

OUTDOOR LIGHTING ORDINANCE TASK FORCE MEETING

SEPTEMBER 16, 2015 – 4:00-6:00 PM

Task Force Members in Attendance:

Carol Lynn Alpert
Chris Basler
Andrea Boyer
Peter Calkins
David Chilinski
Steve Lenkauskas
Ranjit Singanayagam
Charles Teague
Bob Woodbury

City Staff in Attendance:

Lisa Hemmerle
Tracey Joyce
Jeff Roberts

Consultants:

Jeffrey Berg
Paul Lutkevich

Members of Public in Attendance:

Kelly Beatty
Kim Courtney
John Greenup
Glenn Heinmiller
Annette LaMond
Gary Mello
Tom Stohlman
Kenneth Taylor
Marilyn Wellons

Eighth meeting of Lighting Ordinance Task Force was held in the 4th Floor Conference Room of the City Hall Annex, 344 Broadway, Cambridge, Massachusetts.

MEETING NOTES:

Lisa Hemmerle welcomed everyone to the 8th meeting and pointed out the handouts to the Task Force Members (TFMs), including a copy of the meeting's agenda, a revised draft of the proposed outdoor lighting ordinance, copy of the slide presentation, map of proposed Lighting Zones for Cambridge, and the Cambridge Historical Commission's map of Historic Districts and Neighborhood Conservation Districts.

Lisa continued with the presentation (see attachment), which provided a recap of the Task Force's mission; goals of an outdoor lighting ordinance; timeline; and process going forward, which is:

- Task Force and City staff finalize a proposed ordinance and report that includes recommendation, points of consensus and listing of issues that did not reach consensus.
- The proposed ordinance and report is submitted to the City Manager for review, whom may forward to the City Council for consideration.
- The City Council can choose to send the recommendation to the Ordinance Committee for further review and public hearing before submitting a draft back to the City Council for a vote.

After reviewing comments and edits submitted by Task Force members and the public, there are several changes Lisa suggested making to the draft ordinance, including:

- Under the definition of *Architectural Lighting* – changing “incidental” to “secondary/ancillary”;
- Removing the candela measurement reference from the definition of *Lux*;
- Moving the Color Rendering Index limit to only fall under the Performance Standard;
- Requiring automatic shut-offs using daylight sensors or time clocks on all new or replacement light fixtures in residential zoning districts; and
- Under the Prescriptive Standard table, change the Maximum Initial Lumens Per Light Fixture from 390 to 315 to relate to the Model Lighting Ordinance residential limits under Lighting Zone 2.

Lisa outlined the issues that remain to be discussed and addressed, which included:

- Creation of an overlay map of Lighting Zones for Cambridge;
- Requirement of automatic shut-off for fixtures;
- concerns that the proposed color temperature maximum limit of 4000 K was too high;
- concerns that ISD does not have the capacity to administer and enforce the proposed ordinance that there isn’t enough guidance on the Administrative Exemption process;
- concerns that the proposed Performance Standard option of 8 lux vertical illuminance limit at the property line is too high; and
- concerns that up-lighting is allowed under certain circumstances and that fully-shielded fixtures are not required under more circumstances.

Lisa highlighted a comparison between existing outdoor lighting ordinances in other communities and what is proposed in Cambridge. A comparison table is included as an appendix to the presentation.

Lisa asked if she included all major concerns in her presentation.

David Chilinski spoke in regards to the color temperature and mentioned that all color temperatures should be made clear to the public. Bob Woodbury and other Task Force members commented that 3500 K was the preferred color temperature rather than 4000 K. Chris Basler mentioned that there was a compromise proposed in an earlier draft that would list an absolute maximum of 4000 K based on the existing color temperature of the LED streetlights but a preference of 3500 K or lower would be encouraged in the ordinance. The Law Department indicated that only the limit and not a preference can be listed in an ordinance.

Most Task Force members indicated that they would prefer a lower color temperature so Lisa suggested a compromise of 3500 K, but that in the Good Neighbor brochure and other marketing materials we can certainly encourage using less than 3500 K. Majority of the Task Force members agreed. Charlie is concerned about any temperature limit over 3000 K.

Carol Lynn requested that a more detailed definition of a lighting plan required under the Performance Standard be included and that commercial and residential properties have different standards. Also, she felt the proposed 5 year phase-in period is too long and proposed it be limited to 6 months with an immediate action plan to help those residents suffering from light trespass from neighboring properties. Lisa suggested that we strike a balance between a phase in for existing fixtures and simpler solutions in the short term to provide relief, but will have to connect with the Legal team to determine how that could be written into an ordinance.

Carol Lynn suggested that the ordinance require property owners under the Prescriptive Standard to implement 4 immediate changes to bring fixtures closer to compliance:

1. change bulbs
2. change light direction
3. add shielding
4. replace fixtures that cost less than \$200

She further suggested that the City could encourage this action by waiving electrical permit fees for replacement compliant fixtures and that the City add a feature to the ISD website which allows residents to file complaints on-line.

ISD inspectors would be required to get a court order to enter someone's property without permission to review fixtures, however they can go onto the complainant's property to review the issue. Lisa and Ranjit pointed out that any ordinance would require due process and that ISD is given permission by most property owners to review code requirements and it doesn't lead to a lengthy court process. However, an example was cited of a code complaint that has not been resolved after many years in the court system.

