County of Fairfax, Virginia
Planning Commission Meeting
May 13, 2026
Planning Commission Action

PROPOSED PFM AMENDMENT - AMENDMENT TO CHAPTER 7 (STREETS, STREET LIGHTS, PARKING AND DRIVEWAYS) OF THE PUBLIC FACILITIES MANUAL REGARDING STREETLIGHTS
(Countywide)

PLANNING COMMISSION RECOMMENDATIONS:
On May 13, 2026, the Planning Commission voted 12-0 to recommend to the Board of Supervisors adoption of the amendments to the Public Facilities Manual as advertised and set forth in the Staff Report dated April 14, 2026, and that the amendments become effective at 12:01 a.m. on July 1, 2026.

The Planning Commission also voted 11-0-1(Commissioner Sargeant abstained from the vote) to recommend to the Board of Supervisors the following follow-on motion:

- To direct staff to identify opportunities during the Final Development Plan stage to better incorporate streetlight design and location in relation to other streetscape elements, such as utilities, trees, street furniture, signage and sidewalk placement; and, as pertinent, cohesion with adjacent developments and neighborhoods.

ATTACHED DOCUMENTS:
Staff Report dated April 14, 2026

MJ

LAND DEVELOPMENT SERVICES
April 14, 2026

STAFF REPORT

PREPARED BY SITE DEVELOPMENT AND INSPECTIONS DIVISION

☐ PROPOSED COUNTY CODE AMENDMENT

☑ PROPOSED PFM AMENDMENT

☐ PROPOSED ZONING ORDINANCE AMENDMENT

☐ APPEAL OF DECISION

☐ WAIVER REQUEST

Adoption of Amendments to the Public Facilities Manual (PFM) to Implement Changes to Chapter 7-0800 to streamline submission and review of streetlight improvements.

PUBLIC HEARING DATES

Authorization to Advertise:	April 14, 2026
Planning Commission Hearing:	May 13, 2026 at 7:30 p.m.
Board of Supervisors Hearing:	June 9, 2026 at 4:00 pm.

Prepared By:	Bin Zhang, PE (703) 324-7179 Kirsten Munz, PE (703) 324-7523 Site Development and Inspections Division (SDID), Land Development Services (LDS)

STAFF RECOMMENDATION

Staff recommend that the Board of Supervisors (Board) adopt the proposed amendment set forth in this Staff Report dated April 14, 2026. This proposed PFM amendment aims to clarify and consolidate streetlight standards, enhancing consistency and efficiency. It also transitions streetlight design from a staff-led process to one in which developers are responsible for completing the design under the updated PFM requirements, with staff reviewing for compliance.

Coordination

The proposed amendment was prepared by Land Development Services (LDS) and coordinated with Department of Public Works and Environmental Services (DPWES), Department of Planning and Development (DPD), and the Office of the County Attorney.

BACKGROUND

Development along public roadways typically requires new streetlights to ensure the safety of both motorists and pedestrians. While the PFM provides broad placement guidance, individual designs must address site-specific conditions such as road geometry, road classification, pedestrian activity level, and existing lighting conditions. Currently, County staff lead the streetlight design process, which differs from the approach used for other site development components.

Current PFM provisions for streetlights lack clear guidance for developers to complete streetlight design, and are outdated, particularly given Fairfax County's urban centers and revitalization areas that utilize non-standard streetlights. Centralizing certain streetlight design requirements currently found in Technical Bulletins and design guidelines within the PFM would improve clarity and consistency for both applicants and staff.

To align with other review procedures and provide the development community with greater flexibility in the design and approval timelines, staff propose

- Amending the PFM to clarify and consolidate streetlight standards, and improve consistency and efficiency and
- Shifting design from a staff-led process to one where developers can complete the streetlight design using expanded PFM guidance, and staff reviews for compliance.

Outreach

Staff presented the amendments to the Engineering Standards Review Committee (ESRC), which oversees changes to the County's PFM, and the ESRC recommended approval.

Staff advised the regulated community of the status and substance of the proposed amendments through announcements at meetings of the Engineers and Surveyors Institute (ESI) Fairfax Committee and the Northern Virginia Building Industry Association and National Association for Industrial and Office Parks (NVBIA/NAIOP) Fairfax Committee.

Staff has shared the amendment with the Environmental Quality Advisory Council (EQAC) and has responded to follow-up clarification questions.

Staff also reached out to land use aides in all districts and engaged in further communication with the Great Falls Citizens Association.

PROPOSED AMENDMENTS

The proposed amendments consolidate existing requirements into clear, straightforward standards, with defined design parameters and submission requirements. Developers shall be able to submit complete streetlight designs independent of County staff. A detailed summary of revisions to each PFM section is provided below.

1. Revised 7-0801 to add review criteria for waiver applications.

The Director of LDS currently has authority to waive required streetlights; however, the lack of specific waiver criteria has led to confusion and uncertainty. The proposed amendment adds waiver review criteria including existing conditions, roadway design elements, pedestrian activity, collision and crime data, and environmental considerations. Under the amendment, future waiver requests would require the Director to balance these factors when determining whether a waiver or modification is appropriate.

2. Consolidated 7-0802 to correct errors and simplify requirements.

The authority for the streetlight requirements is found in the frontage improvements in Zoning Ordinance 8100.7E(14) and Subdivision Ordinance Section 101-2-2(20). The current PFM provides Table 7.9 and sections (7-0802.1 through 7-0802.5) specifying lighting requirements categorized based on Residential Subdivision, Industrial and Commercial Subdivision, Site Plans, Planned Developments, and Public Improvement Plans. This section and Table 7.9 have been consolidated into a single simplified Table 7.5 with succinct narrative and applicable notes.

One change in 7-0802 concerns streetlight requirements at entrances, where roadways intersect public roads. The current provision requires three lights at entrances but

allows the number to be adjusted based on length of frontage. However, there is no further guidance or criteria for applying a modification. The proposed amendment reduces the requirement to two lights: one on each side of the entrance, which is generally sufficient to illuminate the immediate access point. For site plan and subdivision plans with lot sizes under 18,000 ft², a third light may still be required to ensure lighting along all abutting roadways. Based on a case study conducted by our consultant, two lights provide sufficient illumination for the intersection. The addition of a third light does not result in any measurable improvement in illumination at the intersection. This change does not compromise safety or visual guidance for drivers.

Also under the revised provision, the Director may allow a single light at an entrance if a photometric plan demonstrates compliance with minimum lighting levels. This change addresses resident concerns about preserving the historic, cultural, and scenic character of Virginia byways while maintaining safety standards. It also streamlines the process by reducing the need for formal waiver applications, providing flexibility while maintaining compliance.

3. Updated 7-0803 (previously 7-0804) to clarify acceptable fixtures, design standards, and submission requirements.

Previous 7-0803 on Authorization and Procedures has been moved to 7-0805. Proposed 7-0803 is a revision to the existing provisions in 7-0804. The following table lists the proposed changes in Section 7-0803 along with a brief description of the changes:

PFM Section Number	Section Title	Description
7-0803.1 (old 7-0804.1)	Standard Fixture Style	Consolidated existing texts in new Table 7.6 with notes. Listed area classification, roadway classification, and applicability in a table to simply the different layers of requirements. A note has been added to the table indicating RF-3 is an alternate security light and is not intended to provide sufficient illumination for local streets, but to increase the feeling of safety.
7-0803.2 (old 7-0804.2 and 7-0804.5)	Standard Streetlight Source	This section consolidates and updates requirements previously located in §7-0804.2 and 7-0804.5. Key changes include: **Color Temperature Requirement:** The note regarding Correlated Color Temperature (CCT) has been moved from Table 7.7 to paragraph B for clarity. The Director's authority to approve CCT values greater than 3000K has

		been removed to ensure consistency with County lighting standards. A similar amendment is being processed for the Zoning Ordinance. **Mounting Height Requirement:** The mounting height requirement has been relocated from §7-0804.5 to paragraph C to align with the design sequence and improve readability. **Table 7.7 Revision:** Table 7.7 has been updated to include comprehensive information on all standard streetlights provided by Dominion and NOVEC, including wattage, lumen output, and mounting height. DPWES is developing a webpage to make this information publicly accessible, including links to IES files for industry use. The webpage will also allow greater flexibility to accommodate future changes from utility providers. .
7-0803.3 (old 7-0804.3)	Light Level Requirements	The revised Section 7-0803.3 introduces comprehensive updates to light level requirements to ensure consistency in streetlight design, providing a clear benchmark for compliance. These changes collectively aim to streamline design, improve clarity, and align County standards with industry best practices Key changes include: **Required illumination levels in Tables 7.8 and 7.9** These are based on the ANSI/IES RP-8-22 standards, which is used by DPWES for streetlight review. Explanatory notes have been added to guide the determination of roadway functional classification and pedestrian activity levels, which are critical factors in determining appropriate lighting requirements. **Simplified spacing method** When certain conditions are met, Tables 7.10 and 7.11 may be used to design streetlights based on spacing instead of providing a photometric plan. This method is limited to local streets with relatively uniform geometry. The optimal spacing are derived from the Visual Roadway Tool and verified with AGI32. The spacing may be adjusted by up to 5 feet to accommodate lot lines, streetscape features, or other site constraints. This number has been verified with two cases to not have an impact on average or uniformity.

		The table has been further evaluated to remove options that are inefficient and lead to significant over-lighting of roadways. This not only exceeds the desired illumination levels but also results in unnecessary energy consumption and higher long-term operational costs. Removing these spacing options will allow us to focus on configurations that provide optimal lighting performance, improve energy efficiency, and better align with our design standards and sustainability goals. **Best practices for streetlight placement** This section is introduced to promote uniformity and are based on industry best practices when designing streetlights.
7-0803.4 (old 7-0804.4)	Pole Placement and Bracket Length	The amendment to this section consolidates existing language and incorporates requirements previously shown on various plates. It adds specifications for available bracket lengths for RF-1 and RF-2 poles and introduces language allowing the use of existing utility poles where feasible. These changes aim to simplify design guidance, provide clearer standards for pole and bracket configurations, and offer flexibility by permitting reuse of existing infrastructure.
7-0803.5 (old 7-0804.6)	Plan Submission Requirements	The amendment to this section consolidates existing requirements of 7-0804.6 under a single paragraph, and adds several new provisions to improve clarity and completeness. Key changes include: **Show and label existing streetlights** This is a plan requirement already as specified in ZO 8101.4.B(20). Existing streetlight information is available on JADE. DPWES will provide instruction on how to interpret the attribute table. **Submission of a photometric plan** Added submission requirements of a photometric plan, consistent with our current review of photometric plans when required. **Requirements for simplified spacing method** Added submission requirements for situations where the simplified spacing method is used.

4. Revised 7-0804 (Previously 7-0805) on requirements associated with non-standard streetlights.

The proposed revision has consolidated existing general language, and incorporates Technical Bulletin 14-07 on Tysons Lighting Standards into the PFM, much of which now also applies to all development centers. The following table lists the proposed changes to Section 7-0804 along with a brief description of the changes:

PFM Section Number	Section Title	Description
7-0804.1 (old 7-0805.1)	General	Minor editorial change.
7-0804.2	Currently approved nonstandard streetlight	Listed development centers where nonstandard streetlights have been approved, added references to the urban design guidelines. DPWES will provide a webpage listing approved nonstandard streetlights and poles for each development center, since there may be a need to modify them in the future, as new lights are added or previously approved lights are discontinued. This will ensure those updates can be made efficiently without modifying the PFM. Recently, DPWES has worked with Dominion to accept three types of nonstandard streetlights to the county, but Dominion and DPWES will co-own the lights and maintain the lights. They have been listed as "pre-selected nonstandard fixture". A table has been added to explain the different types of nonstandard streetlights and associated procedures.
7-0804.3 (old 7-0805.2)	Procedure to obtain approval of nonstandard streetlight	Editorial change. This would be processed through LDS as a waiver request.
7-0804.4 (old 7-0805.3, TB 14-07)	Nonstandard streetlight standards	Listed minimum standards when nonstandard streetlight is proposed.

7-0804.5 (old 7-0805.5, TB 14-07)	Plan Submission Requirements	Many of the requirements in this section are from TB 14-07. One change is that now all development centers require a separate lighting analysis to meet requirement in Table 7.13. These are based on guidance in the various Urban Design Guidelines where pedestrian-scaled lighting is listed as design principles.

5. Revised 7-0805 (Previously 7-0803) on authorization and procedures.

This section has been consolidated to eliminate duplicative language and improve clarity. A new subsection (§7-0805.4) has been added to provide guidance on the installation of pre-selected non-standard streetlights. Additionally, timelines have been updated to reflect current utility company requirements: Dominion now requires a longer notice period of 160 days (previously 135 days) for streetlight installation, and its timeframe for preparing cost estimates has been revised from 45 days to 60 days to align with current practices.

In addition, Section 7-0805.2E has been revised to hold the bond release for 120 days from the date payment is received. This change addresses recurring issues where utility provider identified field conditions that required adjustments to their initial cost estimate after the developer had already been released from the bond. In such cases, the County is left unable to install the lights as planned or must install a reduced number of lights due to insufficient funds collected. If developers follow PFM recommendations and request a cost estimate 160 days prior to the desired installation date, this adjustment should not cause delays. This amendment better aligns bond release timing with actual installation schedules, ensuring adequate funding and reducing risk of incomplete lighting installations.

REGULATORY IMPACT

The proposed amendments will have several operational and regulatory impacts. Consolidating and clarifying streetlight requirements will reduce the need for County staff to provide design services, freeing resources for other critical functions. Shifting design responsibility to industry will improve predictability for developers and reduce delays caused by redesigns. Moving review duties to LDS will simplify communication for applicants.

