



City of Minneapolis Street Lighting Policy

Prepared by the Minneapolis Public Works Department
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EXECUTIVE SUMMARY

The Minneapolis Street Lighting Policy (referred to herein as Policy) is written with the intent to provide a framework for how and where the City of Minneapolis will construct, operate and maintain public street lighting. The Policy has several key objectives:

- Maximizing the quality, sustainability, and visibility of the street lighting system.
- Contributing to added comfort and safety for pedestrians, bicyclist, transit users, and motorists.
- Creating a consistent and cohesive lighting system based in place-type characteristics throughout the City of Minneapolis.
- Providing pole and fixture options that are aesthetically pleasing and high quality.
- Providing clear guidance on expected installation methods, procedures and maintenance service levels.
- Creating a system that is cost-efficient, easy to operate, and maintainable.
- Addressing participation and implications for the capital, maintenance, and operational costs.

The Policy is organized into five sections:

Background

This section details some of Minneapolis' street lighting history, describes the main lighting styles currently in use and explains the last several years of street lighting policy decisions.

Section A: Minneapolis Street Lighting Plan

This section defines three different areas for providing street lighting. These include Residential areas, Pedestrian Street Lighting Corridors (PSLCs) and the Central Business District (CBD). These areas were defined using *Access Minneapolis*.

Each area has different lighting requirements due to land use and transportation patterns, and accordingly has different processes for addressing street lighting. This section includes a map depicting the street lighting areas in Minneapolis.

Section B: Street Lighting Standards

Street lighting in Minneapolis must meet performance, material, and equipment requirements to be considered standard street lighting. Performance requirements are based on the Illuminating Engineers Society guidance. The City considers several lighting performance metrics when designing lighting systems. These include lighting levels (foot candles), uniformity (contrast between bright and dark areas) and veiling luminance (glare). Lighting performance measures are different among the various street lighting area types.

Street lighting standards include material and equipment requirements based on durability, service considerations and cost of the equipment. Street lighting within the public street right-of-way must be approved by the Minneapolis Department of Public Works.

Section C: Process for the Installation of Street Lighting

This section details the process for street lighting installation for each area. This section also defines the procedures for affected property owners to opt in and opt out of street lighting projects, as well as the process for petitioning for city street lighting.

Section D: Funding for Street Lighting

Funding for street lighting comes from a variety of sources, ranging from federal grant dollars, property assessments and local net debt bonds to local neighborhood funds and private development resources. This section describes how street lighting installation projects are funded and how operations and maintenance are funded.

Abbreviations and Acronyms

Several abbreviations and acronyms are used frequently in this document and are listed below:

- CBD – Central Business District
- CPAR – Calculated Project Assessment Rate
- HPS – High Pressure Sodium light fixture
- LED – Light Emitting Diode light fixture
- PSLC – Pedestrian Street Lighting Corridor

BACKGROUND

The City of Minneapolis Department of Public Works (Traffic & Parking Services Division) manages the City street lighting system that includes over 48,000 poles installed adjacent to alleys and streets. The street lighting system includes about 60 different styles of fixtures. The annual expense to maintain and operate this system is about \$6.5M (FY 2014). Operation and maintenance is accomplished through the use of City forces and a contract with the City's electrical utility (Xcel Energy). The network of streetlights across Minneapolis is comprised of a metal pole system operated and maintained by Public Works, and a wood pole system operated and maintained by Xcel Energy through a contract with the City.

History of Street Lighting

The City has installed and upgraded street lighting for many years. The City's first electric lighting system was completed in 1897 and included 800 lights. From 1954 through 1963, the City installed fluorescent street lighting in commercial districts. In 1967, the City started a conversion of existing streetlights to mercury vapor fixtures, followed in 1977 by a program to convert mercury vapor fixtures to high pressure sodium fixtures (HPS). HPS fixtures have been the primary light source in the City for the last 35 years. Over numerous years, the Public Works Department has evaluated lighting technologies for the purpose of providing the best possible light at the lowest operation and maintenance cost. The City is now converting some fixtures to Light Emitting Diode (LED) technology, which promises energy reductions plus operations and maintenance savings.

Metal Pole Street Lighting System

The City operates and maintains a large array of metal pole streetlights across the city. In some sectors of the city (the Central Business District, for instance) street lighting is almost entirely metal poles.

City forces maintain and operate approximately 18,000 streetlights. In 2014, that totaled about \$1.9M. The metal pole system is powered through an underground wiring system from metered service cabinets located in close proximity to the streetlights. The metal pole system is comprised of several styles of poles and fixture types. A majority of the currently-approved types of poles and fixtures are shown in Figure 1. The City also maintains a wide variety of additional lighting equipment, including wall-mounted lights, bridge navigation lighting, bollards and tunnel/under bridge lighting.

Wood Pole Street Lighting System

The City contracts with Xcel Energy to furnish, operate and maintain approximately 30,000 streetlights mounted on wood poles. This system is the primary source of lighting on most residential streets, but also other arterial and collector streets.

The wood pole system is powered through overhead wires to transformers mounted on wood poles; power is not metered. The City pays Xcel a flat monthly rate for the maintenance and operation of the wood pole system based on a Public Utilities Commission approved rate tariff. In 2014, that amount totaled approximately \$4.6M. The terms of payment and expected service for the wood pole system are detailed in an existing service agreement between the City and Xcel.

History of this Street Lighting Policy

The City began to have conversations regarding a modern street lighting policy in 1999. Draft policies were reviewed for a number of years, with a policy framework adopted on February 29, 2008. A revised

and expanded version of that policy framework was adopted January 9, 2009. The major points of the policy as adopted included:

- A plan outlining lighting to be provided on all streets and a process for allowing changes;
- Full cutoff style lighting to be used for all future applications;
- Incorporation of the policy into the Access Minneapolis Design Guidelines for Streets and Sidewalks;
- Definition of lighting standards for central business district, pedestrian-oriented and residential areas;
- An explanation of how lighting would be funded through a combination of net debt bonds, general fund dollars, grant resources, and uniform street lighting assessments.

As the 2009 Policy was implemented over the course of several years, concerns were raised about the procedure for adjacent property owners to opt in/out of installations, and the funding mechanism for paying for street lights.

