



May 12, 2026

Planning Commission
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Re: Item 2. May 13 Agenda: Planning and Building. San Mateo County - Bird Friendly Design Standards

Dear Commissioners,

Green Foothills, San Mateo County Bird Alliance, and Santa Clara Valley Bird Alliance support the bird friendly design standards in the updated Design Review Ordinance. We request one minor change in the wording proposed by County staff: **please remove the reference to UV-reflective coated glass.** Otherwise, we strongly support the staff recommendation and urge the Planning Commission to recommend these standards for approval to the Board of Supervisors.

The wording in question is found in subsection J of Section 8.256.170 (General Design Recommendations):

J. Use bird-friendly treatment on windows, glass railings, and other transparent exterior surfaces ("surfaces") to minimize bird strikes.

Bird-friendly treatment is defined as one of the following:

- (1) One of the following treatments applied to surfaces:
 - a) opaque 1/4" dots or 1/8" lines with 2x2" spacing;
 - b) low-reflectance opaque materials; or
 - c) non-glass double-skin facades;
- (2) Permanent patterns or coatings built into surface, such as Acid-Etched or Fritted Glass ~~or UV-Reflective Coated Glass (appears opaque to birds (who see UV light) but transparent to humans);~~ or

(3) Screens or solar shading (e.g. external blinds, shutters, or rollers that can be moved based on the sun's position).

Section 8.256.170 (J) (suggested deletions in strikeout text). This language can be found on page 57 of the staff report and draft design standards in the Planning Commission packet.

We recommend deleting the phrase “or UV-Reflective Coated Glass (appears opaque to birds (who see UV light) but transparent to humans)” because UV-reflective glass is not considered a consistently reliable treatment for preventing bird collisions under real-world conditions. Birds are generally unable to detect UV reflections on glass during cloudy or foggy conditions, or during the early morning and evening hours when bird activity is often highest. The coating may only be visible to birds under bright midday sunlight. Therefore, we respectfully urge the Planning Commission to delete the reference to UV-reflective coated glass from the draft design standards and instead rely on bird-safe treatments with demonstrated effectiveness.

Background: Why These Standards Are Needed

Bird populations across North America and the Bay Area have been declining at alarming rates since the 1970s, with populations down by nearly 30 percent or 3 billion. As a critical stop in the Pacific Flyway, 300,000 to 400,000 birds land and rest on the Bay Area's shorelines each year. Our marshes and coastlines play an important role along this route, providing a space for birds to rest overwinter. Unfortunately, monitoring programs of these migratory patterns have found that birds, and most notably shorebirds, have had sharp declines in population numbers over the past twenty years. Some birds saw as much as an 87 percent decrease in population.

Scientific research consistently shows that bird collisions with glass are a major source of human-caused mortality. In North America alone, hundreds of millions of birds are killed each year due to collisions with buildings. Collisions occur wherever birds are active, not only in dense urban cores but also in suburban areas with trees, landscaping, and nearby open space. In these environments, most collisions occur at tree-canopy height, generally from ground level to about 60 feet, where birds are actively foraging and moving through habitat. Transparent and reflective glass creates the illusion of open sky or vegetation, leading birds to attempt to fly through or into these surfaces. As a result, even relatively small buildings and common features such as glass railings, corners, and fly-through designs can pose significant risks. These risks are especially pronounced near waterways, the coastline, open water, open space, and hillside areas, where bird activity is concentrated and collisions are more likely.

There is a growing list of cities that have implemented bird-friendly design standards into their policies as an attempt to mitigate bird mortalities caused by collisions with building infrastructure. San Francisco, Mountain View, Berkeley, San Jose, Palo Alto, and Cupertino are a few local examples of jurisdictions that have adopted similar design standards in order to set guidelines that protect both bird populations and development.

San Mateo County's proposed standards establish a set of reasonable guidelines and practices that would help protect vulnerable bird populations and are easily implemented. We urge the commissioners to recommend that the Board of Supervisors approve the staff-recommended standards for bird-friendly design, with the minor change of deleting the reference to UV-reflective coated glass.

We thank you for your time and consideration on this issue.

Sincerely,

Alexandra Mendoza
Environmental Associate
Green Foothills

Shan Kleinhaus
Environmental Advocate
Santa Clara Valley Bird Alliance

Chris MacIntosh
Chair, Conservation Committee
San Mateo County Bird Alliance

May 11, 2026

Re: May 13, 2026 San Mateo County Planning Commission
Agenda Item 2, File #PLN2025-00232

Dear Commissioners,

My name is Mark Dinh. I am a five year resident of the coast, a community representative on the Coastside Design Review Committee, and also a regional government employee.

