

**ADOPTION OF AN AMENDMENT TO THE
PUBLIC FACILITIES MANUAL OF THE COUNTY OF FAIRFAX, VIRGINIA**

At a regular meeting of the Board of Supervisors of Fairfax County, Virginia, held in the Board Auditorium of the Government Center at Fairfax, Virginia, on Tuesday, February 28, 2012, the Board after having first given notice of its intention so to do, in the manner prescribed by law, adopted an amendment to the Public Facilities Manual of the County of Fairfax, Virginia, said amendment so adopted being in the words and figures following, to-wit:

**BE IT ORDAINED BY THE BOARD OF SUPERVISORS OF FAIRFAX
COUNTY, VIRGINIA:**

Amend the Public Facilities Manual, as follows:

Amend §7-0802 (Geometrics and Standards) of the Public Facilities Manual, by revising paragraph 7-0802.3 to read as follows:

7-0802.3 Motorcycle Parking Spaces. When provided, motorcycle parking spaces shall conform to the following minimum geometrics. The stall width shall be 4 feet and the depth of the stall perpendicular to the aisle shall be 9 feet. The travel aisle shall be as set forth in Tables ~~7-8~~7.6 and ~~7-9~~7.7.

Amend §7-1001 (General Information) of the Public Facilities Manual by revising paragraph 7-1001.1 to read as follows:

7-1001.1 Street lighting shall be installed, unless waived by the Director with all developments as a requirement of subdivision and site plans for the purpose of enhancing crime deterrence and pedestrian safety, and improving potentially hazardous intersections. The extent of street lighting improvements required for each development shall be based on the proposed density and land use. The installation costs of the required street lighting improvements shall be paid ~~directly~~ by the Developer. ~~to the electric utility company.~~

Amend §7-1003 (Authorization and Procedures) of the Public Facilities Manual to read as follows:

7-1003 Authorization and Procedures

Fairfax County is served by two electric utility companies: Dominion Virginia Power (Dominion) and the Northern Virginia Electric Cooperative (NOVEC). Depending on which electric service area the project is located in, the following authorization and procedures shall be applicable.

7-1003.1 Dominion Electric Service Area:

7-1003.1A In order to minimize cost and disruption, Dominion may include the cabling to the new street lights in their construction plans for the electrical infrastructure serving the development. As soon as construction begins, the developer shall provide approved plans to Dominion showing all the street lighting improvements that have been bonded with the development.

7-1003.1B A minimum of 135 days prior to the desired street light installation date, the developer shall request that DPWES obtain a cost estimate and construction sketch for the street lights. DPWES will submit this cost estimate request to Dominion. Dominion will prepare and submit to DPWES a construction sketch and cost estimate within approximately 45 days. The use of common trenches for street light wiring and the electric service to the lots is to be considered in order to minimize cost. Upon receipt, DPWES will review the construction sketch and cost estimate to ensure that the scope of the street light installations conforms to the approved plan and then DPWES will forward the cost estimate to the developer for payment to the County.

7-1003.1C The developer shall make full payment to the County for the street light installations within 30 days after receiving the copy of the cost estimate, but in no case will the payment be accepted by DPWES after the cost estimate has expired. Fully executed copies of all deeds of the required street light easements shall be transmitted directly to Dominion. Dominion will not be obligated to install any street lights until authorization from DPWES and all signed easement agreements from the developer have been received. After the payment has been received and cleared by the bank, DPWES will authorize Dominion to proceed with the street light installation.

7-1003.1D The developer shall coordinate directly with Dominion to schedule the installation of street lights. This coordination shall be for installation of the wiring for the street lights, concurrently with the electric service, and the subsequent installation of the light poles, fixtures, and final connection when the site is ready for such work. If the street light installations have not been scheduled within one year of the date of the cost estimate, and provided the delay is not the fault of Dominion, Dominion may revise the cost estimate, which may require additional payment by the developer.

7-1003.1E Once full payment has been made by the developer for the bonded street lights and all easements have been granted to Dominion, the developer's bond can be reduced to account

for the street light installation. Any damage claims resulting from the installation of the street lights shall be resolved between the developer and Dominion prior to final bond release.