In January 2013, City Council directed Public Works to review the Street Lighting Policy pertaining to pedestrian corridors and recommend changes. Public Works returned with recommendations in May 2013, and City Council took several actions to update the Policy and address pedestrian corridors. Subsequently, several past, existing and pending pedestrian street lighting corridor projects had their detailed project funding parameters addressed by City Council actions later in 2013.

Thus, this 2015 Policy revision is intended to incorporate those text changes into the official Street Lighting Policy written document, as previously directed by City Council in 2013. In addition, Public Works reviewed the entire 2009 Policy and identified several improvements which are included here.

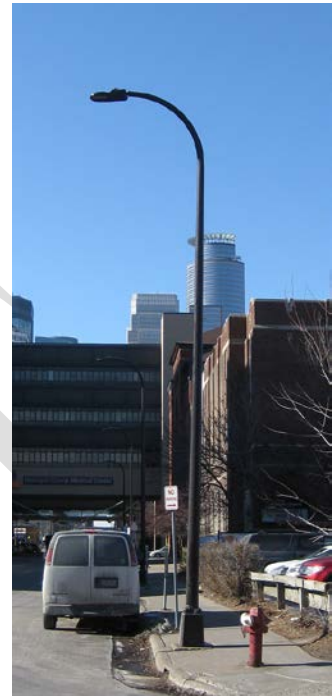
Figure 1: Major Styles of Approved Streetlight Poles and Fixtures



**Modern
Shoebox**



**Tear Drop
(Park Board Only)**



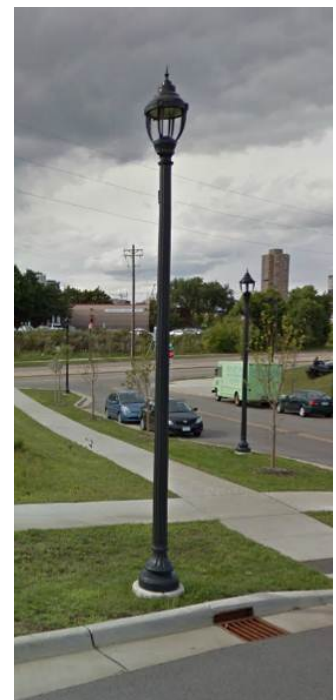
**Cobrahead
LED**



**Cobrahead
(Wood Pole System)**



**LED Lantern
(Full Cutoff)**



**LED Acorn
(Full Cutoff)**

SECTION A: MINNEAPOLIS STREET LIGHTING PLAN

This plan defines three street lighting areas: Residential, Pedestrian and Central Business District (CBD). These areas have different lighting needs. The lighting environment for residential areas require the lowest street lighting intensity, while the CBD presents an environment that is more complex and the lighting needs are greater. Identification of these areas is primarily set by *Access Minneapolis* which identifies high-use pedestrian activity areas. The three street lighting areas are illustrated in Figure 2: Minneapolis Street Lighting Plan.

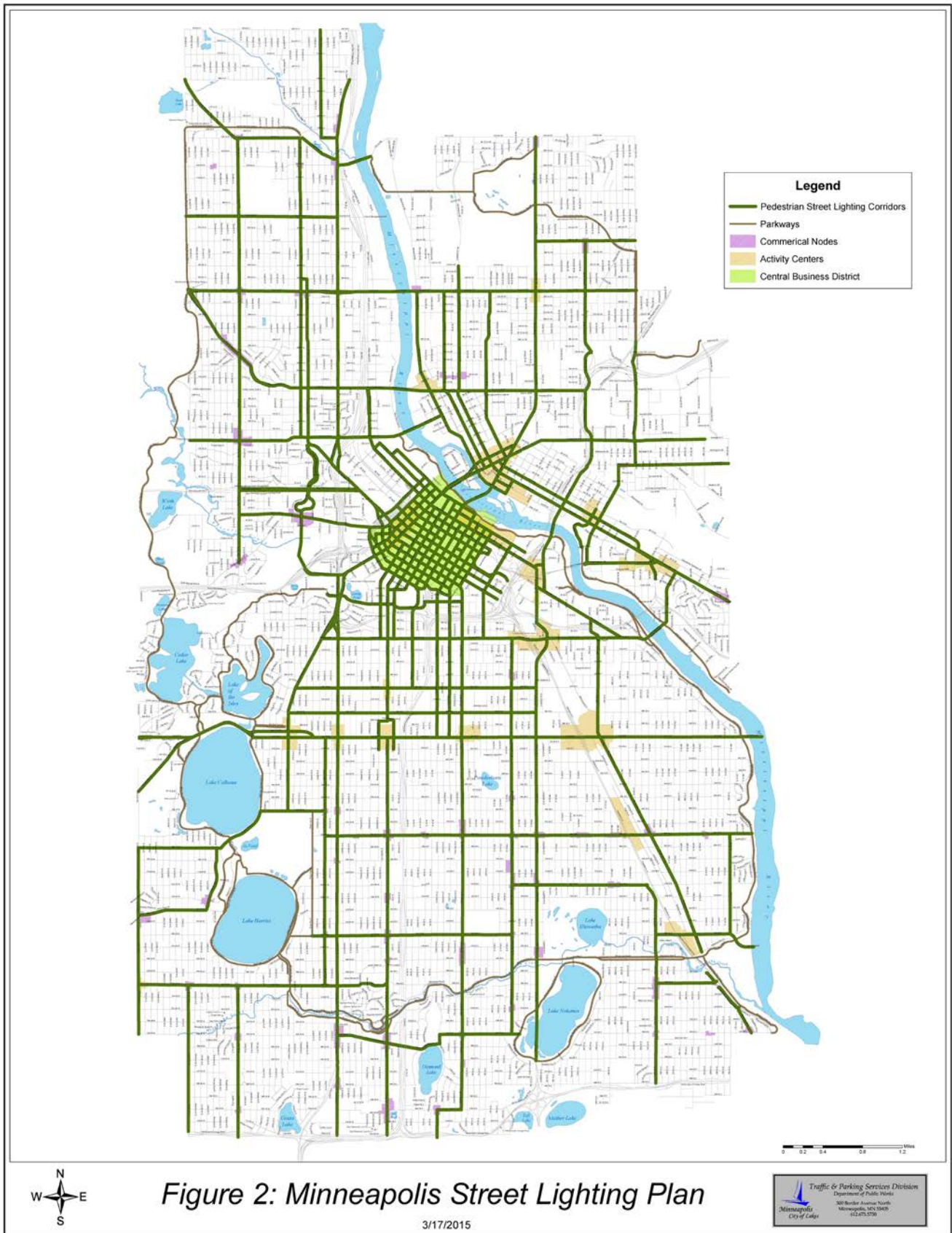
Figure 2 identifies the boundaries for CBD and some Pedestrian areas. The CBD is located in the downtown core while Pedestrian areas are spread throughout the city and consist of Pedestrian Street Lighting Corridors (PSLCs), Activity Centers and Neighborhood Commercial Nodes. Areas not identified on the map are considered to be Residential areas. Parkways are identified on the map and have a lighting plan as approved by the Minneapolis Park and Recreation Board. Alleys are not shown on the map and shall remain a wood pole system.

