions, Chapter 19.40 Residential Hillside (RHS) Zones, Chapter 19.60 General Commercial (GC) Zones, Chapter 19.72 Light Industrial (ML) and Industrial Park (MP) Zones, and Chapter 19.124 Parking Regulations to implement Bird-Safe and Dark Sky Policies." (Attachment A)

#### DISCUSSION

##### *Background*

The FY 2019/20 City Council Work Program directed the City to study and incorporate Bird-Safe Development regulations and Dark Sky regulations to the Municipal Code. At a study session held on October 28, 2019, the Planning Commission provided comments to Staff on the areas of regulation related to bird-safe and dark sky development that should be considered.<sup>1</sup> Since there is overlap in the two areas of regulation, this item has been proposed as one item for the City Council's consideration.

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<sup>1</sup> Staff Report, Attachments and meeting materials online at:

<https://cupertino.legistar.com/LegislationDetail.aspx?ID=4204155&GUID=A2B97253-972C-41FA-893B-3854BBDEC039&Options=&Search=> and  
<https://cupertino.legistar.com/LegislationDetail.aspx?ID=4203814&GUID=918FAEC1-9FE9-48E2-906F-78E7BD2B709A&Options=&Search=>

Cupertino does not currently have bird-safe/bird-friendly design or dark sky standards; however, smaller projects that are not exempt from the California Environmental Quality Act (CEQA) are required to address bird strikes as part of environmental review. Additionally, the City's general plan, General Plan: Community Vision 2015-2040, includes several policies that support protecting environmental resources and ensuring high-quality site design listed below:

- **Goal LU-3:** Ensure that project site planning and building design enhance the public realm through a high sense of identity and connectivity.
  - **Policy LU-3.3: Building Design** – Ensure that building layouts and design are compatible with the surrounding environment and enhance the streetscape and pedestrian activity.
    - **Strategy LU-3.3.1: Attractive Design** – Emphasize attractive building and site design by paying careful attention to building scale, mass, placement, architecture, materials, landscaping, screening of equipment, loading areas, signage and other design considerations.
- **Goal LU-12:** Preserve and protect the City's hillside natural habitat and aesthetic values
  - **Strategy LU-12.1.1: Ordinance and Development Review** – Through building regulations and development review, limit development on ridgelines, hazardous geological areas and steep slopes. Control colors and materials and minimize the illumination of outdoor lighting. Reduce visible building mass with measures including, stepping structures down the hillside, following natural contours, and limiting the height and mass of the wall plane facing the valley floor.
- **Goal ES-5:** Protect the city's urban and rural ecosystems
  - **Policy ES-5.1: Urban Ecosystem** – Manage the public and private development to ensure the protection and enhancement of its urban ecosystem.
    - **Strategy ES-5.2.1: Riparian Corridor Protection** – Require the protection of riparian corridors through the development approval process.

Since these CEQA and city General Plan policies do not provide a clear or defined set of objective standards that specifically address concerns about bird strikes or light pollution, the proposed regulations have been developed.

*Bird-Safe Developments:* Studies suggest that between 100 million and 1 billion birds are killed each year in the US due to bird strikes (collisions into buildings). Bird-safe development regulations are intended to limit building design and site plan factors that

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are hazardous conditions for birds and exacerbate bird collisions, which include the following:

- Large expanses of exposed reflective glass that cause birds to fly into buildings with extensive glazing that reflects the sky, water, or landscaping, believing it is an extension of the outdoor environment
- Large expanses of exposed transparent glass that cause birds to continue flying, since they do not perceive it as a solid barrier
- Bright levels of nighttime lighting that can cause confusion for some migratory birds and affect circadian rhythms. Although most birds migrate during the day, most species of songbirds migrate at night. Inclement weather, such as rain or fog, can force birds to fly below the clouds and navigate through buildings. Since lighting is an attractant for birds, they may fly into beams of light, get disoriented in an urban environment, and collide with surrounding buildings or collapse due to the exhaustion from flying around in confusion (known as “fatal light attraction.”)

