



Government of the District of Columbia
ADVISORY NEIGHBORHOOD COMMISSION 3/4G

Chevy Chase, Barnaby Woods, Hawthorne
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**ANC 3/4G Resolution Regarding the
District Department of Transportation on its proposed Request for Proposal for the “Smart
Street Lighting Project” (available at <https://ddot.dc.gov/streetlightp3>)
January 14, 2021**

1. Background:

ANC 3/4G has a long-standing interest in the effect of street lighting on the health, safety, and well-being of the community. In 2014, the Commission created an Street Light Task Force to better understand the District’s plans and to provide a communication channel to the many residents who had expressed interest and concern about proposed new lighting’s color and brightness. In February, 2020, the Commission agreed that excessive lighting affects the general health and well-being of District residents, and approved a resolution asking that the Comprehensive Plan include a section on Controlling Light Pollution.

2. Current Concerns:

We have concerns that the Request for Proposal (RFP) in its current stage does not pursue the following goals adequately, and ask that the RFP be revised to address these concerns:

a. Over-lighting. Excessive levels of light are wasteful and detrimental to our health.

- * **We ask that the RFP require street lights to be set at levels established by AASHTO or IES, and increase light levels only in cases of safety concerns (crime, vehicular accidents, etc.).** (AASHTO = the American Association of State and Highway Transportation Officials, IES = the Illuminating Engineering Society)
- * **We ask that the RFP include a maximum average illuminance of 25% over the levels established by AASHTO or IES for asphalt (R2) pavement. (see Table 5 attached)**
- * **We request that RFP Table 5 "LED Color Temperature and Wattage Requirements" be retitled "LED Color Temperature, Lumens and Illuminance Requirements" and revised so that the "Proposed Maximum Illuminance" and "AASHTO Recommended Minimum Average Maintained Illuminance" both be listed so they can be readily compared. (see ANC proposed RFP Table 5, attached)**
- * **We ask that the total delivered lumens of Teardrops and Twin-Twenties be consistent with the total delivered lumens of Post-top fixtures. In no case shall they exceed the lumens of Post-Tops by more than 25%. (see ANC proposed RFP Table 5, attached)**

- b. Light Pollution. Light Pollution is detrimental to our enjoyment of starry skies, and detrimental to the mission of the US Naval Observatory (USNO), whose observations are the basis for Global Positioning Systems (GPS) used in a multitude of civilian and military applications.
- * **We ask that the provision in the RFP requiring Washington Globes to send 10% of their light up be stricken, and replaced with the following language: All fixtures installed in the RFP, other than those in the monumental core, should have an upright rating of 0 (none).**
- c. Light trespass. Light streaming into homes and onto property has negative effects on sleep and enjoyment of private property.
- * **We ask that the RFP specify that light trespass onto private property is not allowed. The RFP should specify that lights should use the correct type of distribution (Type 1, Type 2, Type 3, etc) to minimize trespass. If light trespass at individual fixtures still occurs, they should be shielded so as to eliminate trespass.**
- d. Glare. We are concerned that DDOT has not tested LED fixtures on hills, such as occur in our area.
- * **We request that the RFP specify that lights to be used on hills be tested by DDOT for glare before installation, and any additional shielding needed to prevent glare to pedestrians and drivers be designed, tested, and procured prior to installation.**
- e. Color. Exposure to blue light at night has known negative implications on human health.
- * **We request that all lights in our city be 2700K.**
 - * **If having 2700K is not possible citywide, we request that all lighting in our Chevy Chase, Hawthorne and Barnaby Woods neighborhoods be 2700K, including the commercial areas.**
- f. Energy consumption. Eliminating over-lighting will go a long way towards reducing energy consumption.
- * **We ask that the contractor be given an incentive in the RFP to reduce energy consumption.**
- g. Testing in ANC 3/4G before installation. DDOT promised our ANC a moratorium on new fixtures until such time as they had tested proposed lights in our neighborhood.
- * **We request that testing before full-scale installations occur as promised in order to ensure that any potential issues with glare and light trespass are resolved.**
- h. Accountability. The elimination of the 311 system for reporting streetlight issues is concerning.
- * **We request that monitoring of all complaints and requests are readily accessible to the public so that the contractor's performance can be evaluated and corrected if needed.**

Approved by ANC 3/4G after a discussion at its scheduled and noticed January 14, 2021 meeting by a vote of 7 to 0 (a quorum being 4).



 Randy Speck, Chair



 Lisa Gore, Secretary

ANC 3/4 G Recommendation for RFP Table 5: LED Color Temperature and Illuminance Requirements

