



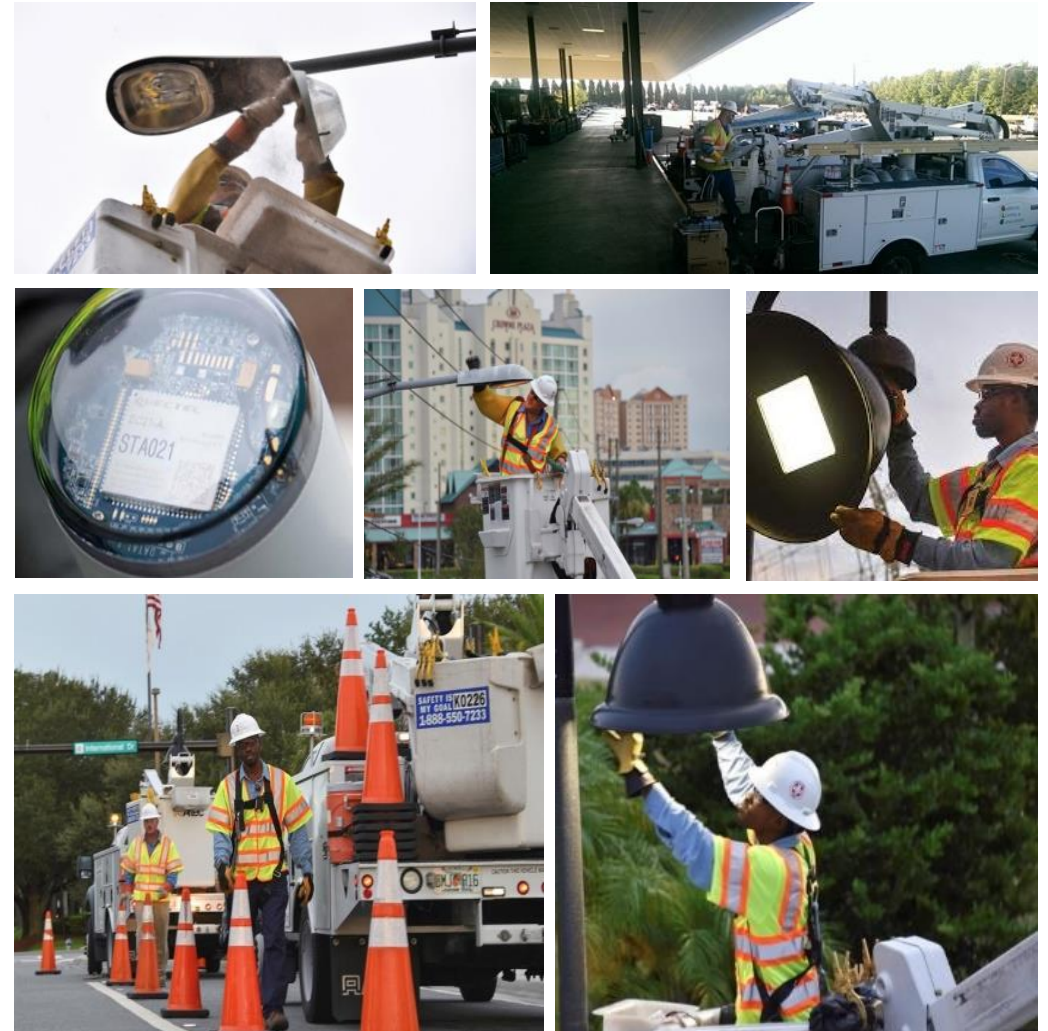
Agenda

City of Hollywood Streetlighting CWO1 and Audit Work Order 2

