Ivins City Staff Report
City Council Meeting 6/3/2021

Agenda Item: Approval Update to Standard Specifications – Lighting Design

Submitted by: Charles R. Gillette, P.E. City Engineer

Recommended City Council Action:
Approve Update to Standard Specifications – Lighting Design

BACKGROUND:
The City last updated the standard specifications for lighting design in June 2019. At the time, the question on how to provide lighting in the "rural area" was undecided.

FINDINGS AND ANALYSIS:
The City Council has been discussing this issue over the past few weeks and has provided guidance to City Staff to update the standard specifications such that lighting of streets in the "rural area" (see map in attachment) would be limited to bollard lighting only.

SUPPORT MATERIALS:
- Proposed Update to Standard Specifications for Design and Construction Section 2.10 Lighting Design

FINANCIAL IMPACT:
None.

Respectfully Submitted:

Charles R. Gillette, P.E. City Engineer and Public Works Director

Content Review:

Dale Coulam, City Manager

2.10. LIGHTING DESIGN

(Section Last Updated, ~~June 2019~~Draft June 2021)

2.10.1. IVINS CITY STANDARD STREET LIGHT

Ivins City has selected a light fixture system as manufactured by ANP Lighting as a standard for City street lights. All streetlights installed on public streets must use the system as herein described. Refer to website at http://www.anplighting.com. The City will pre-purchase poles, luminaires, and bases and keep these materials in stock for developers to use and reimburse the City to prevent suppliers from profiteering from the sole source manufacturer.

Table 2.10.1

Road Classification	R/W Width (ft)	Minimum Spacing	Bollards on Paths	Round-abouts	Intersections: Arterial	Major Collector	Minor Collector	Res Collector	Res Entrance/ Private St/ Comm Drive
Major Arterial	100	250'	Yes	4-18'	2-18'	2-18'	2-18'	2-18'	1-12'*
Minor Arterial	80/85	250'	Yes	4-18'	2-18'	2-18'	2-18'	2-18'	1-12'*
Major Collector – 200 E	66	200'	Yes	4-18'	2-18'	2-18'	2-18'	2-18'	1-12'*
Major Collector	66	200'	Yes	2-14'	2-18'	2-14'	2-14'	2-12'	1-12'*
Minor Collector	60	200'	No	2-14'	2-18'	2-14'	2-14'	2-12'	1-12'*
Residential Collector	55	125'	No	2-12'	2-12'	2-12'	2-12'	2-12'	1-12'*
Residential	50/43/38	125'	No	NR	1-12'	2-12'	2-12'	2-12'	NR
Private Street	n/a	125'	No	NR	1-12'	1-12'	1-12'	1-12'	NR
Rural Area	any	n/a	**	**	**	**	**	**	**

R/W: Right of Way NR: Not Required Notation Examples: 2-18': Two lights, 18' poles
*unless within minimum spacing of another streetlight light, then NR 1-14': One light, 14' pole
** ~~Reserved for Future Update: Developers must budget for standard lighting as applicable~~Bollard lighting only required at cross-walks on collector streets.

A. Light fixture:

1. Light fixture shall be ANP Lighting LA160, LED lighting, 3000 K color temperature, 46 watts/3800 lumens, and Copper Clay color paint finish over the entire hood and body in accordance with Table 2.10.1.

2. The fixture will be supplied will 3000K color LED and fitted with an orange/amber acrylic lens cover provided by the City over the LEDs to lower color temperature to mimic high pressure sodium (approx. 2200 K).

3. Fixture shall be equipped with 90° house side shield when placed on street corners and with a 120° house side shield if ever placed mid-block.

B. Photocell:

1. When metered, locate photocell at meter base. Otherwise, photocell shall be housed in the pole with a drilled hole exposing the sensor at 7.5 feet above the base of the pole.