First I want to commend the planning staff and community representatives from the Midcoast Community Council for all they do for the unincorporated San Mateo County area. The changes proposed in the ordinances are positive changes that will hopefully advance our community forward. I have read through the amended design review standards language and am commenting, as a resident, on the revised approach to lighting standards, specifically specifying 2200K for all projects except for existing single family residences. My concerns are summarized below:

1. I have concerns that the revised exterior lighting standard would not drive the needle forward *enough* by exempting the majority of single family residences, especially since new building permits on the coast are limited through 2027. This leaves room for existing exterior lighting to remain at the bluer, warmer ratings above 3000 kelvin. More importantly, I also feel this could lead to confusion amongst the community as to what standards apply to whom.
2. Specifying a lighting standard that is too restrictive could have unintended impacts for other regional goals such as the state and local housing element.

I recommend that the county set a single design standard, without an exemption, for exterior lighting fixtures, whether that be at 2200K, 2700K or 3000K. While my personally recommendation is at 2700K or 3000K as I feel it provides a balance between environmental impact and affordability, a consistent standard at 2200K should also be considered as originally proposed in January as I feel it will have a greater positive impact than the current proposal with the exemption.

There has been mention about the availability of light bulbs and lighting fixtures in past meetings. I am providing a few ChatGPT prompts and responses below as background information. The intent is not to discount prior research, but to provide some additional background information for consideration.

Respectfully,

Mark Dinh
Moss Beach Resident

ChatGPT Prompt:

what is the most common color temperature limits set by counties or cities in environmentally sensitive areas? please list these communities and their color temperature standard in a table.

ChatGPT Response:

Yes. The dominant trend in environmentally sensitive communities is:

- **3000K max** = broad “dark sky” baseline
- **2700K max** = now the most common stricter residential/community standard
- **2200K or amber** = used mainly for highly sensitive habitats (sea turtle coasts, observatories, protected wildlife areas)

Here is a representative table of adopted or proposed standards from counties, towns, and states that specifically address environmental sensitivity, wildlife, or dark-sky preservation.

Community / Jurisdiction	Type of Area	Color Temperature Standard	Notes
Cupertino	Bird-safe / dark-sky ordinance	3000K max	Outdoor lighting ordinance requires ≤3000K and full shielding. (cupertino.gov)
Los Altos	Proposed dark-sky & bird-safe ordinance	2700K max	Proposed standards require outdoor lighting ≤2700K. (losaltosca.gov)
Ojai Valley	Dark-sky valley / wildlife-sensitive region	Focus on shielding and dark hours; warm lighting encouraged	Ojai ordinance emphasizes downward shielding and nighttime curfews. (rma.venturacounty.gov)
Nantucket	Coastal dark-sky community	2700K max (2400K recommended)	Town guidance repeatedly recommends 2400K or lower as more wildlife-friendly. (Nantucket Lights)
Illinois	State lighting law	2700K max generally; 2200K recommended in environmentally sensitive areas	Statute specifically calls out residential areas, parks, dark-sky locations, and environmentally sensitive areas for ≤2200K. (Illinois General Assembly)

Toquerville	Dark-sky community near protected desert landscapes	2700K required	New construction exterior lighting limited to warm 2700K lighting. (Toquerville UT)
Escambia County Barrier Islands	Sea turtle nesting beaches	Long-wavelength amber lighting (<580nm)	Uses spectral requirement instead of Kelvin standard because turtle protection is the primary goal. (MyEscambia.com)
Palo Alto	Updated dark-sky ordinance	Warm-color lighting required	Ordinance aligned with DarkSky principles emphasizing warmer outdoor lighting. (Palo Alto)

A few important patterns emerge:

1. 2700K is becoming the “practical municipal standard”

Among communities actively modernizing lighting codes, **2700K appears to be the most common enforceable upper limit** for residential and mixed-use outdoor lighting.

Why municipalities choose 2700K:

- Broad product availability
- Lower cost
- Easier maintenance/replacement
- Better resident acceptance
- Significant reduction in blue light versus 3000K+

For affordable housing, this matters because 2700K products are commodity-priced and widely available.

2. 2200K is usually reserved for special ecological zones

Communities generally move to 2200K only when there is:

- sea turtle protection
- observatory protection
- migratory bird concerns
- highly protected habitat
- wilderness/dark-sky tourism goals

Illinois’ new statute is notable because it explicitly distinguishes:

- **2700K for ordinary residential/dark-sky applications**
- **2200K for environmentally sensitive areas** ([Illinois General Assembly](#))

That framework is increasingly influential.