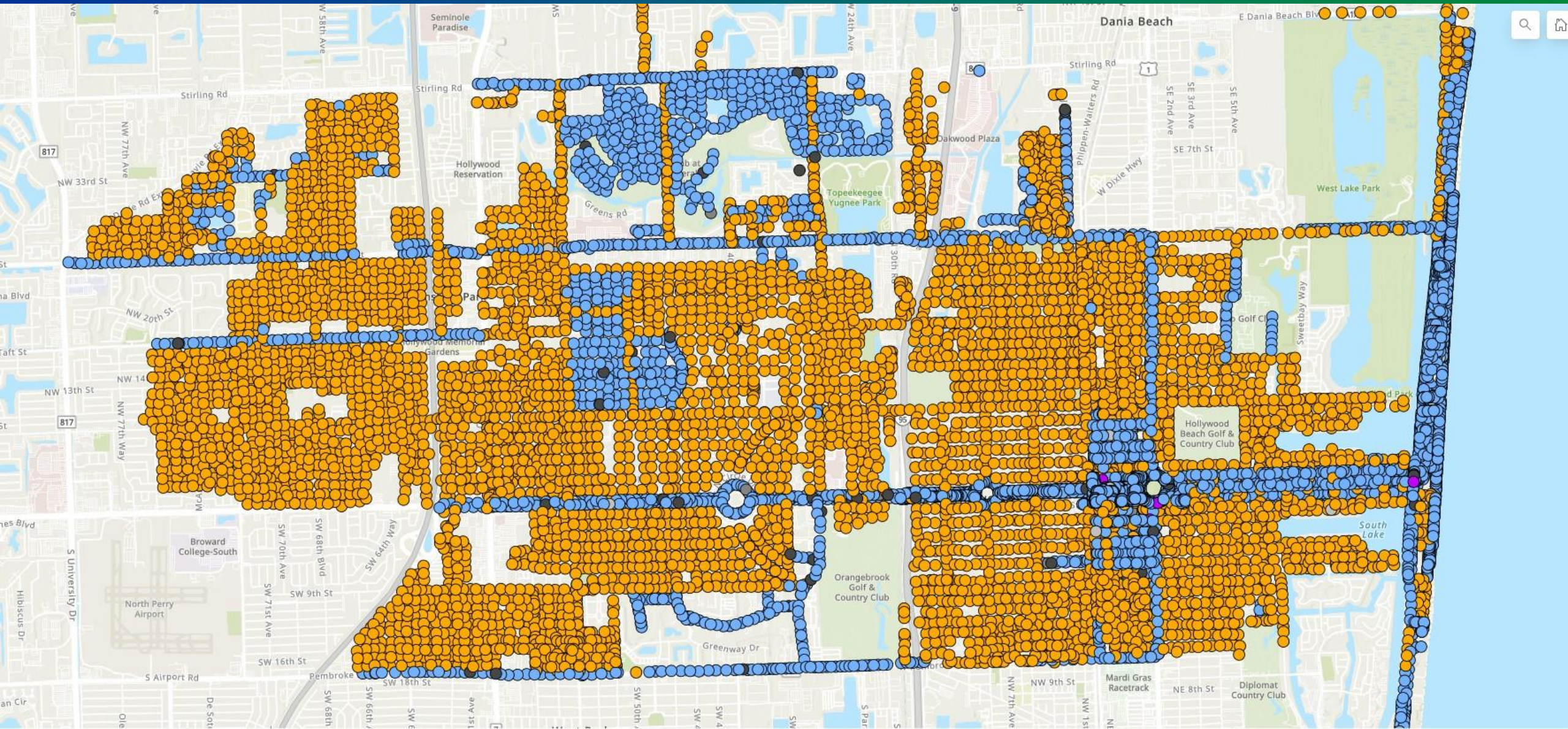
- **Project Objectives**
- **Photometrics**
- **Project Cost**
- **Implementation Schedule**
- **Next Steps**