<u>For Designers:</u>
The consolidation of streetlight design requirements and inclusion of clear tables and explanatory notes will reduce ambiguity and reliance on institutional knowledge, enabling engineers to design compliant streetlight systems with greater confidence. The introduction of a simplified spacing method and best practice guidelines provides flexibility and efficiency, minimizing the need for complex calculations when certain conditions are

met. Enhanced submission requirements, including photometric plans, will ensure predictable review outcomes and reduce redesigns, while allowing for flexibility to accommodate unique site constraints.

For Developers:
Shifting design responsibility from County staff to the developer aligns streetlight design expectations with other site plan elements, improving accountability and predictability, while allowing the developer to make strategic design decisions, maintaining their control of all design elements. Streamlined review processes and reduced waiver applications will save time and costs, particularly for projects in sensitive areas such as Virginia byways, where flexibility is now incorporated into the standards.

Streetlight review will no longer be considered an outside agency review, and no prior approval will be required before the second submission of the plan, as part of the Designated Plans Examiner expedited review program. The review and approval will occur within LDS concurrently with site, stormwater, geotechnical, and forest conservation reviews. These changes collectively support faster approvals and more efficient project delivery

For County Staff:
Eliminating the need for staff to design streetlights frees resources for other critical functions. Transferring review authority from DPWES to LDS simplifies coordination and reduces redundant distribution points, improving efficiency and consistency in plan reviews. Training LDS reviewers in the new standards will enhance redundancy and ensure uniform application of requirements across projects.

Overall, these changes improve clarity, efficiency, and transparency in the streetlight design and review process, aligning Fairfax County's standards with industry best practices, and supporting urban development objectives by accommodating nonstandard streetlight designs in revitalization areas. These changes will foster efficiency, predictability, accountability, and consistency in site development reviews.

ATTACHED DOCUMENT

Attachment A – Proposed Amendments to PFM 7-0800

Attachment A

Proposed Amendments
to
the Fairfax County Public Facilities Manual

Streetlights

Draft of April 14, 2026

Amend PFM, Table of Contents, by revising §7-0800 (Streetlights), to read as follows:

7-0800 STREETLIGHTS
- 7-0801 General Information
- 7-0802 General Requirements
- 7-0803 ~~Authorization and Procedures~~ Standards and Criteria
- 7-0804 ~~Standards and Criteria~~ Nonstandard Streetlights
- 7-0805 ~~Nonstandard Street Lighting~~ Authorization and Procedures

Amend Chapter 7 (Streets, Street Lights, Parking and Driveways), §7-0000, by revising the List of Tables to read as follows:

LIST OF TABLES

Table Number	Title	Section
Table 7.1	Street Name Abbreviations	Sec. 7-0107.8
Table 7.2	Layouts for Off-Street Parking Facilities	Sec. 7-0606.1
Table 7.3	Parallel Parking Spaces	Sec. 7-0602.1
Table 7.4	Universal Size Car Spaces	Sec. 7-0602.2
Table 7.5	~~Area Classification~~ Streetlight Requirements	~~Sec. 70804.7~~ Sec. 7-0802.1
Table 7.6	~~Road Classification~~ Standard Fixture Style	~~Sec. 7-0804.7~~ Sec. 7-0803.1
Table 7.7	~~Lighting Levels for Proposed & Existing Streets: Standard Roadway Fixture (RF-1 and RF-2) (Light Emitting Diode~~) Standard Dominion and NOVEC Luminaires	~~Sec. 7-0804.8~~ Sec. 7-0803.2
Table 7.8	Lighting Levels For Proposed ~~Curb & Gutter Streets: Alternate Security Rixture (RF-3) (Light Emitting Diode)~~ and Existing Streets	~~Sec. 7-0804.8~~ Sec. 7-0803.3A
Table 7.9	~~Quick Street Light Requirements Selection~~ Lighting Levels For Intersections	~~7-0804.8~~ Sec. 7-0803.3B
Table 7.10	Spacing Requirements For Local Streets (RF-1, RF-2)	Sec. 7-0803.3C
Table 7.11	Alternate Security Fixture Spacing Requirements For Local Street (RF-3)	Sec. 7-0803.3C
Table 7.12	Summary of Procedures for Nonstandard Streetlights in	Sec. 7-0804.2B

Attachment A

Table Number	Title	Section
	the Right-of-Way	
Table 7.13	Design Criteria for Walkways within Right of Way	Sec. 7-0804.5D

Amend Chapter 7 (Streets, Street Lights, Parking and Driveways), §7-0000, by revising the List of Plates to read as follows:

LIST OF PLATES

STANDARD DESIGNATION	PLATE NO.	DESCRIPTION	SECTION
PS-3	21-7	Asphalt Concrete Pipestem Standards	7-0403.2A,7-0701,7-0703.2
PS-3A	22-7	Concrete Pipestem Standards	7-0403.2A,7-0701,7-0703.2,7-0703.2B
TLL-1	23-7	Design Example: Residential Subdivision: Lot Size less than 18,000 ft^2	7-0802.1 A~~(3) 7-0804.7~~
TLL-2	24-7	Design Example: Residential Subdivision: Lot Size 18,000 ft2 or greater	7-0802.1~~ A(3) 7-0804.7~~
TLL-3	25-7	Design Example: Site Plan – Industrial ~~Subdivision~~	7-0802.1 ~~2C 7-0804.7~~
TLL-4	26-7	Design Example: Site Plan – Commercial ~~Subdivision~~	7-0802.1 ~~3B 7-0804.7~~
~~TLL-5~~	~~27-7~~	~~Design Example: Site Planned Development~~	7-0802.1
RF-1	28-7	Standard Roadway Fixture – Shoebox Cobra Head for Ditch Section Roads	7-0803.1, 7-0803.4 ~~7-0804.1A(1), 7-0804.6A~~
RF-2	29-7	Standard Roadway Fixture – Shoebox Cobra Head for Curb and Gutter Roads	7-0803.1, 7-0803.4 ~~7-0804.1A(1), 7-0804.6A, 7-0804.6B~~
IT-2	29A-7	Special Expressway Roadway Fixture for Major Roadways	7-0803.1, 7-0803.4 ~~7-0804.1A(3)~~
RF-3	30-7	Colonial Style Fixture for Subdivision Roadways with Curb and Gutter	7-0803.1, 7-0803.4 ~~7-0804.1A(2), 7-0804.6C~~
N/A	30A-7	Accessible Parking Signs	7-0602.4
N/A	30B-7	Van Accessible Parking Signs	7-0602.4

Attachment A

Amend Chapter 7 (Streets, Street Lights, Parking and Driveways), by revising §7-0801 (General Information), to read as follows:

7-0801 General Information

7-0801.1 Street-lights~~ing~~ must be installed, unless modified or waived by the Director in accordance with § 7-0801.6, with all developments as a requirement of subdivision and site plans for the purpose of enhancing crime deterrence, pedestrian safety and improving potentially hazardous intersections. Street-light~~ing~~ improvements should encourage energy conservation and reduce light pollution. The extent of street-light~~ing~~ improvements required for each development must be based on the proposed density, land use, street functional classification, and the anticipated level of pedestrian activity. The installation costs of the required streetlight~~ing~~ improvements must be paid by the Developer.

7-0801.2 The developer must bond 100 percent of the estimated streetlight installation cost as part of the overall bond required by the Director before plan approval in accordance with § 2-0500 *et seq*. This bonding estimate will be based on an average cost per streetlight as determined by the Director. All easements required by the electric utility company for streetlight~~ing~~ must be provided by the developer.

7-0801.3 The required street-light~~ing~~ improvements must be installed by the electric utility company serving the new development. However, the developer may perform the civil portion of the installation with the prior approval of the utility company. All required VDOT permits for the purpose of installing streetlights must be obtained by the electric utility. The fees for these VDOT permits will be included in the utility company cost estimate to be paid by the developer. The street-light~~ing~~ systems must be owned and maintained by the electric utility, unless the developer opts for a nonstandard street-light~~ing~~ system in accordance with § 7-0804~~5~~.

7-0801.4 After the streetlights are installed and energized, the County will be responsible for making payments to the electric utility company for the monthly operating and maintenance costs, unless the developer opts for a nonstandard street-light~~ing~~ system in accordance with § 7-0804.

7-0801.5 The Board may approve a nonstandard street-light~~ing~~ system, if such a system satisfies all the criteria of § 7-0804~~5~~.

7-0801.6 The Director may modify or waive the number or location of streetlights that are required to be installed in accordance with § 7-0802. Under no circumstances will a waiver or modification be approved that will result in

less than one streetlight at an intersection.

A. The request for a modification or waiver must include justification and supporting information listed in Section B below, and a photometric plan certified by a Lighting Professional certified by the National Council on Qualifications for the Lighting Professions (NCQLP), or a State licensed professional engineer, architect, landscape architect, or land surveyor.

B. In considering a request to modify or waive the requirement, the Director will consider factors including, but not limited to the following:
   1. Existing conditions such as right-of-way constraints, significant topographic and geometric challenges, continuity and levels of roadway lighting, and impacts upon registered historical properties or adopted Virginia byways;
   2. Street and intersection design considerations such as safety, intersection classification and geometry, traffic volumes, posted speed limit and design speed;
   3. Levels of pedestrian and cyclist activity and adjacent land uses, such as schools, community facilities, neighborhood retail, and transit stops and stations;
   4. Collision data and investigations related to illumination systems along the roadway within the surrounding area of the proposed development;
   5. Crime data and investigations within the vicinity of the proposed development;
   6. Environmental considerations, such as tree clearing, light trespass, sky glow and offsite glare; and
   7. Other situations where the Director determines that there is good cause to support a modification or waiver.

C. The Director may impose conditions on any modification or waiver to ensure that the safety issues outlined in § 7-0801.1 are addressed.

Amend Chapter 7 (Streets, Street Lights, Parking and Driveways), by revising §7-0802 (General Requirements), to read as follows:

7-0802 General Requirements

~~7-0802.1 Residential Subdivisions~~

~~A. Subdivisions with an Average Lot Size Less Than 18,000 square feet.~~

~~1. Street lights must be installed along all subdivision roadways that are or will be included in the State Roadway System and must meet the VDOT clear zone requirements or pass current crash test requirements for obstacles within street clear zones. Along adopted~~

~~Virginia byways, street lights are required only at intersections and entrances and to address the safety issues outlined in § 7-0801.1. Street lights are not required along private roadways~~

~~2. A minimum of three street lights must be installed along all the existing and/or proposed State roadway(s) at all entrances into the subdivision, except at private entrances serving a private home. If the frontage along the entrance is not sufficiently long to accommodate the three required street lights, then the number of required street lights must be adjusted accordingly. When subdivision lots are accessed directly from an existing State roadway, street lights must be installed along the entire frontage of these lots, unless the State roadway is designated as an adopted Virginia byway. Along adopted Virginia byways, street lights are required only at road intersections and commercial entrances and to address safety issues outlined in § 7-0801.1~~

~~3. Refer to Plate 23-7 for a typical lighting layout.~~

~~B. Subdivisions with an Average Lot Size Less Than 18,000 square feet.~~

~~1. Street lights are not required for roadways within subdivisions.~~

~~2. A minimum of three street lights must be installed along all the existing State roadway(s) at all proposed entrances into the subdivision, except at private entrances serving a private home. If the frontage along the entrance is not sufficiently long to accommodate these three required street lights, then the number of required street lights must be adjusted accordingly.~~

~~3. Refer to Plate 24-7 for a typical lighting layout.~~

7-0802.1 Streetlights are generally required along all roadways and intersections that are or will be included in the State Roadway System. Along adopted Virginia byways, streetlights are required only at intersections and entrances and to address the safety issues outlined in § 7-0801.1. Streetlights are not required along private roadways. See Table 7.5 for detailed requirements. Refer to Plate 23-7 through Plate 26-7 for typical lighting layouts.

~~Table 7.9 Quick Street Light Requirement Selection~~ Table 7.5 Streetlight Requirements

Plan Type ~~Classification~~	~~Three~~ Streetlights at All Entrances (Note 1)	Streetlights along all Interior Roadways (Note 2)	Streetlights Along All Abutting Roadways (Note 3)	~~Street Lights Required at Private Roadways~~
Site Plan	~~N/A~~YES	~~N/A~~YES	YES	~~NO~~

Attachment A

Subdivision Plans	**Average Lot Size is 18,000 ft² or Greater**	YES	NO	~~N/A~~NO	~~NO~~
	Average Lot Size is Less Than 18,000 ft²	YES	YES	~~N/A~~YES	~~NO~~
	~~**Industrial or Commercial**~~	~~YES~~	~~YES~~	~~N/A~~	~~NO~~
Public Improvements Plans		~~N/A~~ Note 4	~~YES~~ Note 4	~~YES~~ Note 4	~~NO~~

Notes:

1. A minimum of two streetlights must be installed along all existing and/or proposed State roadways, including adopted Virginia byways, at all entrances into the site or subdivision. For the purpose of this requirement, an entrance refers to a connection via a public street or private street. It does not include private driveways serving individual homes or commercial entrances leading to parking lots or parking structures for commercial or industrial uses. The Director may allow this requirement to be reduced to one streetlight if a photometric plan is submitted and demonstrates compliance with the lighting level requirements using a single light.
2. Streetlights must be installed along all interior roadways that are or will be included in the State Roadway System.
3. When the site is accessed directly from an existing State roadway, streetlights must be installed along the entire frontage of the site, unless the State roadway is designated as an adopted Virginia byway. When the site fronts an existing or proposed public service road, streetlights must be placed to illuminate the main roadway.
4. Streetlights must be installed along roadways as part of frontage improvements required by the Zoning Ordinance or Subdivision Ordinance. Linear utility projects are not required to provide streetlight improvements. New roadways, sidewalks, roadway widening, and other frontage-related improvements may require streetlights, as determined by the Director.