3. Sea turtle areas often avoid Kelvin standards entirely

Florida coastal ordinances frequently specify:

- amber light
- long-wavelength light
- spectral limits (<580nm)

instead of a Kelvin number because many nominal “2200K” LEDs still emit enough blue light to affect hatchlings. ([MyEscambia.com](#))

4. The industry trend is downward

Historically:

- 4000K–5000K was common for LEDs
- then municipalities shifted to 3000K
- now many dark-sky ordinances are moving toward 2700K
- some sensitive zones are adopting 2200K or amber

DarkSky-aligned guidance increasingly treats:

- **3000K = acceptable minimum**
- **2700K = preferred**
- **2200K = best for sensitive habitat** ([Access Fixtures](#))

For your situation — balancing environmental protection with affordable housing practicality — the most common compromise standard emerging nationally is probably:

2700K maximum for general community lighting, with 2200K reserved for ecologically sensitive subareas.

That approach:

- aligns with current municipal practice
- minimizes cost impacts
- preserves product availability
- reduces maintenance burden
- still meaningfully reduces blue-light pollution

ChatGPT prompt:

what is the financial impact to community and affordable housing construction if color temperature standards were set at 2200 kelvin versus 2700 kelvin or 3000 kelvin for exterior lighting

ChatGPT response:

For **exterior lighting specifically**, the financial impact of requiring **2200K instead of 2700K or 3000K** can be substantial because exterior fixtures are more likely to use:

- integrated LEDs,
- specialty optics,
- dark-sky certification,
- municipal-grade products,
- and longer-life commercial luminaires.

That means the color temperature is often built into the fixture itself — not just a replaceable bulb.

Short answer

For affordable housing and community-scale projects:

Exterior Lighting Standard	Typical Cost Impact vs 3000K	Procurement / Maintenance Impact
3000K max	Baseline	Lowest
2700K max	~0%–10%	Very manageable
2200K max	~15%–50%+	Moderate to significant

For a typical affordable housing development, a mandatory 2200K exterior standard can add approximately:

- **\$10,000–\$75,000+ per project** depending on:
 - site size,
 - parking lot lighting,
 - pathway lighting,
 - pole lighting,
 - and whether decorative fixtures are required.

For a citywide or countywide mandate, the aggregate effect across:

- multifamily housing,
 - mixed-use projects,
 - public works,
 - and streetlighting
- can become materially significant.
-

Why exterior lighting costs rise much more at 2200K

1. Exterior fixtures are usually integrated systems

Most modern exterior fixtures are:

- integrated LED luminaires,
- not screw-in bulbs.

That means:

- 2200K often requires a completely different fixture SKU,
- not just a different lamp.

Commodity 3000K and 2700K fixtures are widely mass-produced. True 2200K fixtures are still relatively niche. ([The Home Depot](#))

2. Many contractor-grade fixtures are unavailable at 2200K

This is the biggest issue for affordable housing.

Common affordable multifamily products:

- wall packs,
- soffit lights,
- corridor lights,
- canopy fixtures,

- parking lot lights,
- pathway bollards

are overwhelmingly stocked in:

- 3000K,
- 4000K,
- selectable CCTs.

True 2200K often pushes projects into:

- premium dark-sky product lines,
 - hospitality-grade fixtures,
 - custom ordering,
 - or specialty manufacturers. ([Visual Comfort & Co.](#))
-

Real-world pricing examples

Example: exterior wall fixtures

A commodity outdoor fixture at 3000K or selectable CCT:

- commonly ranges around:
 - ~\$50–\$120

Comparable specialty 2200K dark-sky fixtures:

- often:
 - ~\$180–\$300+

Examples currently on the market include premium 2200K-to-3000K outdoor fixtures around \$229–\$269 each. ([Visual Comfort & Co.](#))

Meanwhile, commodity 2700K/3000K outdoor ceiling and wall fixtures are commonly available under \$60–\$100. ([The Home Depot](#))

Example project impacts

Small affordable housing project

Example:

- 60-unit affordable housing project
- exterior fixtures:
 - 40 wall packs
 - 25 pathway lights
 - 12 pole lights
 - 20 entry fixtures

Total exterior fixtures:

~97

Scenario A — 3000K standard

Commodity products widely available.

Estimated exterior lighting package:

- ~\$45,000
-

Scenario B — 2700K standard

Most fixtures still commodity-grade.

Estimated increase:

- +\$1,000–\$5,000

Often absorbed into normal bid variation.

Scenario C — 2200K standard

Specialized fixtures required.

Estimated increase:

- +\$8,000–\$30,000+
- sometimes much more if pole lighting must also comply

That can equal:

- roughly \$130–\$500 per housing unit just for exterior lighting.
-

Parking lot and street lighting create the biggest cost increases

This is where municipal impacts become especially important.

Why:

High-output outdoor luminaires are optimized around:

- 3000K,
- 4000K.

At 2200K:

- fewer optics available,
- lower efficacy,
- fewer manufacturers,
- less competition,
- higher custom-order risk.