2. Rotatable housing shall be oriented to point photocell in direction of least luminance from adjacent light fixtures.

C. Pole:

1. Poles shall be aluminum as manufactured by ANP Lighting as per the following table:

Table 2.10.2

Road Classification	Pole Height	Base Cover	Diameter	Wall Thickness	Model Designation
Major Arterial	18	CB1206	5"	0.250"	BD5S18
Minor Arterial	18	CB1206	5"	0.250"	BD5S18
Major Collector (200 E)	18	CB1206	5"	0.250"	BD5S18
Major Collector (All others)	14	BDC4	4"	0.188"	BD4S14
Minor Collector	14	BDC4	4"	0.188"	BD4S14
Residential Collector	12	BDC4	4"	0.188"	BD4S12
Residential	12	BDC4	4"	0.188"	BD4S12
Residential Entrance	12	BDC4	4"	0.188"	BD4S12
~~Rural Section~~	~~**~~	~~**~~	~~**~~	~~**~~	~~**~~

~~** Reserved for Future Update: Developers must budget for standard lighting as applicable.~~

2. Poles shall be cast aluminum A356 alloy free of any porosity, foreign materials, or cosmetic fillers and shall be heat treated to a T-6 condition, of uniform wall thickness with no warping or mold shifting.

3. Poles shall be bolted into a cast in place concrete foundation with breakaway bolts. Bolt size, length and pattern shall be according to the manufacturer.

4. Pole base shall be decorative for Major and Minor Arterials and 200 East, ANP Lighting Model CB1206 and shall also include a concealed GFI 15-amp receptacle, ANP Lighting model CGFI set at 14 feet above base of pole.

D. Twin Arm Mounts: All light poles placed in medians on arterial or major collector roads shall be mounted with a twin post arm mount ANP Lighting PA215 for the placement of double fixtures.

E. Street Signage: Where poles are located at intersections, street signs shall be attached to pole.

F. Color: Poles, Base Covers, Arm Mounts, Adapters, Photocell Housing and Fixtures shall match in color and shall all be a color of Standard Grade "Copper Clay" as manufactured by ANP Lighting.

G. Power Source: Power source shall be as per Rocky Mountain Power requirements.

1. Option A: Direct connect via fused junction box per Standard Drawing No. L-05.

2. Option B: Connect with service meter pedestal. Service pedestal shall be a manufactured fully contained rainproof (NEMA Type 3R Enclosure) cabinet no

larger than 12-inches x 12-inches x 63-inches tall with fully hinged meter section cover and window for meter reading. Milbank A-Style CP3A or equal. When plug in receptacles or irrigation timers are on the service this option shall be required.

H. Banner Arms: On 18-foot poles, banner arms for a 24-inch by 72-inch banner shall be provided. When the light is installed in the median, the light shall be equipped with dual banners.

2.10.2. STREETLIGHT LOCATIONS

Streetlights shall be placed in accordance with the following:

A. Traffic Signalized Intersections:

1. All signalized intersections shall have light fixtures located on top of the signal pole. The fixture will be selected by the City to best match the

2. The signal pole and signal cross arm shall match the ANP Lighting "Copper Clay" color as best as possible.

B. Residential Entrances:

1. All residential developments accessed from arterial or collector roads shall have a streetlight consisting of a 12-foot pole mounted with a single LA160 fixture.

2. A residential entrance light will not be required if an adjacent residential entrance light is located within 125 feet on any arterial or major collector or within 250 feet on minor or residential collectors.

C. Major Arterials (Highway 91):

1. Streetlights, consisting of 18-foot poles mounted with single LA160 fixtures, shall be located at all intersections with collector roads, located on two corners, and located diagonally across the intersection.

2. Only one light is required on T-intersections.

3. In commercial areas, twin arm mounted poles will be required in the street median.

D. Arterials (Snow Canyon Parkway/Center Street/Highway 91):

1. Streetlights, consisting of 18-foot poles mounted with single LA160 fixtures, shall be located at all intersections with collector roads, located on two corners, and located diagonally across the intersection.

