



July 2014-June 2020 Street Light Special Assessment

Specifications, Plans, and Cost Estimates

Prepared for the Dayton City Commission

May 28, 2014

Introduction

On May 28, 2014, the Dayton City Commission heard the first reading of Resolution No. 6039-14 declaring the need to provide a street lighting improvement and to assess specially benefited properties for the cost of the improvement. The second reading and possible adoption of the Resolution will take place on June 4, 2014.

The street light system costs are being assessed to all property owners in the City of Dayton benefiting from the street light system. By applying the costs to all property owners including residential, commercial, industrial and property tax-exempt properties, the City is able to ensure a low assessment rate. You can find details of the proposed assessment and the apportioned cost for each key parcel attached to this document and on the City's website at www.daytonohio.gov/streetlights.

Safe, Green and Efficient Street Lighting

The purpose of the proposed assessment is to provide a standardized public street lighting system citywide that will promote safety and security in our neighborhoods, business districts and across the city's hundreds of miles of roadways. The street light system is comprised of over 19,700 lights situated throughout the city. Miami Valley Lighting (a division of the Dayton Power & Light Company) owns and maintains approximately 14,400 lights and the City owns and maintains approximately 5,300. The plan includes upgrades of the existing City-owned poles from high pressure sodium fixtures to energy-efficient light emitting diode (LED) technology. LED lights consume less energy than their high pressure sodium counterparts and have more than double the useful life. Conversion to LED lights is also good for the environment by reducing the City's carbon footprint.

The services covered by the special assessment are the maintenance, energy, capital and administrative costs of the City's street light system, which is about \$3.0 million annually. The cost of intersections, major highways and 2 percent of total assessment will be deducted before the assessments are apportioned to property owners based on assessed values. The assessment will cover a six-year period beginning on July 1, 2014 and ending on June 30, 2020. A six-year assessment period allows the fixed costs associated with the assessment to be spread over a longer term, which reduces the annual rate.

The following describes the Plans, Specifications and Cost Estimates for the proposed improvements.

Street Lighting Improvement Plan

The City of Dayton will provide services related to the standardization, upgrade, installation, and maintenance of street lighting and associated systems in public rights-of-way over the six-year benefit period. The areas of service consist of two districts, designated as District A and District B. District A is comprised of the Central Business District. District B consists of the area within the City of Dayton’s corporation’s limits, excepting Area A, and specific areas which are either without present City or Miami Valley Lighting, or have special arrangements for lighting directly with power companies. Descriptions of these areas are specifically listed in the attached 2014 Street Lighting Assessment Lighting Standards Exhibits. Lighting will be installed and maintained to the following general standards:

AREA A

- Maximum Pole Spacing: 100 Feet
- Minimum Light Output at initial installation for mounting heights less than 25': 3,200 Lumens per Pole
- Minimum Light Output at initial installation for mounting heights greater than 25': 15,000 Lumens per Pole

AREA B

- Maximum Pole Spacing: 200 Feet
- Minimum Light Output at initial installation for mounting heights less than 25': 3,200 Lumens per Pole
- Minimum Light Output at initial installation for mounting heights greater than 25': 9,500 Lumens per Pole

Standardization will consist of installing new poles, luminaires, and related hardware and wiring as appropriate at locations that presently have little or no lighting. Upgrades will consist of replacing City owned street lights with LED luminaires in assessed areas. Upgrades will also be completed by Miami Valley Lighting. Maintenance will include regular inspection of current street lighting, and the repair and replacement of poles, luminaires and related systems as necessary.

Street Lighting Inventory

The inventory for street lights and related systems is housed in graphic features and database components of the City's ARCGIS mapping geographic information system through secured information technology infrastructure, and also in documents stored at the City's Department of Public Works. Inventory includes locations of existing lighting, styles of poles, and qualities of luminaires.

As part of the assessment the inventory will be updated and enhanced with GPS data collection techniques. As part of the enhancement a web-based map with pole location identification will be available online for property owners to review the current pole inventory and to identify individual poles to report outages or other maintenance concerns.

Cost Estimates for the Proposed Street Lighting Improvement

Assessment costs are outlined in the attached Proposed Street Light Special Assessment Cost Estimates (Exhibit B) and are on file in the City of Dayton Commission Office.

