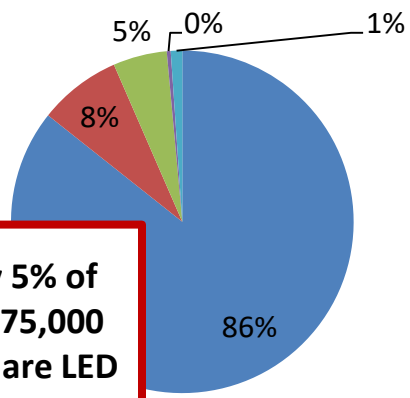
WE ARE WASHINGTON
GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

Safer. Smarter. Greener.

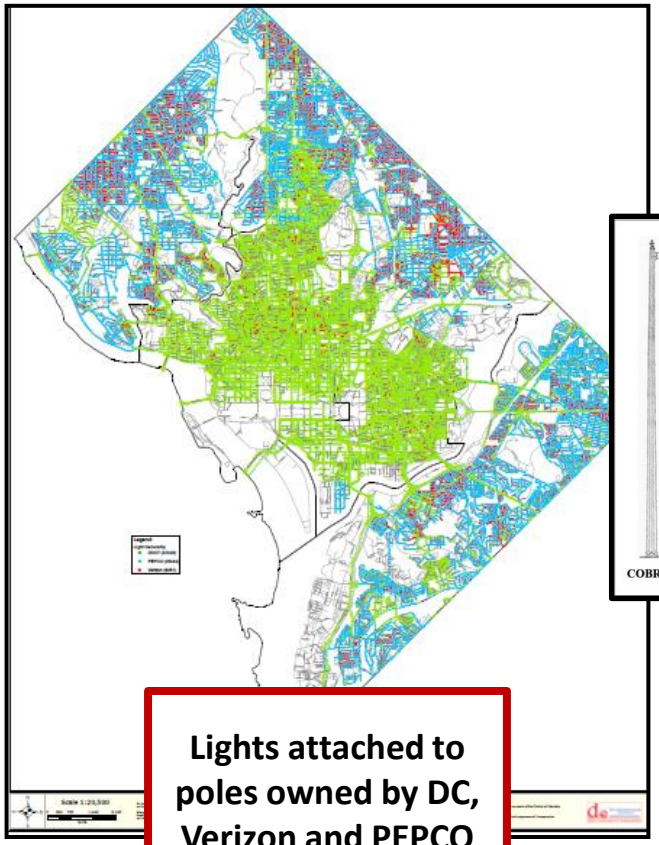
Smart Lighting Project Public Meeting

Background: Streetlights, By the Numbers

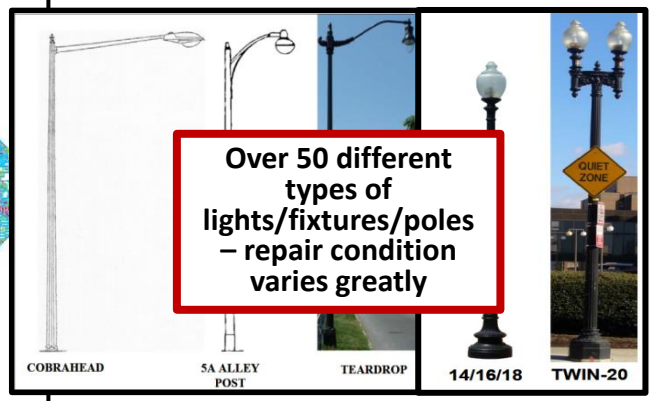


Only 5% of DC's 75,000 lights are LED

- High Pressure Sodium (HPS) - 61359
- incandescent - 5583
- Light-Emitting Diode (LED) - 3639
- Metal Halide (MH) - 267
- Mercury Vapor (MV) - 775



Lights attached to poles owned by DC, Verizon and PEPCO



Over 50 different types of lights/fixtures/poles – repair condition varies greatly

What are public-private partnerships (P3s)?