| Application | Road Class | Cobrahead | | | | Teardrop | | | | Post Top | | | | Twin-20 | | | |
|---------------------|--------------|--------------------------------------|---|---|---|--------------------------------------|---|---|---|--------------------------------------|---|---|---|--------------------------------------|---|---|---|
| | | CCT (color temperature in degrees K) | RFP Units (Lumens- light produced at fixture) | AASHTO Recommended Average Maintained Illuminance (fc)* | ANC 3/4G Recommended Maximum Average Maintained Illuminance (fc)* | CCT (color temperature in degrees K) | RFP Units (Lumens- light produced at fixture) | AASHTO Recommended Average Maintained Illuminance (fc)* | ANC 3/4G Recommended Maximum Average Maintained Illuminance (fc)* | CCT (color temperature in degrees K) | RFP Units (Lumens- light produced at fixture) | AASHTO Recommended Average Maintained Illuminance (fc)* | ANC 3/4G Recommended Maximum Average Maintained Illuminance (fc)* | CCT (color temperature in degrees K) | RFP Units (Lumens- light produced at fixture) | AASHTO Recommended Average Maintained Illuminance (fc)* | ANC 3/4G Recommended Maximum Average Maintained Illuminance (fc)* |
| Freeways | Commercial | 3000 | 19000 | 0.6 | 0.9 | 3000 | 16000 | 0.6 | 0.9 | 3000 | 10000 | 0.6 | 0.9 | 3000 | 20,000 | 0.6 | 0.9 |
| | Intermediate | 3000 | 19000 | 0.6 | 0.9 | 3000 | 16000 | 0.6 | 0.9 | 3000 | 10000 | 0.6 | 0.9 | 3000 | 20,000 | 0.6 | 0.9 |
| | Residential | 3000 | n/a | 0.6 | 0.9 | 3000 | n/a | 0.6 | 0.9 | 3000 | n/a | 0.6 | 0.9 | 3000 | n/a | 0.6 | 0.9 |
| Principal Arterials | Commercial | 3000 | 19000 | 1.6 | 2 | 3000 | 16000 | 1.6 | 2 | 3000 | 10000 | 1.6 | 2 | 3000 | 20,000 | 1.6 | 2 |
| | Intermediate | 3000 | 19000 | 1.2 | 1.5 | 3000 | 16000 | 1.2 | 1.5 | 3000 | 10000 | 1.2 | 1.5 | 3000 | 20,000 | 1.2 | 1.5 |
| | Residential | 2700 | 10800 | 0.8 | 1 | 2700 | 9200 | 0.8 | 1 | 2700 | 8000 | 0.8 | 1 | 2700 | 16000 | 0.8 | 1 |
| Minor Arterials | Commercial | 3000 | 19000 | 1.4 | 1.75 | 3000 | 16000 | 1.4 | 1.75 | 3000 | 10000 | 1.4 | 1.75 | 3000 | 20,000 | 1.4 | 1.75 |
| | Intermediate | 3000 | 10800 | 1 | 1.25 | 3000 | 14000 | 1 | 1.25 | 3000 | 8000 | 1 | 1.25 | 3000 | 16000 | 1 | 1.25 |
| | Residential | 2700 | 10800 | 0.7 | 0.875 | 2700 | 14000 | 0.7 | 0.875 | 2700 | 6000 | 0.7 | 0.875 | 2700 | 12000 | 0.7 | 0.875 |
| Collectors | Commercial | 2700 | 19000 | 1.1 | 1.375 | 2700 | 14000 | 1.1 | 1.375 | 2700 | 6000 | 1.1 | 1.375 | 2700 | 12000 | 1.1 | 1.375 |
| | Intermediate | 2700 | 10800 | 0.8 | 1 | 2700 | 14000 | 0.8 | 1 | 2700 | 6000 | 0.8 | 1 | 2700 | 12000 | 0.8 | 1 |
| | Residential | 2700 | 7300 | 0.6 | 0.75 | 2700 | 9200 | 0.6 | 0.75 | 2700 | 6000 | 0.6 | 0.75 | 2700 | 12000 | 0.6 | 0.75 |
| Local | Commercial | 2700 | 10800 | 0.8 | 1 | 2700 | 14000 | 0.8 | 1 | 2700 | 6000 | 0.8 | 1 | 2700 | 12000 | 0.8 | 1 |
| | Intermediate | 2700 | 7300 | 0.7 | 0.875 | 2700 | 9200 | 0.7 | 0.875 | 2700 | 3840 | 0.7 | 0.875 | 2700 | 7680 | 0.7 | 0.875 |
| | Residential | 2700 | 5400 | 0.4 | 0.5 | 2700 | 5428 | 0.4 | 0.5 | 2700 | 3480 | 0.4 | 0.5 | 2700 | 7680 | 0.4 | 0.5 |
| Alley | Commercial | 2700 | 7300 | 0.6 | 0.75 | 2700 | 7360 | 0.6 | 0.75 | 2700 | n/a | 0.6 | 0.75 | 2700 | n/a | 0.6 | 0.75 |
| | Intermediate | 2700 | 5400 | 0.4 | 0.5 | 2700 | 5428 | 0.4 | 0.5 | 2700 | n/a | 0.4 | 0.5 | 2700 | n/a | 0.4 | 0.5 |
| | Residential | 2700 | 3348 | 0.3 | 0.375 | 2700 | 3312 | 0.3 | 0.375 | 2700 | n/a | 0.3 | 0.375 | 2700 | n/a | 0.3 | 0.375 |
| Trail Lights** | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 2700 | 3300 | n/a | n/a | n/a | n/a | n/a | n/a | |

*fc=Footcandles- light at ground for grey pavement

**Trail Lights - why post top? The least light-polluting are cobrahead.

Interstate- AASHTO rec = .6 fc

Sidewalks are not in table 5. We ask that sidewalks be consistent with the streets they abut.

Yellow highlights show categories where the allowed lumens for teardrop and twin-twenties greatly exceed the lumens delivered by cobraheads and post-tops. The lumens need to be reduced.