~~7-0802.2 Industrial and Commercial Subdivision~~

~~A. Street lights must be installed along all roadways that are or will be included in the State Roadway System and must meet the VDOT clear zone requirements or pass current crash test requirements for obstacles within street clear zones. This must include a minimum of one street light at each intersection within the subdivision. Along Virginia byways, street lights are required only at road intersections and commercial entrances and to address safety issues outlined in § 7-0801.1. Street lights are not required along private roadways.~~

~~B. A minimum of three street lights must be installed along the existing State roadway(s) at all entrances into the subdivision. When subdivision lots are accessed directly from an existing State roadway, street lights must be installed along the entire frontage of these lots, unless the State roadway is designated as an adopted Virginia byway. Along adopted Virginia byways, street lights are required only at road intersections and commercial entrances and to address safety issues outlined in § 7-0801.1.~~

C. Refer to Plate 25-7 for a typical lighting layout.

7-0802.3 Site Plans

A. Street lights must be installed along all existing and/or proposed State roads providing frontage to the development, unless the State roadway is designated as an adopted Virginia byway and must meet the VDOT clear zone requirements or pass current crash test requirements for obstacles within street clear zones. Along adopted Virginia byways, street lights are required only at road intersections and commercial entrances and to address safety issues outlined in § 7-0801.1.

B. Refer to Plate 26-7 for a typical lighting layout.

7-0802.4 Planned Developments (PDH,PDC,PRC,PRM and PTC Districts)

A. Street lights must be installed along all roadways that are or will be included in the State Roadway System unless the State roadway is designated as an adopted Virginia byway and must meet the VDOT clear zone requirements or pass current crash test requirements for obstacles within street clear zones or other standards, as applicable. Along adopted Virginia byways, street lights are required only at road intersections and commercial entrances and to address safety issues outlined in § 7-0801.1

B. A minimum of three street lights must be installed along all existing or proposed State roadways at all entrances into the development, except at private entrances serving a private home. If the property's frontage along the entrance is not sufficiently long to accommodate these three required street lights, then the number of required street lights must be adjusted accordingly. Where the existing or proposed State roadway provides frontage to the development, street lights must be installed along the entire frontage, unless the State roadway is designated as an adopted Virginia byway. Along adopted Virginia byways, street lights are required only at road intersections and commercial entrances and to address safety issues outlined in § 7-0801.1.

C. Street lights must be installed throughout the development in accordance with the residential subdivision, industrial and commercial subdivision and site plan requirements as previously stated in § 7-0802.1 et. Seq

~~D. Refer to Plate 27-7 for a typical lighting layout.~~

~~7-0802.5 Public Improvement Plans~~

~~A. Street lights must be installed along roadways that are or will be included in the State Roadway System in accordance with the residential subdivision, industrial and commercial subdivision, site plan and planned development requirements as previously stated in § 7-0802.~~

Amend Chapter 7 (Streets, Street Lights, Parking and Driveways), by revising §7-0803 (Authorization and Procedures), to read as follows:

7-0803 ~~Authorization and Procedures 7-0804~~ Standards and Criteria

7-0803.1 ~~7-0804.1~~ Standard Fixture ~~Luminaire~~ Style

~~A.~~ There are three standard lighting fixture styles ~~and poles~~ available for use. The selection of the style of fixture ~~and pole combination~~ for a particular development is to be made in relation to the area classification ~~(see Table 7.5)~~, ~~and~~ roadway classification ~~(see Table 7.6).~~ and VDOT clear zone requirements. See Table 7.6 ~~These lighting fixtures are to be set in accordance with the current VDOT Road Design Manual, Section A-2, Clear Zone Guidelines for fixed objects and must meet the VDOT clear zone requirements or pass current crash test requirements for obstacles within street clear zones. The available lighting fixtures are as follows:~~

~~1. Dominion Shoebox Cobrahead or NOVEC Cobrahead (RF-1 and RF-2): This is a cut-off fixture which is bracket mounted to a concrete (RF-2) or wood pole (RF-1) (see Plates 28-7 and 29-7). These two fixtures can be used on all roadways and area classifications, where the clear zone is less than 20 feet. When street light poles are set in-line with an existing power pole line, the light pole is to be wood (RF-1). When the light pole is to be set in an area where the electrical distribution is underground, the poles are to be concrete (RF-2). When the street light poles are set in front of an existing pole line, either RF-1 and RF-2 (preferred) can be used.~~

~~2. Colonial Cut-off (RF-3): This is a top pole mounted coach fixture on a black fiberglass pole that is set in the utility strip (see Plate 30-7).~~

~~3. Expressway (EX): This special fixture is only used on primary roadways where the VDOT's clear zone is greater than 20 feet. This fixture can be installed on wood poles (EX-1) or concrete (EX-2) (see Plate 29A-7)~~

~~B. Local Roadways in Residential, Single Family Detached Dwelling, classification areas: The preferred luminaire is the Colonial Cut-off (RF-3). This fixture is limited to curb-and-gutter roadways and underground electrical wiring. As an alternative, the RF-1 and RF-2 can also be used. For local roadway with commercial or industrial classifications, use RF-1 or RF-2 luminaires.~~

~~C. Collector and Arterial roadways in Commercial/Industrial and Residential classification areas: Luminaires to be used are the RF-1 or RF-2. Where the clear zone for fixed objects is greater than 20 feet, the luminaires to be used are the EX-1 and EX-2.~~

Table 7.6 Standard Fixture Style

Fixture Style	Area Classification (Note 1)	Roadway Classification (Note 2)	Applicability
RF-1/RF-2 (Dominion Shoebox Cobrahead NOVEC Cobrahead) see Plates 28-7 and 29-7 (Note 4)	Residential Commercial Industrial	Local Collector Arterial	1. For ditch section roads, use RF-1 (cobrahead mounted on wood pole). For curb and gutter roads, use RF-2 (cobrahead mounted on concreate pole). RF-1 can be substituted with RF-2. 2. When streetlight poles are set in-line with an existing power pole line, use RF-1. When the electrical distribution is underground, use RF-2. 3. When the streetlight poles are set in front of an existing pole line, either RF-1 or RF-2 (preferred) can be used. 4. When clear zone (Note 3) is less than 20 ft.
RF-3 (Colonial Cut-Off) see Plate 30-7 (Note 4)	Residential - Single Family Detached Dwelling	Local	1. For curb and gutter roads with underground electrical wiring only. 2. This is an alternate security fixture. RF-2 is preferred for residential subdivisions. 3. RF-3 can be used as pedestrian lights in planned districts
EX-1/EX-2 see Plate 29A-7 (Note 4)	Residential Commercial Industrial	Collector Arterial	1. When clear zone (Note 3) is more than 20 ft.

Notes:
1. Area Classification should be in accordance with Zoning Ordinance definition.
2. Road Classification is based on VDOT Roadway Functional Classification.
3. Clear Zone requirement should comply with the current VDOT Road Design Manual, Appendix A-2.
4. All fixtures should have zero uplight (U0) distribution and comply with the International Dark-Sky Association (IDA) guidelines to minimize glare and light trespass.

7-0803.2 ~~7-0804.2~~Standard Streetlight Source

A. The standard light source for all streetlights must be Light Emitting Diodes (LEDs) ~~fixtures~~ with Smart City capability. The use of LED streetlights must conform to the standards as set forth in Table 7.7, ~~and 7.8~~ unless otherwise approved by the Director.

B. ~~Any use of existing Mercury Vapor (MV), High Pressure Sodium (HPS), or Metal Halide (MH) street lights along existing state road frontage must be converted to LED. These new fixtures must meet the requirements of the American National Standards Institute/Illuminating Engineering Society's (ANSI/IES) Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting (ANSI/IES RP-8-18, or latest).~~The light source must have a Correlated Color Temperature (CCT) of 3,000 Kelvin, or lower where approved, and a Type III Distribution.

C. Luminaire Mounting Height – All standard luminaires must be installed with mounting heights as specified in Table 7.7.

D. ~~Any use of~~ Existing Mercury Vapor (MV), High Pressure Sodium (HPS), or Metal Halide (MH) streetlights along existing state road frontage must be converted to LED.

Table 7.7 Standard Dominion and NOVEC Luminaires

Fixture Style	HID Wattage	HID Lumens	LED Wattage	LED Lumens	Mounting Height (ft)	Notes
Cutoff Colonial RF-3	70	5000	41	3656	14	
	100	8000	66	3656	14	
	150	14000	94	7124	14	
Shoebox (Cobrahead) RF-1, RF-2	70	5000	30	3735	20-25	
	100	8000	45	5342	25-30	
	150	14000	60	8145	25-30	
	200	19000	88	11936	25-30	Not offered by NOVEC
	250	23000	106	15230	30-35	
	400	42000	175	25200	30-40	Not offered by NOVEC
Expressway EX-1, EX-2	250	23000	105	16193	30-35	
	400	42000	155	23469	30-40	

Notes:
1. LED wattage and lumens are based on product specifications shared by Dominion Energy as of 2023.
2. All luminaires are Type III distribution with a CCT of 3000K.

7-0803.3 ~~7-0804.3~~Light Level Requirements

A. Required illumination levels are determined based on ~~area~~ street classification ~~as described in Tables 7.7, 7.8 and 7.9. See Tables 7.5 for definitions of area classifications. Due to the variations in the geometrics and traffic counts for existing State roadways, the design of~~

~~street lights at these locations is site specific. The initial design of these street lights must conform to the generalized standards as set forth in Table 7.7. 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 may be subject to revision after review by DPWES. DPWES may also adjust approved street lighting layouts along existing State roadways. DPWES will 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 ANSI/IES RP-8-18.~~and pedestrian activity classification based on the Illuminance Method. See design standards in Table 7.8.

~~A. Residential Areas~~

~~1. Street lights must be provided along roadways within new residential subdivisions in accordance with § 7-0802.1. Luminaire size and maximum allowable spacing and mounting height must conform to the standards set forth in Tables 7.7 and 7.8.~~

~~2. A minimum of three street lights must be provided at all subdivision entrances as set forth in Tables 7.7~~

~~B. Commercial/Industrial Areas~~

~~1. Street lights must 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 must conform to the standards set forth in Tables 7.7~~

~~2. A minimum of three street lights must be provided at all subdivision entrances as set forth in Tables 7.7.~~

Table 7.8 Lighting Levels For Proposed and Existing Streets

ANSI/IES Functional Classification	VDOT Street Classification (Note 1)	Tysons Street Classification (Note 2)	Pedestrian Activity Classification (Note 3)	Average Illuminance (fc)	Average Uniformity Ratio Eavg/Emin	
Major	**Principal Arterial**	**Boulevard**	High	1.7	3.0	
			Medium	1.3	3.0	
			Low	0.9	3.0	
Collector		**Avenue Collector**	High	1.2	4.0	
			Medium	0.9	4.0	

Attachment A

	Minor Arterial Major Collector		Low	0.6	4.0	
Local	**Minor Collector Local**	**Collector Local**	High	0.9	6.0	
			Medium	0.7	6.0	
			Low	0.4	6.0	

Notes:
These requirements are based on ANSI/IES RP-8-22. The latest edition of the publication may be used in lieu of this table.

1. Street classification is based on the VDOT Roadway Functional Classification. For mixed-use urban centers subject to multimodal design standards, see VDOT Road Design Manual, Appendix B2, to determine roadway classification. Design engineers should use their best judgment and consult with county engineers as needed to determine the appropriate classification. This process is used to translate the ANSI/IES categories to the VDOT Functional Classification.
2. Transportation Standards for Tysons has adopted a different functional classification for roadways. Tysons Collector streets may be subject to either ANSI/IES Collector or Local Street design standards based on number of lanes. Streets with 4 lanes or more should follow ANSI/IES Collector lighting criteria.
3. Pedestrian activity classification is determined based on proposed use and adjacent activities. Design engineers should use their best judgement and consult with county engineers as needed to determine pedestrian activity classification.
   High: Areas with continuous or frequent nighttime pedestrian use, such as urban centers, downtown districts, commercial corridors, or near transit stations. More than 100 pedestrians during the highest nightly average one-hour volume period.
   Medium: Areas with moderate pedestrian use, typically mixed-use or neighborhood streets with intermittent activity. Between 11 and 99 pedestrians during the highest nightly average one-hour volume period.
   Low: Areas with little or infrequent pedestrian activity, such as residential local streets or 10 or fewer pedestrians during the highest nightly average one-hour volume period.

B. Required illumination levels at intersections should be in accordance with Table 7.9.

Table 7.9 Lighting Levels For Intersections

ANSI/IES Functional Classification	Average Illuminance (fc) Pedestrian Activity Level Classification			Uniformity Ratio Eavg/Emin
	High	Medium	Low	
Major/Major	3.2	2.4	1.7	3.0
Major/Collector	2.7	2.0	1.4	3.0
Major/Local	2.4	1.9	1.2	3.0
Collector//Collector	2.2	1.7	1.1	4.0
Collector/Local	2.0	1.5	0.9	4.0
Local/Local	1.7	1.3	0.7	6.0

Notes:
These requirements are based on ANSI/IES RP-8-22. The latest edition of the publication may be used in lieu of this table.