*Dark Sky:* Based on information from the Illuminating and Engineering Society (IES) and International Dark Sky Association (DSA), the issue of light pollution was first recognized as a growing concern in the 1970s when astronomers associated the degradation of the night sky with increased lighting accompanied by growth and development. Through this, the “dark sky” movement rose to help preserve and protect the nighttime environment through environmental responsible outdoor lighting. Dark Sky regulations are intended, among others, to:

- Permit reasonable outdoor lighting for nighttime safety, utility, security and enjoyment while preserving the ambience of night;
- Prevent light pollution and intrusion;
- Curtail and reverse any degradation of the nighttime visual environment and the night sky;
- Minimize glare and obtrusive light by limiting outdoor lighting that is misdirected, excessive or unnecessary; and,
- Help protect the natural environment from damaging effects of night lighting.

The City currently regulates outdoor lighting through development standards within the Cupertino Municipal Code (CMC). Chapter 19.60: General Commercial and Chapter 19.124: Parking Regulations include regulations for new lighting fixtures at any new site construction or building improvements within General Commercial (CG) zoning districts, and parking lots, sidewalks and other areas accessible to pedestrians and automobiles in all other zoning districts. The City’s ordinance requires that exterior lighting be white type light that is either metal halide or a comparable color corrected light, unless otherwise approved as part of a development plan. To minimize the impact of lighting glare, light fixtures must be oriented and designed to preclude any light and

direct glare to adjacent residential properties. Lighting glare may not be visible above three feet at a public right-of-way. In addition, lighting must be designed to illuminate with a uniform and adequate intensity in compliance with the standards identified in the Municipal Code. The Municipal Code allows for critical areas (stairways, ramps, and main walkways) to have a higher level of illumination than other areas. (See CMC tables 19.060.060.E and 19.124.040.)

In addition to CG zoned properties and parking lots in general, the Municipal Code identifies specific lighting standards for properties zoned Residential Hillside (RHS) due to the environmentally sensitive setting in which these properties are located. CMC Table 19.040.060.H.3 requires that all outdoor lights be directed to meet the particular need. Motion-activated security lights cannot exceed 100 watts and must be shielded to avoid all off-site intrusion. In addition, the Municipal Code prohibits high-intensity lighting of tennis courts and other recreational uses.

The Municipal Code does not address interior lighting placed in other types of residential uses (single family, tri-plex, duplex, multi-family etc.), mixed-uses, or other non-residential (office, industrial, quasi-public) buildings.

#### *Planning Commission Study Session*

Planning Commission was supportive of implementing guidelines/standards to promote Bird-Safe and Dark Sky policies at a Study Session on October 28, 2019. Staff provided an overview of policy standards based on analysis of various jurisdictions' regulations of Bird-Safe and Dark Sky policies (see attachments B and C). The Planning Commission discussed various ideas and made suggestions, which were considered in the preparation of the draft ordinance, including:

- Using existing professionally accepted bird safe design standards
- Considering a phased implementation of bird-safe design policies
- Importance of educational materials upon adoption of ordinance
- Importance of light impacts on environment and health
- Importance of ensuring adequate security lighting
- Limiting number of public hearings for landscape lighting
- Preventing light trespass

In addition to Planning Commission direction, public comment at the study session included the following:

- Bird-safe treatments should be required citywide to all project types (including small residential projects, retrofits, and other glass features) and should not include exemptions as bird-safe treatments can be cost-effective

- Suggestion that Bird-Safe and Dark Sky regulations should be combined and reviewed together
- Role of the government is to preserve the natural environment
- Education and outreach to teach the public about the dangers of glass
- Bird-safe design is limited to development and is a good first step, but policies should also be development to regulate a variety in landscaping to protect habitat, especially for big birds.

### *Community Outreach*

Postcards were mailed citywide for two outreach meetings to discuss regulations related to bird-safe and dark sky regulations. The outreach meetings were held on February 12, 2020 and February 20, 2020 at the Quinlan Community Center. Identical presentation and materials were used at both meetings. A total of 32 people attended the meetings. Below is a summary of the comments received (see Attachment D):

