

# University of Oregon

## Campus Outdoor Lighting Plan

November 2004

Campus Planning Committee and Ad Hoc Committee on Campus Lighting

### **I. Purpose:**

The purpose of this plan is to interpret and enhance the existing Long Range Campus Development Plan (LRCDP) outdoor lighting policies creating a Level 3 Plan. The LRCDP states:

“The University recognizes that campus and exterior building lighting is needed to address adequately the personal safety requirements of students, faculty, staff and campus visitors without significantly damaging its nighttime aesthetic qualities, and to be consistent with its concerns for energy conservation.”

The plan defines lighting parameters for entrances, pedestrian walkways, and parking lots on campus. It also describes review requirements.

Issues beyond physical design, such as safety concerns and operations, are not within the purview of the LRCDP and are addressed by the Department of Public Safety and Facilities Services. Therefore, the University Planning Office and the Campus Planning Committee (CPC) have worked with staff from the Department of Public Safety and Facilities Services to develop this plan.

All proposed policies are consistent with federal standards established by the Illuminating Engineering Society of North America (IESNA) and City regulations.

### **II. Background:**

Outdoor lighting on campus has received a great deal of attention over the years. This plan is designed to address the key issues and concerns surrounding the subject.

Students have expressed concern about night safety on campus. Adequate lighting is one part of the solution; it does not imply, however, that a lit area is guaranteed to be safe. The LRCDP states that the university is committed to developing a program of maintenance, rehabilitation, and repair of campus lighting on a systematic, continuous basis and will continue to seek adequate funding for this activity. Although many new fixtures have been installed over the past few years, limited budgets and lack of an overall plan leave room for improvement.

In addition, the recently adopted City of Eugene outdoor lighting standards require cut-off fixtures, which are not currently used by the university. The new City standards also categorize the university (PL-Public Land zoning) as a Low Ambient Light Area unless an area is determined to have a high level of nighttime activity.

These issues, combined with the recent funding allocated by the Associated Students of the University of Oregon (ASUO) towards lighting improvements, have triggered a renewed interest in and need to prepare a comprehensive lighting plan.

Establishing a plan (in particular prioritizing outdoor lighting walkways) will also allow the CPC to review outdoor lighting improvements in a comprehensive manner, thus eliminating the need for individual lamp location reviews. In the past, the CPC has reviewed individual proposed locations for lighting fixtures. The CPC approved the first phase of a network of outdoor lighting walkways in August 1996. This plan extends the initial phase to the entire campus.

### **III. Review Requirements:**

The following departments/committees are responsible for the design, review, and installation of outdoor lighting fixtures on campus:

Facilities Services: All installations are coordinated by Facilities Services.

Department of Public Safety: The Department of Public Safety is responsible for ensuring that proposed lighting designs and installations properly consider safety needs.

Campus Planning Committee: All installations using standard fixtures that are in approved outdoor lighting walkways or large parking lots, and that meet the lighting guidelines described below, are coordinated by Facilities Services and are not subject to CPC review.

All other exterior lighting installations are subject to CPC review. Examples of installations requiring review include use of a standard fixture in an area outside of the approved outdoor lighting walkways, or use of a non-standard light fixture anywhere on campus. Often CPC review of lighting fixtures occurs as part of a project's schematic design review.

### **IV. General Lighting Guidelines:**

The following general guidelines apply to the selection, design, and placement of all campus outdoor lighting:

1. Adequately address the personal safety requirements of students, faculty, staff and campus visitors (LRCDP) as recommended by the Department of Public Safety.
2. Maximize energy conservation (LRCDP).
3. Preserve the campus nighttime aesthetic qualities (LRCDP).
4. Restrict light trespass. In particular, unusual applications, such as illuminating outdoor recreation fields or facilities, need to be designed with the specific activity in mind while protecting adjacent spaces and uses from spillover light to the maximum extent possible (LRCDP).
5. Ensure that main entrances, major walkways and adjacent spaces are well lighted. However, avoid deliberate lighting of open lawn expanse between paths (LRCDP).
6. Minimize the difference between lighting levels in adjacent areas to prevent strong contrasts and shadows.
7. Eliminate glare to the greatest extent possible.
8. Recognize the relationship between lighting and other landscape features such as vegetation. The placement and design of outdoor lighting need to be carefully coordinated with sensitive management of campus vegetation. When possible, lighting engineers and landscape architects should work collaboratively in

designing nighttime illumination improvements (LRCDP). Minimize the need to substantially trim landscaping while recognizing the need to minimize shadows and provide surveyable surroundings.