C. In lieu of using the illumination level as specified in Section A for streetlight design, a simplified spacing method may be used when the

proposed lighting layout conforms to Tables 7.10 and 7.11 for the specified luminaire type, mounting height, and roadway classification, and when the roadway and streetscape conditions are typical. Use of Table 7.10 and 7.11 is limited to the following conditions:

1. The street is classified as a local road with a typical cross-section and low to medium pedestrian activity level. These tables shall not be used for collector or major roadways, or for locations with unique conditions such as sharp curves, medians, or steep grades.
2. Existing roads with operating streetlights may require a lighting analysis to ensure lighting levels are evaluated comprehensively.
3. The design must use County-approved standard luminaires, poles, brackets, and mounting heights. The light source, distribution type, color temperature, and lumen output must match the approved specifications in Table 7.7.
4. Pole placement should follow standard layout patterns with adjustments made as necessary to coordinate with existing streetlights.
5. Minor adjustments to the spacing (up to 5 feet unless otherwise approved by the Director) requirements may be allowed to accommodate lot lines, streetscape features, topography, or other site constraints.

Table 7.10 Spacing Requirements For Local Streets (RF-1,RF-2)

Roadway Width (ft)	Luminaire Size HID/LED (Watts)	Mounting Height (ft)	Spacing (ft) Lights on one side		Spacing (ft) Lights on two sides (parallel)		Spacing (ft) Lights on two sides (stagger)	
			Low pedestrian	Medium pedestrian	Low pedestrian	Medium pedestrian	Low pedestrian	Medium pedestrian
24	70/30	20	N/A*	116	N/A	N/A	261	239
		25	157	96	N/A	162	319	198
	100/45	25	157	140	N/A	N/A	319	285
		30	185	114	N/A	191	378	236
30	70/30	20	N/A	96	N/A	N/A	259	221
		25	158	92	N/A	164	N/A	192
	100/45	25	158	131	N/A	N/A	321	276
		30	186	116	N/A	191	381	235
36	100/45	25	156	113	N/A	N/A	327	259
		30	187	110	N/A	194	383	229
	150/60	25	N/A	163	N/A	N/A	N/A	334
		30	193	164	N/A	N/A	398	339
	200/88	30	N/A	194	N/A	N/A	N/A	401
		35	222	209	N/A	N/A	466	421
40	100/45	25	159	100	N/A	N/A	318	246
		30	188	102	N/A	194	N/A	221
	150/60	25	N/A	152	N/A	N/A	N/A	331
		30	193	151	N/A	N/A	404	329
	200/88	30	N/A	192	N/A	N/A	N/A	401

Attachment A

		35	222	203	N/A	N/A	466	414
44	100/45	25	159	N/A	N/A	195	298	213
		30	177	93	N/A	164	392	232
	150/60	25	N/A	N/A	N/A	N/A	N/A	312
		30	194	138	N/A	N/A	401	317
	200/88	30	N/A	193	N/A	N/A	N/A	398
		35	223	223	N/A	N/A	466	405
	250/106	30	N/A	N/A	N/A	N/A	N/A	N/A
		35	N/A	223	N/A	N/A	N/A	466
48	100/45	25	N/A	N/A	N/A	161	267	215
		30	159	97	N/A	191	383	201
	150/60	25	N/A	N/A	N/A	N/A	N/A	279
		30	192	126	N/A	N/A	394	303
	200/88	30	N/A	177	N/A	N/A	N/A	395
		35	220	N/A	N/A	N/A	459	392
	250/106	30	N/A	N/A	N/A	N/A	N/A	394
		35	N/A	221	N/A	N/A	N/A	460
*'N/A' indicates an inefficient, over-lighting configuration that is not viable.								

Table 7.11 Alternate Security Fixture			
Roadway Width (ft)	**Luminaire Size HID/LED (Watts)**	**Mounting Height (ft)**	**Spacing (ft) Lights on one side or staggered**
22-36	70/41	14	80-100 (Note 1)
Note 1: This spacing range represents the acceptable average fixture spacing for RF-3 luminaires. However, the spacing between any two adjacent fixtures must not vary by more than 5 feet from the selected average spacing.			

D. Regardless of the method used, the submitter should follow the best practices below when locating streetlights:
   1. Even Distribution: Pole placement should promote uniform light distribution across the project frontage to avoid dark spots and excessive brightness.
   2. Efficiency: Evaluate combinations of pole height, spacing, lumen output and pole layout arrangement (e.g., staggered, parallel, one sided) to identify the most cost-effective solution that meets the lighting level.
   3. Intersections Lighting:
      a. Intersection roadway lighting should not include more than one luminaire per pole to avoid glare.
      b. Generally, begin lighting layouts at intersections or other conflict areas and extend outward to ensure coverage of critical zones
   4. Pole height and fixture type should remain consistent along the roadway for visual and functional consistency.
   5. Crosswalks should be adequately illuminated with streetlights where feasible within the streetscape design to enhance pedestrian visibility and safety.

Attachment A

7-0803.4 ~~7-0804.4~~ Pole Placement and Bracket Length

A. ~~All standard roadway fixtures must be installed in such a manner as to maintain a minimum roadway overhang of 2 feet.~~ All pole locations must conform to the current edition of the VDOT Road Design Manual, Appendix ~~Section~~ A-2, Clear Zone Requirements ~~Guidelines and must meet the~~ VDOT ~~clear zone requirements~~ or pass current crash test requirements for obstacles within street clear zones.

B. ~~1.Residential Areas.~~ Poles located at intersections must be installed as close as possible to, but outside, the radius of the intersection. Poles located along roadways between intersections ~~must be installed with a 1-foot offset to side lot property boundaries. All pole placements and bracket lengths must conform to the standards set forth in Tables 7.7. 2.Commercial/Industrial Areas. Poles located at intersections must be installed as close as possible to, but outside, the radius of the intersection. Poles located along roadways between intersections must~~ should be installed, if possible, within the public right-of-way with at least a 1-foot offset ~~to side lot~~ from property boundaries. ~~All pole placements and bracket lengths must conform to the standards set forth in Tables 7.7.~~

C. Standard concrete poles (RF-2) should be installed a minimum of 7.5 feet from the face of curb or 2.0 feet behind the sidewalk. Standard wood poles (RF-1) should be installed a minimum of 10 feet from the edge of pavement.

D. All standard streetlights must be installed to maintain a minimum roadway overhang of 2 feet. The maximum bracket length for standard concrete poles (RF-2) is 12 feet, available in 2.5-, 6-, 8-, 10-, and 12-foot options. Longer brackets, up to 20 feet (available in 16- and 20-foot lengths), may be used with heavy-duty concrete poles. Wood poles require downguide for brackets longer than 12ft. Brackets length for wood poles (RF-1) range from 6 feet to 20 feet in 2 foot increments.

E. ~~B.~~Standard colonial style roadway lighting fixtures (RF-3) must utilize black fiberglass poles. These poles should be installed 2 feet behind the face of curb.

~~C. If a development has frontage on an existing or proposed public service road, street lights must be located to light the main roadway in accordance with adopted illumination standards.~~

F. Existing utility poles may be used for streetlight installation, provided it is determined to be feasible based on safety, structure capacity, and approval from the utility company.

7-0803.5 ~~7-0804.5 Luminaire Mounting Height – All RF-1 and RF-2 luminaires must be installed with mounting heights as specified in Tables 7.7. All RF-3 luminaires must be installed at a height of 14 feet.~~Plan Submission Requirements

A. All existing streetlights within 300 feet of the site's frontage must be shown and labeled with fixture style, luminaire size, and mounting height.

B. All proposed RF-1, RF-2, RF-3, EX-1, and EX-2 streetlights must be plotted accurately to scale on the plans with respect to pole location and, where applicable, bracket length.

~~7-804.6 Street light information to be shown on development plans:~~

1. ~~A.The standard roadway fixture for use on ditch section roadways is the RF-1 (~~Plate 28-7~~). However, the RF-1 can be substituted with the RF-2 (concrete pole with underground wiring) if desired.~~ The RF-1 locations must be designated on the plan using ~~in accordance with~~ the symbol shown in Plate 28-7 ~~or 29-7. Each RF-1 location must be~~ and dimensioned from edge-of-pavement to face-of-pole. The label must include ~~Each RF-1 location must be labeled as to~~ luminaire size, bracket length and mounting height as follows: RF-1-luminaire size-bracket length (mounting height), e.g., RF-1-88~~145~~-12(35) refers to a 88~~145~~ watt luminaire with a 12-foot bracket length at a mounting height of 35 feet.

2. ~~B.Standard roadway fixture for use on curb-and-gutter roadways (Plate 29-7).~~ The RF-2 locations must be designated on the plan using ~~with~~ the symbol shown in Plate 29-7 and dimensioned from face of curb to face of pole. ~~Each RF-2 location must be labeled as to~~ The label must include luminaire size, bracket length and mounting height as follows: RF-2-luminaire size-bracket length (mounting height), e.g., RF-2-60~~71~~-10(30~~35~~) refers to a 60~~71~~ watt luminaire with a 10-foot bracket length at a mounting height of 30~~35~~ feet.

3. ~~C.Standard colonial style roadway lighting fixture (~~Plate 30-7~~).~~ The RF-3 locations must be designated on the plan using ~~in accordance with~~ the symbol shown in Plate 30-7. ~~Each RF-3 location must be~~

~~labeled as to~~ The label must include luminaire size as follows: RF-3-luminaire size, e.g., RF-3-66~~72~~ refers to a 66~~72~~ watt luminaire.

4. ~~D.Special Expressway lighting fixture (Plate 29A-7).~~ The EX-1 and EX-2 locations must be designated on the plan using ~~in accordance with~~ the symbol shown in Plate 29A-7. ~~Each EX-1 and EX-2 location must be labeled as to~~ The label must include luminaire size, bracket length, mounting height and tilt as follows: EX-1-luminaire size-bracket length(mounting height)(tilt), e.g., EX-1-105~~145~~-1(35)(0) refers to a 105~~145~~ watt luminaire with a 1-foot bracket length at a mounting height of 35 feet with a tilt of zero.

~~E.All RF-1, RF-2, RF-3, EX-1, and EX-2 street lights must be plotted accurately to scale on the plans with respect to pole location and, where applicable, bracket length.~~

C. Street classification, right-of-way boundaries, easements, intersections, mid-block crosswalks, and pedestrian conflict areas need to be clearly shown.

D. Other features within the streetscape must be clearly shown on the lighting plan to identify potential conflicts. Such features include, but are not limited to: trees, planters, traffic control devices, pedestrian access points, pedestrian facilities and crosswalks.

E. A photometric plan must be provided by the developer to LDS to demonstrate compliance with Tables 7.8 and 7.9. All photometric plans must include the following:
   1. Results from Illuminance method-minimum maintained average values in footcandles (fc).
   2. Calculation zone areas. Calculations may be point-by-point or software-based and must include grid spacing, calculation boundaries, and relevant assumptions.
   3. Uniformity ratios: average/minimum.
   4. Lighting loss factor (LLF): Light loss factor of not less than 0.85 should be used for light emitting diode (LED) or 0.72 for high intensity discharge (HID) lamps.
   5. Certification: the plan must be sealed by a Lighting Certified professional by the National Council on Qualifications for the Lighting Professional (NCQLP), or a State licensed professional engineer, architect, landscape architect, or land surveyor.

F. When Tables 7.10 and 7.11 are used for roadway lighting design, the submitted plan must clearly label the distance between poles along the roadway.

~~7-0804.7 For design examples, see Plates 23-7 through 27-7.~~

~~Table 7.5 Area Classification~~

~~Residential~~ ~~– All land uses as described in Section 2102 of the Zoning Ordinance.~~

~~Commercial Industrial~~ ~~– All land uses as described in Sections 2103 and 2104 of the Zoning Ordinance.~~

~~Planned Development~~ ~~– All land uses as described in Section 2105 of the Zoning Ordinance.~~

~~Table 7.6 Road Classification~~

~~Local~~ ~~– Roadways used primarily for direct access to residential, commercial, or industrial or other abutting property. These roadways do not carry through traffic.~~

~~Collector~~ ~~– Roadways used for serving through traffic between arterial and local roadways. These roadways are used mainly for traffic movement within residential, commercial and industrial areas.~~

~~Arterial~~ ~~– Roadways used as a principal network for through traffic flow. These roadways connect areas of principal traffic generation and important rural highways entering population centers such as cities.~~

~~7-0804.8~~

~~Lighting Levels Tables~~

~~Table 7.7 Lighting Levels For Proposed and Existing Streets: Standard Roadway Fixture (RF-1 and RF-2)(Light Emitting Diode)~~

~~Area Classification~~	**~~Roadway Section Type ft.~~**	**~~Roadway Width ft.~~**	**~~Luminaire Size Watts~~**	**~~Maximum Spacing ft.~~**	**~~Mounting Height ft.~~**	**~~Notes~~**
~~Residential~~	~~Curb & Gutter~~	~~30~~	~~54~~	~~175~~	~~30~~	~~1,3,4~~
		~~36~~	~~54~~	~~165~~	~~30~~	~~1,3,4~~
		~~44~~	~~71~~	~~200~~	~~35~~	~~1,3,4~~
	~~Ditch Section~~	~~24~~	~~37~~	~~170~~	~~25~~	~~1,3,4~~
		~~36~~	~~54~~	~~165~~	~~30~~	~~1,3,4~~
		~~48~~	~~71~~	~~200~~	~~35~~	~~1,3,4~~
~~Industrial/Commercial~~	~~Curb & Gutter~~	~~30~~	~~105~~	~~220~~	~~35~~	~~1,3,4~~
		~~36~~	~~105~~	~~215~~	~~35~~	~~1,3,4~~
		~~44~~	~~145~~	~~220~~	~~35~~	~~2,3,4~~
	~~Ditch~~	~~24~~	~~105~~	~~220~~	~~35~~	~~1,3,4~~

