

1 AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF
2 ORLANDO, FLORIDA, RELATING TO LIGHTING
3 REGULATIONS; AMENDING CHAPTER 63,
4 ENVIRONMENTAL PROTECTION, BY CREATING NEW
5 PART 2M, ENTITLED "OUTDOOR LIGHTING;"
6 CONSOLIDATING EXISTING OUTDOOR LIGHTING
7 REGULATIONS IN THE NEW PART 2M, PROVIDING
8 PURPOSE AND INTENT OF LIGHTING REGULATIONS AND
9 DEFINITIONS; REQUIRING AN OUTDOOR LIGHTING PLAN
10 FOR CERTAIN DEVELOPMENT; PROVIDING SUBMITTAL
11 REQUIREMENTS FOR APPLICATIONS FOR OUTDOOR
12 LIGHTING PLAN APPROVAL; PROVIDING LIGHTING PLAN
13 REGULATIONS, VARIANCE APPROVAL PROCESS AND
14 ALTERNATIVE STANDARDS FOR OUTDOOR LIGHTING
15 PLANS; PROVIDING FOR SEVERABILITY, CODIFICATION,
16 CORRECTION OF SCRIVENER'S ERRORS, AND AN
17 EFFECTIVE DATE.

18
19 **WHEREAS**, section 163.3202(1), Florida Statutes, requires that the City of
20 Orlando, Florida (the "City"), adopt or amend and enforce land development regulations
21 that are consistent with and implement the City's adopted comprehensive plan; and
22

23 **WHEREAS**, section 163.3203(3), Florida Statutes, encourages the use of
24 innovative land development regulations and requires that all land development
25 regulations be combined into a single land development code for the City; and
26

27 **WHEREAS**, from time to time, amendments and revisions to the City's adopted
28 comprehensive plan (the "Growth Management Plan") and progress in the field of
29 planning and zoning make it necessary or desirable to amend the land development
30 regulations of the City; and
31

32 **WHEREAS**, at its regularly scheduled meeting of March 19, 2013, the Municipal
33 Planning Board recommended to the City Council of the City of Orlando, Florida (the
34 "Orlando City Council"), that the provisions of this ordinance are consistent with the
35 applicable provisions of the City's adopted Growth Management Plan, are in the best
36 interest of the public health, safety, and welfare, are in harmony with the purpose and
37 intent of the City's Land Development Code, will not result in disorderly and illogical
38 development patterns, and will not result in incompatible land uses; and
39

40 **WHEREAS**, the Orlando City Council hereby finds and determines that this
41 ordinance is consistent with the applicable provisions of the City's adopted Growth
42 Management Plan, is in the best interest of the public health, safety, and welfare, is in
43 harmony with the purpose and intent of the City's Land Development Code, will not
44 result in disorderly and illogical development patterns, and will not result in incompatible
45 land uses; and
46

47 **WHEREAS**, outdoor lighting is provided for a variety of purposes to the benefit of
48 modern society, including safety and security, recreation, emphasizing features of
49 architectural or historic significance, and to light parks and gardens; and
50

51 **WHEREAS**, recent developments to the rapidly changing lighting industry,
52 including the use of light-emitting diode (LED) technology, have greatly improved the
53 effectiveness and energy efficiency of outdoor lighting; and
54

55 **WHEREAS**, the existing Code of the City of Orlando, Florida (the "Orlando City
56 Code") does not recognize LED and other relatively new lighting technologies; and
57

58 **WHEREAS**, the Orlando City Council hereby finds and declares that this
59 ordinance is in the best interest of the public health, safety, and welfare, and that it
60 preserves, protects, and enhances the use of property within the City through the use of
61 appropriate and efficient lighting practices and systems; and
62

63 **NOW, THEREFORE, BE IT ENACTED BY THE CITY COUNCIL OF THE CITY**
64 **OF ORLANDO, FLORIDA, AS FOLLOWS:**
65

66 **SECTION 1. SECTION 9.23, DELETED.** Section 9.23, Orlando City Code, is
67 hereby deleted and reserved for future use.
68

69 **SECTION 2. SECTION 9.32, DELETED.** Section 9.32, Orlando City Code, is
70 hereby deleted and reserved for future use.
71

72 **SECTION 3. SECTION 9.36, DELETED.** Section 9.36, Orlando City Code, is
73 hereby deleted and reserved for future use.
74

75 **SECTION 4. SECTION 61.306, DELETED.** Section 61.306, Orlando City Code,
76 is hereby deleted and reserved for future use.
77

78 **SECTION 5. CHAPTER 63, PART 2M, CREATED.** Chapter 63, Part 2M,
79 Orlando City Code, is hereby created to read as follows:
80

