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**Waiver Justification** 

Section 4.1.3.B.2.c

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PLANNING &
DESIGN SERVICES

## 18ZONE1014

Topgolf USA Louisville, LLC (the "applicant") is seeking a waiver of LDC Section 4.1.3.B.2.c, which requires all lighting fixtures over 3,500 lumens to be fully shielded. After an exhaustive search for field lighting that meets the IESNA definition of "fully shielded," the applicant has been unable to locate a fixture that would simultaneously meet the "fully shielded" requirement and light the field. In fact, the applicant has worked with a member of the IESNA Sports Lighting Committee to come up with the lighting design proposed, which complies with LDC Section 4.1.3.B.6, which covers recreational lighting. As shown in the lighting report performed by Keith Pharis, PE, the proposed lighting plan for Topgolf and updated parking lot lighting at Oxmoor Center will produce less up-light, spill-light and glare than the parking lot lighting currently in place at Oxmoor Center.

Chapter 4 of the Land Development Code contains two contradictory requirements. Section 4.1.3.B.2.c states that all luminaires in all form districts that are over 3,500 lumens must be fully shielded. Section 4.1.3.B.6, titled Recreational Facilities, states that recreational lighting (for sports fields) must be fully shielded or designed with sharp cut off capability, so as to minimize up-light, spill-light, and glare. Unfortunately, the intended distinction between recreational lighting and all other lighting (i.e. sidewalk, parking lot, architectural, etc.) was not incorporated into Section 4.1.3.B.2.c. According to the applicant's lighting expert, there are no recreational lighting fixtures under 3,500 lumens, which is the equivalent of approximately three 75-watt lightbulbs. Therefore, according to a strict reading of the LDC, all recreational lighting must be "fully shielded." Through the applicant's lighting expert and manufacturer, the applicant has explored a variety of fixtures in order to attempt to provide lighting that meets these two incongruous requirements. But there are no lighting fixtures available for Topgolf's recreational field applications that meet the "fully shielded" requirement. Because there are no applicable fixtures that meet the "fully shielded" requirements of Section 4.1.3.B.2.c, the applicant is seeking a waiver.

The proposed waiver will not adversely affect adjacent property owners. As stated in the lighting report from Keith Pharis, PE, the proposed lighting will result in less glare, less spill-light and less up-light than the existing parking lot fixtures at Oxmoor Center. According to Mr. Pharis's lighting report, "The proposed design meets or surpasses the LDC restrictions on [light trespass, light pollution and glare] and improves over the current installation (which does not have glare control and fails to meet the light trespass requirements). The report goes on to state that "The current fixtures are also "high glare" luminaires with no shielding or cutoff optics and are highly visible from adjoining properties." Allowing the proposed development will reduce glare, reduce up-light and reduce spill-light on adjacent properties to levels that are compliant with Section 4.1.3.B.11.

The proposed waiver will not violate the Comprehensive Plan. The proposed waiver will allow for lighting that meets the intent of Section 4.1.3 and the requirements of 4.1.3.B.6, while allowing for highly focused but not fully shielded fixtures. As stated above, fully shielded recreational lighting is not

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commercially available for field lighting. Guideline 3-Compatibility states that applicants should mitigate adverse impacts of lighting from proposed development on nearby properties and on the night sky. The proposed lighting system, including the parking lot revision, will result in less glare, less up-light, and less spill-light, the goal of this policy. According to Mr. Pharis's report, the [Topgolf] fixtures have tightly controlled optical patterns that are designed specially to light the field with a high degree of accuracy and virtually no light trespass beyond the field perimeter. In addition, Topgolf will install a dense evergreen screen along the end of the outfield, which will shield the lights even further.

The extent of the waiver is the minimum necessary to afford relief to the applicant. Due to the lack of available fully shielded recreational fixtures, no recreational facility can comply with Section 4.1.3.B.2.c. Granting the waiver will allow the proposed development to provide lighting that complies with Section 4.1.3.B.6 and 4.1.3.B.11.

The applicant has incorporated other design measures that compensate for its non-compliance with the fully shielded requirement. The proposed Topgolf and Oxmoor parking lot renovation will result in less glare, less up-light, and less spill-light than the existing condition. In fact, the revised lighting, including Topgolf, will result in a net lumen reduction on the east side of the former Sears building of over 1,100,000 lumens (Existing: 3,675,000 lumens-Proposed: 2,544,000 lumens=Net Reduction-1,131,000 lumen reduction). All in all, the proposed redevelopment will result in a dramatic improvement in lighting conditions.

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