Attachment A

~~**Table 7.7 Lighting Levels For Proposed and Existing Streets: Standard Roadway Fixture (RF-1 and RF-2)(Light Emitting Diode)**~~

~~Area Classification~~	~~Roadway Section Type ft.~~	~~Roadway Width ft.~~	~~Luminaire Size Watts~~	~~Maximum Spacing ft.~~	~~Mounting Height ft.~~	~~Notes~~
	~~Section~~	~~36~~	~~105~~	~~215~~	~~35~~	~~1,3,4~~
		~~48~~	~~145~~	~~220~~	~~35~~	~~1,3,4~~

~~NOTES:~~

~~1/ All luminaires to be installed on one side of the roadway.~~

~~2/ Luminaires are to be set symmetrically on both sides of the roadway. When the development only fronts one side of the road, street lights only need to be provided on that side at the spacing specified.~~

~~3/ 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.~~

~~4/ Unless otherwise approved by the Director, the light source must have a Correlated Color Temperature (CCT) of 3,000 Kelvin, or lower where approved, and a Type III Distribution.~~

~~**Table 7.8 Lighting Levels For Proposed Curb & Gutter Streets: Alternate Security Fixtures (RF-3)(Light Emitting Diode)**~~

~~Area Classification~~	~~Roadway Classification~~	~~Luminaire Size Watts~~	~~Maximum Spacing ft.~~	~~Mounting Height ft.~~
~~Residential, Single Family Detached~~	~~Local~~	~~72~~	~~160~~	~~14~~

~~NOTES:~~

~~Poles to be placed on one side of the roadway.~~

~~Unless otherwise approved by the Director, the light source must have a Correlated Color Temperature (CCT) of 3,000 Kelvin, or lower where approved, and a Type III Distribution.~~

Amend Chapter 7 (Streets, Street Lights, Parking and Driveways), by revising §7-0804 (Standards and Criteria), to read as follows:

7-0804 ~~Standards and Criteria 7-0805~~ <u>Nonstandard Streetlights</u>

7-0804.1 ~~7-0805.1~~ It is the County's objective to provide for the implementation of a safe, effective, and economical street-light~~ing~~ system. ~~To this end~~, ~~s~~<u>S</u>tandard fixtures, lighting intensities, and implementation criteria are specified in <u>§ 7-0801</u> through <u>~~§ 7-0804~~§ 7-0803</u>. However, nonstandard

street-lighting systems may be approved to satisfy the requirements of § 7-0800 *et seq*., if the resulting lighting levels meet or exceed those specified for the area under consideration. In addition, the nonstandard street-lighting system must meet the general County goals of crime deterrence, increased pedestrian safety, and reduced hazardous driving conditions. Any proposed streetlight system that does not conform to the requirements of § 7-0801 through ~~§ 7-0804~~§ 7-0803 is considered nonstandard. This may include any deviation from standard fixtures, poles, brackets, illumination intensities, light sources and lighting layout required in § 7-0800 *et seq*. However, minor adjustments of standard pole locations to accommodate lot lines or unusual physical topographical features of the site are allowable and will not cause a lighting system to be considered nonstandard.

~~7-0804.2 7-0805.2 The procedure to obtain approval of a nonstandard street light system will be as follows:~~

~~A. The developer must submit to DPWES a written request to use a nonstandard street light system. This request will include a description of the nonstandard street light system components and lighting layout, and lighting computations as per § 7-0805.5B. Schematic drawings or pictures of the nonstandard street light components, manufacturer's specifications, and photometric data must also be submitted.~~

~~After reviewing the information submitted, DPWES will provide a recommendation on the acceptance, modification, or rejection of the proposed nonstandard street light system~~

7-0804.2 Nonstandard streetlights have been approved for properties located within development centers including: Tysons Urban Center (PTC), Reston Transit Station Area (TSA), Huntington TSA, West Falls Church TSA, Commercial Revitalization Districts (CRD), including Annandale, Bailey's Crossroads and Seven Corners, McLean and Richmond Highway, Commercial Revialization Areas (CRA) including Lincolnia, Lake Anne, and Merrified, Springfield CRA/TSA.

A. The Board has approved nonstandard streetlights with adoption of the Tysons Urban Design Guidelines, Guidelines for Development in Reston TSAs, and Fairfax County Urban Design Guidelines. These guidelines include streetlight suggestions that may differ from the requirements set forth in the PFM based upon the unique characteristics of the urban environment. Developers are strongly encouraged to use the guidelines in by-right development proposals in these areas.

~~7-0804.3 7-0805.3 All nonstandard street light systems must comply with VDOT requirements for street lights, including clear zone consideration.~~

Table 7.12 – Summary of Procedures for Nonstandard Streetlights in the Right-of-Way

Nonstandard Streetlight Classification	Procurement of Materials	Maintenance and Operations	Construction	Electrical Design	Installation	Ownership	Maintenance Agreement (Note 1)
Private Nonstandard	Developer	Developer	Developer	Developer	Developer	Property Owner	YES
Premium Nonstandard	Dominion	Dominion	Dominion	Dominion	Dominion	Dominion	NO
Pre-selected Nonstandard fixtures (Note 2)	Developer	Dominion	Dominion	Dominion	Dominion	Dominion & DPWES	NO

Notes:
1. See § 7-0804.6 for requirements of private maintenance agreement.
2. Pre-selected nonstandard lighting fixtures that have been approved by the utility company and DPWES. These lights are operated and maintained by Dominion, however, the developer is responsible for procurement. Developer must coordinate with Dominion prior to installation. Refer to § 7-0805.4 for authorization and installation procedures.

7-0804.3 ~~7-0805.4 If a nonstandard street light system is proposed for a planned development made up of more than one section, then an overall nonstandard street lighting layout for the entire development must be submitted to DPWES before approval of any section of the development~~ Other nonstandard streetlights may be proposed by the developer. The procedure to obtain approval of a nonstandard streetlight system will be as follows:

A. The developer must submit to LDS a written request to use a nonstandard streetlight system. This request will include a description of the nonstandard streetlight system components and lighting layout, and compliance with the lighting requirements per §7-0804.4. Schematic drawing or pictures of the nonstandard streetlight components, manufacturer's specifications, and photometric data must also be submitted.

B. The request will be coordinated with DPWES. After reviewing the information submitted, DPWES will provide a recommendation on the acceptance, modification or rejection of the proposed nonstandard streetlight system.

Attachment A

~~7-0804.4 7-0805.5 The following conditions must be met before a final approval of a nonstandard street light system:~~

~~A. The existing and/or proposed nonstandard street light system must include all areas where street lighting is specified in accordance with § 7-0800 *et. seq*.~~

~~B. Lighting computations for the proposed nonstandard lighting system must be provided by the developer to DPWES. These computations must show that the proposed nonstandard lighting system meets the ANSI/IES RP-8-18 or latest version, and that it conforms to the guidelines of the International Dark-Sky Association (IDA) concerning glare and light trespass. These computations must be sealed by a Lighting Certified professional by the National Council on Qualifications for the Lighting Professional (NCQLP), or by a State licensed professional engineer.~~

~~C. The developer must, as a condition of the approval of the nonstandard street light system, enter into an agreement with the County for the perpetual maintenance and operation of the lighting system. This agreement must be recorded in the land records of the County and must run with the title of the land. The agreement will stipulate the following:~~

~~1. The arrangements for and all costs associated with perpetual operation and maintenance of the nonstandard street light system must be the responsibility of and at the sole expense of the property owner(s). The County will not be obligated to bear any of the cost to operate or maintain the nonstandard street light system.~~

~~2. The nonstandard street light system will be replaced with standard street lights, as specified in § 7-0800 *et seq*., at the option of the County, if this system is not properly operated or maintained in the future. Such a street light replacement must be at the sole expense of the property owner(s).~~

~~3. The County will not be obligated to install, remove or replace or to pay for the installation, removal or replacement of nonstandard street lights.~~

7-0804.4 All nonstandard streetlight systems must comply with the following standards:

A. American National Standards Institute/Illuminating Engineering Society's (ANSI/IES) Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting (ANSI/IES RP-8-22, or the most recent adopted edition)

B. The International Dark-Sky Association (IDA) guidelines to minimize glare and light trespass. Fixtures must have zero uplight (U0) distribution to reduce light pollution and conform to IDA guidelines.

C. All pole locations must conform to Clear Zone Requirements in the current edition of the VDOT Road Design Manual, Appendix A-2, or pass current crash test requirements for obstacles within street clear zones.

D. LED light source must have a Correlated Color Temperature (CCT) of 3,000 Kelvin, or lower where approved,

~~7-0804.5 7-0805.5 The following conditions must be met before a final approval of a nonstandard street light system:~~

~~A. The existing and/or proposed nonstandard street light system must include all areas where street lighting is specified in accordance with § 7-0800 *et. seq*.~~

~~B. Lighting computations for the proposed nonstandard lighting system must be provided by the developer to DPWES. These computations must show that the proposed nonstandard lighting system meets the ANSI/IES RP-8-18 or latest version, and that it conforms to the guidelines of the International Dark-Sky Association (IDA) concerning glare and light trespass. These computations must be sealed by a Lighting Certified professional by the National Council on Qualifications for the Lighting Professional (NCQLP), or by a State licensed professional engineer.~~

~~C. The developer must, as a condition of the approval of the nonstandard street light system, enter into an agreement with the County for the perpetual maintenance and operation of the lighting system. This agreement must be recorded in the land records of the County and must run with the title of the land. The agreement will stipulate the following:~~

~~1. The arrangements for and all costs associated with perpetual operation and maintenance of the nonstandard street light system must be the responsibility of and at the sole expense of the property owner(s). The County will not be obligated to bear any of the cost to operate or maintain the nonstandard street light system.~~

~~2. The nonstandard street light system will be replaced with standard street lights, as specified in § 7-0800 *et seq*., at the option of the County, if this system is not properly operated or maintained in the future. Such a street light replacement must be at the sole expense of the property owner(s).~~

~~3. The County will not be obligated to install, remove or replace or to pay for the installation, removal or replacement of nonstandard street lights.~~

7-0804.5 Plan Submissions for nonstandard streetlight systems must include the following:

A. A description of the nonstandard streetlight system components with schematic drawings or pictures. Provide manufacturer's specifications and details including photometric data, procedures for installation, operation and maintenance, and maintenance responsibility.

B. Submission requirements as specified in § 7-0803.5A, § 7-0803.5C, § 7-0803.5D, and § 7-0803.5E.

C. The best lighting practices in § 7-0803.3D should be used.

D. Mounting heights should be 30 feet, 35 feet or 40 feet for either local, collector, or major roads and spaced as necessary to provide the required lighting, where height remains consistent along the road. Subject to approval by the director, other mounting heights may be considered.

E. For development in development centers specified in §7-0804.2, pedestrian lighting will be analyzed separately from roadway lighting as follows:
   1. LED pedestrian lighting luminaire may be attached to the back side of the roadway lighting at a 15-foot or 20-foot mounting height, with additional freestanding pedestrian lighting between 15-foot or 20-foot mounting height added as needed between the roadway lighting. Consistent pedestrian light mounting height along a given street is encouraged.
   2. Design criteria for pedestrian walkways should achieve illumination levels and uniformity in Table 7.13 as recommended by ANSI/IES RP-8-22 or latest version.

Table 7.13 Design criteria for Walkways within Right of Way

ANSI/IES Pedestrian Activity Classification	E_{avg}(fc)	E_{avg}/E_{min}
High	0.9	5.0
Medium	0.5	5.0
Low	0.2	10.0

Emin: Minimum horizontal illuminance at the surface of the sidewalk.
Eavg: Minimum maintained average horizontal illuminance at the surface of the sidewalk.

F. If a nonstandard streetlight system is proposed for a planned development made up of more than one section, then an overall nonstandard streetlight layout for the entire development must be submitted to LDS before approval of any section analysis of the development. Lighting analysis should include the following:
   1. CDP/FDP area's lighting computation. Demonstrate with light computations that the CDP/FDP lighting layout is viable. Show proposed on-site lights and future lights for those areas within CDP area (off-site from site plan) and those adjacent areas that are expected to redevelop in the near future. Show existing lighting and street geometry for areas that are not expected to redevelop in the near future. Applicants with larger CDP areas may submit lighting plans for sections of development that account for the site plan area and 300 feet surrounding the site plan area.
   2. Site plan lighting computations. Demonstrate with light computations that the site plan area's lighting layout is viable.
      a. Show how proposed on-site lights and existing off-site lighting and street geometry conditions perform.
      b. Show how proposed on-site lights perform in future site plan with ultimate street geometry. Areas not expected to be redeveloped should be shown with existing street geometry. Areas expected to redevelop in the near future (by another CDP or similar) should show ultimate street geometry. Streets that are entirely new streets should show ultimate street geometry, even if they are not expected to redevelop in the near future.

7-0804.6 Before final plan approval, the developer must enter into an agreement with the County for the perpetual maintenance and operation of the lighting system classified as private nonstandard streetlight in Table 7.12. This agreement must be recorded in the land records of the County and must run with the title of the land. The agreement will stipulate the following:

A. The arrangements for and all costs associated with perpetual operation and maintenance of the nonstandard streetlight system must be the responsibility of and at the sole expense of the property owner(s). The County will not be obligated to bear any of the cost to operate or maintain the nonstandard streetlight system.

