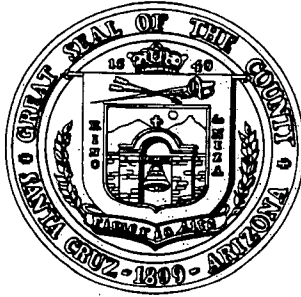


BUILDING DEPARTMENT



SANTA CRUZ COUNTY
Robert Banzhof
Director

OUTDOOR LIGHTING REGULATIONS

A new Lighting Ordinance, 2008-04, has been adopted by Santa Cruz County. The new Ordinance will go into effect on July 11th, 2008. Most plans submitted for permitting will require an Exterior Lighting Schedule because the Building Code requires an exterior light to be installed at all exterior doors. A sample Exterior Lighting Schedule is in this package for your use. Exterior wall mounted lights must be shown on the electrical plans and pole mounted exterior lights on the Site Plan. The lighting on the plans shall correspond to the plan key designation on the schedule. Show the following on the Exterior Lighting Schedule. Show the lamp type, IN = incandescent (including tungsten-quartz-halogen), LPS = low pressure sodium, HPS = high pressure sodium, MH = metal halide, FL = fluorescent. Indicate maximum wattage for each lamp on the schedule. Included in the package is Table 2800-2 which may be used to determine the initial lumens for different lamp types. Show the number of each type of light and indicate if FS = fully shielded or U = unshielded. Table 2800-1 is included in this package. It shows the allowable number of lumens allowed on different projects. Show the total exterior lumens proposed for the site on the schedule. Circle the option that you are using from Table 2800-1 and indicate the square footage of the property.

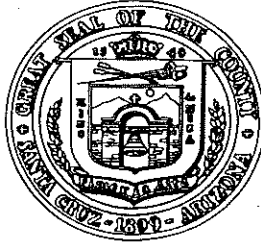
All applications for permits, except gas and electrical permits, shall submit an Exterior Lighting Schedule. If no exterior lighting is planned, for example a barn, then write across the Schedule, no exterior lighting for this project. When submitting plans for additions, plans shall show all existing exterior lighting and submit an Exterior Lighting Schedule. The existing lighting lumens shall be added to the proposed lighting lumens to determine if the total site lumens are allowable.

If you have further questions I may be reached at 520-375-7882

Thank you,

ROBERT BANZHOF
BUILDING OFFICIAL

BUILDING DEPARTMENT



SANTA CRUZ COUNTY
Robert Banzhof
Director

PERMIT # _____
PARCEL # _____

EXTERIOR LIGHTING SCHEDULE

Plan* Key	Lamp Type	Wattage	Lumens Per unit	No. of Units	Shielding (FS or U)	Total Lumens
A						
B						
C						
D						
E						

IN = INCANDESCENT
LPS = LOW PRESSURE SODIUM
HPS = HIGH PRESSURE SODIUM
MH = METAL HALIDE
FL = FLUORESCENT
FS = FULLY SHIELD
U=UNSHIELDED

TOTAL (U) UNSHIELDED LUMENS _____

TOTAL (FS) FULLY SHIELDED LUMENS _____

TOTAL EXTERIOR LUMENS FOR SITE _____

Which option are you using from table 2800-1? Circle 1, 2, or 3

Acreage or square footage of property _____

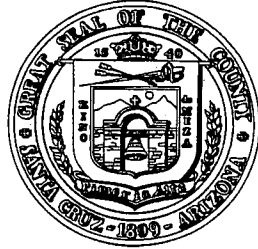
ALLOWABLE (U) UNSHIELDED LUMENS
(From Table 2800-1) _____

