M E M O

TO: Planning Commission

FROM: James Kramvik, Community Development Director

DATE: January 18th, 2023

RE: Lighting Workgroup Results for Revisions to Zoning Code Section 515-4-8 Outdoor Lighting

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Introduction

The Planning Commission directed staff to attend the Park Board meeting and the BPU Commission meeting to discuss creating a City-wide policy regarding color temperature standards in lighting. In order to institute a City-wide policy, there must be agreement from the Planning Commission, the Park Board, BPU Commission, and City Council. A workgroup was formed and consisted of: One member from Planning Commission, two members from the Park Board, one member from the BPU Commission, the Public Works Director, the Community Development Director, and BPU's Operations Manager.

Lighting Workgroup

The lighting workgroup was tasked with helping the City of Brainerd form an overall lighting policy regarding *Lighting Color Temperature Standards*. Lighting in the City consists of street/ traffic lighting, park lighting, and private property lighting. The goal of the workgroup was to form a consensus for color temperature standards for the Citys' street lighting policy, that will be presented to City Council at a later date. Findings from the workgroup will then be presented to the Park Board and the Planning Commission to potentially recommend adoption of lighting color temperature standards in the Zoning Code. The Zoning Code addresses lighting standards in parks and private property. The City's lighting policy dictates lighting standards for traffic lighting on commercial and residential right-of-ways. Additionally, the workgroup discussed other potential code language that could help limit light pollution in Brainerd.

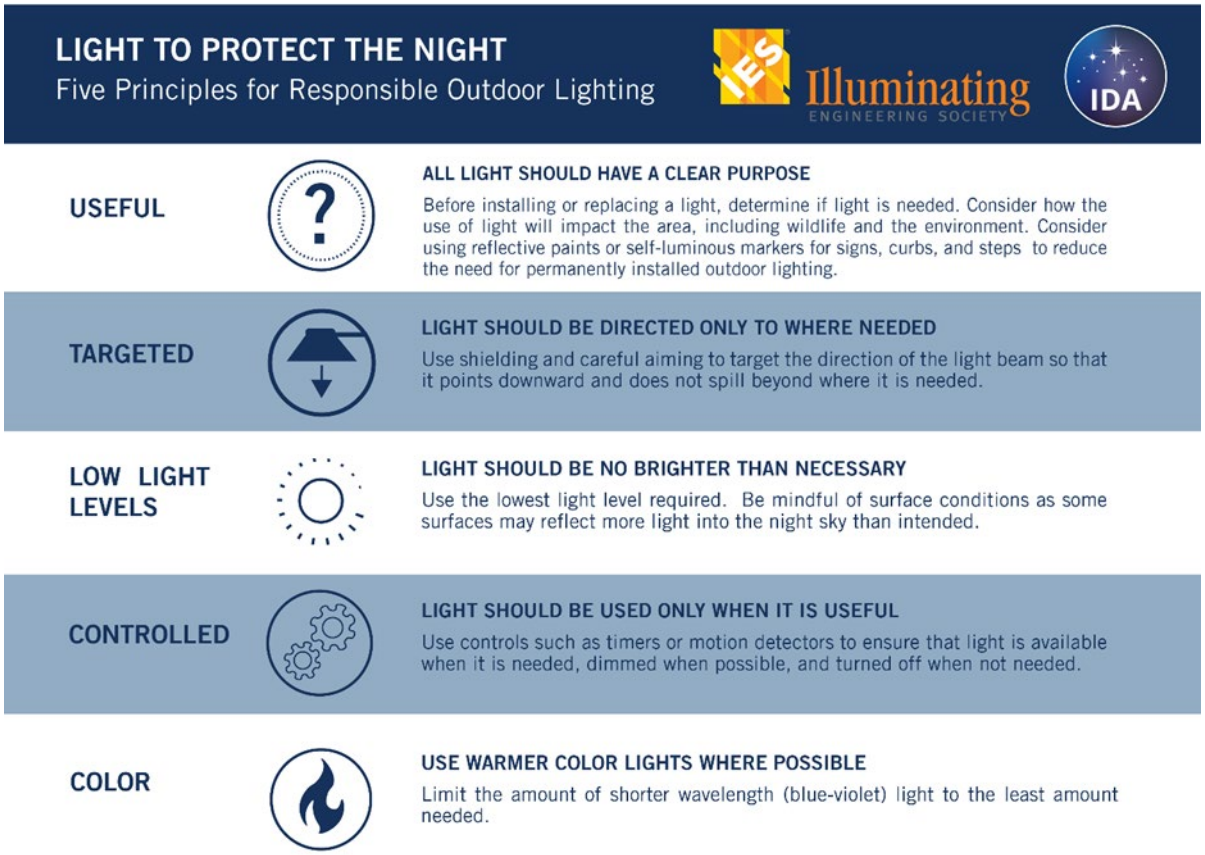
Street Lighting Policy

Public Works Director Dehn has been working with City Council and BPU's Operations Manager Hawkinson to finalize the City of Brainerd's Street Lighting Policy. As part of street reconstruction projects, the City of Brainerd will implement the lighting policy and install new poles and fixtures. The preliminary policy includes fixtures with a color temperature of 3000 Kelvins. Preliminary pricing indicates that residential fixtures will not have a price increase going from 4000 Kelvins to 3000 Kelvins. Staff has also researched the price to add photocells with dimmable motion sensing nighttime lighting to the fixtures. Additional costs for adding that component to lighting fixtures is approximately $125.

Changes to the Zoning Code

The lighting workgroup discussed several topics to potentially amend the Zoning Code to limit light pollution in Brainerd. Many of the items are supported by the International Dark-Sky Association. A significant amount of discussion centered around color temperature standards in new residential lighting. The City of Brainerd does not issue electrical permits in the Community Development Department when a fixture is added to an existing property. However, the Building Department does review all new homes and can require applicants to submit a lighting plan that potentially meets the new standards within the lighting ordinance. It was determined that the standards should apply to all residential properties as well as commercial. Discussion also involved creating a mechanism as part of the ordinance to require properties to correct lighting fixtures that are displaying non-intended corelated color temperatures.

Discussion Topics Included: Color Temperature Lighting Standards, Athletic Field Lighting, Dimmable Nighttime Lighting, Zoning District Requirements, Correction Steps for Non-Functioning LED Lights.



Staff Recommendation

Amended language should be added to Section 515-4-8.D with a title change to the Section. Section should be titled *"Lighting Restrictions and Trespass".*

D. **Lighting Restrictions and Trespass**

1. Color Temperature of Lamps**.** All new lighting must have a correlated color temperature (CCT) of 3,000 Kelvin (K) or lower.
   a. All light fixtures displaying a non-intended correlated color temperature is considered in violation of this ordinance.
   b. Recreational lighting is exempted from Section D.1 of this article
2. Dimmable Lighting. All new nonresidential lighting must dim by at least 50% or turn off at 10PM or one hour after close of business, whichever is later.
3. Maximum Light Levels. Light trespass shall not exceed one (1) foot candle at the center line of a public street or four-tenths (0.4) foot candles at the property line of adjacent residential property as measured at the property line per the method outlined in this Section.
4. The foot candle level of a light source shall be measured at the property line and taken after dark with the light meter held six (6) inches above the ground with the meter facing the light source. A reading shall be taken with the light source on, then with the light source off. The difference between the two readings will be identified as the light intensity.

Public Semi-Public (PSP) District must be added to the Residential Use Standards.