7-1003.1F The County shall make final payment to Dominion and accept the street lights into the County Street Light System upon the submission of an invoice requesting payment and a standard completion report to DPWES by Dominion, except that the street light installations shall be inspected and approved by the County prior to making final payment and acceptance.

1003.2 NOVEC Electric Service Area:

7-1003.2A1 As soon as construction begins, the developer shall ~~is to~~ request in writing that ~~NOVEC to the electric utility company to~~ prepare a cost estimate for the required street lights. The developer shall ~~is to~~ provide approved plans to ~~the electric utility company~~ NOVEC showing all the street lighting improvements that have been bonded with the development.

7-1003.2B ~~The electric utility company is to~~ NOVEC shall prepare and deliver a street light wiring construction sketch and cost letter to the developer for payment. The use of common trenches for street light wiring and the electric service to the lots is to be considered in order to minimize cost. The developer is to pay ~~the electric utility company~~ NOVEC directly for the required street light wiring work. ~~The electric utility company~~ NOVEC will ~~is also to~~ prepare ~~for and provide~~ the developer, a cost estimate for the subsequent installation work of the street light poles and fixtures included on the plans, with a copy sent to DPWES. The street light poles and fixtures are to be installed when the site is ready for such work by ~~the electric utility company~~ NOVEC. Included with this cost letter shall be easement agreements and plats.

7-1003.2C3 DPWES ~~will~~ shall review ~~the electric utility company~~ NOVEC's construction sketch and cost estimate to ensure that the scope of the street light installations conforms to the approved development plan. DPWES will authorize NOVEC in writing ~~the electric utility company~~ to include the new street lights into the Fairfax County Street Light Account. If the cost estimate is not in agreement with the approved plans, DPWES ~~will~~ shall mark up the street light construction sketch indicating the deficiencies found and return it to ~~the electric utility company~~ NOVEC for correction. Adjustment to the street light layout may need to be made to account for any change in the original existing conditions when the plans were approved. After ~~the electric utility company~~ NOVEC has made the necessary corrections, it will be authorized by DPWES to include these street lights into the County account.

7-1003.2D4 The developer shall make full payment to ~~the electric utility company~~ NOVEC for the street light installations within the time frame that the cost estimate is valid. Fully executed copies of all deeds of the required street light easements shall be included with the payment. ~~The electric utility company~~ NOVEC will not be obligated to install any street lights until full payment and all signed easement agreements have been received. ~~The electric utility company~~ NOVEC shall provide DPWES with a copy of the receipt provided to the developer for the street light installation payment.

7-1003.2E5 The developer shall coordinate directly with ~~the electric utility company~~ NOVEC to schedule the installation of street lights. This coordination shall be for installation of the

wiring for of the street lights, concurrently with the electric service, and the subsequent installation of the light poles and fixtures when the site is ready for such work. If the street light installations are not completed within one year of the date of payment of the estimated cost ~~the cost estimate payment~~, providing the delay is not the fault of ~~the electric utility company~~ NOVEC, NOVEC~~the electric utility company~~ may require the developer to make additional payment.

7-1003.2F6—The developer shall submit to the County payment receipts for all the street light installations indicated on the approved plans as verification that the street light requirements have been satisfied. ~~and that~~ Subject to verification that all required easements have been provided to NOVEC, the developer's bond can be reduced to account for the street light installation.

7-1003.2G7—The County ~~will~~shall accept the street lights into the County Street Light System upon the submission of a standard completion report to DPWES by NOVEC~~the electric utility company~~, except that the street light installations shall be inspected and approved by the County prior to acceptance.