9. Recognize that uniform lighting is often more important than the amount of lighting when establishing the sense of a safe, well-lit area.
10. Recognize that lighting serves as an architectural design element in the landscape setting in addition to its functional qualities.

## **V. Prioritized Plan for Outdoor Lighting Walkways**

The creation of a prioritized plan for outdoor lighting walkways will help achieve the general lighting goals described above by helping to provide a sense of a safe night environment on campus while conserving energy to the greatest degree possible and preserving the landscaped, park-like character of campus. The premise behind this network of walkways is that it is of primary importance to encourage people to use well-traveled paths as supported by the Department of Public Safety. Lighting these walkways identifies them and encourages pedestrians to use them.

In general a walkway, plus about 20 feet on either side, should be adequately lit as appropriate. The network of walkways includes corresponding main entrances and parking areas.

Identifying these outdoor lighting walkways does not preclude the possible need to light other areas of campus; rather, it helps determine where to focus lighting efforts as resources become available. It should be noted that many of the outdoor lighting walkways are already adequately lit.

To be designated as outdoor lighting walkways, the routes will:

1. Follow all general lighting guidelines (see above).
2. Link major building entrances to each other and to primary auto/bike parking areas and transit stops (pay particular attention to buildings that have high levels of nighttime use).
3. Add to a sense of a safe night environment.
4. Encourage the use of well-traveled areas.
5. Correspond with ADA access routes.
6. Preserve the landscaped, park-like character of campus.
7. Protect significant landscape features.
8. Conserve energy to the greatest degree possible.
9. Correspond with call box locations.
10. Correspond with designated bike paths.

The prioritized plan for outdoor lighting walkways is represented on the attached map (Map 1).

This plan recognizes that City-owned streets are a component of the outdoor lighting walkway network for the campus area. Although the university does not have jurisdiction over these public-right-of-ways, the City should be encouraged to make lighting improvements where necessary.

## VI. Light Fixture Designs

Consistent landscape design features, such as light fixtures, benches, and trash receptacles, are important components in defining the overall campus character. These design features create a visual connection throughout campus, helping to integrate the variously styled buildings and landscapes.

Criteria for selecting light fixtures include:

1. All general lighting guidelines.
2. Visual appearance - compatibility with existing fixtures, campus character, and pedestrian scale.
3. Initial cost.
4. Maintenance costs and requirements.
5. Operations and energy efficiency (LRCDP).
6. Cut-off (to meet city standards).
7. Quality and color of light/type of light: Within the limits of technology and reasonable cost, lamps should emit a spectrum as close to natural light as possible (LRCDP). However, in consideration of the university's commitment to energy savings and to economical maintenance, high-pressure sodium lamps are acceptable according to the LRCDP.
8. Availability of parts over a long period of time.
9. Compatibility with the existing poles (if a proposed standard for pedestrian walkways).
10. Free-standing design - avoid building-mounted fixtures (LRCDP)

### Campus-standard Fixture:

The campus-standard light fixture shall be used whenever possible to maintain consistency throughout the campus landscape. It is particularly important to use the campus-standard fixture for entrances, pedestrian walkways, small/medium auto-parking areas, bike-parking areas, and transit stops.

The LRCDP standard fixture is a 10- or 12-foot-high fluted lamppost (painted dark green) fitted with acorn globes. The pre-approved model is the Visco, Series A, Holophane Granville with a Granville G-V-8N globe. The type of refractor is not standardized; it depends on the pattern of light distribution needed in individual applications (LRCDP). The standard lamp fixture has an interior shield to meet the city cut-off requirements while providing appropriate light distribution.