Definition:

- Long-term, performance-based contract
- Risk transferred to party best able to manage
- Contractor **D**esigns, **B**uilds, **F**inances, and **M**aintains public facility (DBFM)

Benefits of P3s:

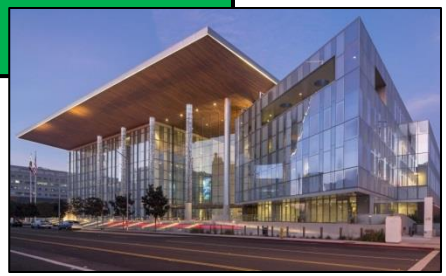
- Incentivizes Innovation
- Life-Cycle Management
- Transfers Risk
- Performance/Outcome-Based
- Debt Capacity

Examples:

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

What a P3 is NOT:

- Not – Free money
- Not – Privatization or Outsourcing
- Not – Philanthropy



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 (99% availability, repairs in 24 hours or less)

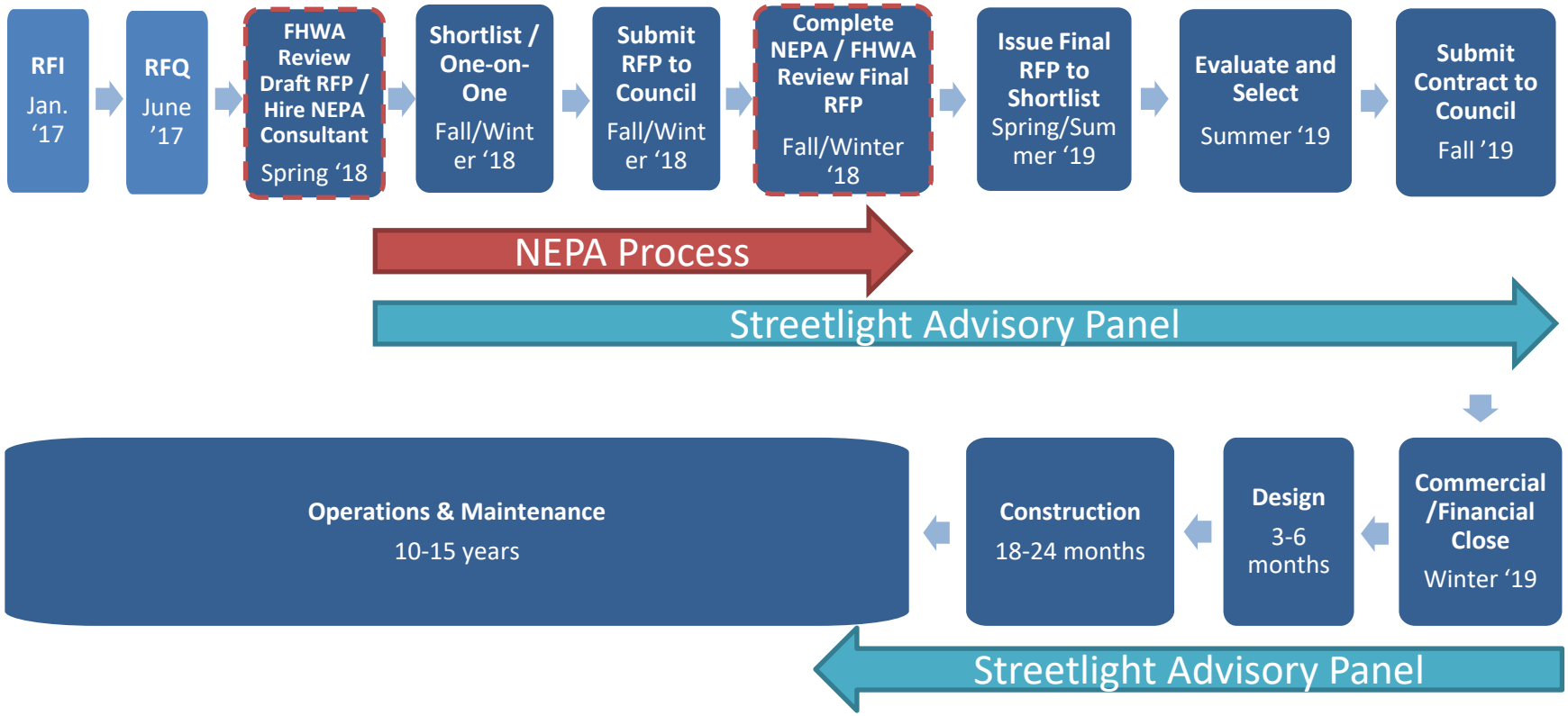
Project Scope

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

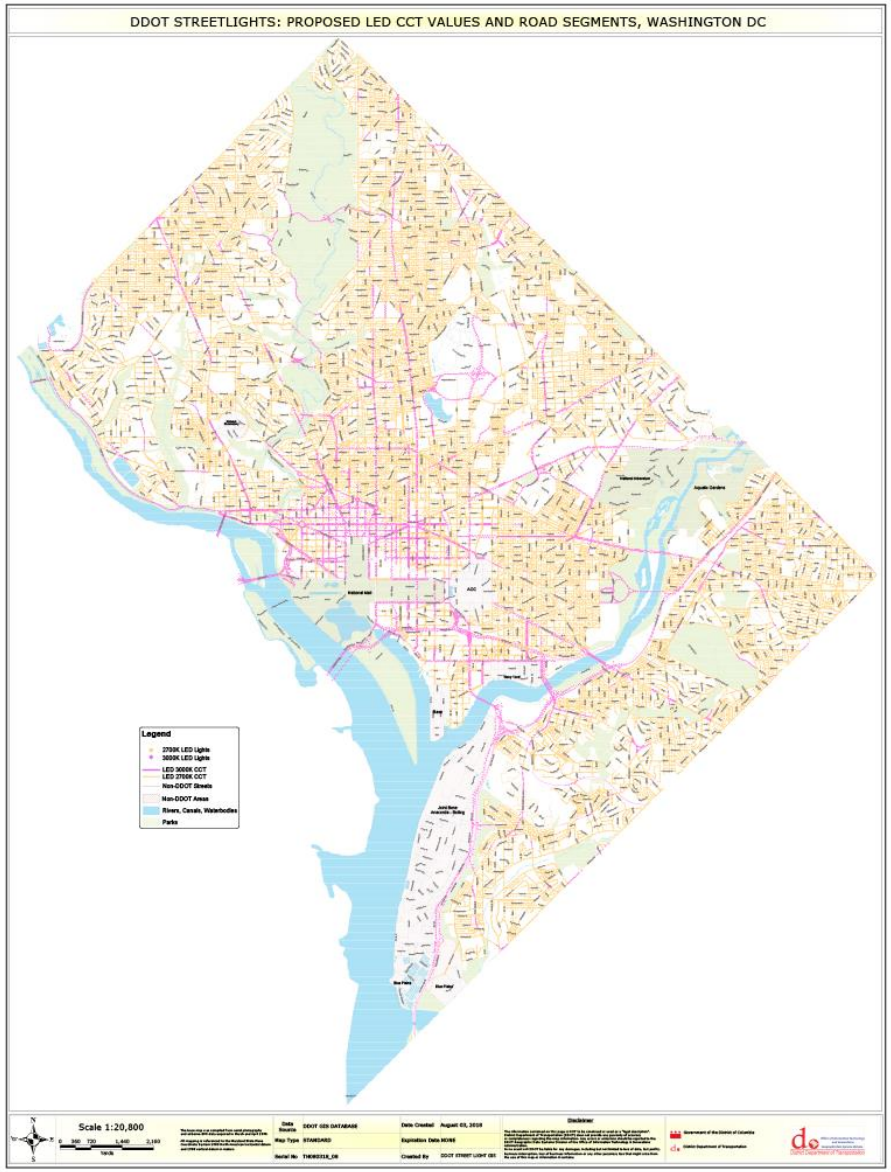
Project Benefits

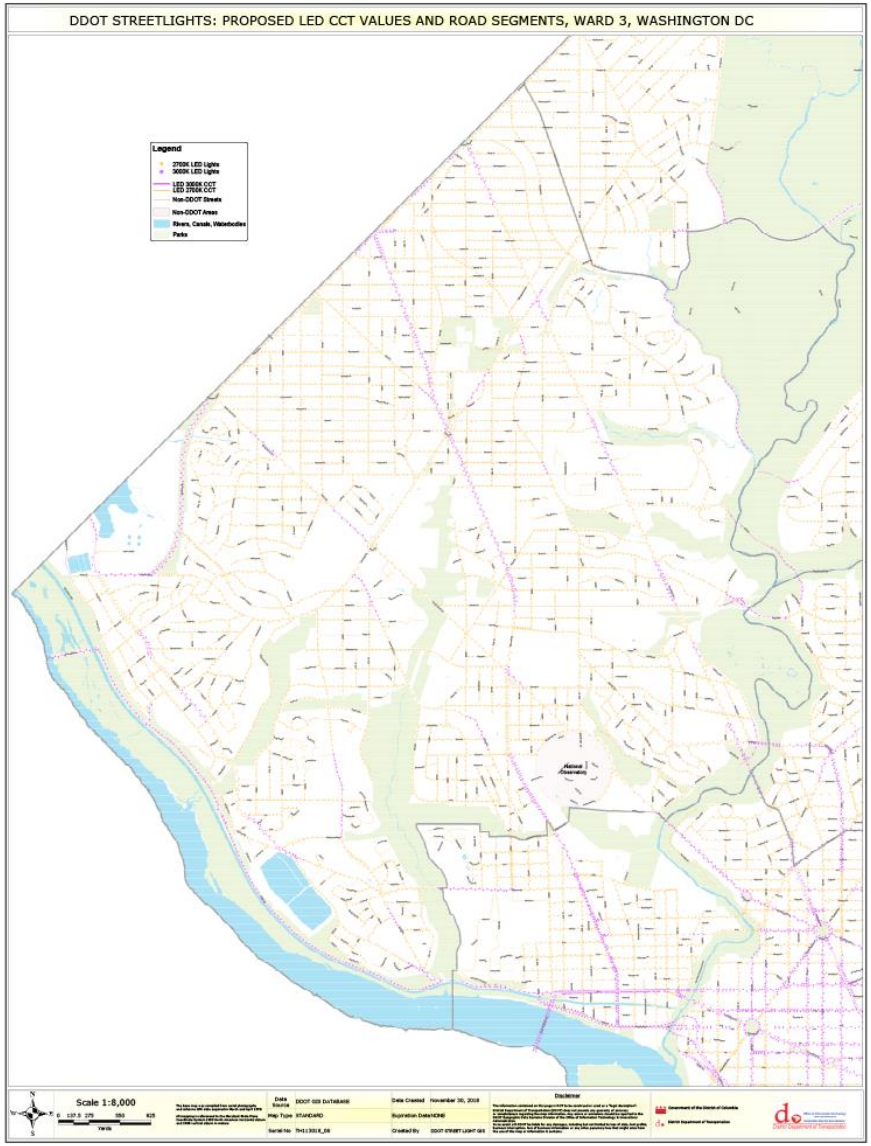
Public & Traffic Safety	• More consistent and reliable light • Remote control system for incident response
Environmental	• Eliminate 30 tons of greenhouse gas per year (33 million pounds of coal not burned) • Shielding and dimming reduce light pollution
Economic	• 40% to 50% reduction in energy costs ($3 to $4M annually) • Lights last 3-4x longer and need fewer repairs
Neighborhood	• Remote monitoring and control system for comprehensive lighting design attuned to needs of each neighborhood • Faster repair and customization by location
Smart City	• Expansion of Free Broadband 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 (99% avail.)