B. The nonstandard streetlight system will be replaced with standard streetlights, as specified in § 7-0800 *et seq*., at the option of the County, if this system is not properly operated or maintained in the future. Such a streetlight replacement must be at the sole expense of the property owner(s).

C. The County will not be obligated to install, remove or replace or pay for the installation, removal or replacement of nonstandard streetlights.

Amend Chapter 7 (Streets, Street Lights, Parking and Driveways), by revising §7-0805 (Nonstandard Street Lighting), to read as follows:

7-0805 ~~Nonstandard Street Lighting 7-0803~~ Authorization and Procedures

7-0805.1 ~~7-0803.1~~ Fairfax County is served by two electric utility companies: Dominion Energy (Dominion) and the Northern Virginia Electric Cooperative (NOVEC). When standard lights are used, see procedures in § 7-0805.2 and § 7-0805.3 depending on which electric service area the project is located in, ~~the following authorization and procedures apply~~. When pre-selected nonstandard lights are used, see procedures in § 7-0805.4.

7-0805.2 ~~7-0803.2~~ Dominion Electric Service Area:

A. In order to minimize cost and disruption, Dominion may include the cabling to the new streetlights in their construction plans for the electrical infrastructure serving the development. As soon as construction begins, the developer must provide approved plans to Dominion showing all the streetlight~~ing~~ improvements that have been bonded with the development.

B. A minimum of ~~135~~ 160 days before the desired streetlight installation date, the developer must request that DPWES obtain a cost estimate and construction sketch for the streetlights. 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~~ 60 days. The use of common trenches for streetlight 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 streetlight installations conforms to the approved plan and then DPWES will forward the cost estimate to the developer for payment to the County.

C. The developer must make full payment to the County for the streetlight 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 streetlight easements must be transmitted directly to Dominion. Dominion will not be obligated to install any streetlights 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 streetlight installation.

D. The developer must coordinate directly with Dominion to schedule the installation of streetlights. This coordination must be for installation of the wiring for the streetlights, 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 streetlight installations have not been scheduled within one year of the date of the cost estimate, and if the delay is not the fault of Dominion, Dominion may revise the cost estimate, which may require additional payment by the developer.

E. Once full payment has been made by the developer for the bonded streetlights and all easements have been granted to Dominion, the developer's bond can be reduced to account for the streetlight installation 120 days after receipt of the payment, ~~A~~any damage claims resulting from the installation of the streetlights must be resolved between the developer and Dominion before final bond release.

F. The County will make final payment to Dominion and accept the streetlights into the County Streetlight System upon the submission of an invoice requesting payment and a standard completion report to DPWES by Dominion, except that the streetlight installations must be inspected and approved by the County before making final payment and acceptance.

7-0805.3 ~~7-0803.3~~ NOVEC Electric Service Area

A. As soon as construction begins, the developer must request in writing that NOVEC prepare a cost estimate for the required streetlights. The developer must provide approved plans to NOVEC showing all the streetlight~~ing~~ improvements that have been bonded with the development.

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

C. DPWES will review NOVEC's construction sketch and cost estimate to ensure that the scope of the streetlight installations conforms to the approved development plan. DPWES will authorize NOVEC in writing to include the new streetlights into the Fairfax County Streetlight Account. If the cost estimate is not in agreement with the approved plans, DPWES will mark up the streetlight construction sketch indicating the deficiencies found and return it to NOVEC for correction. Adjustment to the streetlight layout may need to be made to account for any change in the original existing conditions when the plans were approved. After NOVEC has made the necessary corrections, it will be authorized by DPWES to include these streetlights into the County account.

D. The developer must make full payment to NOVEC for the streetlight installations within the time frame that the cost estimate is valid. Fully executed copies of all deeds of the required streetlight easements must be included with the payment. NOVEC will not be obligated to install any streetlights until full payment and all signed easement agreements have been received. NOVEC must provide DPWES with a copy of the receipt provided to the developer for the streetlight installation payment.

E. The developer must coordinate directly with NOVEC to schedule the installation of streetlights. This coordination must be for installation of the wiring for of the streetlights, 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 streetlight installations are not completed within one year of the date of payment of the estimated cost, providing the delay is not the fault of NOVEC, NOVEC may require the developer to make additional payment.

F. The developer must submit to the County payment receipts for all the streetlight installations indicated on the approved plans as verification that the streetlight requirements have been satisfied. Subject to verification that all required easements have been provided to NOVEC, the developer's bond can be reduced to account for the streetlight installation.

G. The County will accept the streetlights into the County Streetlight System upon the submission of a standard completion report to DPWES by NOVEC, except that the streetlight installations must be inspected and approved by the County before acceptance.

~~7-0805.4~~ ~~7-0803.4~~ ~~DPWES will review the electric utility company construction sketch and cost estimate to ensure that the scope of the street light installations conforms to the approved development plan. DPWES will authorize 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 mark up the street light construction sketch indicating the deficiencies found and return it to the electric utility company 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 has made the necessary corrections, it will be authorized by DPWES to include these street lights into the County account.~~

7-0805.4 Pre-selected Nonstandard Streetlights

Pre-selected nonstandard streetlights should generally follow the authorization and procedures for the Dominion service area in Section 7-0805.2 above and the subsections below.

A. The developer must coordinate directly with Dominion prior to installation of the light fixture or facilities.

B. The developer must arrange the procurement of light fixtures or facilities with the manufacturer as specified by Dominion and in coordination with DPWES.

C. The Developer will supply Dominion the nonstandard facilities needed for installation work including fixtures, brackets and/or poles.

D. The County will not be obligated to bear any of the cost associated with the installation of the nonstandard light system.

~~7 -0803.5 The developer must make full payment to the electric utility company 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 must be included with the payment. The electric utility company will not be obligated to install any street lights until full payment and all signed easement agreements have been received. The electric utility company must provide DPWES with a copy of the receipt provided to the developer for the street light installation payment.~~

~~7-0803.6 The developer must coordinate directly with the electric utility company to schedule the installation of street lights. This coordination must be for the wiring 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 the cost estimate payment, providing the delay is not the fault of the electric utility company, the electric utility company may require the developer to make additional payment.~~

Attachment A

~~7-0803.7~~ ~~The developer must 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 the developer's bond can be reduced to account for the street light installation.~~

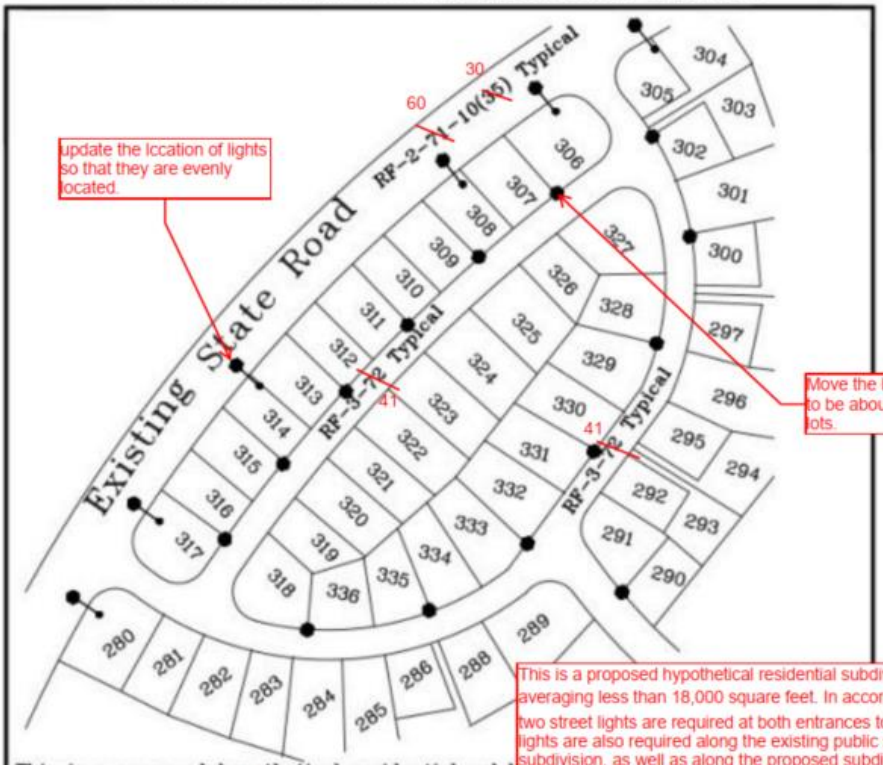
~~7-0803.8~~ ~~The County may accept the street lights into the~~ County Street Light System ~~upon the submission of a standard completion report to~~ DPWES ~~by the electric utility company, except that the street light installations must be inspected and approved by the County before acceptance.~~

Amend Chapter 7 (Streets, Street Lights, Parking and Driveways), §7-0000, by revising Plate 23-7, 24-7, 25-7, 26-7, 28-7, 29-7, 29A-7, and 30-7 as indicated in red texts below. Plate 27-7 will be removed from the PFM.

Attachment A

Plate 23-7 Design Example: Residential Subdivision

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



This is a proposed hypothetical residential subd
less than 18,000 square feet. According to §7-0
at all entrances to the subdivision and along al
State roadway system. A minimum of three ligh
to the subdivision. This existing State roadway
with a 44-foot pavement width. Therefore, the
in accordance with §7-0804.1. According to Tabl
maximum spacing of 200 feet are required with

According to §7-0804.1B, the preferred luminair
subdivision is the standard RF-3. According to T
road with single family detached dwellings, a lu
required at a spacing of 160 feet. The poles mu
curb as specified on Plate 30-7 and along the

This is a proposed hypothetical residential subdivision containing lots averaging less than 18,000 square feet. In accordance with §7-0802.1, two street lights are required at both entrances to the subdivision. Street lights are also required along the existing public street abutting the subdivision, as well as along the proposed subdivision roads that will be included in the State roadway system.The existing State roadway is a curb-and-gutter local roadway with a 44-foot pavement width. Therefore, standard RF-2 must be utilized in accordance with §7-0803.1. According to Table 7.10, 60-watt street lights with a mounting height of 30 feet are required at a spacing of 194 feet.The proposed subdivision roads are curb-and-gutter roadways with a 36-foot pavement width; therefore, standard RF-3 is used. According to Table 7.11, a luminaire size of 41 watts is appropriate at a spacing of 100 feet. Poles must be placed 2 feet behind the curb as specified on Plate 30-7. When RF-3 is used, no separate lighting calculation is required for interior intersections.

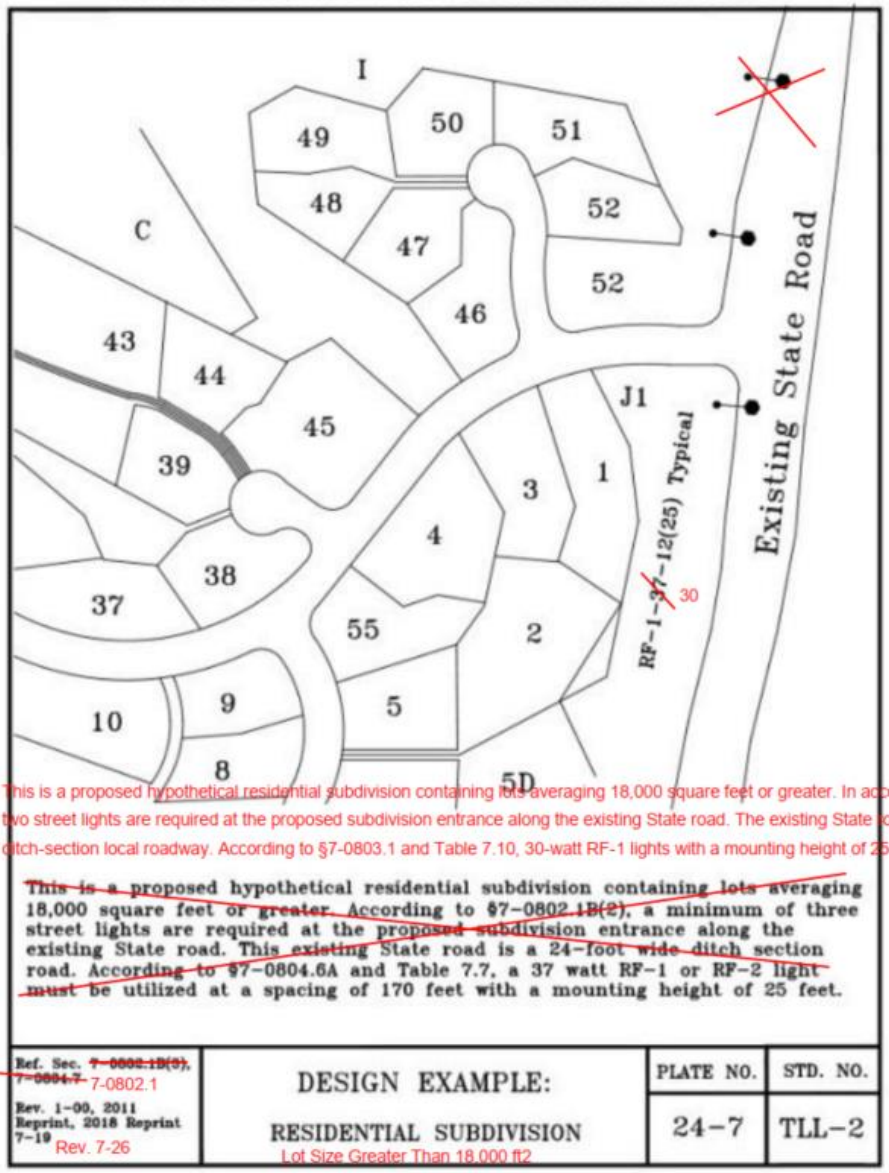
Ref. Sec. ~~7-0802.1A(3), 7-0804.7~~ 7-0802.1 Rev. 1-00, 2011 Reprint, 2018 Reprint, 7-19	DESIGN EXAMPLE: RESIDENTIAL SUBDIVISION Lot Size Less Than 18,000 ft2	PLATE NO. 23-7	STD. NO. TLL-1