Pedestrian areas have greater intensity of pedestrian activity due to land use, commercial activities and transit use. As a rule, metal pole lighting will always be provided along designated PSLCs. Other Pedestrian areas (Activity Centers and Neighborhood Commercial Nodes) *require* only residential-level lighting levels, however, more lighting is allowable up to the Pedestrian lighting standard in these areas.

The Pedestrian areas are shown on Figure 2 and were determined as follows:

- **Pedestrian Street Lighting Corridor (PSLC)**: Any of the corridors as listed below:
 - Commercial Corridors – Streets that have traditionally served as boundaries connecting a number of neighborhoods and serve as a focal point for activity.
 - Community Corridors – Streets that support new residential development from low to high density in specified areas, as well as increased housing diversity in neighborhoods.
 - Primary Transit Network Streets – Networks of all-day transit with at least 15-minute frequency for 18 hours of the day.
- **Activity Centers**: A place that supports a wide range of commercial, office and residential uses as defined by the City Comprehensive Plan. An Activity Center typically has a busy street life with activity throughout the day and into the evening. It is heavily oriented toward pedestrians and maintains a traditional urban form and scale. Activity Centers are well served by transit. Examples include Uptown, the North Loop and the Cedar Riverside areas.
- **Neighborhood Commercial Node**: An area comprised of a handful of small- and medium-sized businesses focused around one intersection as defined by the City Comprehensive Plan. They primarily serve the needs of surrounding neighborhoods. These nodes generally consist of traditional commercial storefront buildings. They maintain a building typology and pedestrian orientation that is appropriate for the surrounding residential neighborhoods.

Figure 2: Minneapolis Street Lighting Plan



Land uses and associated pedestrian transportation patterns change over time. New designated pedestrian areas may be added to the map. The process for changing the Minneapolis Street Lighting Plan designations for street lighting areas or corridors is as follows:

- Process is initiated by block, business, or neighborhood organization. The Department of Public Works or other City departments may also initiate the process.
- The group provides a written request to Department of Public Works requesting the street lighting designation change and providing rationale.
- The request is shared with the area council member(s) for initial feedback and comments. Other City departments are consulted for their input. The request is forwarded to the neighborhood and/or business association/group as appropriate for comments and support.
- If the street meets the place type characteristics, as defined above, the request is considered for recommendation by Public Works to the City Council Transportation and Public Works committee for approval to change the area designation.
- The Minneapolis Street Lighting Plan (Figure 2 map) is then updated accordingly.

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SECTION B: STREET LIGHTING STANDARDS

Standards for street lighting in Minneapolis fall into one of two broad categories: performance and materials/equipment. The standards will be regularly updated as technology advances. In order to more easily facilitate changing standards, technical details will be included in the [Standard Specifications & Detail Plates](#); this is separate from the Street Lighting Policy.

Performance Standards

The performance standards for the City of Minneapolis follow the guidelines set by the Illuminating Engineers Society of North America (IES). The IES is the recognized technical authority on illumination in the U.S. They communicate information regarding good lighting practice to its members and the public. The current Minneapolis performance standards are based on the IES adopted RP-8-00 report (*Roadway Lighting*). There are three criteria for designing lighting systems: Foot Candle levels (amount of light), Uniformity (contrast between bright and dark spots), and Veiling Luminance (Glare). The performance standards for each area type are defined in the table below.

Table 1: Street Lighting Performance Standard Criteria for Three Areas

Criteria	Central Business District	Pedestrian Areas	Residential Areas
Foot Candles (light intensity, fc)	1.5 to 2.0 fc	0.8 to 1.2 fc	0.3 to 0.6 fc
Uniformity (contrast between bright and dark spots)	3 to 1 max	3 to 1 max	6 to 1 max
Veiling Luminance (glare)	0.3 to 1 max	0.3 to 1 max	0.4 to 1 max

Lighting Above the Performance Standard

Lighting will be installed to Performance Standards (Table 1). If additional lighting is desired and is reasonable for the area and the environment then it may be approved. Environmental concerns and energy use are some factors that will be considered to limit the amount of lighting over-standard. If lighting above the Performance Standards is installed then the full cost (operation, maintenance, and installation) of the above-standard lighting will be charged to the adjacent properties. The installation charge is a one-time cost that may be paid over the term of the assessment. The operation and maintenance charges are annual charges. Operation and maintenance of all lighting designed within city public street right-of-way will be managed by the Minneapolis Department of Public Works.

Materials/Equipment Standards

Poles and fixtures used for street lighting must be approved by the Minneapolis Department of Public Works. Approval is based on operation, maintenance and cost criteria. Specifications for approved street lighting materials and equipment can be found with the [City of Minneapolis Standard Specifications & Detail Plates](#).

There are five styles of light fixtures that are currently approved as standard street lighting – the full cutoff LED lantern, full cutoff LED acorn, teardrop with shield (Parkways and Park Board properties only), full cutoff LED cobrahead, and full cutoff modern shoebox. See Figure 1 for examples of these fixtures.

Lighting Fixture Cutoff Level

As of 2009, all new street lighting installations in Minneapolis must be full cutoff, meaning that these types of fixtures will have no up-lighting. Table 2 lists the fixtures currently used by the City of Minneapolis, the existing level of light cutoff, and the new level of light cutoff. To meet this cutoff goal Public Works will specify full cutoff fixtures as part of any fixture procurement process. Full cutoff fixtures will be used with all new construction.

The City continues to employ many light fixtures that do not meet the full cutoff standard. Minneapolis Public Works has an ongoing capital program for street lighting renovation. As light fixtures are replaced over time, non-conforming fixtures will be replaced with compliant models.