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.2A to read as follows:

7-1004.2A The standard light source for all street lights shall be the High Pressure Sodium (HPS) lamps. ~~Mercury Vapor (MV) lamps are an optional light source, which is available for use at an extra cost to the developer, as specified in § 7-1004.2B to 7-1004.2F. The HPS lamps emit a yellow to orange light, and the MV lamps produce a white to blue light. The use of HPS street lights shall conform to the standards as set forth in Tables 7.127.9, 7.137.10, and 7.14 7.11, respectively.~~

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by deleting paragraphs 7-1004.2B, 1004.2C, 1004.2D, 1004.2E, Table 7.8, and paragraph 1004.2F:

~~7-1004.2B If the developer determines that the MV light source is more compatible with a particular development, then the developer may use the optional MV light source if the developer pays all additional costs associated with this light source as outlined in §§ 7-1004.2C to 7-1004.2F below.~~

~~7-1004.2C The photometric characteristics for MV street lights are different from those of HPS street lights. Therefore, if the developer elects to utilize the MV light source, the design of these street lights shall conform to the standards as set forth in Tables 7.12A, 7.13A, and 7.14A, respectively.~~

~~7-1004.2D Payment for Increased Operating Cost: The operation and maintenance costs for MV street lights are higher than those for a comparably sized HPS street light. To defray these higher costs, the developer opting for MV street lights shall pay the County, prior to plan~~

approval, a one-time, non-refundable cash contribution equal to the additional operation and maintenance costs that the County is projected to incur over the 20-year useful life of the proposed MV street lights.

~~7-1004.2E~~ Based on the County's street lighting contract with the electric utility company serving the area of the proposed development, DPWES will determine the amount of the required contribution. For each size of MV street light specified, the contribution will be determined by subtracting the current monthly operation and maintenance rates for an equivalent lumen size HPS street light from such cost for the MV street lights, then multiplying the difference by 240 and multiplying that product by the number of proposed MV street lights. The equivalent lumen size HPS street light to be used in computing the increased operation and maintenance cost of a MV street light shall be as set forth in Table 7.8.

Table 7.8 Equivalent Light Source (Lumens)
(80-03 PFM)

High Pressure Sodium (HPS)	Mercury Vapor (MV)
8,000	7,000
14,000	11,000
23,000	20,000
42,000	33,000

~~7-1004.2F~~ Payment for Future MV Street light Conversion Cost: Under the County's supplemental agreement with Dominion Virginia Power, the developer shall make a payment to Dominion Virginia Power for each MV street light to be installed. This payment is to offset the economic incentive offered by Dominion Virginia Power to the County for the future conversion of MV street lights to HPS street lights. This payment shall be based on the rates contained in Schedule C of the County's supplemental agreement with Dominion Virginia Power. This payment is not required for new MV street lights installed in the Northern Virginia Electric Cooperative service area of Fairfax County. The above one-time, non-refundable cash payment shall be made to Dominion Virginia Power as part of the installation cost for the proposed street lights and will be a prerequisite to acceptance of the proposed lights into the Fairfax County Street Lighting System for maintenance. During any period in which Dominion Virginia Power does not offer an economic incentive for conversion of MV street lights to HPS, a developer will not be required to make additional payment to offset any such incentive.

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.2G to read as follows:

7-1004.2GB The use of Any existing Mercury Vapor (MV) street lights along existing state road frontage ~~will~~shall be upgraded to meet permitted at no additional cost to the developer provided that the Illuminating Engineering Society of North America (IESNA), American National Standard Practice for Roadway Lighting (ANSI/IESNA RP-8-00, or latest) standards are achieved without any modifications to the existing street light system. The relocation of any existing pole(s) that do not adversely impact the ability of the existing street lights to continue meeting current lighting standards shall not be considered a modification to the existing lighting system.

If additional street lights are required or modifications to the size of the existing street lights are necessary to satisfy PFM requirements or current lighting standards, the conversion to a HPS light source will be required for all street lights unless the developer satisfies the provisions of § 7-1004.2B to § 7-1004.2F.

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.3 to read as follows:

7-1004.3 Light Level Requirements. Illumination levels are determined based on area and road classification. See § 7-0306 for definitions of area and road classifications. Due to the variations in the geometrics and traffic counts for existing State roadways, the design of street lights at these locations is very site specific. The initial design of these street lights shall conform to the generalized standards as set forth in Table 7.9 for HPS and Table 7.9A for MV street lights. Special coordination with DPWES during the preparation of this street light design may be required to address specific site conditions. The design of these street lights must be shown on the first submission construction plans. This street light design shall be subject to revision after review by DPWES. DPWES may also adjust approved street lighting layouts along existing State roadways. DPWES shall explain to the developer the reasons why the approved lighting layout is adjusted. These modifications will be made only to coordinate with the location of existing or proposed street lights adjacent to the site or to meet current IESNA Standard Practice for Roadway Lighting.