Streetlight LED Conversion Objectives

- Have Significant Improvement in lighting quality and illumination levels of City Owned Lights
 - Improves average light levels
 - Increases safety and security
 - Clean clear white light vs dull yellow orange light of High Pressure Sodium
 - Reduces light degradation over time
- Reduce constituent complaints
- Reduce maintenance, burnout and cost of ownership
 - LED rated life is 4 time greater than non-LED (100,000 hours or over 20 years)
 - 10-year equipment warranty vs 2 year for non-LED
 - Cloud based Streetlight management and work order notification system
- Reduce monthly energy costs
- Reference Florida GreenBook Standards for Illumination



CITY OWNED (IN BLUE) VS FPL OWNED FIXTURES (IN ORANGE)



Photometrics (Existing)

- Existing HID Barn fixture



Photometrics (Demo Installed)

- **Demonstration Project**



Photometrics (Summary)



	Avg	Max	Min
Before	1.46	3.4	0.2
After	1.72	4.8	0.3
% Improvement	18%	41%	50%



Before	0.14	0.6	0
After	0.49	1.7	0
% Improvement	250%	183%	0



Before	0.1	0.6	0
After	0.39	2	0
% Improvement	290%	233%	0



Before	1.39EB / 1.46WB	2.3	0.4
After	1.59EB / 1.68WB	3.3	0.4
% Improvement	15%	44%	0



Older Light Fixtures



New Demo Light Fixtures

Cost Comparison to FPL

FPL Bill Code	Quantity	FPL on-bill pricing				NORESKO Pricing			
		LED fixture fee	monthly	yearly	20-year total	NORESKO Price	Total 20-year cost w/ finance	Life-cycle Savings	Extended Savings
F2	98	\$ 5.50	\$ 5.50	\$ 66	\$ 1,320	\$ 678	\$ 987	\$ 333	\$ 32,670
I2	341	\$ 5.90	\$ 5.90	\$ 71	\$ 1,416	\$ 743	\$ 1,081	\$ 335	\$ 114,302
L3	454	\$ 10.50	\$ 10.50	\$ 126	\$ 2,520	\$ 1,335	\$ 1,942	\$ 578	\$ 262,512
C2	548	\$ 4.90	\$ 4.90	\$ 59	\$ 1,176	\$ 540	\$ 785	\$ 391	\$ 214,358
D2	7	\$ 5.10	\$ 5.10	\$ 61	\$ 1,224	\$ 540	\$ 785	\$ 439	\$ 3,074
J9	88	\$ 27.90	\$ 27.90	\$ 335	\$ 6,696	\$ 1,964	\$ 2,857	\$ 3,839	\$ 337,870
J9	52	\$ 27.90	\$ 27.90	\$ 335	\$ 6,696	\$ 2,464	\$ 3,583	\$ 3,113	\$ 161,875
J9	16	\$ 27.90	\$ 27.90	\$ 335	\$ 6,696	\$ 2,297	\$ 3,341	\$ 3,355	\$ 53,682
J9	62	\$ 27.90	\$ 27.90	\$ 335	\$ 6,696	\$ 2,658	\$ 3,866	\$ 2,830	\$ 175,490
J9	223	\$ 27.90	\$ 27.90	\$ 335	\$ 6,696	\$ 2,390	\$ 3,475	\$ 3,221	\$ 718,197
C5	88	\$ 13.90	\$ 13.90	\$ 167	\$ 3,336	\$ 1,483	\$ 2,157	\$ 1,179	\$ 103,750
C5	38	\$ 13.90	\$ 13.90	\$ 167	\$ 3,336	\$ 1,363	\$ 1,982	\$ 1,354	\$ 51,446
C5	15	\$ 13.90	\$ 13.90	\$ 167	\$ 3,336	\$ 1,483	\$ 2,157	\$ 1,179	\$ 17,685
C5	17	\$ 13.90	\$ 13.90	\$ 167	\$ 3,336	\$ 1,483	\$ 2,157	\$ 1,179	\$ 20,043
E5	520	\$ 14.10	\$ 14.10	\$ 169	\$ 3,384	\$ 1,344	\$ 1,955	\$ 1,429	\$ 742,954
E5	6	\$ 14.10	\$ 14.10	\$ 169	\$ 3,384	\$ 1,344	\$ 1,955	\$ 1,429	\$ 8,573
G3	32	\$ 8.70	\$ 8.70	\$ 104	\$ 2,088	\$ 1,418	\$ 2,063	\$ 25	\$ 805
V4	42	\$ 14.50	\$ 14.50	\$ 174	\$ 3,480	\$ 1,881	\$ 2,735	\$ 745	\$ 31,269
V4	22	\$ 14.50	\$ 14.50	\$ 174	\$ 3,480	\$ 2,260	\$ 3,287	\$ 193	\$ 4,245
C5	279	\$ 13.90	\$ 13.90	\$ 167	\$ 3,336	\$ 1,474	\$ 2,144	\$ 1,192	\$ 332,690
C5	260	\$ 13.90	\$ 13.90	\$ 167	\$ 3,336	\$ 1,400	\$ 2,036	\$ 1,300	\$ 338,013
D10	499	\$ 29.10	\$ 29.10	\$ 349	\$ 6,984	\$ 2,149	\$ 3,126	\$ 3,858	\$ 1,925,329
D3	26	\$ 8.10	\$ 8.10	\$ 97	\$ 1,944	\$ 817	\$ 1,188	\$ 756	\$ 19,645
	3733								\$ 5,670,476