2. Only one light is required on T-intersections.

3. Twin arm LA160 fixtures mounted on 18-foot poles will be required in the street medians in accordance with Table 2.10.1.

E. Major Collectors:

1. Streetlights, consisting of 14-foot poles mounted with single LA160 fixtures, shall be located at all intersections with collector roads, located on two corners, and located diagonally across the intersection.

2. Only one light is required on T-intersections.

F. Minor/Residential Collectors:

1. A streetlight, consisting of a 12-foot pole mounted with a single LA160 fixture, shall be located at all intersections with collector roads, located on one corner of the intersection.

G. Rural Section: The rural section of Ivins City is defined by the Ivins Transportation Master Plan, Figure 102. The map is also provided below in Figure 2.10.1.

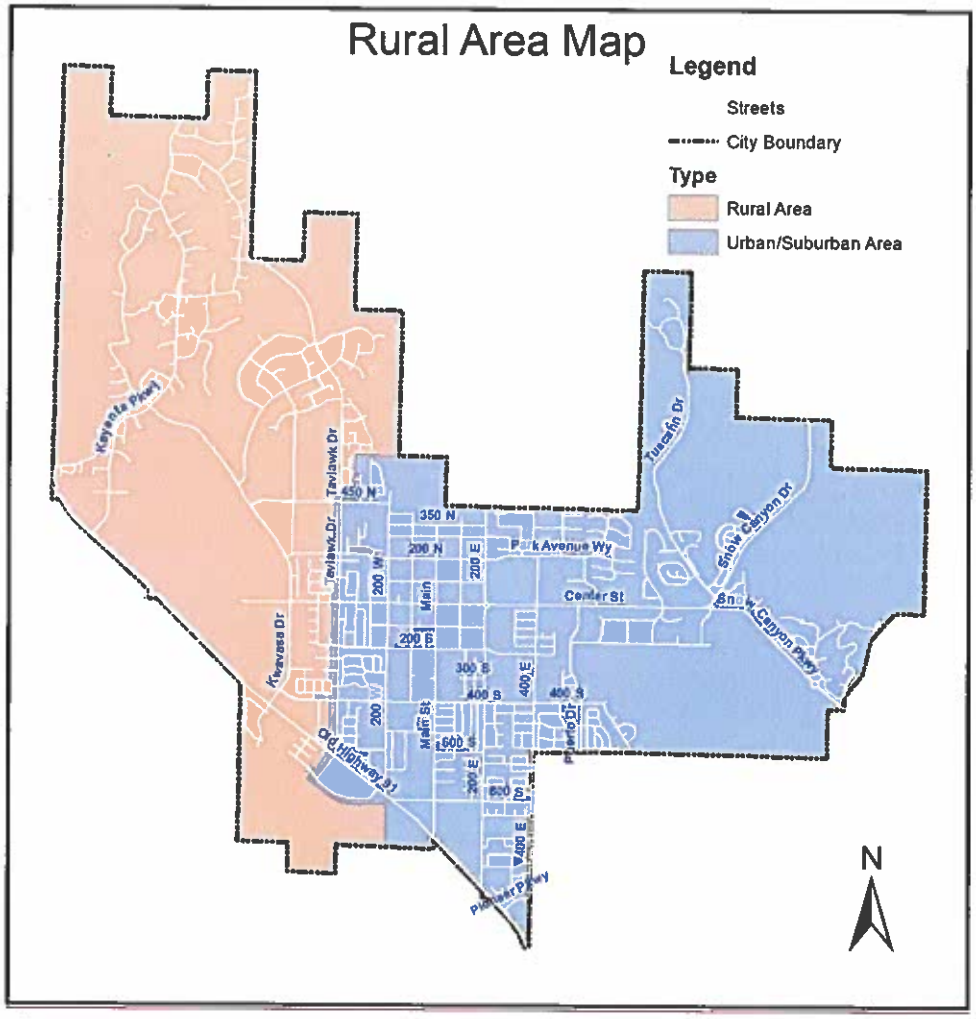


Figure 2.10.1 – Rural Area Map

1. All lighting of public and private streets in the rural area shall be limited to bollard lighting.

2. Bollard lighting shall only be required on both sides of a pedestrian crosswalk on collector streets.

- ~~Reserved for Future Update. Developers in the rural section must budget for standard streetlighting, but not install until specification is updated, as applicable.~~

2.10.3. IVINS CITY STANDARD BOLLARD FOR PAVED SHARED-USE TRAILS

Ivins City has selected the Bounce Bollard light fixture system as manufactured by Kim Lighting as a standard for all shared-use trail lighting. Refer to Kim website at http://www.kimlighting.com/.

A. Bollard Fixture:

1. Bollard fixture shall be the Bounce Bollard Model No. BNB1 as manufactured by Kim Lighting.

2. Lighting element shall be LED with the Type 3 light distribution (27L) and 2200K color temperature.

3. If manufacturer does not supply fixture in 2200 K, it shall be supplied with 3000K and then shall be retrofitted by replacing the clear lens with an orange/amber acrylic lens as provided by the City to further reduce the color temperature to mimic high pressure sodium.

4. Fixture shall include Optional Matte Black Body Cap (Cat. No. BBC) to meet IES designation for "cutoff".

B. Color: Bollard shall be a standard color of Dark Bronze as manufactured by Kim Lighting.

C. Locations: Bollard lighting of paved shared-use trails will be required on all arterial and major collector roads not in the rural area.~~, including the rural zone.~~