81 **Part 2M. Outdoor Lighting**
82

83 **Sec. 63.400. Purpose and Intent.**
84

85 The purpose and intent of this part is to ensure that outdoor lighting (or "exterior
86 lighting") has a positive visual impact on surrounding properties. To that end, exterior
87 lighting should be designed, installed, and maintained in a consistent and coordinated
88 fashion to provide safe, convenient, and efficient lighting for customers, pedestrians, and
89 vehicles. Outdoor lighting must also avoid the creation of hot spots, glare, obtrusive light,
90 unreasonable light pollution, light trespass, and visual nuisance. This part is also

135 intended to promote energy conservation. Also, exterior lighting should accentuate key
136 architectural elements of buildings, and highlight or otherwise emphasize landscape
137 features.

138
139 **Sec. 63.401. Scope.**

140
141 This part applies to all development with exterior lighting except agricultural uses,
142 single family residential, and duplexes.

143
144 **Sec. 63.402. Definitions.**

145
146 Color Rendering Index (CRI) means the scale used to compare the effect of a
147 light source on the color appearance of its surroundings. The higher the score, the more
148 accurately the light source reflects true color.

149
150 Cutoff fixture means an outdoor light fixture that provides a cutoff (shielding) of
151 the emitted light. The light distribution may not be greater than 2.5% of the luminaire's
152 lumen output at or above 90 degrees vertical from the nadir and not more than 10% of a
153 luminaire's lumen output at or above 80 degrees vertical from nadir.

154
155 Fixture means the assembly that houses a lamp or lamps, and may also include
156 reflectors, mirrors, refractors, lenses, ballasts, housings, and other attachment parts. A
157 fixture is the same as a "luminaire."

158
159 Footcandle (sometimes denoted as "f.c.") means the measure of light noted as a
160 unit of illuminance amounting to one lumen per square foot.

161
162 Glare means intense and somewhat blinding light, or the sensation produced by
163 brightness within the visual field that is sufficiently greater than the intensity of light to
164 which the human eyes are accustomed or adapted, thereby causing annoyance,
165 discomfort, visual impairment, or loss or reduction of visibility.

166
167 Height of fixture means the vertical distance from the normal finished grade
168 directly below the centerline of the luminaire to the top of the light fixture.

169
170 Height of the pole means the vertical distance from the finished grade to the
171 highest point inclusive of the pole, finial, fixture, and mounting arm.

172
173 Hot spot means an area of very high illumination above normal footcandle levels
174 – typically found in an area underneath a luminaire, making normal footcandle levels
175 appear relatively dark.

176
177 Illuminance means the quantity of light arriving at a surface divided by the area of
178 the lighted surface, measured in footcandles.

Formatted: F
Underline

ORDINANCE NO. 2013-73

179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221

Illuminating Engineering Society of North America (IES or IESNA) means the nonprofit professional society of lighting engineers and specialists that has established recommended design standards for various exterior lighting applications.

Internal louvered optical system means a series of high-specular (mirror type) stacked louvers that cover the lamp, creating a cutoff, low-glare light pattern.

Lamp means a light bulb.

LED means light-emitting diode.

Light loss factor means the product of all factors that contribute to the lowering of an illumination level, including factors such as reflector degradation, dirt, lamp depreciation, and voltage fluctuations.

Light pollution means any adverse effect of manmade light, often used to denote a brightness of the night sky, commonly known as urban sky glow.

Light trespass means light falling where it is not desired, wanted, or needed.

Lumen means a quantitative unit measuring the amount of light emitted by a lamp or luminaire.

Luminaire means a complete lighting unit consisting of the lamp or light source, fixture, and other parts designed to distribute the light.

Luminance means the quantitative measure of brightness of a light source or an illuminated surface, equal to luminous intensity per unit area of the source or surface viewed from a given angle.

Metal halide (lamp) means a high intensity discharge lamp where the light is produced by radiation from metal-halide vapors, and which renders colors close to their daytime appearance.

Obtrusive light means light which causes annoyance, discomfort, visual impairment, or loss or reduction of visibility.

Photometric plan means a diagram drawn to scale depicting the location of all light poles and building-mounted light fixtures in a specific area and a numerical grid of the maintained lighting levels that the fixtures will produce. All values must be at grade unless otherwise stipulated.

222 Sag lens, convex lens, or drop-lens means a clear or prismatic refracting lens
223 that extends below the lowest opaque portion of the light fixture.

224
225 Shielded means a fixture constructed to have internal or external shields, top and
226 side visors, hoods, or internal louvers to limit glare and light trespass caused by light
227 emission from the luminaire.