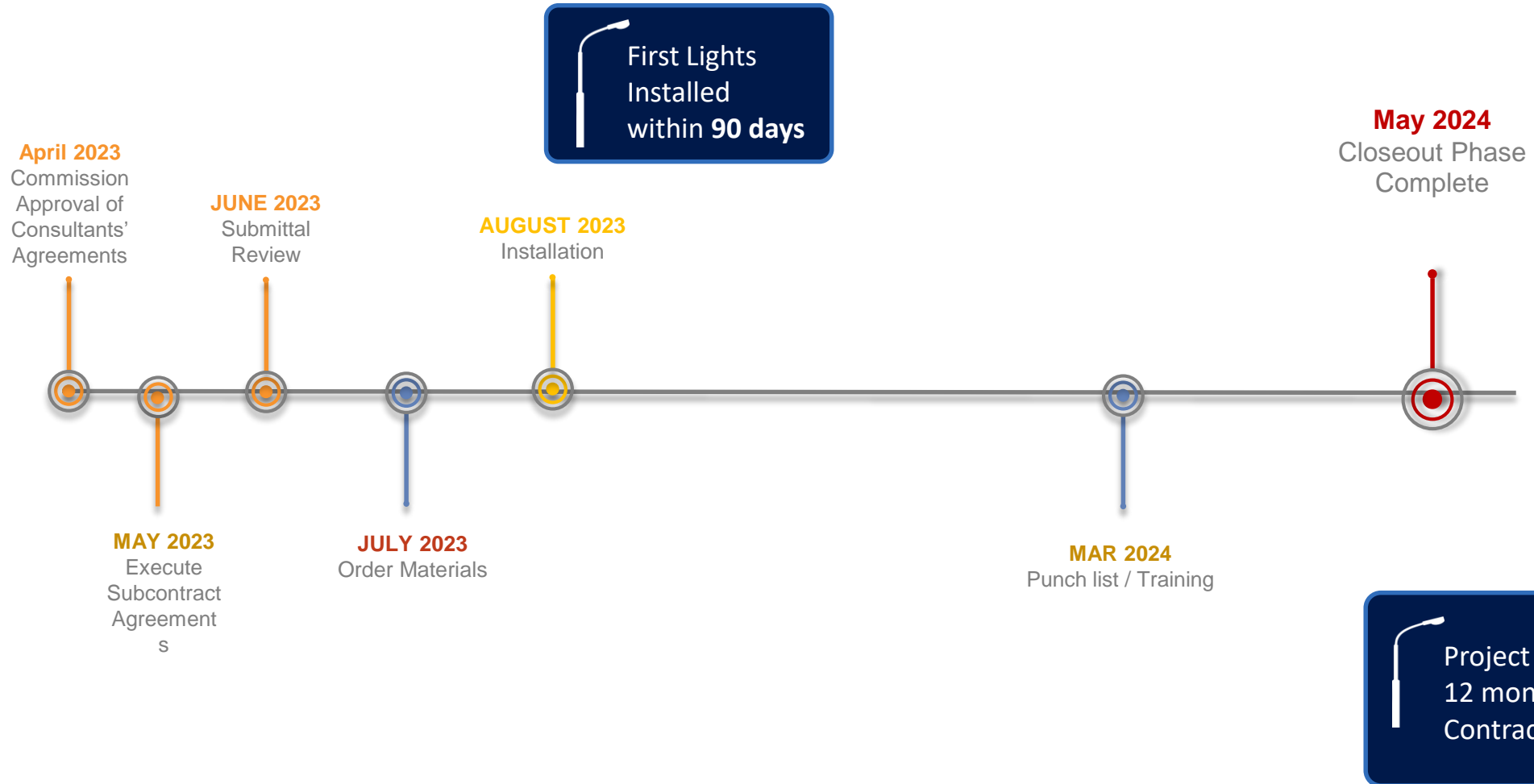
NORESKO costing including finance avg 43% below FPL on-bill

