LED Streetlight Plan

As part of the City's environment and sustainability goals the City has an opportunity, through a partnership with Dominion Energy Virginia (DEV), to expedite the replacement of Dominion-owned mercury vapor and high pressure sodium streetlight fixtures with LEDs, which have 75% lower energy-consumption and last five times longer. Energy and maintenance cost savings allow for payback periods of as little as four years for a basic fixture, or 12 years for a premium fixture. The lighting can also offer improved visibility for public safety, enhancing walkability and bikeability in the City.

This CIP project allows the City to select different types of replacement lighting in separate spaces throughout the City, allowing for unique looks in particular areas. Lighting selection will be consistent with the City's streetscape standards, where they apply. DEV is already replacing some fixtures on existing lights that have failed with LEDs. However, replacements are piecemeal, made without consideration for the overall aesthetic or light pattern and color needs in different locations. Only lights in the "basic" classification are being replaced, and only with the existing fixture style. While this process is at no additional cost to the City, waiting for lights to fail may result in non-uniform replacement types, and will also delay realization of the environmental and cost benefits of reduced energy consumption and maintenance. By selecting several basic style lights, as shown below, the City will be able to provide guidance to DEV and meet the desired appearance and light quality both for individual repair replacements and a coordinated, uniform aesthetic and color temperature along corridors. Premium costs paid by the City will be focused on Great Streets.

Engineering details, such as color temperature, pattern, and wattage, will be selected by a multi-departmental task force, to ensure safety concerns are met while keeping costs down. Since the selected lights are all LEDs, the lighting is directed down and out, providing maximum light coverage and limiting up-lighting. The following table outlines the staff-recommended plan to direct DEV lighting replacements, depending on aesthetic, function, and cost consistent with adopted plans. Staff requests input.

WHERE	FIXTURE NAME	PREMIUM OR BASIC
Corridor	Shoebox	BASIC
Parks	Basic Acorn	BASIC
Residential	Carlyle Acorn	BASIC
Great Streets Preferred	Cutoff Acorn	PREMIUM
Great Streets Back-Up	Carlyle Acorn	BASIC

*All Cobra Heads will be replaced with Shoebox LED Lights

Red Lines = Great Streets: Cutoff Acorns (Premium Lighting)

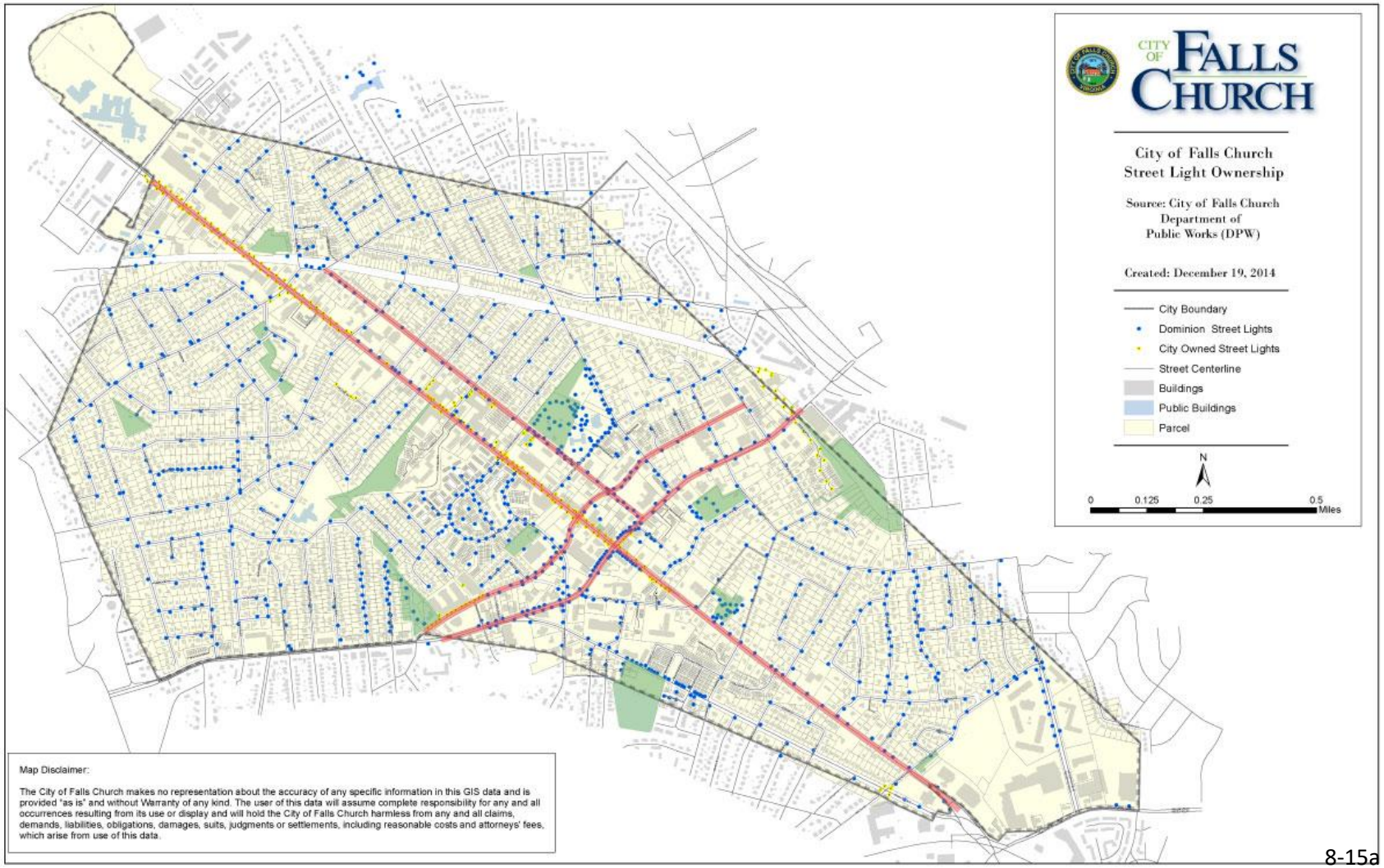
Green Shapes = Parks: Basic Acorn

All of Blue Dots = Residential Lighting

Basic Acorn

Carlyle Acorn

Cutoff Acorn

Shoebox

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