

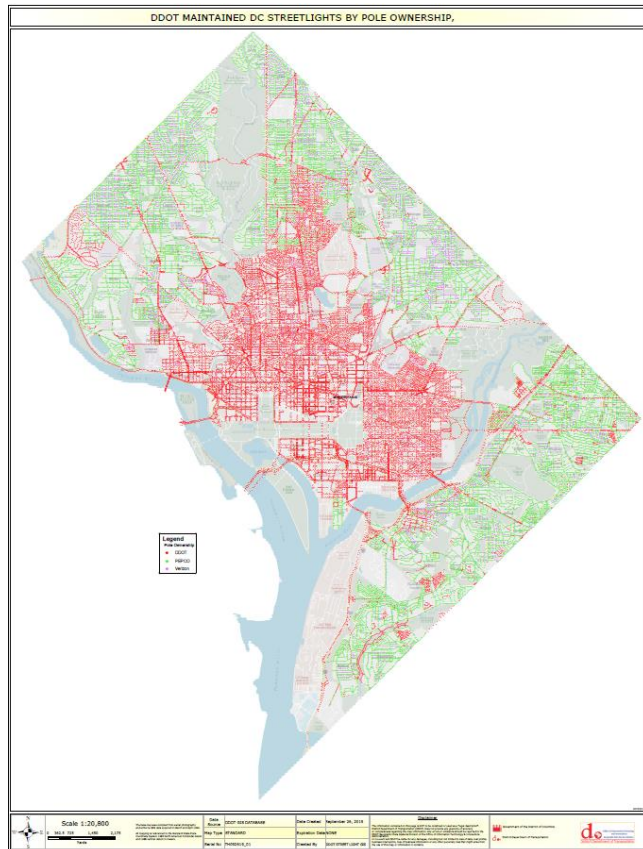


DC Smart Lighting Project

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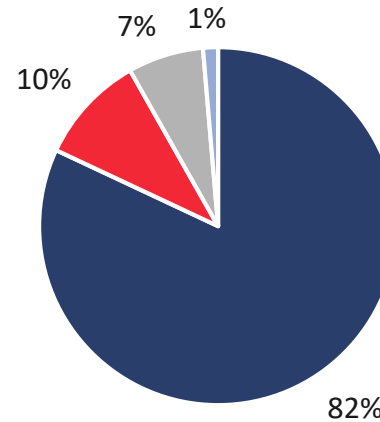
NEPA/Section 106 Presentation

Streetlight Network



DDOT owns fixtures attached to poles owned by DC (red), Verizon (purple) and PEPCO (green)

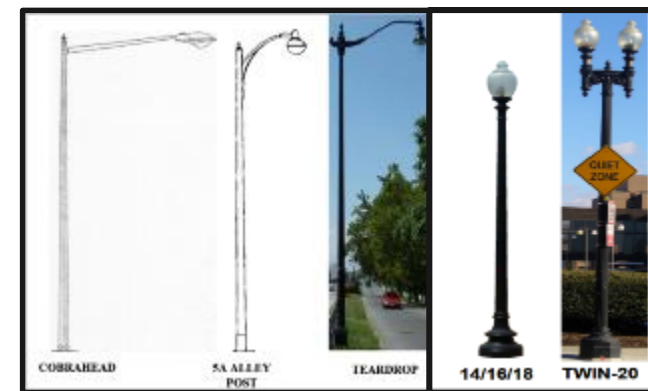
Lighting Technology



**10 percent of
lights are
currently LED**

■ High Pressure Sodium ■ LED ■ Incandescent ■ Other

Over 50 different combinations of poles, arms, and fixtures



What are Public-Private Partnerships (P3)?



Definition:

- Long-term, performance-based contract
- Risk transferred to party best able to manage
- Developer Designs, Builds, Finances, and Maintains public asset (DBFM)

Benefits of P3s:

- Incentivizes Innovation
- Life-Cycle Management
- Transfers Risk
- Performance/Outcome-Based



Examples:

- Virginia 495 Beltway Express Lanes
- Long Beach Courthouse
- Maryland Purple Line
- LaGuardia Airport

P3 Benefits

Leverage Private Financing

- 1-2-year conversion process, compared to 8-12 under current funding plan

Risk Transfer

- If lights don't work, we don't pay

Performance-Based

- Strict requirements for availability of lights and speed of repair

Project Scope

LED Conversion

- Convert all 75,000 lights to more reliable and energy-saving LED

Remote Monitoring and Control System

- Faster repair and customization by location

Maintenance

- Performance-based requirements and risk transfer

Smart City Technology

- Expanded public Wi-Fi which also helps enable future smart city technologies

Project Benefits

Public & Traffic Safety

- More consistent and reliable light
- Remote control system for incident response

Environmental

- Eliminate 32,000 tons of greenhouse gas per year (32 million pounds of coal not burned)
- Shielding and dimming reduce light pollution

Economic

- 40% to 50% reduction in energy costs (\$3 to \$4M annually)
- Lights last 3-4x longer and need fewer repairs

Neighborhood

- Dimming schedules attuned to needs of each neighborhood
- Instant notification of outages, providing equity of service