EXHIBIT A: JULY 2014-JUNE 2020 STREET LIGHT SPECIAL ASSESSMENT

LIGHTING AREA DESCRIPTION

DISTRICT A: CENTRAL BUSINESS DISTRICT

DISTRICT A

The area bounded by the following:

Beginning at the Great Miami River at West Third Street;

Hence heading upstream along the Great Miami River to the Patterson-Riverside Bridge over the Great Miami River;

Hence heading southward along North Patterson Boulevard to the north line of property owned by CSX Railroad;

Hence heading westward along the north line of property owned by CSX Railroad to the Great Miami River;

Hence heading upstream along the Great Miami River to the point of beginning.

EXHIBIT A: JULY 2014-JUNE 2020 STREET LIGHT SPECIAL ASSESSMENT

LIGHTING AREA DESCRIPTION

DISTRICT B: CITY OF DAYTON CORPORATION LIMITS, EXCEPTING

1. **DISTRICT A**
2. **EXEMPTED AREAS IN THE FOREST RIDGE/QUAIL HOLLOW NEIGHBORHOOD**
3. **HOOK ESTATE**
4. **THE OREGON HISTORIC DISTRICT**
5. **COOPER PLACE**
6. **JAMES M. COX DAYTON INTERNATIONAL AIRPORT**

DISTRICT B

The area bounded by the City of Dayton Corporation Limits, **excepting** the following areas:

1. District A (Central Business District)
2. The following plats in the Forest Ridge/Quail Hollow neighborhood:
 - a) Forest Ridge Four, Sections 8 & 9
 - b) Forest Ridge Five, Sections 1, 2, 3, 4, & 5
 - c) Villages of Forest Ridge, Sections 1, 2, 3, 4, 5, & 6
 - d) Glendora Commons

Properties fronting both sides of the streets excepting as noted:

- a. Amberwood Drive from Silver Oak Street to Kitridge Road
- b. Appleridge Court from the West Terminus to Amberwood Drive
- c. Beech Tree Court from Strathaven Drive to the East Terminus
- d. Berrywood Drive from the South Terminus to Strathaven Drive
- e. Blue Spruce Court from Beech Tree Court to the East Terminus
- f. Copper Tree Court from Berrywood Drive to the East Terminus
- g. Cozycroft Drive from the West Corporation Limit to the East Corporation Limit
- h. Forest Ridge Boulevard from Berrywood Drive to the East Corporation Limit
- i. Hazelridge Circle from Berrywood Drive to the North Terminus
- j. Hollywreath Court from Strathaven Drive to the East Terminus
- k. Hunter's Brook Court from Forest Ridge Boulevard to the East Terminus
- l. Kitridge Road, south side, from Lot Number 80424 to Lot Number 80279
- m. Lacoda Court from the South Terminus to Berrywood Drive

- n. Larch Tree Court from Saddleridge Circle to the North Terminus
- o. Leafburrow Drive from Appleridge Court to Strathaven Drive
- p. Ogletree Court from Cozycroft Drive to the North Terminus
- q. Pepper Tree Court from the West Terminus to Forest Ridge Boulevard
- r. Pinecastle Court from the West Corporation Limit to the East Terminus
- s. Quail Bush Drive from Silver Oak Street to the East Corporation Limit
- t. Quisenberry Drive from Cozycroft Drive to the East Corporation Limit
- u. Saddleridge Circle from Berrywood Drive to the East Terminus
- v. Silver Oak Street from the South Corporation Limit to Strathaven Drive
- w. Sourwood Drive from the East Corporation Limit to the North Terminus
- x. Strathaven Drive from the South Corporation Limit to Kitridge Road
- y. Sweetleaf Drive from the South Corporation Limit to Berrywood Drive
- z. Terre Linda Drive from Silver Oak Street to Lot Number 80307
- aa. White Spruce Circle from Berrywood Drive to the East Terminus
- bb. Whitewood Court from the West Terminus to the East Terminus
- cc. Winding Oak Circle from the West Terminus to Berrywood Drive
- dd. Woodcock Way from Amberwood Drive to Lot 80292