Municipalities sometimes must:

- increase fixture count,
- increase wattage,
- or use premium optics to maintain illumination standards at 2200K.

That can significantly increase:

- capital cost,
- maintenance cost,
- pole spacing constraints.

The hidden cost: procurement and replacement

Affordable housing operators are especially sensitive to:

- discontinued SKUs,
- replacement delays,
- maintenance inventory complexity.

Community discussions repeatedly note the difficulty of sourcing true sub-2700K outdoor lighting. ([Reddit](#))

This matters because affordable housing maintenance teams rely on:

- standardization,
- interchangeable products,
- local supplier availability.

3000K and 2700K align far better with that ecosystem.

The energy savings difference is negligible

A very important point:

The difference in electrical consumption between:

- 2200K,
- 2700K,
- 3000K LEDs

is usually very small.

The cost issue is:

- fixture availability,
- not utility bills.

In many cases:

- a 2200K fixture may actually be *less efficient*, requiring slightly more fixtures or wattage to meet code illumination targets.
-

What most environmentally sensitive communities actually do

Most communities trying to balance:

- dark sky goals,
- wildlife protection,
- and housing affordability

do **not** require 2200K everywhere.

Instead they typically adopt:

Area Type	Common Standard
General exterior residential lighting	2700K
Parking areas	2700K–3000K
Pedestrian pathways	2700K
Sensitive habitat edge	2200K
Turtle-sensitive areas	Amber / spectral controls

This tiered model is becoming increasingly common because it:

- dramatically lowers project costs,
 - preserves fixture competition,
 - reduces affordable housing burden,
 - while still reducing blue-light pollution significantly.
-

The strongest financially balanced standard

If a community wants a dark-sky / environmentally sensitive policy without heavily impacting affordable housing production, the most economically practical approach is usually:

Recommended compromise

Application	Recommended Limit
General exterior residential lighting	2700K max
Parking lots and circulation	2700K–3000K
Wildlife-sensitive edges	2200K max
Critical habitat zones	Amber / spectral standard

This approach:

- aligns with current market availability,
 - minimizes affordable housing cost escalation,
 - avoids major procurement problems,
 - and still achieves substantial ecological benefit.
-

One especially important emerging solution

A rapidly growing market segment is:

- selectable-CCT exterior fixtures
or
- warm-dim exterior fixtures.

These can:

- reduce future retrofit risk,
- allow municipalities to tighten standards later,

- and reduce inventory fragmentation.

Many contractors now prefer selectable-CCT fixtures because residents and municipalities often disagree on preferred outdoor color temperature. ([Reddit](#))

From: [Jeremy Levine](#)
To: [Planning Commission](#)
Cc: [Alice Kaufman](#); [Shani Kleinhaus](#); [Alexandra Mendoza](#); [Lennie Roberts](#); [Chris MacIntosh](#)
Subject: Public Comment: Agenda Item 2, rightsizing bird-safe design standards
Date: Tuesday, May 12, 2026 3:35:12 PM

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Good afternoon San Mateo County Planning Commission. Jeremy Levine here writing on behalf of the Housing Leadership Council of San Mateo County (HLC).

HLC works with communities and their leaders to produce and preserve quality affordable homes. To that end, we support standards that promote environmentally sustainable development, balancing environmental protections with housing needs.

As written, the amended [design review standards](#)--specifically, the bird-safe glass requirements--would increase total development costs for multi-family housing without regard for cost-benefit analysis.

Earlier today, we coordinated with several environmental groups (staff cc'ed) on a solution. To improve the ordinance, we recommend exempting multi-family buildings that have glass on 40% or less of the building surface area from bird-safe glass requirements (an exemption used in the City of Palo Alto's recently approved [bird friendly design standards](#)). This amendment would ensure that only buildings with high risk of bird collisions--those with a high surface area of exterior glass--would be required to incur additional costs.

The County could implement this amendment with the following language:

Bird-friendly treatment, as defined in Section 8.256.170 (J) or other equivalent alternative design measure, subject to approval by the Director of Planning and Building, is required on 90% of windows and other transparent exterior surfaces for:

(1) All new planned developments (e.g., residential subdivisions);

(2) Portions of new single-family ~~and multifamily~~ homes that exceed 30 feet above grade;

(3) Portions of multifamily housing where the building facade consists of more than 40% glass;

(4) New commercial, institutional, and industrial construction projects;

(5) Additions and existing development that replace 50% or more of the existing exterior glass shall be subject to requirements pertaining to new construction for the relevant use type as listed above.

These amendments will ensure the ordinance achieves its intended effects to protect birds while continuing to incentivize new homes.

Thank you for consideration,
Jeremy

--

Jeremy Levine (he • him)

Policy Manager

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