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.3A(1) to read as follows:

7-1004.3A(1) Street lights shall be provided along roadways within new residential subdivisions in accordance with § 7-1002.1. Luminaire size and maximum allowable spacing and mounting height shall conform to the standards set forth in Tables 7.9, 7.10 and 7.13 7.11 for HPS and Tables 7.9A and 7.13A for MV street lights.

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.3A(2) to read as follows:

7-1004.3A(2) A minimum of three street lights shall be provided at all subdivision entrances as set forth in Tables 7.9 and 7.10.

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.3B(1) to read as follows:

7-1004.3B(1) Street lights shall be provided along all proposed and existing roadways that are or will be included in the State Roadway System within new commercial and industrial

subdivisions. Luminaire size and maximum allowable spacing shall conform to the standards set forth in Tables 7.9 and 7.10. ~~for HPS and Table 7.10A for MV street lights.~~

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.3B(2) to read as follows:

7-1004.3B(2) A minimum of three street lights shall be provided at all subdivision entrances as set forth in Tables 7.9 and 7.10. ~~for HPS and Table 7.9A for MV street lights.~~

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.4A(1) to read as follows:

7-1004.4A(1) Residential Areas. Poles located at intersections shall be installed as close as possible to, but outside, the radius of the intersection. Poles located along roadways between intersections shall be installed with a 1-foot offset to side lot property boundaries. All pole placements shall conform to the standards set forth in Tables 7.9 and 7.10. ~~for HPS and Table 7.10A for MV street lights.~~

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.4A(2) to read as follows:

7-1004.4A(2) Commercial/Industrial Areas. Poles located at intersections shall be installed as close as possible to, but outside, the radius of the intersection. Poles located along roadways between intersections shall be installed, if possible, with a 1-foot offset to side lot property boundaries. All pole placements and bracket lengths shall conform to the standards set forth in Tables 7.9 and 7.10. ~~for HPS and Table 7.10A for MV street lights.~~

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.4B to read as follows:

7-1004.4B Standard colonial style roadway lighting fixtures shall utilize black fiberglass poles. These poles shall be installed 2 feet behind the face of curb as set forth in Table 7.11, ~~for HPS and Table 7.11A for MV street lights.~~

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising paragraph 7-1004.5 to read as follows:

7-1004.5 Luminaire Mounting Height – All RF-1 and RF-2 luminaires shall be installed with mounting heights as specified in Tables 7.9 and 7.13 ~~7.10.~~ ~~for HPS and Table 7.9A and 7.13A for MV street lights.~~ All RF-3 luminaires shall be installed at a height of 14 feet.

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by deleting Tables 7.9A, and 7.10A:

**Table 7.9A Lighting Levels For Existing Streets:
Standard Roadway Fixture (RF-1 and RF-2) (MV)
(80-03 PFM)**

Area Classification	Roadway Section Type ft.	Roadway Width ft.	Lamp Size Lumens	Maximum Spacing ft.	Mounting Height ft.
Residential	Curb & Gutter	30	7,000	155 ²	30
		36	7,000	150 ²	30
		44	11,000	155	30
	Ditch Section	24	7,000	155 ²	25
		36	7,000	145 ²	30
		48	11,000	155	30
Industrial/ Commercial	Curb & Gutter	30	20,000	217	35
		36	20,000	205	35
		44	20,000	145	35
	Ditch Section	24	20,000	229	35
		36	20,000	205	35
		48	20,000	185	35

NOTES:

^{1/} All luminaires to be installed on one side of the roadway.