1. In the rural area (see figure 2.10.1), bollard lighting of shared-use trails shall only be required on Center Street, Kwavasa Drive (600 West) from 200 North to Old Highway 91, Old Highway 91 west of Kwavasa Drive (600 West), and 400 South east of Kwavasa Drive (600 West).

~~C.~~D. Spacing: Bollards shall be placed at a target spacing of 80 feet with a maximum spacing of 90 feet along these trails.

2.10.4. REQUIREMENTS FOR NEW DEVELOPMENT

A. Conduit, wiring and streetlights shall be installed at the developer's expense in all new and proposed subdivisions or commercial areas. Streetlights and bollards, since they are sole sourced and as such to avoid the potential for predatory pricing, shall be purchased by the City in larger quantities and stored and then resold to developers without any markup.

B. Those subdivisions and commercial areas will be lighted in accordance with a written plan that addresses intersections, public facilities, trails and crosswalks. (See Zoning Ordinance Chapter 11 for details)

C. Non-Standard Lighting for New Development.

1. In the event that a new subdivision or commercial area presents a written lighting plan that uses non-standard streetlights, the plan must be approved by the Planning and Zoning Commission and the City Council.

2. All costs associated with installation, operation and maintenance of non-standard lights shall be by other than Ivins City.

3. All non-standard lighting must meet the requirements of Ivins City Outdoor Lighting Ordinance (Ord. No. 2007-11).

D. Exceptions may be made by the City Engineer or Public Works Director on the location of lighting if crosswalks and street signs along collector and arterial streets are provided with alternative lighting as proposed by a developer.

2.10.5. EXISTING SUBDIVISIONS

A. Existing subdivisions which do not want streetlights shall not be required to install them.

B. In the event a resident living in an established, built-out area requests the installation of a street light, the resident must have the approval and signatures of all adjoining residents impacted by the street light installation, and the City Council. The requesting resident is responsible for costs associated with the street light and its installation. The City will assume ownership after installation.

C. If an existing subdivision or project has non-standard lights installed, approval may be given to continue the non-standard street lights. All non-standard lights shall not be maintained by Ivins City unless already under Ivins City maintenance.