- Applicability should include all project types throughout the City (new construction, new additions, replaced glazing or glazed features, new and existing municipal buildings, in sensitive areas and to residential and non-residential uses)
- Requirements should be mandatory
- Treatments should be to the exterior and permanent
- Exemption for and against historic buildings, small residential buildings, and commercial storefronts
- Skepticism that decline in bird population is due to glazing and lighting requirements and that bird strikes should be monitored locally before requiring city-wide regulations
- Apply regulations to all structures (existing and proposed)
- Comments regarding applicability to residential, both in favor, and not in favor;
- Lighting should conform to a curfew and/or duration limit;
- Lighting from motion sensors should be treated differently and/or exempted;
- Light color temperature should be regulated;
- Lighting should be appropriate to the use;
- Prohibit lights that flash or blink, flood lights, up lighting, and spotlights;
- Prevent light trespass; and
- Allow holiday lighting

In addition to outreach meetings, staff received comments through email and phone as follows:

- Support for regulations on both issues
- Regulations for Bird-Safe and Dark Sky should be reviewed separately
- Desire to ensure that with a reduction in up-lighting, city lights remain visible to aircrafts, so that airplanes in trouble do not assume it is a safe landing area.

- Not in support of the Work Program items - do not focus on “vanity” projects, focus on city problems (e.g. crime, housing, street cleaning, homelessness etc.)

### *Planning Commission Meetings*

The Planning Commission considered the draft ordinance on August 11, 2020<sup>2</sup> and October 27, 2020<sup>3</sup>. At the first meeting, the Commission requested some clarifications and additional information and subsequently, modifications were presented to the Commission at the October 27, 2020 meeting. Modifications included amendments to address the Commission’s concerns related to:

- Applicability of bird-safe regulations,
- Interior lighting standards in residential development,
- Exemptions for affordable housing projects and single-family homes outside Bird Sensitive Areas (defined in the Code),
- Alternative standards for Public Art, subject to review and
- Clarifying language regarding lighting associated with permitted late-night activities.

The Planning Commission adopted Resolution No. 6914 (see Attachment E) recommending approval of the proposed ordinance 4-1-0 (Wang voting no). Planning Commission additionally recommended that staff review string lighting regulations in other communities and present the results for the Council to determine whether string lighting should be allowed for year-round use in both residential and non-residential uses. This topic is discussed later in this staff report.

### *Analysis*

A redline document of all the proposed Municipal Code Amendment is attached as Attachment F. This document reflects new text, deletions of text and also indicates when text has been relocated from one place in the Municipal Code to another.

### *Bird-Safe Design*

#### *Applicability, Exemptions, and Alternative Compliance*

Since the City protects the natural environment through its landscaping policies and environmentally sustainable programs, many developments are functionally attractive to birds. The draft ordinance requires bird-safe design and glass treatments be incorporated

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<sup>2</sup> Staff Report and other materials available online at:

<https://cupertino.legistar.com/LegislationDetail.aspx?ID=4609899&GUID=C14A1011-F8FB-4AD3-9829-D3C0ABB72018&Options=&Search=>

<sup>3</sup> Staff Report and other materials available online at:

<https://cupertino.legistar.com/LegislationDetail.aspx?ID=4675925&GUID=B63219C0-D4AA-4BAD-B41F-4970F75D6156&Options=&Search=>

in development projects of all types across the City in order to minimize bird collisions except for exemptions discussed further below. Staff recommends that all new buildings, including remodels and additions (standards apply only to the remodeled or added portions), replacement of windows or any existing or new glass features, be required to comply with the proposed Bird-Safe development standards. The standard requires that no more than 10% of the surface area of a façade be untreated glass between the ground and 60 feet above ground and no more than 5% of the surface area of the façade be untreated glass between 60 feet above ground and up.

Exemptions to bird-safe glazing treatment are proposed in the draft ordinance as follows: an exemption for historic structures listed in the General Plan or the State or National Historic Register, an exemption for storefronts up to a height of 15 feet, an exemption for 100% affordable housing developments, and an exemption for residential development in R1 zoning districts outside of Bird-Sensitive Areas. Bird-Sensitive Areas are areas within 300 feet of the city's Wildland Urban Interface, in Residential Hillside Zones, within 300 feet of public and private open spaces, or within 300 feet of a creek.

Since there are various solutions and treatments that can be applied to glass or to the exterior and interior of glass that would provide a visual cue to prevent bird collisions, staff has included section 19.102.020 (B)(3) to allow for flexibility in selecting treatments. This section would allow applicants to propose different solutions suitable for their specific situations. Based on rough estimates obtained by staff discussions with two manufacturers of bird safe treatments, it appears that this type of treatment adds between 2 and 10% to the cost of windows.