228
229 Spill light means light that falls outside the property where the luminaire is
230 located.

231
232 **Sec. 63.403. Outdoor Lighting Plan Approval Required.**

233
234 Unless otherwise exempt, it is hereby made unlawful and a violation of this part
235 to install or operate outdoor lighting without first obtaining lighting plan approval from the
236 City permitting official. All outdoor lighting must be built and maintained in conformity
237 with the applicable lighting plan approval. The following is exempt from this section:

238
239 (a) Work on property within an historic preservation overlay district or property
240 designated as an Orlando historic landmark.

241
242 (b) Work associated with single and two family residential uses.

243
244 (c) Work not constituting a substantial improvement to the outdoor lighting
245 system of a building or site.

246
247 (d) Structures and improvements approved as a temporary use for less than 61
248 days.

249
250 (e) Work in the public right-of-way.

251
252 **Sec. 63.404. Application for Outdoor Lighting Plan Approval.**

253
254 An application for outdoor lighting plan approval must be submitted to the City
255 permitting official on a form provided for such purpose. The application form must
256 include a description of all the information, documents, and other submissions that City
257 officials will need in order to review the proposal for compliance with this Code. At a
258 minimum, the outdoor lighting plan must include or conform to the following:

259
260 (a) A photometric plan covering the entire site, including any new street right-of-
261 way. The photometric plan must provide enough information to determine the potential
262 for direct illumination of the site's outdoor areas, spill illumination, and compliance with
263 this part. The photometric plan must show the illumination levels (in footcandles) for all
264 exterior fixtures.

265

266 (b) The plan must be prepared by a licensed design professional, who shall sign
267 and seal the plans and certify that the plan complies with this part.

268
269 (c) The plan must be prepared in a scale that is easily legible.

270
271 (d) The plan must show all proposed and existing buildings on the site,
272 pedestrian and vehicular areas, other above-ground improvements, the horizontal
273 location of all proposed and existing outdoor lighting fixtures including pole and wall-
274 mounted fixtures, mounting heights of each fixture, overall height of each pole above
275 grade, location of externally illuminated signs and associated fixtures, and the location of
276 all architectural and landscape lighting fixtures.

277
278 (e) The plan must show initial horizontal illuminance values in footcandles for the
279 area to be illuminated. These values must be calculated at grade and include
280 contributions from all onsite fixtures. The light loss factor may not be less than 0.8.

281
282 (f) The manufacturer's cut sheets (specifications) for each proposed fixture must
283 be submitted. Each cut sheet must be legible and must identify the manufacturer's
284 catalog number. A fixture schedule must be provided with this information and the plan
285 cross-reference identification. Drawings of all typical fixtures must show the directional
286 controls such as shields, reflectors, refractors, and lenses that will aim and limit the
287 angle of illumination. Details must show the vertical angle of illumination that will
288 determine shielding angle.

289
290 (g) A lighting fixture schedule that presents the following information:

291
292 1. Lighting fixture plan identification symbol or abbreviation.

293
294 2. Fixture type, including the manufacturer's product identification catalog
295 number.

296
297 3. Lamp type and wattage or LED luminaire wattge.

298
299 4. Fixture mounting height.

300
301 5. Light loss factors used in the plans.

302
303 (h) The plan must plot footcandles of illumination at ground level to the nearest
304 tenth of a footcandle, and at horizontal grid intervals of no more than ten feet. Light
305 intensity values must be maintained values calculated using a maintenance factor of less
306 than 0.8.

307
308 **Sec. 63.405. General Regulations for Outdoor Lighting Plans.**

309

ORDINANCE NO. 2013-73

310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353

All outdoor lighting plans must conform to the following regulations:

(a) Illumination levels. Illumination levels may not exceed 0.5 footcandles at the property line where the neighboring property is a residential use or is zoned for a residential use. For all other uses, illumination levels may not exceed 1.0 footcandles at the property line. To avoid glare and light spilling onto neighboring properties, fixtures must be installed with shields and reflectors.

(b) Light fixtures. All light fixtures must conform to the following regulations:

1. All fixtures, including security lighting, must be cutoff fixtures.

2. All fixtures must be incorporated into the building or site as an integrated design element through the use of common or complementary style, material, and color.

3. Fixtures may not be tilted towards adjacent properties.

4. Sag lenses, convex lenses, and drop lenses are prohibited.

5. Floodlighting is prohibited except for non-retail industrial uses where the floodlight is internal to the site and cannot be seen from adjacent public rights-of-way and neighboring residential uses or zoning districts.