3. Hook Estate, properties fronting both sides of street and related ingress/egress utility easements:

- a. Hook Estate Drive from the East Terminus to Philadelphia Drive

4. The Oregon Historic District, properties fronting both sides of all streets except as noted:

- a. Abram Avenue from Cass Street to the South Terminus
- b. Bainbridge Street, north side and west side, from East Fifth Street to Wayne Avenue
- c. Brown Street from East Fifth Street to the South Terminus
- d. Cass Street from Jackson Street to Wayne Avenue
- e. Clay Street from East Fifth Street to Cass Street
- f. East Fifth Street from the CSX Railroad Overpass to Wayne Avenue
- g. East Fifth Street, south side, from Wayne Avenue to Bainbridge Street
- h. East Sixth Street from South Patterson Boulevard to Jackson Street
- i. Gates Street, south side, from Pine Street to Jackson Street
- j. Green Street from South Jefferson Street to Jackson Street
- k. Hess Street from Brown Street to Jackson Street
- l. Hugo Street from Wayne Avenue to Bainbridge Street
- m. Jackson Street, east side, from Gates Street to Wayne Avenue
- n. Jackson Street from Gates Street to the South Terminus
- o. Jones Street from the West Terminus to Wayne Avenue
- p. Pine Street from Gates Street to East Fifth Street
- q. Pine Street, west side, from the North Terminus to Gates Street

- r. South Jefferson Street, east side, from South Patterson Boulevard to U. S. Route 35
- s. South Patterson Boulevard, east side, from CSX Railroad to South Jefferson Street
- t. Tecumseh Street from East Sixth Street to Green Street
- u. Van Buren Street from Jackson Street to Wayne Avenue
- v. Wayne Avenue from East Fifth Street to U. S. Route 35
- w. Wayne Avenue, west side, from Jackson Street to East Fifth Street

5. Cooper Place, properties fronting both sides of streets:

- a. Cooper Place East from the South Terminus to Ice Avenue
- b. Cooper Place West from the South Terminus to Ice Avenue

6. The Corporation Limits of James M. Cox Dayton International Airport.

EXHIBIT B: JULY 2014-JUNE 2020 STREET LIGHT SPECIAL ASSESSMENT

PROPOSED STREET LIGHT ASSESSMENT COST ESTIMATES

Item	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	Average	Total
Estimated Energy and MVL Costs	2,194,127	2,270,921	2,350,404	2,432,668	2,517,811	2,605,935	2,395,311	14,371,866
New Energy Costs from Standardization	-	9,597	19,865	30,840	42,559	55,061	26,320	157,922
Savings from Conversion to LED	-	(23,214)	(48,053)	(74,602)	(102,951)	(133,193)	(63,669)	(382,013)
Less Highways/Expressways	(151,319)	(156,615)	(162,097)	(167,770)	(173,642)	(179,720)	(165,194)	(991,163)
Less Intersections (plus 2%)	(621,120)	(642,860)	(665,360)	(688,647)	(712,750)	(737,696)	(678,072)	(4,068,433)
Estimated Energy Costs after deducts	1,421,687	1,457,829	1,494,759	1,532,488	1,571,027	1,610,387	1,514,696	9,088,178
Direct Expenditures:								
Energy and MVL Costs	1,421,687	1,457,829	1,494,759	1,532,488	1,571,027	1,610,387	1,514,696	9,088,178
Conversion to LED	348,583	348,583	348,583	348,583	348,583	348,583	348,583	2,091,500
Standardization	77,083	77,083	77,083	77,083	77,083	77,083	77,083	462,500
Capital Equipment	87,987	87,987	87,987	87,987	87,987	87,987	87,987	527,923
Inventory	175,000	-	-	-	-	-	29,167	175,000
Maintenance, Supplies & Materials	641,832	664,296	687,546	711,610	736,516	762,295	700,683	4,204,096
Total Estimated Street Lighting Costs	2,752,173	2,635,779	2,695,959	2,757,752	2,821,198	2,886,336	2,758,200	16,549,197
Administrative:								
Postage/Processing & Advertising	150,905	-	-	-	-	-	25,151	150,905
Administrative Costs	111,643	63,800	66,033	68,345	70,737	73,212	75,628	453,770
City Administrative Costs	262,547	63,800	66,033	68,345	70,737	73,212	100,779	604,675
Administrative - County	150,736	134,979	138,100	141,305	144,597	147,977	142,949	857,694
Total Estimated Administrative Costs	413,283	198,779	204,133	209,649	215,333	221,190	243,728	1,462,368
GRAND TOTAL (Estimate)	3,165,457	2,834,558	2,900,092	2,967,402	3,036,531	3,107,526	3,001,928	18,011,566