Table 2: Fixture Styles and Cutoff Levels

Existing Fixture Style	Existing Cutoff Level	New Cutoff Level
Shoebox	Semi cutoff	Full cutoff
Modern shoebox	Full cutoff	Full cutoff
Teardrop with Shield	Cutoff	Full cutoff
Lantern	Semi cutoff	Full cutoff
Acorn	Non cutoff	Full cutoff
Cobrahead - Xcel wood pole	Semi cutoff	Full cutoff
Cobrahead LED	Full cutoff	Full cutoff

Types of Lighting Fixtures

There are several types of light fixtures on the market. The City currently uses high pressure sodium (HPS) fixtures in most lighting applications. This is due to cost and service life. Other current fixtures used include metal halide (MH), induction and Light Emitting Diode (LED).

The City will use the most efficient and effective type of light fixture for new street lighting installations. Currently, this type of lighting fixture is LED in most applications. Factors that will be used to determine efficiency and effectiveness include: fixture cost, installation and maintenance labor, manufacturer warranty, energy use and cost, light quality and the fixture's life cycle cost.

Some existing street lighting fixtures are not yet cost-effective for conversion to LED. These street lighting fixtures will be addressed as cost structures continue to change over time. Public Works expects that LED fixture prices will continue to decline, making installation of LED fixtures more feasible in almost all situations.

Pole Placement Standards

Lighting is placed in a regular pattern along streets to ensure effective light dispersal and uniformity for both the sidewalk and street. Pole placement is different depending on pole height, fixture style/type and block length. Table 3 shows general placement standards for metal and wood pole lighting systems. These pole standards may vary with the specific lighting needs of a particular street or project and any variations to Table 3 shall be reviewed for consistency and approved by the Department of Public Works.

Table 3: Typical Streetlight Pole Placement Standards – Poles per Block

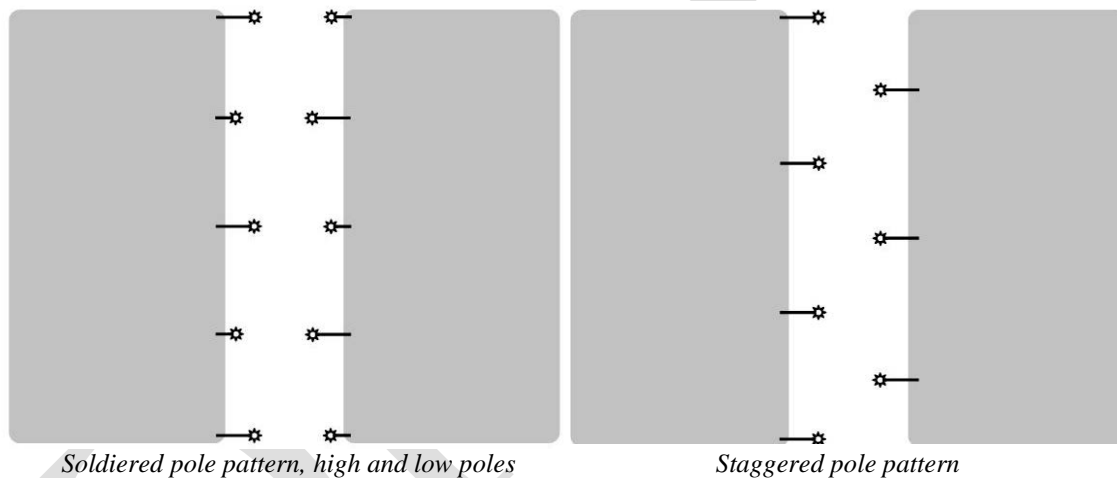
Pole Style	Block Length		
	330 feet (short block)	406 feet (CBD)	660 feet (long block)
High Poles (30' typical)	3	8	7
Low Poles (12-15' typical)	5	10	10
High-Low Mix	5	7	10
Wood Pole (Xcel system)	3	3	4

*All pole spacing to be approved by the Traffic & Parking Services Division of Public Works.

Poles are placed in one of two patterns on the street – staggered or soldiered. Poles of a single type (all high or all low poles) may be placed in a staggered pattern. Poles intermixed in a high-low combination must be soldiered. Whatever the pole pattern, the Table 1 Standards for foot candles, uniformity and veiling luminance must be met.

Light poles are installed in either a staggered or soldiered pattern (see Figure 3) – this detail will be specified for each project.

Figure 3: Typical Pole Placement Patterns



Pole height, fixture style/type and pole placement patterns will generally depend on the width of the street. On a two-lane street with parking on both sides, Public Works will begin with the assumption that patterns using only low pedestrian poles is appropriate, but will assess the need for a high and low pole mix when street width is in the range of 40-44 feet. Taller poles are able to provide better lighting of a wide street than low poles, which cast a smaller area of light. Taller poles may always be considered for use at intersections in the interest of traffic safety. On a street with three or more travel lanes and a width of 45 feet or greater, then a mixture of high and low poles or a pattern of only high poles will be used. Public Works must approve all such pole heights, fixture style/types and patterns on a project-by-project basis.

For more detailed information about approved street lighting materials, see the City of Minneapolis Standard Specifications & Detail Plates (<http://www.minneapolismn.gov/publicworks/plates/index.htm>). Questions regarding materials and equipment can be directed to the Public Works Electrical General Foreman at 612-673-5750.

SECTION C: PROCESS FOR THE INSTALLATION OF STREET LIGHTING

This section describes when different street lighting areas will receive, or be able to install, new lighting systems. This section is organized into sub-sections as follows:

1. Installation of New Lighting with Street Reconstruction Projects
 - 1.1. CBD and PSLC streets
 - 1.2. Activity Centers and Neighborhood Commercial Node Streets
 - 1.3. Residential and Other Non-PSLC Streets
 - 1.4. Existing Lights Prior to Reconstruction
2. Installation of New Lighting for Stand Alone Projects
3. End of Service Life
4. Two-Phased Petition Process
 - 4.1. Phase 1 Petition
 - 4.2. Phase 2 Petition
 - 4.3. Results Tabulation
5. Property Assessment
6. City Council Approval Process
7. Development Projects
8. Wood Pole Street Lighting System
9. Requesting Changes to Wood Pole Street Lighting System
 - 9.1. Request for New/Additional Wood Pole Lighting
 - 9.2. Requests for Reduction in/Modification of Wood Pole Lighting