The light source is metal halide, a white-light source.

Conversion to a white-light source shall be done in a coordinated manner, area by area, to avoid a mismatched appearance. All new construction and lighting upgrade projects shall specify metal halide fixtures and adjacent areas shall be converted at the same time whenever possible. Facilities Services anticipates that it will take about ten years to fully convert the campus fixtures to metal halide.

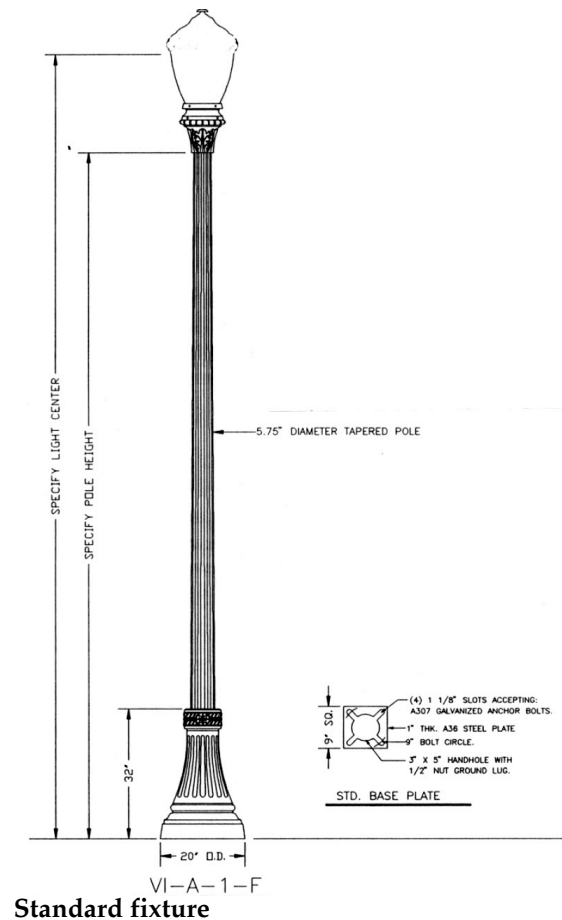
## All Other Applications:

Although the campus-standard light fixture should be used whenever possible, a non-standard fixture design may be appropriate to meet special lighting needs, for example in large parking lots and playing fields. Also, a non-standard fixture may be appropriate to ensure design compatibility with the historic or architectural character of a particular building.

All non-standard lighting fixtures are subject to the lighting guidelines contained in this plan and are subject to Campus Planning Committee review.

**Parking Lots:** Alternative designs for large parking lot fixtures should only be considered for the interior portions of large parking lots. The standard pedestrian-scale acorn-globe fixture should be used in transition areas, which include the outer edges of the lot, walks adjacent to or bisecting the lot, and campus drives and streets. The standard acorn globe fixture should also be used in locations where a taller, contemporary parking-lot fixture would detract from the character of the

adjacent area or adjacent buildings. This is particularly true for areas designated as a significant open space by the LRCDP or one possessing historic significance.



## VII. Lighting Levels and Ratios

As stated in the LRCDP, "adequate consideration is to be given to the perceptions of the relationship between light and safety as well as the actual measured light conditions. In consideration of this, the University does not subscribe to a specific quantitative illuminance standard. Similarly, the University recognizes the need for uniform light distribution, but does not subscribe to a specific ratio standard."

The general guidelines should be followed when determining appropriate light levels and ratios. In particular, uniformity and quality of light are encouraged over quantity. In all cases, IESNA standards and city regulations shall be met.

*Note: (LRCDP) indicates that the guideline is an existing policy contained in the 1991 Long Range Campus Development Plan.*

*Available on-line at the University Planning Office web page:  
<http://darkwing.uoregon.edu/~uplan/LightingPlan.pdf>*

Map updated November 2004