Rev. 7-26

Attachment A

Plate 24-7 Design Example: Residential Subdivision

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



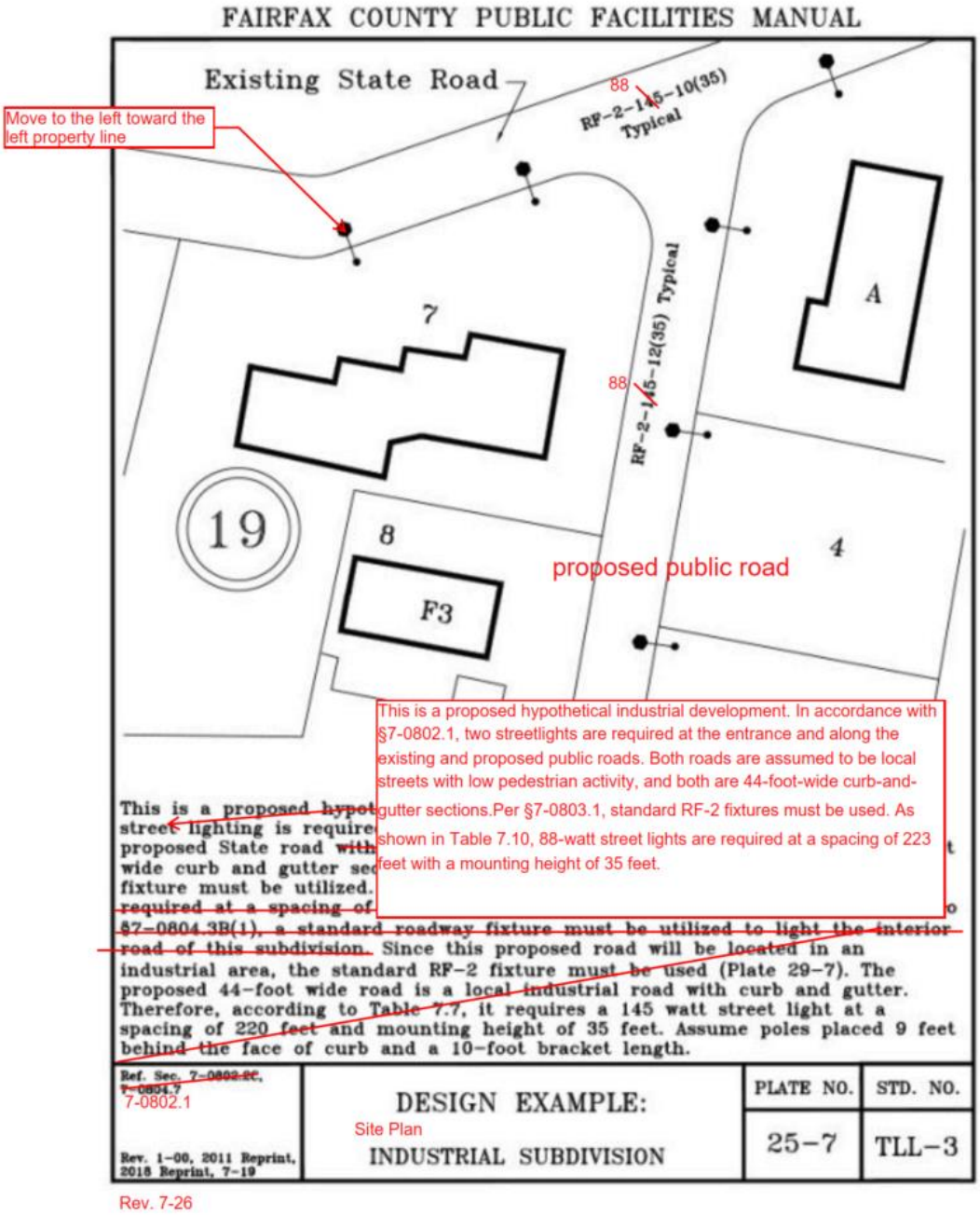
This is a proposed hypothetical residential subdivision containing lots averaging 18,000 square feet or greater. In accordance with §7-0802.1, two street lights are required at the proposed subdivision entrance along the existing State road. The existing State road is a 24-foot-wide ditch-section local roadway. According to §7-0803.1 and Table 7.10, 30-watt RF-1 lights with a mounting height of 25 feet are appropriate.

~~This is a proposed hypothetical residential subdivision containing lots averaging 18,000 square feet or greater. According to §7-0802.1B(2), a minimum of three street lights are required at the proposed subdivision entrance along the existing State road. This existing State road is a 24-foot wide ditch section road. According to §7-0804.6A and Table 7.7, a 37 watt RF-1 or RF-2 light must be utilized at a spacing of 170 feet with a mounting height of 25 feet.~~

Ref. Sec. ~~7-0802.1B(2), 7-0804.7~~ 7-0802.1 Rev. 1-00, 2011 Reprint, 2018 Reprint 7-19 Rev. 7-26	DESIGN EXAMPLE: RESIDENTIAL SUBDIVISION Lot Size Greater Than 18,000 ft2	PLATE NO.	STD. NO.
		24-7	TLL-2

Attachment A

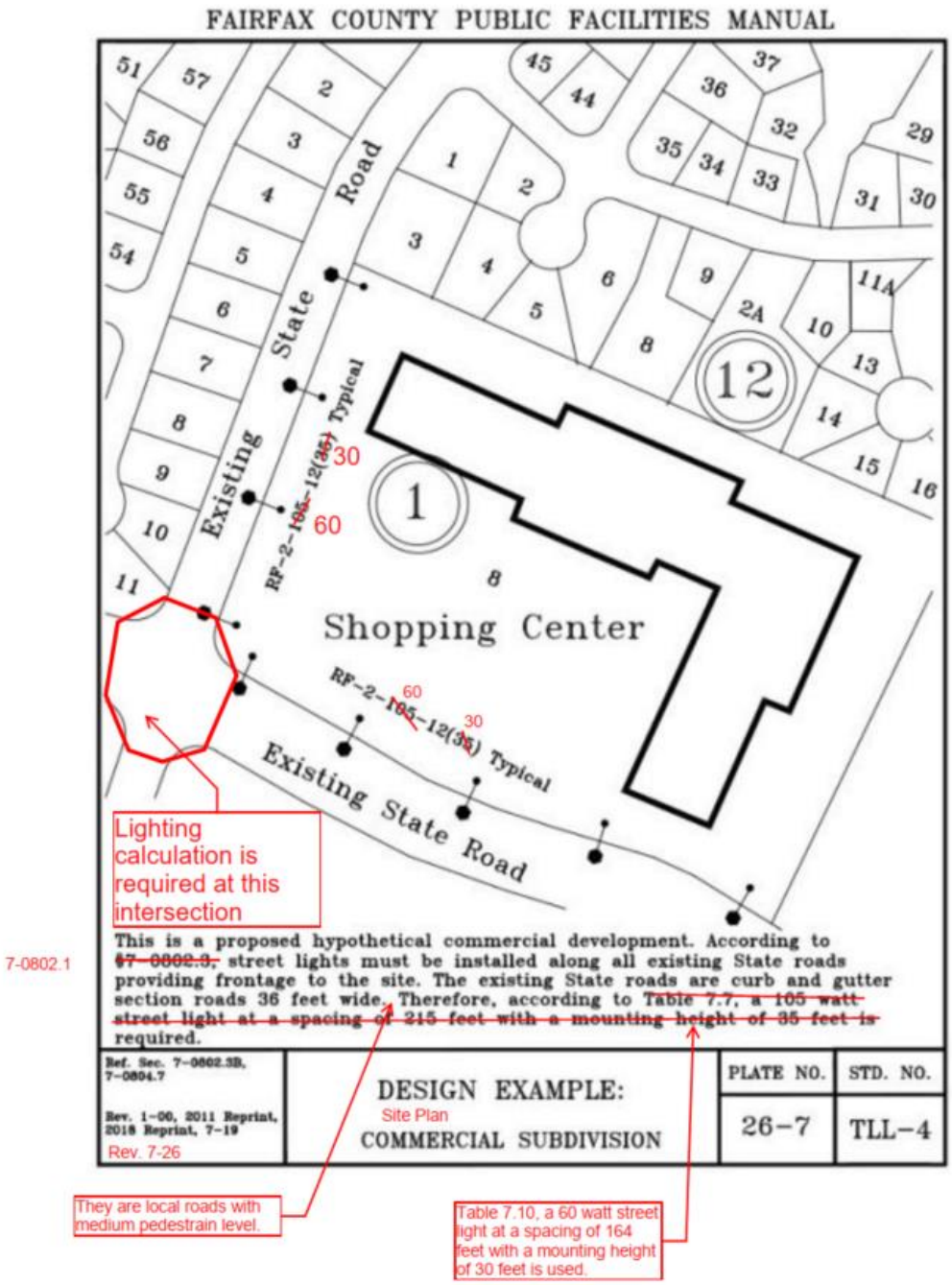
Plate 25-7 Design Example: Industrial Subdivision