1. Installation of New Lighting with Street Reconstruction Projects

- 1.1. CBD and Pedestrian Street Lighting Corridor (PSLC) Streets: Metal pole lighting will be installed with all street reconstruction projects according to the CBD or Pedestrian lighting standard as outlined in this Policy. All costs will be borne by the street reconstruction project. Operation and maintenance will be paid by the City. See Chart 1 for process steps.
- 1.2. Activity Centers and Neighborhood Commercial Nodes (non-CBD and PSLC) Streets: When a street is reconstructed in an Activity Center or Neighborhood Commercial Node (not in CBD or a PSLC), then metal pole lighting will be built to the Residential lighting standard. The cost of installation will be assessed to adjacent property owners. Property owners will receive a Phase 2 petition mailing sent by the City of Minneapolis. For metal pole lighting *not* to be installed with the reconstruction project, property owners representing 51 percent of the assessable influence area must request that lighting not be installed (opt out). If a metal pole system is not installed, then the existing wood pole system will remain or a new wood pole system will be installed at no additional cost to adjacent property owners. See Chart 2 for the process steps. Operation and maintenance costs of a Residential lighting standard system in these areas will be paid by the City.

If property owners would like a metal pole lighting system at the Pedestrian lighting standard (above the Residential lighting standard) in these Centers and Nodes, then the Pedestrian lighting standard would be allowed. This increased lighting would require a Two-Phase Petition Process and an assessment or other funding would be needed to pay for installation of any additional lighting above the Residential standard level. Operation and Maintenance for a Pedestrian lighting standard system in these Activity Centers and Neighborhood Commercial Nodes would be paid for by the City.

Chart 1: Street Lighting Process for CBD and PSLC Streets

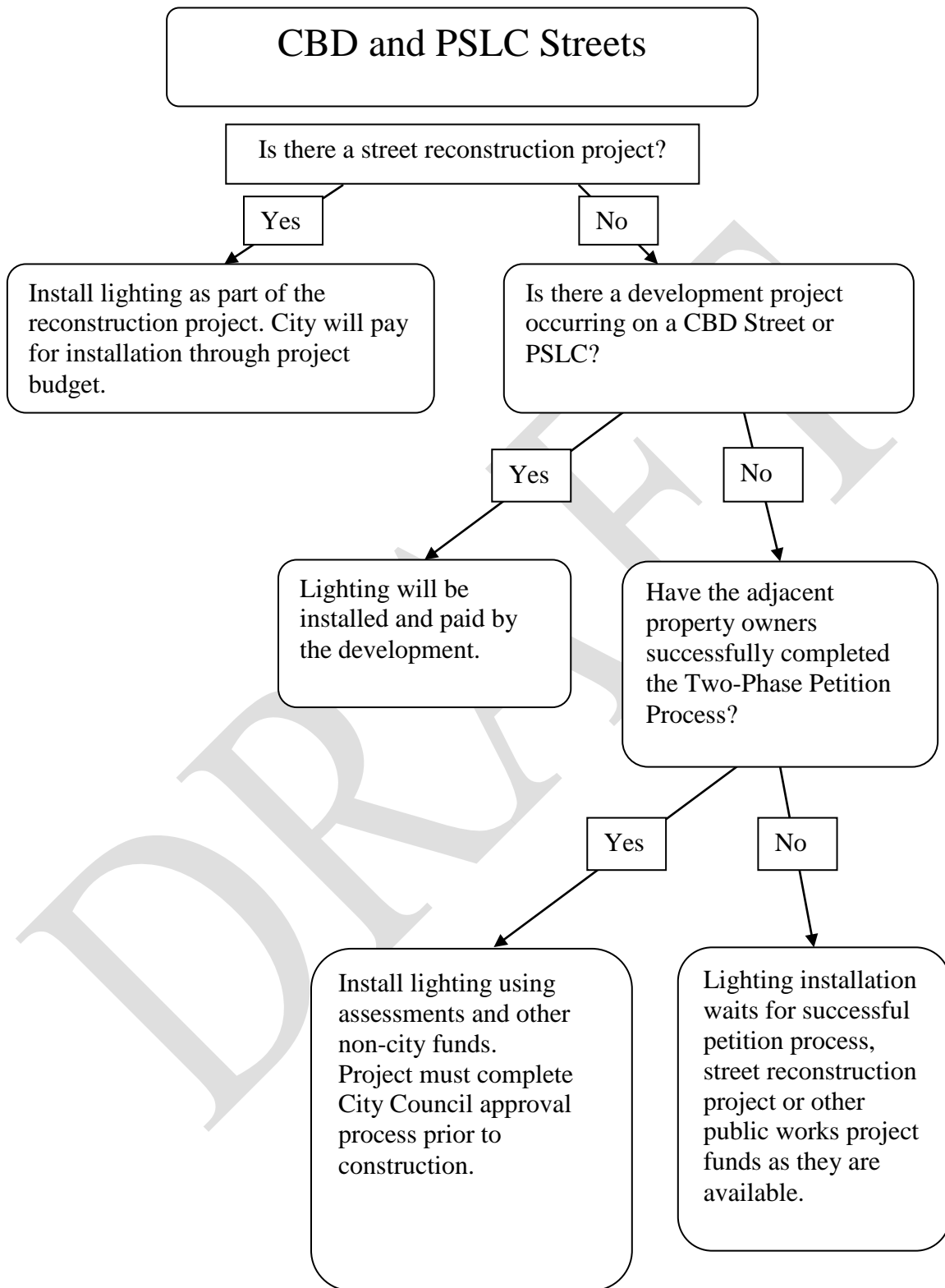
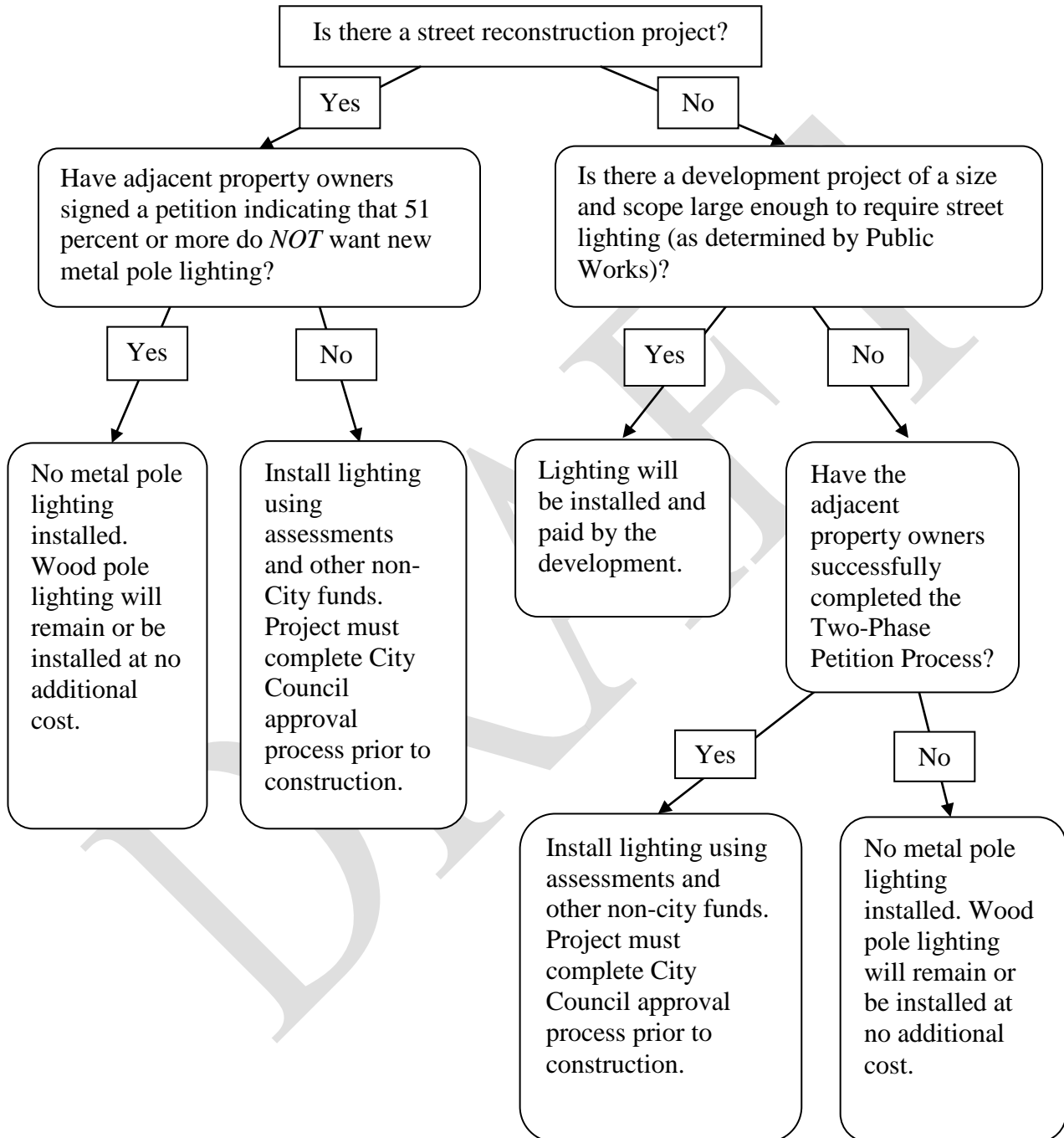