The proposed ordinance also allows staff to maintain a list of acceptable bird-safe treatment to help residents and applicants identify bird-safe strategies for their project (in section 19.102.020 (B)(2)). This list will be administratively updated from time to time to list new strategies and reflect technological advances in new materials for glazing treatments that can be used to comply with the ordinance requirements.

In addition to bird safe treatment, the ordinance requires bird safe design in the site planning and design of developments. Minor edits, reflected in the proposed ordinance and the redline document, have been made to Section 19.102.030 (D) since the ordinance was presented to the Planning Commission to clarify the language.

#### *Application Submission Requirements*

The proposed ordinance identifies additional submission requirements to allow review of plans for compliance with the ordinance. These include specific elevation drawings with details, cross sections, and other exhibits.

### *Lighting Standards*

Bird-safe lighting requirements are intended to regulate the strength and brightness of exterior lighting fixtures, to prohibit excessive lighting, and to require some interior lighting be turned off. For readability, the exterior lighting requirements have been incorporated into the Dark Sky (Lighting) standards of the proposed ordinance (and are discussed below) while non-residential interior lighting requirements remain under the Bird-Safe section. Non-residential developments would be required to install programmable automatic sensors and timers to be turned off at eleven p.m. or within two hours after the business is closed.

### **Dark Sky**

#### *Applicability*

To ensure that the ordinance is effective in achieving a darker sky, staff recommends that applicants comply with outdoor lighting requirements whenever obtaining a building permit, an electrical permit for outdoor lighting or signage, and/or City approval for any development project.

In addition to applicable submittal requirements, the proposed ordinance identifies specific plans required to be provided to ensure staff can verify compliance with the ordinance requirements. These include a site plan indicating all outdoor lighting fixtures, description of lighting fixture(s), and Photometric plans. The proposed ordinance includes a provision allowing the Director of Community Development to waive submittal requirements, including for photometric plans, in the event it is clear that the proposed lighting would be in compliance with the provisions of the ordinance. To ensure the intent of the ordinance is met, staff has included a provision to require any other pertinent information to ensure compliance with the ordinance.

#### *Standards*

The main intent of implementing the proposed regulations is to minimize light intrusion into the night sky and to prevent glare into neighboring properties, while allowing for safety. Therefore, almost all outdoor lighting is required to be shielded and downward directed. Certain lighting may be unshielded, such as low wattage landscape lighting, and uplighting would be allowed for architectural features and public art, subject to City approval. Lighting for historic structures may be unshielded, subject to approval of the City.

All outdoor lighting, except lighting for safety required by law, must be automated to turn off after 11:00 p.m. but may be activated by motion sensors after that. Security lighting is allowed by the proposed amendments but must be directed away from adjacent properties, shielded, and motion activated. The proposed ordinance also



contains specific regulations related to service station canopies to minimize light intrusion and glare. Security lighting, lighting of areas required by the California Building Code or state law, and lighting allowed in conjunction with a conditional use permit may operate past 11:00 p.m.

Existing lighting standards in Chapters 19.40, 19.60, 19.72, and 19.124 have been incorporated into the proposed lighting standards with minor clarifications to the lighting standard for color of light (no more than 3000K). New definitions were added to Chapter 19.08 to implement the proposed regulations.

Upon research of lighting fixtures available, staff found that the cost of incorporating lighting fixtures that sensors, timers and other mechanisms for complying with the regulations is insignificant when compared to fixtures that are sold without such accompanying hardware. After market solutions are also available at a low cost to transform existing non-complying fixtures to be compliant fixtures, if desired.

#### *Prohibited Lighting*

To minimize light intrusion into the night sky, the following lighting is prohibited:

- Outdoor lighting that blinks, flashes, or rotates.
- Outdoor flood lights that project above the horizontal plan.
- Lighting that unnecessarily illuminates any other lot or substantially interferes with use or enjoyment of adjacent property.
- High intensity lighting for recreation courts on private property.
- Spotlights

#### *Exemptions*

Several exemptions from lighting standards are proposed. Exemptions proposed are based on the following factors: ensuring safety, allowing observance of special events and/or holidays, and complying with other applicable regulations. The following types of lighting are exempt from the proposed ordinance:

- Lighting within the public right-of-way and parks
- Permitted lighting for signs
- Lighting to illuminate address signs
- Temporary construction or emergency lighting
- Short-term lighting authorized by a special event permit
- Holiday seasonal lighting from October 15 through January 15 and
- Required lighting to comply with CA Building Code or state law

Minor grammatical changes to the ordinance have also been made between the Planning Commission and City Council hearings.