^{2/} Luminaires bracket lengths are to be sized as to provide a 2 ft. roadway overhang. The maximum bracket length for standard concrete poles is 12 ft. Longer brackets, up to 20 ft. (in 2 ft. increments), are available for wood poles (down guiding is required) and for special concrete poles. Pole locations are to be determined based on current VDOT Road Design Manual, Section A-2 Clear Zone Guidelines.

**Table 7.10A Lighting Levels For Proposed Curb & Gutter Streets:
Standard Roadway Fixture (RF-2) (MV) (99-07 PFM, 80-03 PFM)**

Area Class	Roadway Class	ADT	Lamp Size Lumens	Maximum Spacing ft.	Mounting Height ft.	Notes
Residential	Local	0-250	7,000	155	30	1,3,4
		251-400	7,000	155	30	1,3,4
		401-1000	7,000	145	30	1,3,4
		1001-2000	7,000	145	30	1,3,4
		2001-4000	7,000	140	30	1,4
		4001-5500	11,000	158	30	1,4

	Collector	4001-5500	11,000	123	30	1,4
Industrial/ Commercial	Local	0-250	20,000	220	35	1,4
		251-400	20,000	220	35	1,4
		401-1000	20,000	205	35	1,4
		1001-2000	20,000	205	35	1,4
		2001-4000	20,000	200	35	1,4
		4001-5500	20,000	150	35	1,4
	Collector	4001-5500	20,000	230	35	2,4
NOTES:						
^{1/} Luminaires are to be set on one side of the roadway.						
^{2/} Luminaires are to be set symmetrically on both side of the roadway.						
^{3/} The standard colonial style roadway lighting fixture may be used at these locations. See Table 7.11 for additional details.						
^{4/} Luminaires bracket lengths are to be sized as to provide a 2 ft. roadway overhang. The maximum bracket length for standard concrete poles is 12 ft. Longer brackets, up to 20 ft. (in 2-ft. increments), are available for wood poles (down guiding is required) and for special concrete poles. Pole locations are to be determined based on current VDOT Road Design Manual, Section A-2 Clear Zone Guidelines.						

Amend §7-1004 (Standards and Criteria) of the Public Facilities Manual by revising Table 7.11 and deleting Table 7.11A to read as follows:

Area Class	Roadway Class	ADT	Lamp Size Lumens	Maximum Spacing ft.	Mounting Height ft.	Notes
Residential	Local	0-250	5,000	160	14	1,3,4 2
		251-400	5,000	160	14	1,3,4 2
		401-1000	8,000	160	14	1,3,4 2
		1001-2000	8,000	160	14	1,3,4 2

NOTES:

^{1/} Measured from face of pole to face of curb.^{2/} Poles to be placed on one side of the roadway.

**Table 7.11A Lighting Levels For Proposed Curb & Gutter Streets:
 Alternate Security Fixtures (RF-3)
 (Mercury Vapor) (99-07 PFM, 80-03 PFM)**

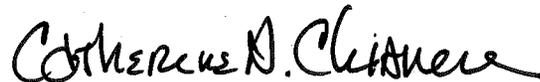
Area Class	Roadway Class	ADT	Lamp Size Lumens	Maximum Spacing ft.	Mounting Height ft.	Notes
Residential	Local	0-250	7,000	150	14	1,3,4
		251-400	7,000	150	14	1,3,4
		401-1000	7,000	120	14	1,3,4
		1001-2000	7,000	120	14	1,3,4

NOTES:

^{1/} Measured from face of pole to face of curb.^{2/} Poles to be placed on one side of the roadway.^{3/} Maximum spacing is based on the use of the "traditionaire" luminaires.

This amendment shall become effective on February 29, 2012, at 12:01 a.m.