ALLOWABLE (FS) FULLY SHIELDED LUMENS
(From Table 2800-1) _____

TOTAL ALLOWABLE LUMENS (From Table 2800-1) _____

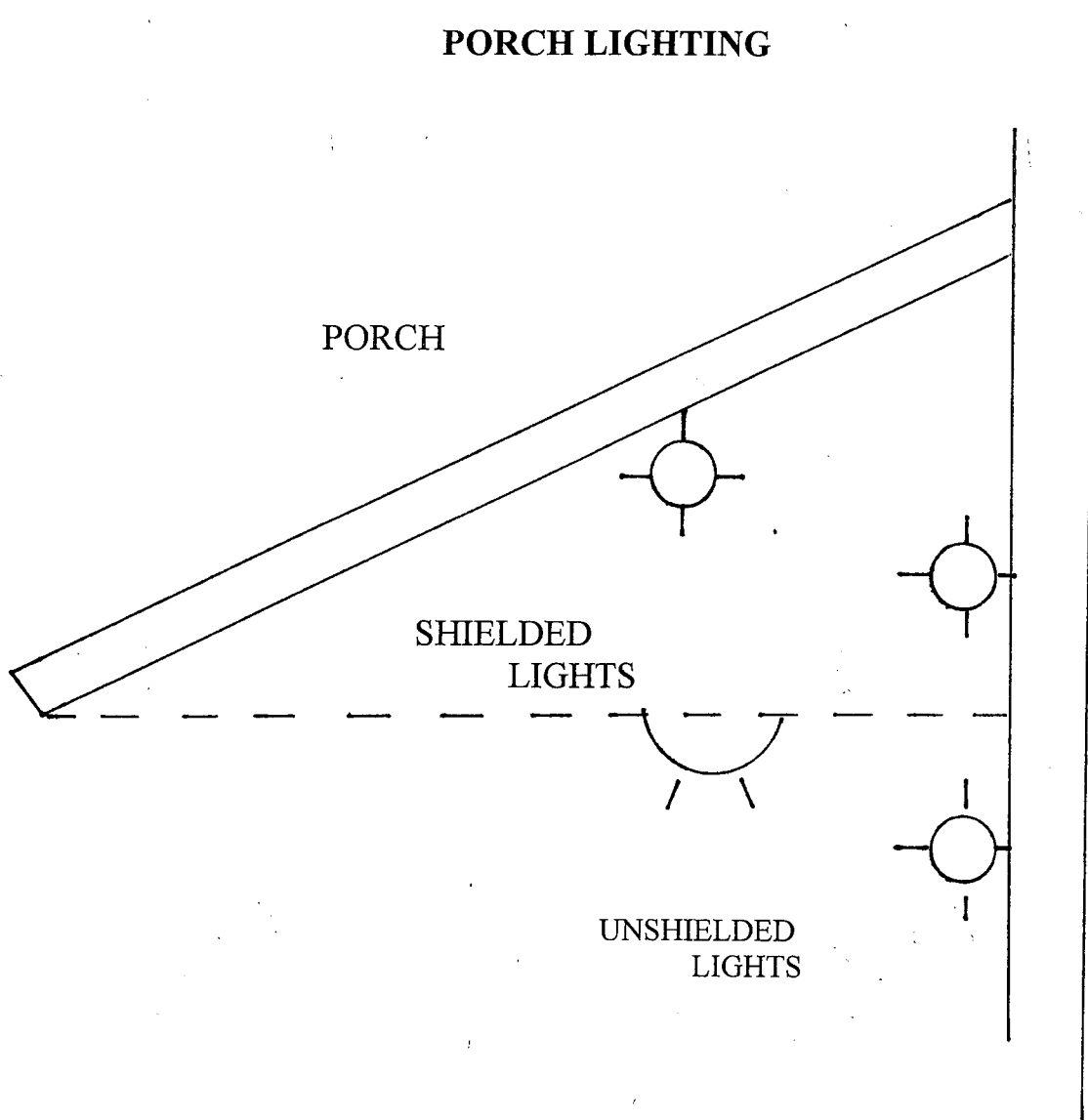
*plan key must correspond to labeling on plans

BUILDING DEPARTMENT



SANTA CRUZ COUNTY
ROBERT BANZHOF
DIRECTOR

PORCH LIGHTING



ROBERT BANZHOF
BUILDING OFFICIAL

TABLE 2800-1

Table 2800-1: Maximum Total Outdoor Light Output Requirements Per Acre – Lumen Caps

Option 1- Commercial and Industrial _ (1)(2)(5) (Mostly Low Pressure Sodium LPS)	
Total (FS LPS, plus FS non LPS, unshielded)	75,000
Limit on non-LPS FS	3,000
Limit on unshielded components, LPS or Non-LPS lighting	3,000
Option 2- Commercial and Industrial – (1)(2)(5)	
Total Lumens (FS, plus unshielded)	60,000
Limit on unshielded components	3,000
Option 3- All Residential zoning (3)(4)	
Total (FS plus unshielded) Lots one acre or larger	20,000
Limit on unshielded component	3,000
Total (FS plus unshielded) Lots less than one acre	10,000
Limit on unshielded component	3,000