### *String Lighting*

Upon direction from the Planning Commission, staff reviewed several ordinances regarding string lighting. Most cities have an exemption for holiday/seasonal lighting which is generally outdoor string lighting. The regular and sustained use of exposed lightbulbs, including string lighting, is prohibited by most cities to prevent light trespass and associated impacts to the dark sky.

However, some cities (e.g. the Californian cities of San Juan Capistrano, Calimesa, Malibu and Surprise, AZ) allow permanent installation of string lighting under certain circumstances. They were allowed if:

- Located in commercial/non-residential areas
- Color of the lighting was limited to either white light or 3,000 Kelvin.
- Lighting was limited to illuminating either landscape features (trees, bushes, etc.) or occupied dining and entertaining areas, but usually not both.
- Maximum 2.8-watt system designed for exterior installation and use
- Subject to the approval of the Director of Community Development

None of the cities surveyed allow string lighting in residential areas, except for holiday and/or seasonal lighting.

Since the Planning Commission specifically requested staff to propose options for Council to consider string lighting for both residential and non-residential uses, draft language has been proposed, (see Attachment G). Should the Council wish to incorporate any or all these requirements, it can consider making a motion to amend the draft ordinance to add subsection 19.102.040(A)(1)(e), and all or portions of subsection 19.102.040(B)(12) it deems appropriate.

### *Environmental Review*

The proposed ordinance is exempt from environmental review under California Environmental Quality Act ("CEQA") Guidelines section 15308 because these regulations are being adopted to assure the maintenance, restoration, enhancement, or protection of the environment; CEQA Guidelines section 15301 because the regulations would result in the minor alteration of existing public or private structures without any expansion of use; CEQA Guidelines section 15305 because the regulations involve minor alterations in land use limitations that do not alter permitted uses or density; and CEQA Guidelines section 15061(b)(3) because it can be seen with certainty that these regulations related to glazing and lighting will have no possibility of a significant effect on the environment; and that none of the exceptions in CEQA Guidelines section 15300.2 apply to the proposed ordinance.

### ***Public Noticing & Outreach***

The following noticing has been conducted for this project:

<b>Notice of Public Hearing, Site Notice &amp; Legal Ad</b>	<b>Agenda</b>
<ul style="list-style-type: none"><li>▪ Legal ad placed in newspaper (<i>at least 10 days prior to hearing</i>)</li><li>▪ Display ad placed in newspaper (<i>at least 10 days prior to hearing</i>)</li></ul>	<ul style="list-style-type: none"><li>▪ Posted on the City's official notice bulletin board (<i>four days prior to hearing</i>)</li><li>▪ Posted on the City of Cupertino's Web site (<i>four days prior to hearing</i>)</li></ul>

Outreach was discussed earlier in the staff report.

### ***Sustainability Impact***

The proposed ordinance has no sustainability impact.

### ***Fiscal Impact***

There are no fiscal impacts to the City's General Fund.

### **NEXT STEPS**

Upon final decision by the City Council, the ordinance will need a second reading at a subsequent hearing, tentatively scheduled for December 15, 2020. If adopted, the ordinance will be effective 30 days after the second reading/adoption.

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Reviewed by: Benjamin Fu, Director of Community Development;

Approved for Submission by: Dianne Thompson, Assistant City Manager

### **ATTACHMENTS**

- A. Draft Ordinance for MCA-2019-003 MCA-2019-004
- B. Comparison of Bird-Safe Regulations
- C. Comparison of Lighting and Dark Sky Regulations
- D. Public Comments received prior to Planning Commission hearing on August 11, 2020
- E. Planning Commission Resolution No. 6914
- F. Redline Document for Proposed Modifications to Title 19
- G. Draft String Lighting Regulations for Council's consideration