6. Fixtures that decoratively light a building or wall may not light above the parapet of the building or the top of the wall and may not produce glare or spill light.

Landscape and decorative lights with lamps of 60-watts or less (or the functional equivalent of 60-watts or less) are hereby made exempt from this subsection.

(c) Time controls and motion detectors. Lighting on non-residential sites must include time controls. The time controls must dim all outdoor lights by at least 50% of normal illumination levels within one hour of the close of business on the site. The lights must remain dimmed until the business re-opens in the morning or the automatic light sensors switch the light off in the morning. Where a site includes more than one business, the time controls must dim the lights associated with each discrete place of business within the hour of the respective business closing to the public, but common area lighting may remain fully lit until the last onsite business closes. This requirement does not apply to businesses that operate 24-hours a day. Dimmed lights may return to full luminance for no more than 30 seconds if triggered by a motion detector.

(d) Light sensors. All outdoor lighting must include light sensors that automatically turn lights off when daylight exceeds 85% of the ground level luminance of the fixture.

354
355 (e) Manual controls. All electrical circuits for outdoor lighting must include
356 manually controlled switches conveniently located for manual operation.

357
358 **Sec. 63.406. Special Regulations for Outdoor Lighting Plans.**

359
360 Outdoor lighting plans must conform to the following regulations where
361 applicable:

362
363 (a) Height of light fixtures. Excepting the public rights-of-way, light fixtures may
364 not exceed 30-feet in height when located within a parking lot, and may not otherwise
365 exceed 15-feet in height. Height shall be measured from finished grade to the top of the
366 fixture. Industrial uses not within 500-feet of a residential use or residential zoning district
367 (measured between property lines) may include fixtures up to 50-feet if necessary to
368 illuminate roads or berths used by trucks.

369
370 (b) Parking lots. To avoid conflict in layout, parking lot lighting must be
371 coordinated with the parking lot's landscaping. Parking lot lighting must conform to the
372 following regulations:

373
374 1. Lamps must be metal halide, compact fluorescent, LED, or a source
375 that produces a CRI of 65 or greater. Wattage may not exceed 400-watts per bulb
376 unless necessary to illuminate roads or berths used by trucks at industrial uses not
377 within 500-feet of a residential use or residential zoning district (measured between
378 property lines).

379
380 2. Illumination levels outside the radius of all light poles must range
381 between 0.6 and 3.6 footcandles. For purposes of this part, the radius of a light pole
382 equals the height of the pole or 20-feet, whichever is greater. Each light pole's radius
383 must be shown on its respective outdoor lighting plan. Areas of a parking lot adjacent to
384 a building canopy, porte-cochere, or other illuminated building overhang may exceed 3.6
385 footcandles if the luminance otherwise complies with this part.

386
387 3. Light poles must be spaced apart from each other at least 2.5 times the
388 height of the pole.

389
390 4. Decorative acorn-type fixtures may not exceed 18-feet in height and
391 may not exceed 250-watts per bulb. Acorn-type fixtures must have a textured, clear lens
392 and globe, frosted phosphor-coated bulbs, and an internal louvered optical system, or
393 refractor-type glass globes that meet the cutoff standards of this part.

394
395 (c) Walkways, bikeways, and trails. Walkway, bikeway, and trail lighting must
396 conform to the following regulations:

397

398 1. Fixtures must be decorative in appearance, style, and finish.

399
400 2. Lamps must be metal halide, compact fluorescent, LED, or a source
401 that produces a CRI of 65 or greater. Wattage may not exceed 100-watts per bulb.

402
403 3. Illumination levels outside the radius of all light poles must range
404 between 0.2 and 2.5 footcandles. Nature trails, walkways, and bikeways may be
405 exempted from this minimum illumination level by the planning official if he or she finds
406 that the natural environmental objectives and purposes of the trail, walkway, or bikeway
407 would be unreasonably compromised by this minimum lighting requirement and that the
408 location and environmental design of the trail, walkway, or bikeway reasonably provides
409 natural surveillance and otherwise protects public safety.

410
411 (d) *Canopied areas for vehicles.* Light fixtures in canopied areas for vehicular use
412 such as drive-through facilities at banks and restaurants, at gas stations, porte-cocheres,
413 and in building canopies and awnings within vehicle use areas must be recessed or
414 cutoff fixtures, and must also conform to the following regulations:

415
416 1. Lamps must be metal halide, compact fluorescent, LED, or a source
417 that produces a CRI of 65 or greater. Wattage may not exceed 250-watts per bulb.

418
419 2. Illumination at ground level under canopies may not exceed 20
420 footcandles.