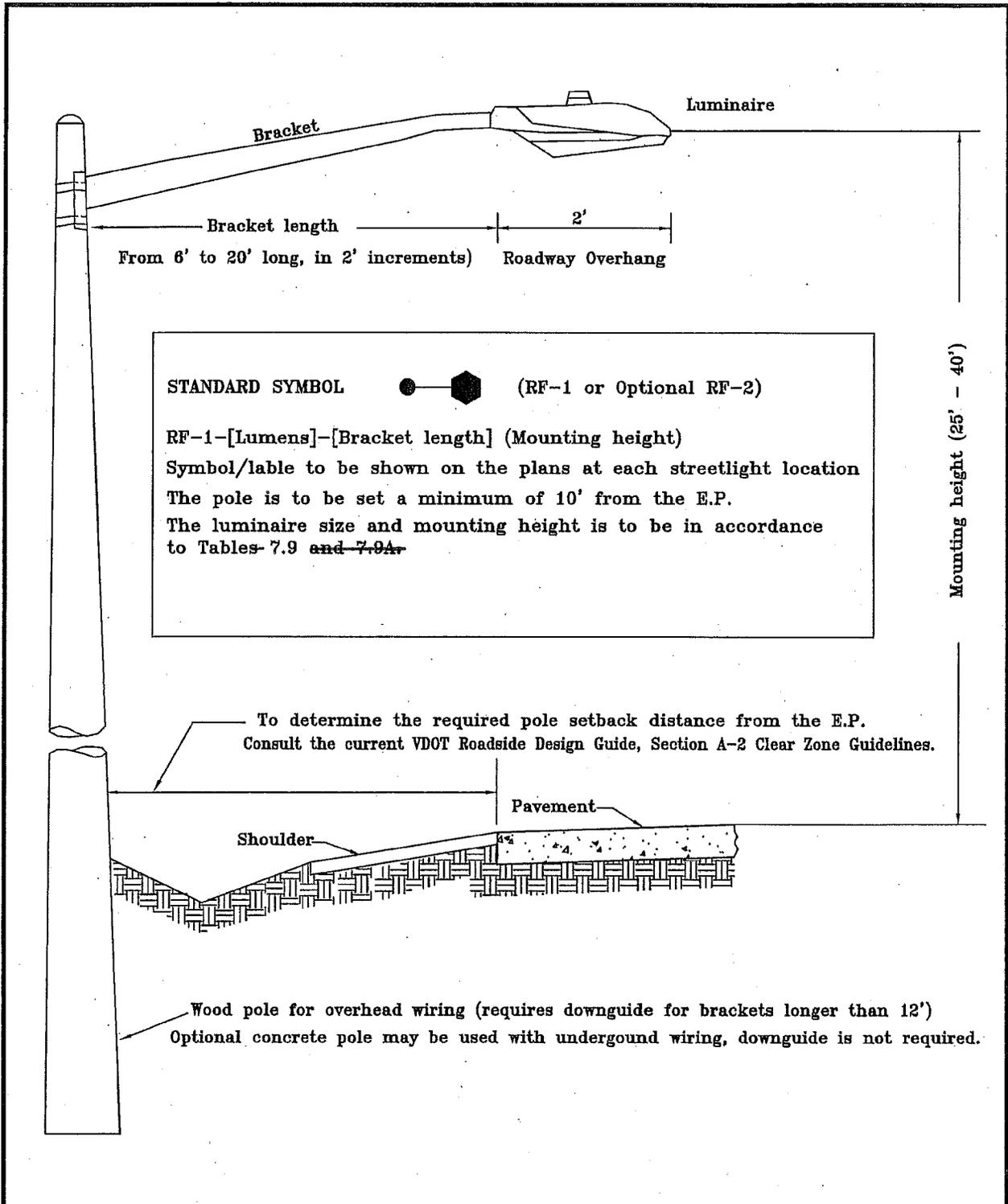
GIVEN under my hand this 28th day of February, 2012.