Project Timeline

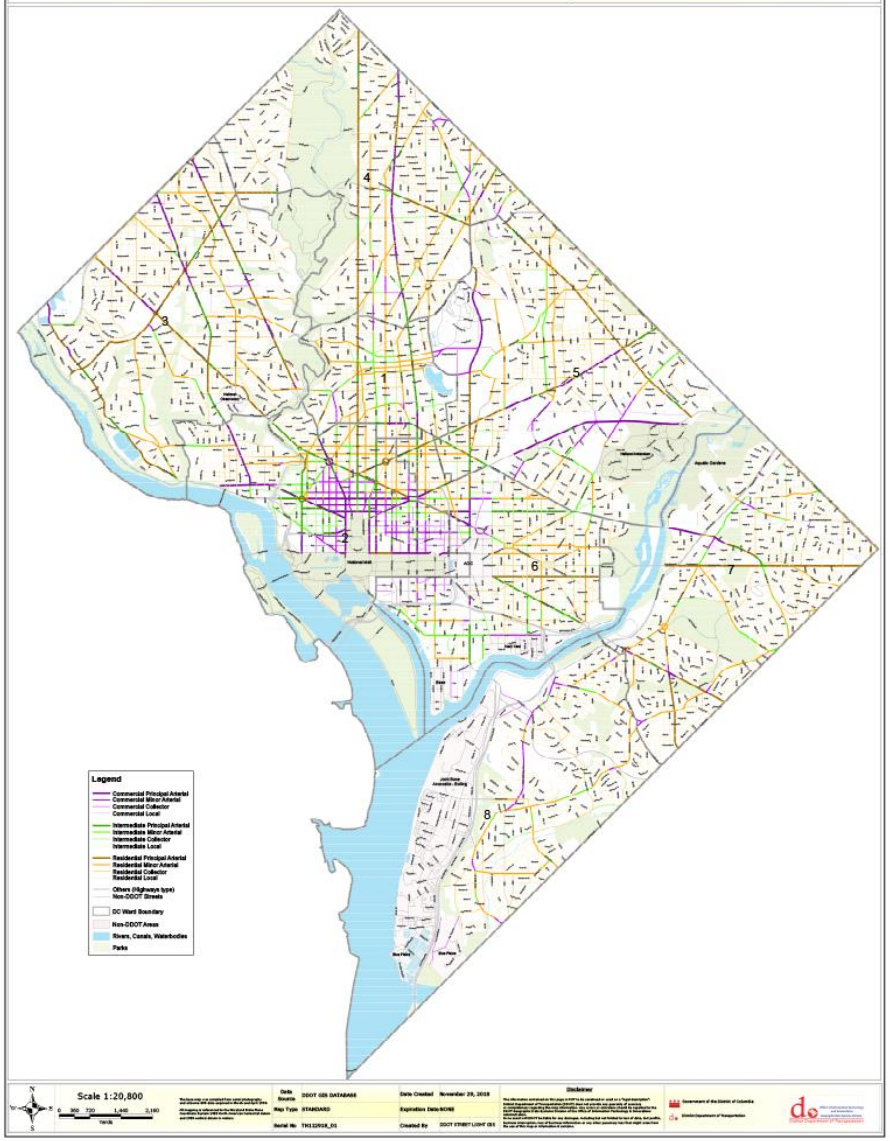


DC Smart Lighting Project – Public Meeting

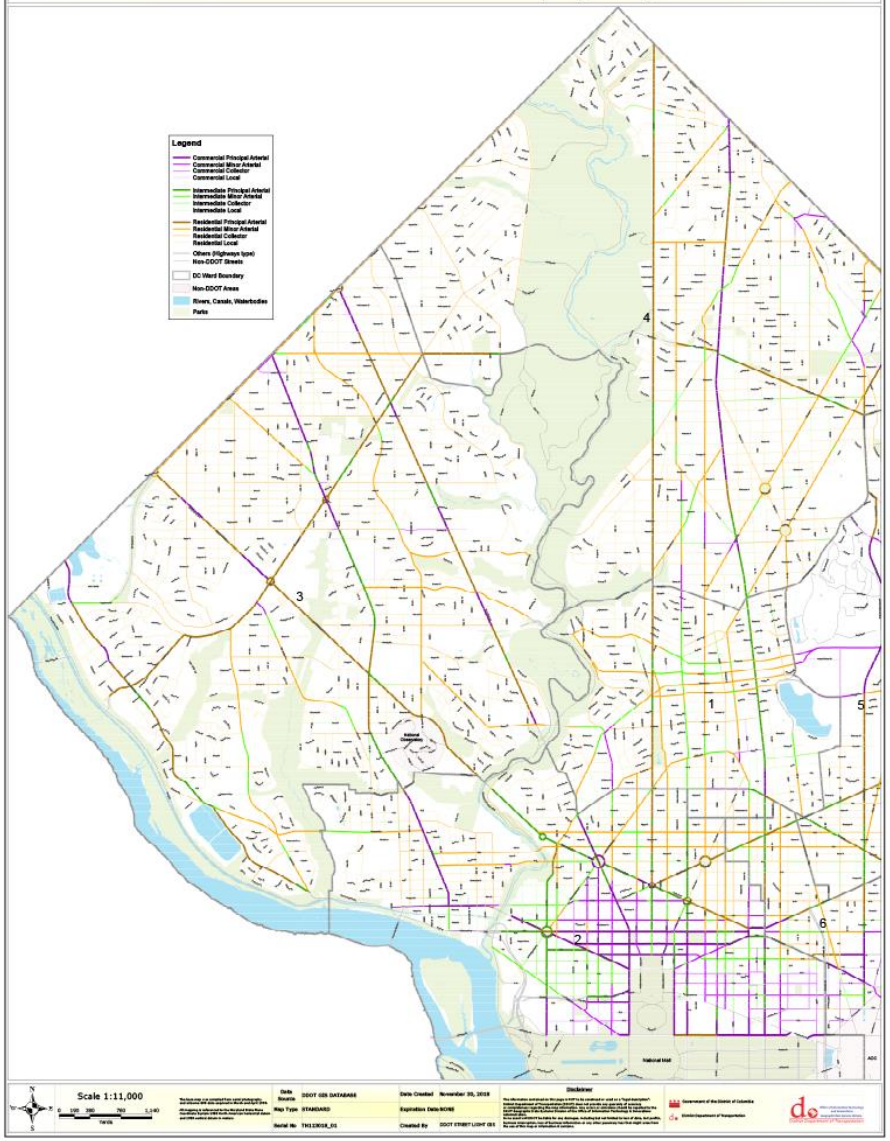




ROAD SEGMENT BY LANDUSE TYPE AND ROAD FUNCTIONAL CLASS, WASHINGTON DC



ROAD SEGMENT BY LANDUSE TYPE AND ROAD FUNCTIONAL CLASS, NW QUADRANT, WASHINGTON DC



LED Color Temperature & Wattage Regulations Chart

Application		COBRAHEAD		TEARDROP		POSTTOP	
		Color Temp.	Wattage	Color Temp.	Wattage	Color Temp.	Wattage
Interstate & Other Freeways	Commercial (Class A)	3000K	215W	3000K	215W	3000K	180W
	Intermediate (Class B)	3000K	215W	3000K	215W	3000K	180W
	Residential (Expressway)	3000K	215W	3000K	215W	3000K	120W
Other Principal Arterials (Major)	Commercial (HIGH)	3000K	215W	3000K	215W	3000K	180W
	Intermediate (MEDIUM)	3000K	215W	3000K	215W	3000K	180W
	Residential (LOW)	2700K	110W	2700K	110W	2700K	120W
Minor Arterials (Major)	Commercial (HIGH)	3000K	215W	3000K	215W	3000K	180W
	Intermediate (MEDIUM)	3000K	215W	3000K	215W	3000K	180W
	Residential (LOW)	2700K	110W	2700K	110W	2700K	120W
Collectors	Commercial (HIGH)	2700K	215W	2700K	215W	2700K	180W
	Intermediate (MEDIUM)	2700K	110W	2700K	110W	2700K	120W
	Residential (LOW)	2700K	110W	2700K	110W	2700K	120W
Local	Commercial (HIGH)	2700K	110W	2700K	110W	2700K	120W
	Intermediate (MEDIUM)	2700K	110W	2700K	110W	2700K	120W
	Residential (LOW)	2700K	110W	2700K	110W	2700K	80W
Alley	Commercial (HIGH)	2700K	75	N/A	N/A	N/A	N/A
	Intermediate (MEDIUM)	2700K	75	N/A	N/A	N/A	N/A
	Residential (LOW)	2700K	75	N/A	N/A	N/A	N/A

Let us know what you think!

Fill out a comment card before your leave, or…

By Email: StreetlightP3@dc.gov

By Phone: (202) 790-6846

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