Notes to Table 2800-1

1. Use either option 1 or 2 for the entire property.
2. This applies to all land-use zoning classifications for multiple family triplexes and larger, commercial, and industrial sites.
3. This applies to all residential land-use zoning, including all densities and types of housing, such as single family detached and duplexes.
4. If LPS is used for residential lighting, then the total lumens in the table can be increased by 50 percent of FS plus unshielded lighting. For example, for lots one acre or larger, the total lumens could be 30000 of FS LPS including 3000 if non-LPS (which could include 3000 of non-FS). The grand total shall not exceed 30000 lumens.
5. Lumens per Net Acre; Unshielded lumen caps shall not increase regardless of acreage

TABLE 2800-2 Standards values based on manufacturer's data to be used unless applicant submits other verified lumen values		
Type	Lamp Wattage	Initial Lumens
Incandescent	25 W	150
	40 W	460
	60 W	890
	75 W	1210
	100 W	1750
	150 W	2880
	300 W	6360
	1000 W	23800
Compact Florescent	5 W	250
	7 W	400
	13 W	900
	18 W	1200
	26 W	1800
	32 W	2900
	4700	
Tungsten-Halogen	250 W	10700
	500 W	19000
	1000 W	36000
	1500 W	14000
Metal Halide	175 W	20000
	250 W	40000
	400 W	115000
	1000 W	1740
PAR (Parabolic Aluminized Floods & Spots)	150 W	3300
HPS (High Pressure Sodium)	50 W	5800
	70 W	9500
	100 W	16000
	150 W	22000
	200 W	30000
	250 W	37000
	310 W	50000
	400 W	140000
LPS (Low Pressure Sodium)	18 W	1800
	35 W	4800
	55 W	8000
	90 W	13500
	135 W	22500
	180 W	33000
Fluorescent (Standard Cool White, 1.5-inch tubes)	21 W	1190
	30 W	2050
	36 W	2450
	39 W	3000
	50 W	3700
	52 W	3900
	55 W	4600
	70 W	5400
	75 W	6300

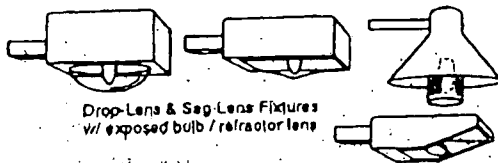
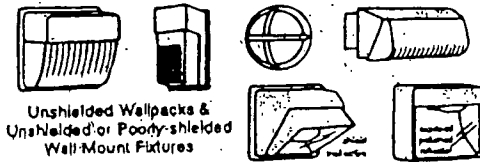
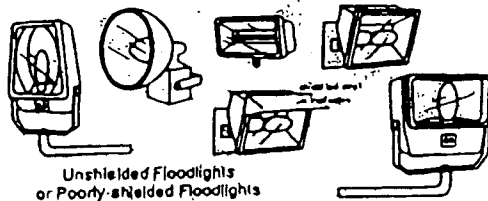
Appendix A

Examples of fixtures that are NOT Fully Shielded
 (Note: Some of these fixtures may be acceptable provided they don't exceed 1,000 lumens.)

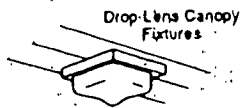
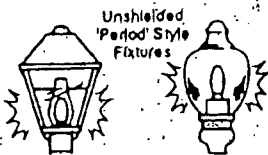
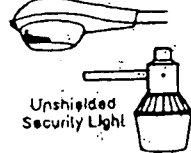
Examples of fixtures that are Fully Shielded
 (Note: to be fully shielded these fixtures must be closed on top and mounted such that the bottom opening is horizontal)

Examples of Acceptable / Unacceptable Lighting Fixtures

Unacceptable / Discouraged
 Fixtures that produce glare and light trespass

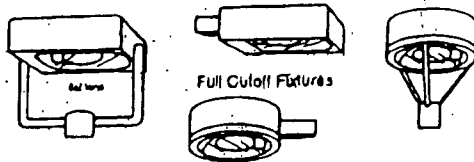


Unshielded Sirelight

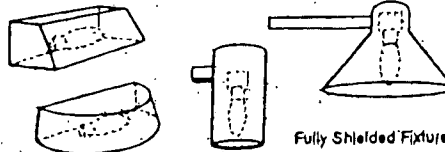


Acceptable

Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night



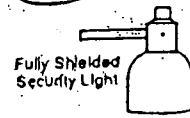
Fully Shielded Wallpack & Wall Mount Fixtures



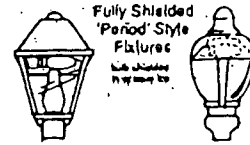
Full Cutoff Streetlight



Fully Shielded Security Light



Fully Shielded 'Period' Style Fixtures



Shielded / Properly-aimed PAR Floodlights



Flush Mounted Canopy Fixtures



061002

END AMENDMENT