CATHERINE A. CHIANESE

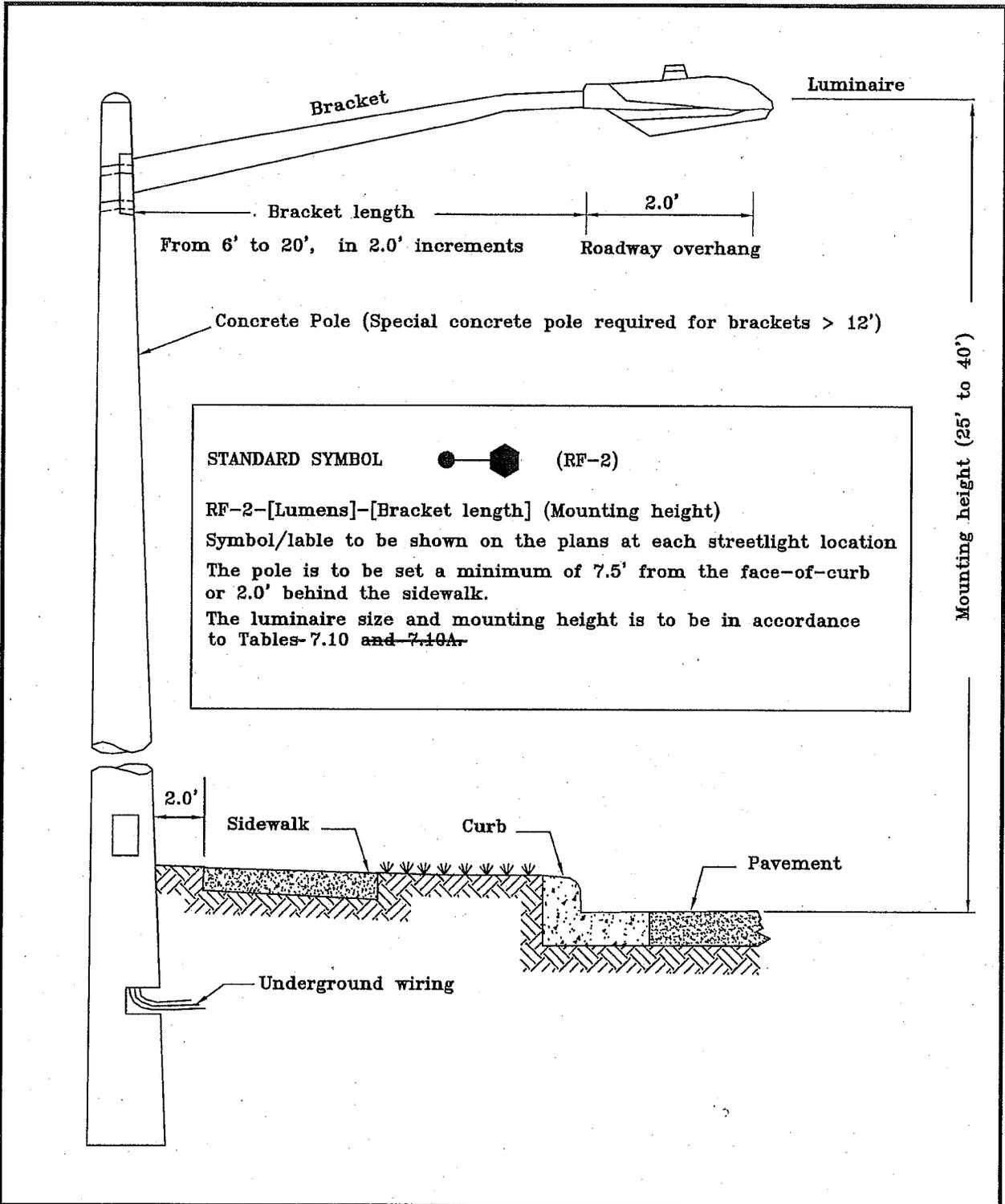
Clerk to the Board of Supervisors

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Ref. Sec. 7-1004.6A Rev. 1-00, 12-03, 2011 Reprint	STANDARD ROADWAY FIXTURE COBRA HEAD STYLE FOR DITCH SECTION ROADS	PLATE NO. 30-7	STD. NO. RF-1
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FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Ref. Sec. 7-1004.6B, 7-1004.7B, 7-1008.3 Rev. 1-00, 12-03, 2011 Reprint	STANDARD ROADWAY FIXTURE COBRA HEAD STYLE FOR CURB AND GUTTER ROADS	PLATE NO. 31-7	STD. NO. RF-2