Chart 2: Street Lighting Process for Residential, Activity Center, and Neighborhood Commercial Node (Non-CBD and PSLC) Streets

Residential, Center and Node (Non-CBD & PSLC) Streets



- 1.3. Residential and Other Non-PSLC Streets: Metal pole lighting will be built to the Residential lighting standard. The cost of installation will be assessed to adjacent property owners. Property owners will receive a Phase 2 petition mailing sent by the City of Minneapolis. For lighting *not* to be installed with the reconstruction project, property owners representing 51 percent of the assessable influence area must request that lighting not be installed (opt out). If a metal pole system is not installed, then the existing wood pole system will remain or a new wood pole system will be installed at no additional cost to adjacent property owners. See Chart 2 for the process steps. Operation and Maintenance of a Residential lighting standard system on Residential and other non-PSLC streets would be paid for by the City.

- 1.4. Existing Lights Prior to Reconstruction: If there are existing lights prior to construction within the CBD or a PSLC, then the existing lighting will be replaced or reinstalled to standard with all costs borne by the street reconstruction project.

If a street reconstruction project occurs where a previously completed streetlight project is still on the assessment rolls (i.e. within the original 20 year assessment window) and is not a CBD or PSLC area, then the City will determine the best method of reinstalling the existing lights to their condition prior to the proposed street reconstruction project.

2. Installation of New Lighting for Stand Alone Projects

Areas that are not likely to have the street reconstructed in the near future (within 5 years) are able to have new street lighting installed as outlined in the Policy Standards after a successful Two-Phased Petition Process and City Council approvals to pay assessments. A typical timeline for a stand-alone lighting project is shown in Table 4. For all areas, operation and maintenance of any lighting system constructed up to the lighting area standard would be paid by the City. Any lighting above-standard would require an ongoing, annual commitment from property owners for operation and maintenance costs.

Table 4: Sample Timeline for Stand-Alone Street Lighting Projects

Step	Time Required	Starting Month
Community requests to start petition process	1 Week	On or before September, Year 0
Phase 1 Petition process	24 Weeks	October, Year 0
Phase 2 Petition process	12 Weeks	April, Year 1
Public Works reviews returned mailings, verifies signatures and tabulates support	4 Weeks	July, Year 1
Council Member Update on Status of Request	1 Week	August, Year 1
Project Designation by City Council (Letter Preparation, required time prior to public hearing)	6 Weeks	Mid-August, Year 1
Public Hearing and Project Approval	4 Weeks	October, Year 1
Assessment Appeal Process	6 Weeks	November, Year 1
Project Design	8 Weeks	Mid-December, Year 1
Bid Project (if applicable)	6 Weeks	Mid-February, Year 2
Begin Construction		April, Year 2
Complete Construction		
Assessment Payment Begins		May 15, Year 2

3. End of Service Life

Street lighting infrastructure is designed to last approximately 20 to 30 years. The City seeks to maximize service life through routine maintenance. However at some point, the cost to maintain the street lighting system becomes more than its present value and/or safety concerns have resulted in the infrastructure reaching the end of its usable service life. The end of service life will be determined by the Minneapolis Department of Public Works. When the end of service life is reached, there are options for how to proceed depending on the street lighting area type as described in the following paragraphs.