Carol Lynn still has concerns that the lumen limits proposed under the Prescriptive Standard are too high and that there is not a restriction on the number of fixtures. Lisa noted that a restriction on fixtures in an urban setting with a variety of property types and setbacks will not make practical sense.

Charlie feels that the proposed ordinance would be unenforceable and that a property owner that doesn't want to comply with the requirements would be able to holdout in the court system from making any lighting changes. He agrees with Carol Lynn that 5 years for the phase-in period is too long. Lisa suggested that the ordinance is more enforceable than current zoning because it sets measureable limits. She also maintained that a balance for phase in must be maintained to give residents time to purchase new fixtures and bulbs over time.

David indicated that a phase-in period of 5 years seems long but understands that there are many considerations and defers to the Law Department for the appropriate length of time. He would like to see the City Manager incentivize neighbors to do the right thing and make financial and technical assistance available to property owners that want to bring their outdoor lighting into compliance.

Charlie requested that all recommendations discussed at this evening's meeting be included in a draft that is sent around to the Task Force members for review before it is finalized by the Law Department. Lisa pointed out that multiple drafts circulating could cause confusion and that a draft provided by the Law Department would be presented to the Task Force for review and discussion before it is finalized and approved by the Committee.

Charlie and Carol Lynn want to focus attention on inappropriate lighting in LZ 3 district of Cambridge.

Carol Lynn presented a short power point discussion about what she felt were discrepancies within the Performance Standard and the two lighting practices available under that option. The Performance Standard of 8 lux at the property line is from the Model Lighting Ordinance's Lighting Zone 3 recommended limit. However, the LEED Light Pollution Reduction Credit promotes a 1 lux limit for Lighting Zone 2 and 2 lux limit for Lighting Zone 3 under the Calculation Method if a property owner chooses to follow that option under LEED version 4. She recommends that we get rid of 8 lux as an option in Performance Standard and only follow the lux level limits under the LEED Light Pollution Reduction Credit if a property owner chooses to follow the calculation method.

Carol Lynn feels that any property, regardless of Lighting Zone, over 10,000 SF should be required to follow the LEED Light Pollution Reduction Credit.

Peter pointed out that LEED is a voluntary process and allows property owners to pick the credits they want to utilize. Paul cautioned that the LEED Light Pollution Reduction Credit is an aspiration for developers and commercial property owners to follow and is not specifically designed to be an ordinance.

Peter suggested that the specific version of LEED should be identified in the ordinance and that there be a review process established to allow for later versions to be adopted; not automatically enforce the latest version as it is currently proposed. There were no objections from Task Force members to this proposal.

Carol Lynn proposed that the Color Rendering Index be deleted from the ordinance completely and there were no objections to this recommendation.

Carol Lynn suggested, similar to other municipal ordinances, that we require full compliance with the Outdoor Lighting Ordinance when a property owner renovates 25% or more of a property. Ranjit pointed out that addition of water sprinklers and other code updates are required to be installed in buildings that undergo a 50% renovation. Lisa pointed out that if any of the light fixtures were replaced, the entire property would have to be comply with the ordinance as drafted.

Task Force members and the public were encouraged to submit written comments on the latest draft that was circulated, along with any additional proposals.

PUBLIC COMMENT

Comments and concerns raised by members of the public attending include:

- 1) Ken Taylor, resident and lighting professional.
 - Has concerns about the over-all light levels allowed under this ordinance and other Cambridge lighting practices.
 - Would like to see a citizen panel to review applications for architectural lighting of significant buildings.
 - Lighting Design Guidelines should be established and presented to the Historical Commission and any other board or commission that have authority over building design and construction in Cambridge.
- 2) Tom Stohlman, resident.
 - Is concerned about the exemption of historic properties from complying with the outdoor lighting ordinance. Does not want to see over-lighting of historic properties, especially if the structure was built before electricity.
 - Is concerned about the exemption of emergency rooms and pointed out that the neighbors around the Mt. Auburn Hospital entered into an agreement that outlined appropriate lighting practices because of light trespass and light pollution from the hospital.
- 3) Glenn Heinmiller, resident and lighting professional.
 - Agreed with the proposal to remove the Color Rendering Index from the proposed ordinance.
 - Pointed out that there are a number of sustainable building practice requirements for buildings of a certain size so creating a standard based on size would not be difficult.
- 4) Marilyn Wellons, resident.
 - Is concerned about the over-all light levels in Cambridge and the City lighting practices on municipal buildings, streets, playgrounds, and the negative health impact on residents, especially on children.
 - Would like to see indoor lighting spilling out of windows included in the ordinance.
 - Concerned that there is no limit on number of fixture and that the change in grade between properties isn't a factor.
 - Concerned that the review and enforcement property relies too heavily on affidavits, which can be easily ignored.
- 5) Kelley Beatty, lighting professional.
 - Stated that the Task Force shouldn't be afraid to follow stricter guidelines for vertical and horizontal lux limits at the property line.
 - Is concerned that existing Cambridge zoning ordinance that covers illumination in residential districts (7.20) will be replaced by the Outdoor Lighting Ordinance. Would like to see it work in tandem with the proposed municipal ordinance.

- Stated that the International Dark-Sky Association only endorses 3000 K as the highest color temperature.

Lisa thanked everyone for their time and the meeting was adjourned.