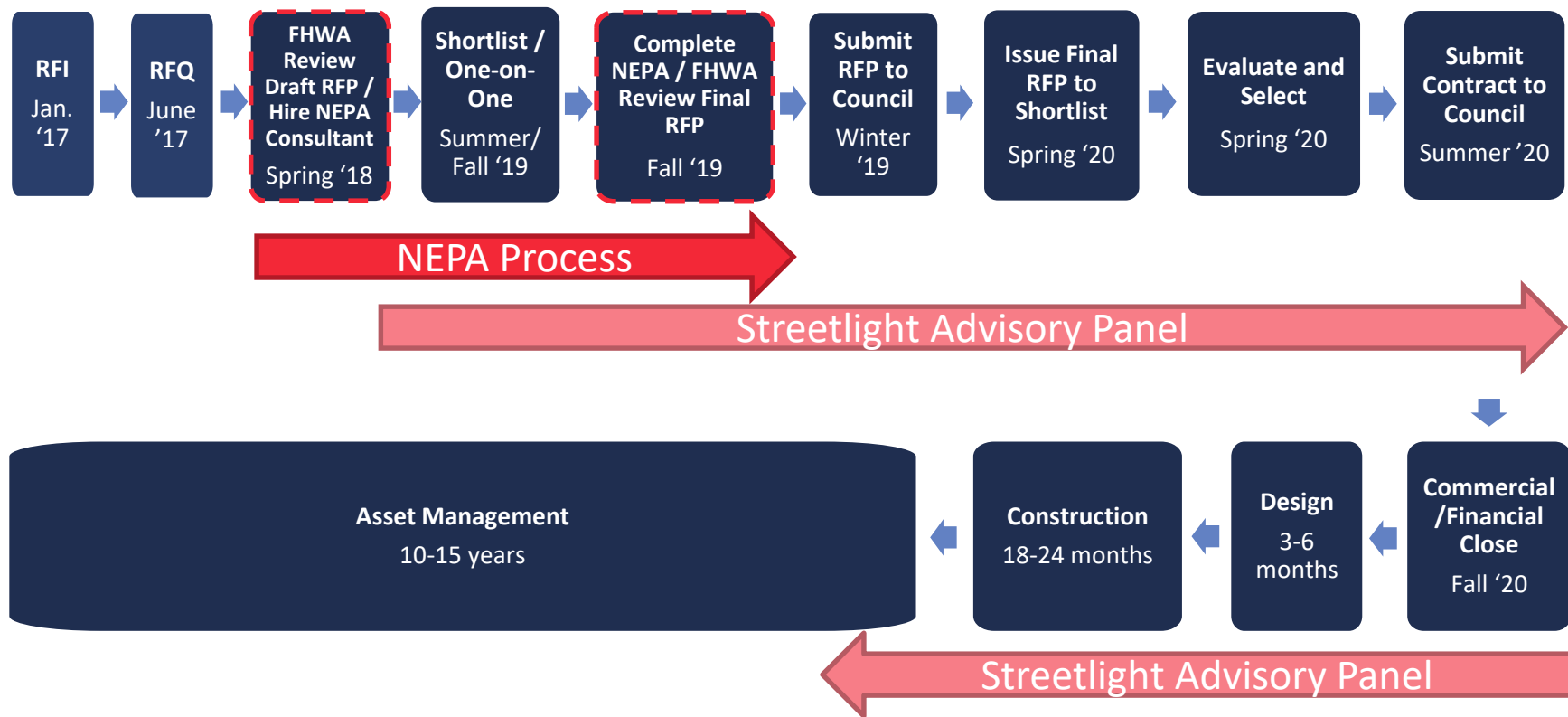
Smart City

- Expansion of free public Wi-Fi
- Platform for other apps (e.g., traffic and air sensors)

P3 Risk Transfer

- 1-2 year install, compared to 8-12 currently
- Strict performance requirements

Project Timeline



National Historic Preservation Act

National Historic Preservation Act (NHPA)

- Section 106 of the NHPA and its implementing regulations (36 CFR Part 800) require federal agencies—or those acting on their behalf—to consider the effects of their actions (“undertakings”) on historic properties.
- Historic properties are any buildings, structures, objects, sites (including archaeological sites), and districts listing in or eligible for listing in the National Register of Historic Places.

Section 106

- Consultation is the process of seeking, discussing, and considering the views of the stakeholders who are invited to participated in the process.
- Stakeholders, or Consulting Parties, include the State Historic Preservation Office, the Advisory Council on Historic Preservation, local elected representatives, other Interested parties, and the public.
- The purpose of consultation is to identify historic properties, assess adverse effect, and resolve those adverse effects through avoidance, minimization, and/or mitigation strategies.

Section 106 Process and Consulting Parties

Consulting Parties are:

- DC State Historic Preservation Office (SHPO)
- Advisory Council on Historic Preservation
- Local government representatives
- Neighborhood organizations
- Other individuals/organizations with interest in the project or who have concerns about the project's effects on historic resources

Roles of Consulting Parties:

- Discuss views about the project and preferred alternative
- Help consider the options and solutions to avoid, minimize, or mitigate adverse effects to historic properties
- Discuss potential mitigation measures

Step 1: Initiate the Process

Step 2: Identify
Historic
Properties

Step 3:
Determine Effects
to Historic
Properties

Step 4: Resolve
Adverse Effects

Proposed LED Technical Specifications

- Color temperature will be no more than 3,000 Kelvin (warm white)
- Most lights will be 2,700 K (extra warm white)
- Wattages will range from 215 to 80 watts depending on road classification, land use, and pole style
- Alleys will be lit with 75 W fixtures
- All fixtures will be equipped with remote monitoring and control and dimming capabilities
- Dimming will allow fixtures to reach any level in between the maximum wattage and fifty percent reduction

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district department of transportation