On CBD streets and PSLCs, Public Works will decide whether to do major maintenance and/or system replacements, as maintenance or capital funds allow.

In Residential areas, Neighborhood Commercial Nodes and Activity Centers, existing wood pole structures are maintained and replaced at no additional cost to adjacent property owners. Where a metal pole lighting system has come to the end of its service life in these areas, a modified Phase 2 petition process will be used. The City of Minneapolis will send the petition to affected property owners asking whether A) the metal pole lighting should be replaced, or B) the metal pole lighting should be removed and a new wood pole system installed to standard. To replace the metal pole system which has exceeded its service life, property owners representing 70 percent of the assessable influence area must agree to the replacement and to pay an assessment for the new metal pole street light installation.

4. Two-Phased Petition Process

This process is used when a neighborhood, block club, business association or other affected local individual or group wishes to add additional lighting above the Policy Standards, or install a metal pole lighting system as a stand-alone project in the absence of a street reconstruction project or any other City-directed project to install lighting.

- 4.1. Phase 1 Petition: The Phase 1 Petition documents the general support by the property owners. Petitions shall equal or exceed 35 percent of potentially affected property owners within a six month time period. This process is initiated by a neighborhood, block club, business association or other affected local individual/group of individuals or entity along the proposed project corridor(s). A dated Phase 1 petition form will be provided by Public Works to the community to begin this process. Petitioners must contact Public Works to receive this form and initiate the petition process. Petitioners must return the petition once the 35 percent threshold has been met.
- 4.2. Phase 2 Petition: Upon reaching the 35 percent Phase 1 threshold, Public Works will conduct a formal petition via mail sent to potentially affected property owners. The mailing will be sent to the listed tax payers on record, and will describe the proposed project boundaries, estimated project cost, Calculated Project Assessment Rate (CPAR) with all costs inclusive, information on the remainder of the process, and a form to complete and return to the City.

Public Works will determine the CPAR and project boundaries. The CPAR is based on the assessable influence area and a standard per-pole installed cost for the typical streetlight design for CBD, PSLC and Residential areas, whichever Standard applies for the proposed project corridor(s).

To move forward with a street lighting project, property owners representing 70 percent of the assessable influence area must agree to support and fund the project using the CPAR. Other funds may be used to buy down or eliminate the assessments, such as grant dollars or neighborhood funds.

- 4.3. **Results Tabulation:** The City will tabulate results of the returned Phase 2 forms to determine the level of support. A non-response from an assessable non-governmental property will be tabulated and counted as a *NO* vote. If support reaches 70 percent, the proposed street lighting project will be forwarded to the Minneapolis City Council for the assessment approval process.

For the Phase 2 petition process with street reconstruction projects on Residential and other non-PSLC streets, property owners representing 51 percent of the assessable influence area must request that lighting not be installed (opt out). A non-response from an assessable non-governmental property will be tabulated and counted as a *NO* vote. If the opt out results in less than 51 percent opposed to lighting installation, the proposed street lighting project will be forwarded to the Minneapolis City Council for the assessment approval process.

For petition and assessment purposes, only the registered property owner or legal agent of the registered owner of the assessable parcel shall be allowed to be the signatory authority for that property. The petition process is based on percentage of total assessable influence area in the project zone. Therefore the larger the property, the more weight the decision of that owner has in whether a streetlight project moves forward or not.

Public Works will tally the governmental and non-assessable properties as a *YES* vote, positively supporting the street lighting project.

Public Works will tally assessable, non-assessable and governmental properties separately to calculate their percentage of support along with the Yes, No and non-responses.

5. Property Assessment

Due to the wide variability in project lighting requirements, each stand-alone project will have a Calculated Project Assessment Rate (CPAR) based on a standard per-pole installed cost (approximately \$8,500 per pole in 2015, subject to changes in inflation and other cost fluctuations for materials and labor). Public Works will generate a project cost estimate based on pole spacing requirements, street widths, and other related factors.

Stand-alone street lighting projects involve special assessments. A special street lighting district will be established. This means that charges will apply to all properties that are not governmental, and shall include normally tax-exempt properties such as churches, non-profit organizations, and so on. To ensure a consistent approach for all private and public colleges and universities, each institution will be assessed or asked to contribute funds to the project commensurate with their assessable rate.

Minneapolis School District #1, Minneapolis Park Board, City of Minneapolis, Hennepin County, State of Minnesota, and Federal properties shall not be included in the project assessment roll. Along CBD and PSLC streets, the lighting costs for these properties will be paid by the City. The City will seek joint partnerships with public agencies to cover their share of the lighting project.

In addition to capital installation costs, the non-governmental, tax exempt properties will be assessed an operation & maintenance street lighting fee in lieu of property tax.

6. City Council Approval Process

When a proposed project accomplishes the proper petition process from property owners and is tabulated by Public Works, then the project can proceed to the City Council. When seeking City Council approvals, Public Works will present the petition percentage for each of the property types.

Public Works would request City Council approvals to designate the project, set a public hearing and receive direction to prepare assessments.

The assessments and public hearing process for street lighting is the same as other street construction projects. The public hearing procedure will follow the City Ordinance ([Title 2, Chapter 24, Article III](#)), and property owners will be notified of the public hearing date and time. Following City Council approval of the project and the associated assessment cost, property owners have 30 days to appeal the assessment.

Design and construction will begin only after the 30-day appeal process has passed. If there is an appeal, Public Works and City Attorney staff will confer and determine whether to proceed with the project or return to City Council for further action.

7. Development Projects

Minneapolis has seen a large amount of property development in recent years. In many cases, new or additional street lighting would be considered both desirable and necessary as new development projects are realized. Today most development projects that impact the boulevard and sidewalk areas are installing new streetlights at the projects' expense according to City Standards. However, not all projects install new lighting, which leads to lighting inconsistencies and future costs and obligations by others. This section addresses this situation and creates a uniform approach.

All new developments impacting the street, boulevard and/or sidewalk and located within the CBD and on PSLC streets shall install street lighting as outlined in this Policy. Lighting must be installed on all public right-of-way sides abutting the development site. In the case that a portion of a development site does not abut a CBD or PSLC street, Public Works may require adding lighting to that street. Pre-existing poles and fixtures may be reused if they are in good material condition and conform to the Policy Standards. Any existing lighting systems that are disturbed by a development must be re-installed or replaced.