421
422 3. Canopy fascias may not be internally lit.

423
424 4. Luminaires in canopies may not rely on surrounding structures,
425 including the canopy edge, for required shielding.

426
427 (e) *Outdoor automobile dealerships.* Illumination at ground level of outdoor
428 display areas for products such as automobiles, recreational vehicles, motorcycles, and
429 boats, may not exceed 40 footcandles for display rows adjacent to external rights-of-way
430 and may not exceed 24 footcandles for all other areas. Illumination at ground level of all
431 other outdoor areas of the dealership may not exceed 10 footcandles.

432
433 (f) *Firelanes and driveways.* Illumination at ground level of firelanes and
434 driveways may exceed the applicable maximum value provided by this part if the
435 planning official finds that strict compliance with the maximum value would create an
436 unreasonable safety hazard, but in no event may the illumination level exceed 5
437 footcandles unless the applicable maximum value is greater.

438
439 (g) *Awnings.* Back and rear lit awnings are prohibited. Awnings may be lit from
440 above, or from the front by fixtures that meet the cutoff requirements of this part.
441 Shielding on awning light fixtures may be tilted above the horizontal in order to

442 effectively illuminate awnings and awning signs from the front, or from an angle, but the
443 fixtures must prevent spill light.

444
445 (h) *Parking garages.* Interior fixtures must be shielded to prevent light spilling
446 from the garage. Light fixtures on the top deck of a parking garage may not exceed 25-
447 feet in height and must be shielded to prevent light spilling from the boundary of the
448 garage deck.

449
450 **Sec. 63.407. Variances.**

451
452 The planning official may approve variances to the quantitative standards of this
453 part. Such variances must be approved as part of the application for the certificate of
454 outdoor lighting plan approval. In considering a request for a variance, the planning
455 official must apply the standards of review provided at section 65.382 of this Code and
456 may condition the approval of the variance on one or more of the conditions provided at
457 section 65.381 of this Code as necessary to minimally mitigate the identified land use
458 impacts of the variance.

459
460 **Sec. 63.408. Alternative Lighting Standards.**

461
462 As an alternative to the development standards of this part, the planning official
463 may approve an outdoor lighting plan conforming to the Joint International Dark-Sky
464 Association and Illuminating Engineering Society Model Lighting Ordinance, dated June
465 15, 2011.

466
467 **SECTION 6. CODIFICATION.** The City Clerk and the City Attorney shall cause
468 the Code of the City of Orlando, Florida, to be amended as provided by this ordinance
469 and may renumber, re-letter, and rearrange the codified parts of this ordinance if
470 necessary to facilitate the finding of the law.

471
472 **SECTION 7. SCRIVENER'S ERROR.** The City Attorney may correct scrivener's
473 errors found in this ordinance by filing a corrected copy of this ordinance with the City
474 Clerk.

475
476 **SECTION 8. SEVERABILITY.** If any provision of this ordinance or its
477 application to any person or circumstance is held invalid, the invalidity does not affect
478 other provisions or applications of this ordinance which can be given effect without the
479 invalid provision or application, and to this end the provisions of this ordinance are
480 severable.

481
482 **SECTION 9. EFFECTIVE DATE.** This ordinance takes effect on April 1, 2014.

483
484 **DONE, THE FIRST READING,** by the City Council of the City of Orlando,
485 Florida, at a regular meeting, this _____ day of _____, 2014.

486

ORDINANCE NO. 2013-73

487 **DONE, THE PUBLIC NOTICE**, in a newspaper of general circulation in the City
488 of Orlando, Florida, by the City Clerk of the City of Orlando, Florida, this _____ day
489 of _____, 2014.

490
491 **DONE, THE SECOND READING, AND PUBLIC HEARING, AND ENACTED**
492 **ON FINAL PASSAGE**, by an affirmative vote of a majority of a quorum present of the
493 City Council of the City of Orlando, Florida, at a regular meeting, this _____ day of
494 _____, 2014.

495
496 BY THE MAYOR/MAYOR PRO TEMPORE
497 OF THE CITY OF ORLANDO, FLORIDA:
498

499
500 _____
501 Mayor / Mayor Pro Tempore
502

503 ATTEST, BY THE CLERK OF THE
504 CITY COUNCIL OF THE CITY OF
505 ORLANDO, FLORIDA:

506
507 _____
508 City Clerk
509

510 APPROVED AS TO FORM AND LEGALITY
511 FOR THE USE AND RELIANCE OF THE
512 CITY OF ORLANDO, FLORIDA:

513
514 _____
515 Assistant City Attorney
516

517 **[Remainder of page intentionally left blank.]**r