Total 20-Year Extended Savings

\$5,670,476

FPL costs adjust higher over time. NORESKO cost is fixed.

Speed to Market



City (Non CRA) LED conversion, Ubicquia controls

• Work Scope

- 2,438 LED upgrades less CRA fixtures
- 1,529 Streetlights
- 409 Acorn Fixtures
- 137 Beach Bell Fixtures
- 353 Teardrop fixtures
- Ubicquia UbiCell and UbiVu management system for all upgraded streetlights
- Energy and Operational Savings are **guaranteed** for term

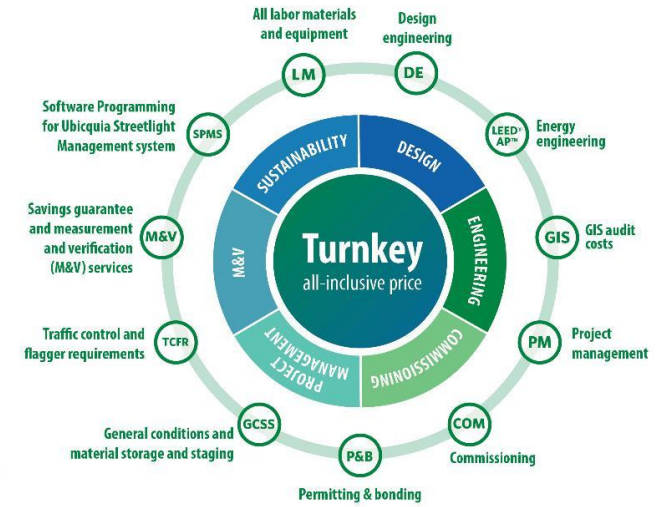
Project with Ubicquia Controls

Total Implementation Cost	\$4,570,000
Project Energy Savings (year 1)	\$111,834
Project O&M Savings (year 1)	\$39,847
Total Savings Over Term	\$4,178,355
Capital Contribution	\$2,000,000
Project Term	20 years
Customer Repair Allowance	\$50,000

NORESKO PROGRAM



NORESKO COMPREHENSIVE PROGRAM



Next Steps

- Construction Work Order Approval and Audit Work Order 2 (5/17/23)
- Execution of Contract and Implementation
- Begin Audit of Work Order 2
- Assess new lighting system for post implementation deficiencies to be addressed through strategic deployment of new poles or solar poles
- Assess opportunities for additional funding through Audit Work Order 2