Rev. 7-26

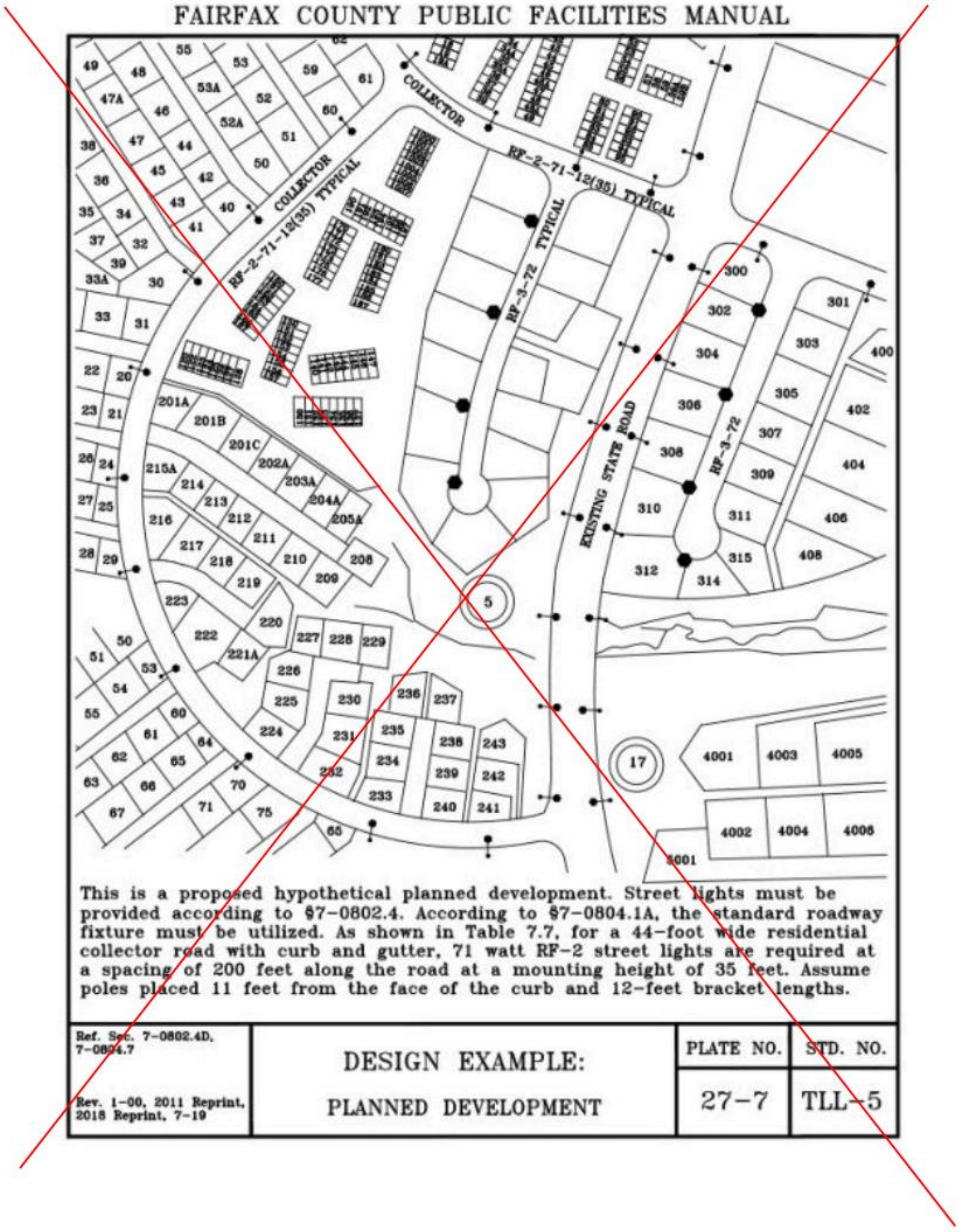
Attachment A

Plate 26-7 Design Example: Commercial Subdivision



Attachment A

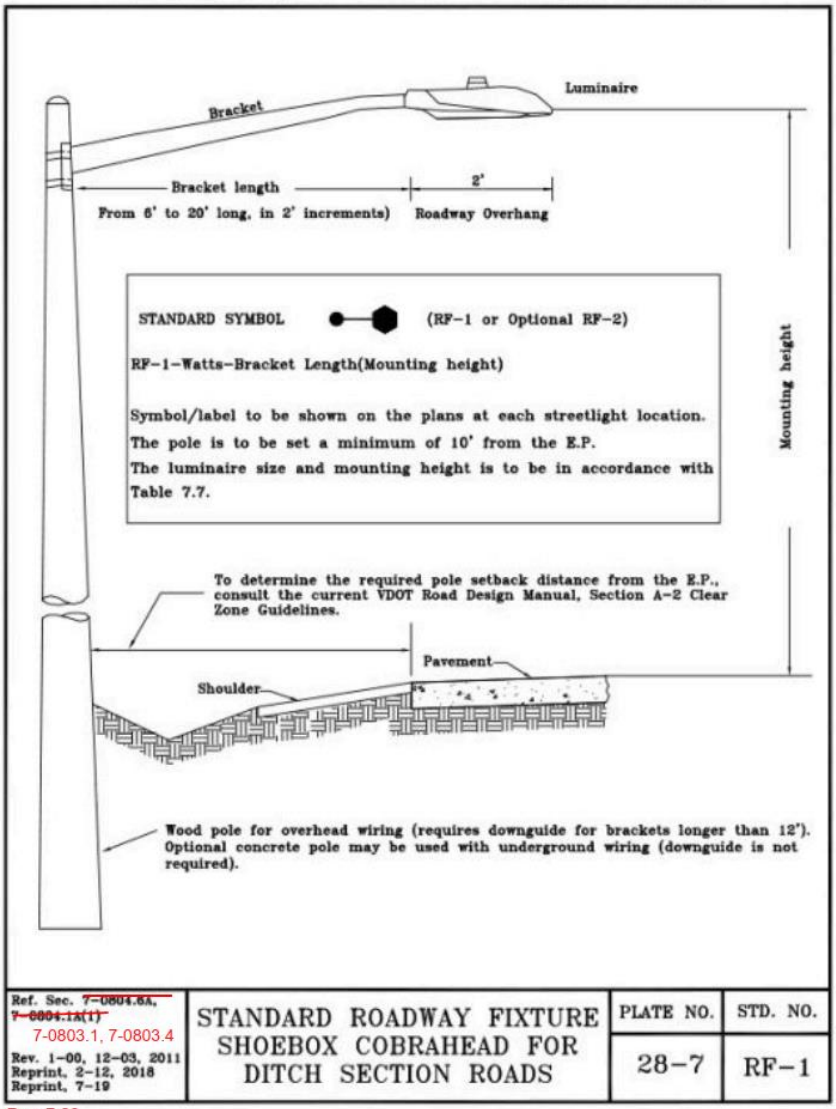
Plate 27-7 Design Example: Planned Development



Attachment A

Plate 28-7 Standard Roadway Fixture Shoebox Cobrahead for Ditch Section Roads

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



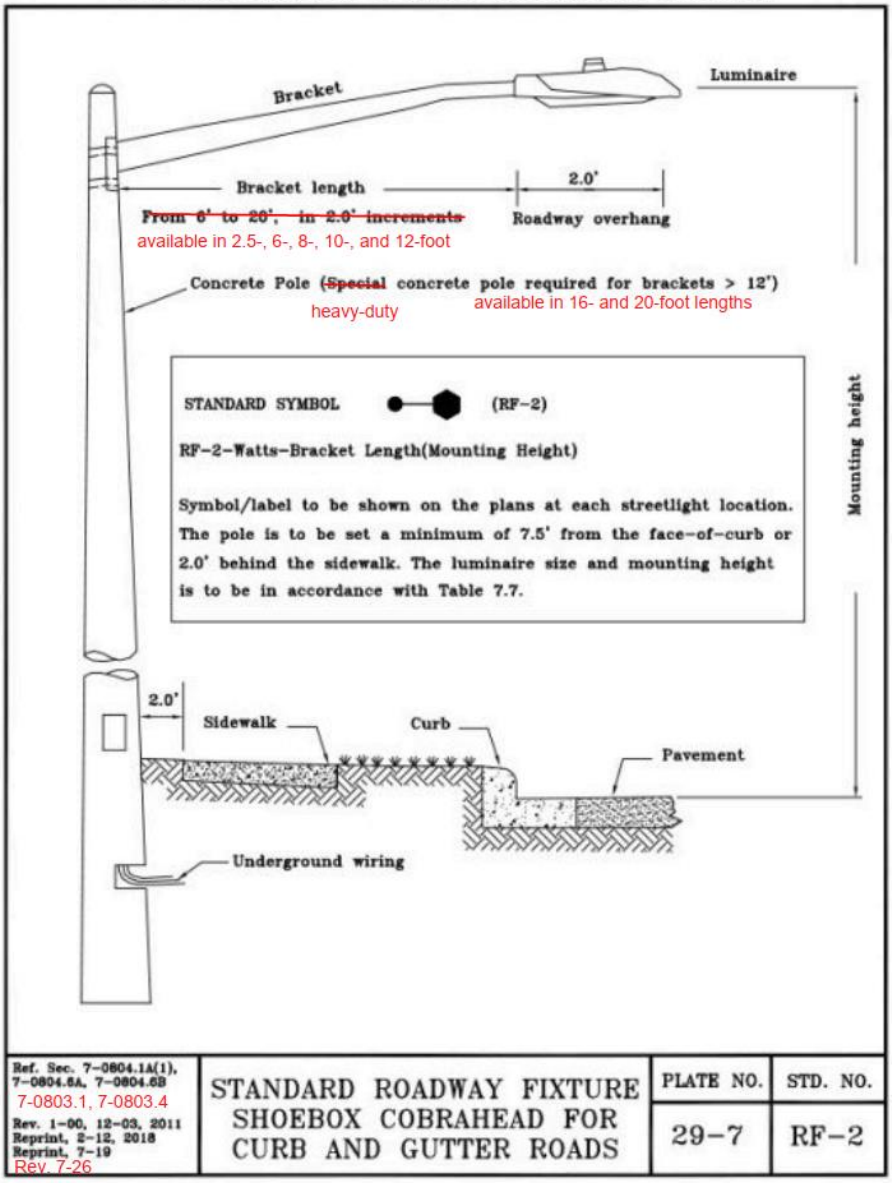
Ref. Sec. ~~7-0804.8A, 7-0804.1A(1)~~ 7-0803.1, 7-0803.4	STANDARD ROADWAY FIXTURE SHOEBOX COBRAHEAD FOR DITCH SECTION ROADS	PLATE NO.	STD. NO.
Rev. 1-00, 12-03, 2011 Reprint, 2-12, 2018 Reprint, 7-19		28-7	RF-1

Rev. 7-26

Attachment A

Plate 29-7 Standard Roadway Fixture Shoebox Cobrahead for Curb and Gutter Roads

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL

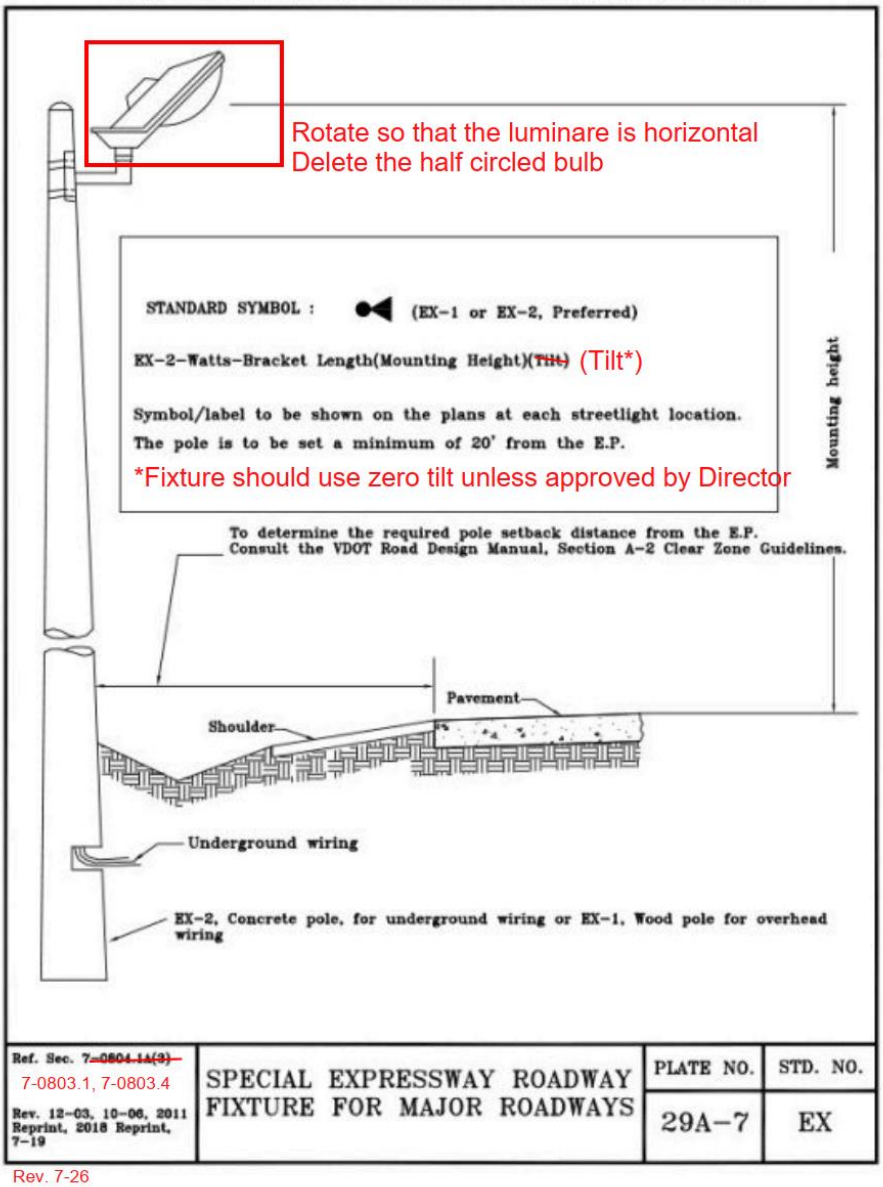


Ref. Sec. 7-0804.1A(1), 7-0804.6A, 7-0804.6B 7-0803.1, 7-0803.4 Rev. 1-00, 12-03, 2011 Reprint, 2-12, 2018 Reprint, 7-19 Rev. 7-26	STANDARD ROADWAY FIXTURE SHOEBOX COBRAHEAD FOR CURB AND GUTTER ROADS	PLATE NO.	STD. NO.
		29-7	RF-2

Attachment A

Plate 29A-7 Special Expressway Roadway Fixture for Major Roadways

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Ref. Sec. ~~7-0804.1A(3)~~ 7-0803.1, 7-0803.4 Rev. 12-03, 10-06, 2011 Reprint, 2018 Reprint, 7-19	SPECIAL EXPRESSWAY ROADWAY FIXTURE FOR MAJOR ROADWAYS	PLATE NO.	STD. NO.
		29A-7	EX

Rev. 7-26

Attachment A

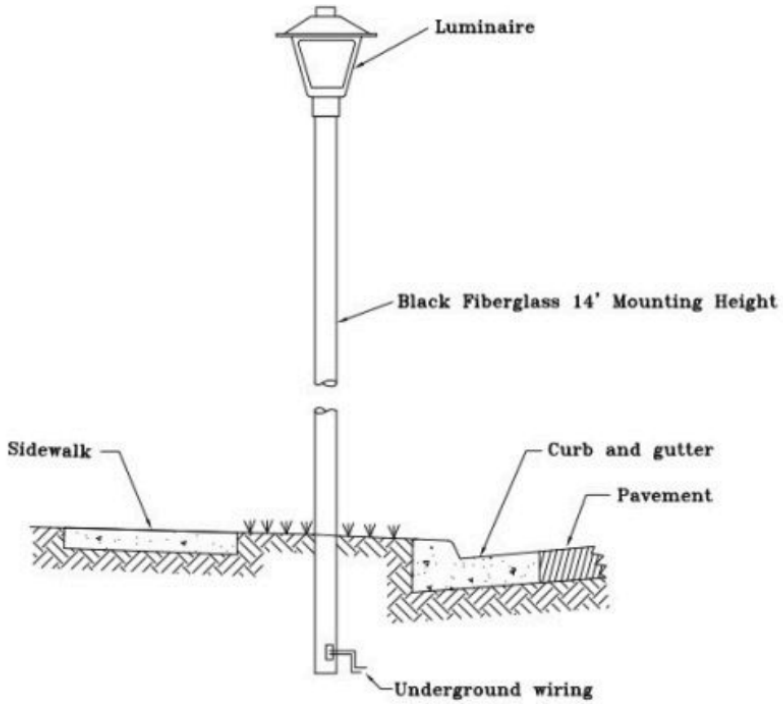
Plate 30-7 Colonial Style Fixture for Subdivision Roadways with Curb and Gutter

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL

STANDARD SYMBOL ⬢ (RF-3)

RF-3-Watts

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 with Table ~~7.8.~~ 7.7



Ref. Sec. ~~7-0804.1A(2), 7-0804.6C~~ 7-0803.1, 7-0803.4 Rev. 1-00, 11-05, 7-06, 2011 Reprint, 2-12, 2018 Reprint, 7-19	COLONIAL STYLE FIXTURE FOR SUBDIVISION ROADWAYS WITH CURB AND GUTTER	PLATE NO.	STD. NO.
		30-7	RF-3

Rev. 7-26