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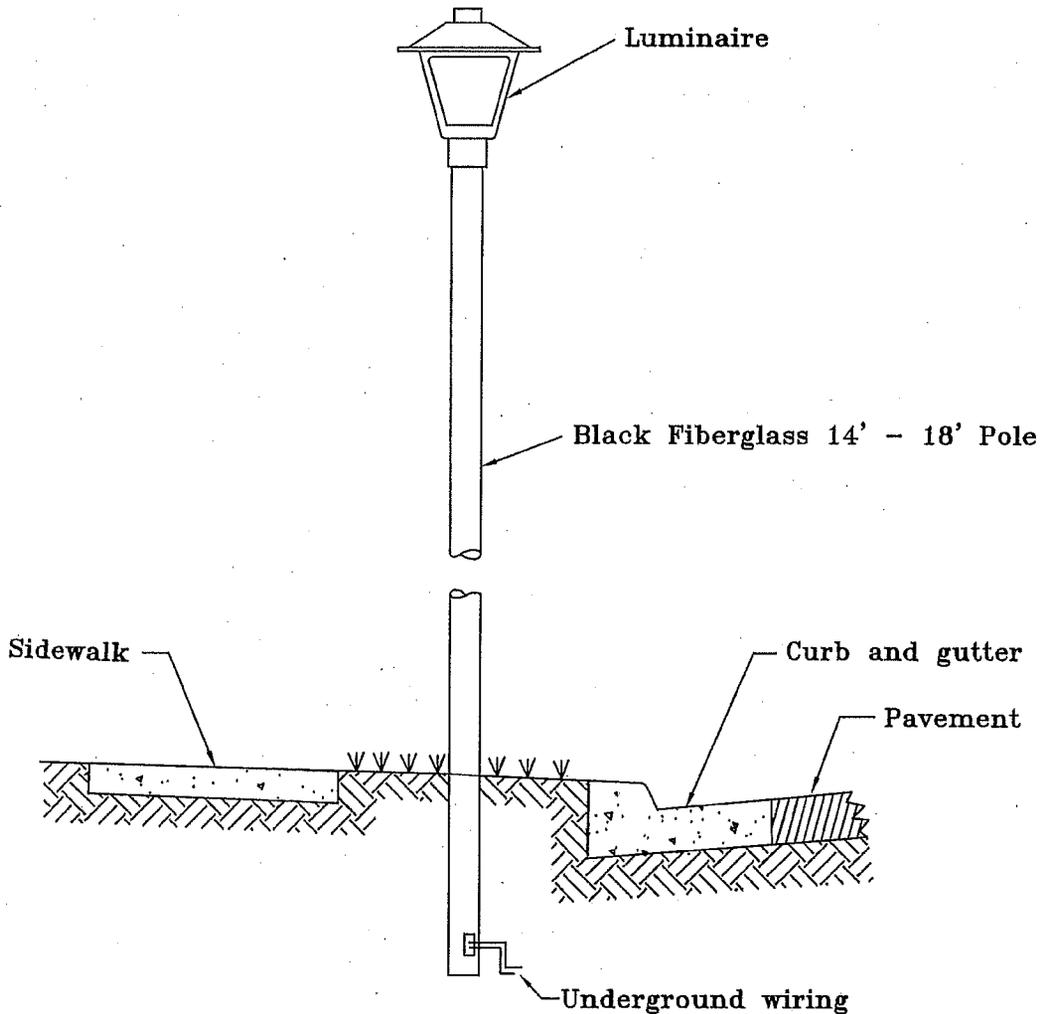
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STANDARD SYMBOL (RF-3)

RF-3-[Lumen]-[Bracket Length] (Mounting Height)

Symbol/label to be shown on the plans at each streetlight location.
The pole is to be set in the utility strip
in accordance with VDOT clear zone requirements.

The luminaire size and mounting height are to be in accordance
to Tables 7.11 and 7.11A.



Ref. Sec. 7-1004.1A(2),
7-1004.6C, 7-1006.1B

Rev. 1-00, 11-05,
7-06, 2011 Reprint

**COLONIAL STYLE FIXTURE
FOR SUBDIVISION ROADWAYS
WITH CURB AND GUTTER**

PLATE NO.

STD. NO.

32-7

RF-3