All costs for Standard lighting installation will be borne by the development project and all subsequent operation and maintenance will be paid by the City. Any enhanced lighting and all its expenses above the Standards will be borne by the adjacent development and/or property owners.

Installation of a lighting system that meets these Standards shall be managed by Public Works. This is required to ensure that all new lighting systems that serve the public right-of-way are built and can be effectively managed for their intended public purpose. The City of Minneapolis will own, operate and maintain lighting systems that are located in the public right-of-way and are designed and installed to the City Standards.

Development projects below a certain threshold may not be required to add Standard lighting. This threshold will be determined by the City Engineer as part of the Site Plan Review process. For example, a single unit home construction will not be required to add new street lighting, but would be responsible for any disturbance to existing lighting. Larger-scale, mixed use and/or multi-unit residential type developments may be required to include Standard street lighting adjacent to their properties.

In Residential areas, additional street lighting will not be required, unless the development results in disturbance to existing street lighting. In this case, the developer will be required to pay for the salvage and replacement costs for disturbed metal street light poles or wood poles. Larger scale development in residential areas may require more scrutiny on the part of Public Works site plan review.

Questions regarding Street Lighting materials and equipment may be directed to the Public Works Electrical General Foreman at 612-673-5750.

This section is not intended to prohibit property owners from adding to or enhancing the City Standard lighting at their own cost. However, the City strongly prefers such enhanced lighting occurs on private property and does not impact the public right-of-way with intense, non-uniform, or glaring light that affects transportation users.

8. Wood Pole Street Lighting System

Over 50 percent of the street lighting within the City of Minneapolis is wood pole lighting that is installed, operated, maintained and removed by Xcel Energy. This is considered the basic minimum lighting standard where installed. Wood pole lighting is installed at no charge to the property owner. The wood pole system operating cost (electricity and maintenance) is paid by the City.

One light shall be provided at each street intersection, with long city blocks (660 feet) having two lights at the approximate third points of the block and short city blocks (330 feet) having one mid-block light in addition to the intersection lights. Long alleys are entitled to two alley lights spaced evenly and short alleys may receive one light at the approximate midpoint, in addition to lights where alleys intersect with streets. Wood pole lighting systems shall not be installed in metal pole streetlight areas simultaneously and must be removed as part of any project where metal pole lighting is installed.

9. Requesting Changes to the Wood Pole Lighting System

9.1. Requests for New/Additional Wood Pole Lighting:

Step 1: Requester contacts Minneapolis 311 (telephone call to 311 inside Minneapolis, or 612-673-3000 from outside the city) and submits a new streetlight request. The requester should be as specific as possible with the request location. Requesters should provide contact information to 311.

Step 2: Public Works will check to see if the lighting in the area conforms to the Standards indicated in this policy for wood pole light spacing. If lighting does meet the Standard, the requester will be notified of that finding. Also, Public Works will ask whether he/she is interested in pursuing a stand-alone lighting project through the Two-Stage Petition Process. If the requester is not interested, the 311 case will be closed. If the requester wishes to proceed with a stand-alone lighting request, the two-stage petition process will be started.

Step 3: If Public Works determines that existing lighting does not meet the wood pole Policy Standard, then Public Works shall determine where additional lighting is needed and notify the requester of the finding plus the location(s) of additional lighting. Public Works will inform all property owners adjacent to the proposed new pole(s) of the pending installation of a new lighting, and shall obtain a signed *To the Record* letter and necessary City Council approvals. Public Works will then coordinate with Xcel Energy to have the new lighting installed.

9.2. Requests for Reduction in/Modification of Wood Pole Lighting

Step 1: Requester contacts Minneapolis 311 (telephone call to 311 inside Minneapolis, or 612-673-3000 from outside the city) and submits a street lighting removal or modification request. The requester should be as specific as possible with the location of the request. Requesters should provide contact information to 311.

Step 2: Public Works will discuss the issue with the requester. If the problem relates to excess light on the requester's property, Public Works will evaluate the concern, and may generate a work request to Xcel Energy to install a cut-off style light fixture or other appropriate and reasonable modifications. If a new fixture provides satisfactory response to the problem, the 311 case will be closed.

Step 3: For a wood pole light removal request, Public Works will first review whether the existing light pole pattern meets these Policy Standards. If the existing lighting meets and does not exceed the Standard, Public Works will inform the requester of this finding, that no wood poles will be removed and the 311 request will be closed.

If the wood pole lighting exceeds the Standard, Public Works will notify the requester of this finding and will describe the petition process for pole removal. A removal petition shall be conducted of all property owners on the block faces abutting the light location. Because of the perceived safety issues with light removal, 100 percent of the owners on that block must consent to removal of the wood pole light. If the petition is successful, Public Works will obtain a signed *To the Record Letter* and necessary City Council approvals, and will coordinate with Xcel Energy to have the pole removed.

SECTION D: FUNDING FOR STREET LIGHTING

The funding for street lighting projects varies based on the Policy and the process used to install the lighting. The installation of street lighting is either associated with: 1) a street reconstruction project; 2) a stand-alone street lighting project that was initiated by the citizens, neighborhood and/or business association; or 3) a stand-alone street lighting project initiated by the City of Minneapolis.

1) Street Lighting with Street Reconstruction Projects:

Street lighting will be installed as part of all street reconstruction projects based on the Policy Standards and lighting area, except in cases where property owners opt out of the street lighting project and an existing wood pole system remains.

For CBD and PSLC streets, the cost for this installation will be borne by the street reconstruction project. If an existing system is in place on a CBD or PSLC street it will be refurbished or replaced and the cost will be borne by the street reconstruction project.

For Residential and other non-CBD and PSLC streets, a metal pole street lighting system will be installed to Standard for that area with the street reconstruction project based on the Petition Process. Costs for a metal pole street lighting system will be assessed to property owners. If property owners opt out of a metal pole system installation then the existing wood pole system will remain or a new wood pole lighting system will be installed with street reconstruction. No additional costs will be assessed to property owners.

2) Stand Alone Street Lighting Projects NOT on a CBD or PSLC street:

Street lighting can be installed in the absence of a street reconstruction project in all street lighting areas. These projects will follow the Two-Phased Petition Process. The cost for these installations will be paid by property owners through assessments.

3) Stand Alone Street Lighting Projects on a CBD or PSLC street:

In the absence of a street reconstruction project, street lighting may be installed on CBD or PSLC streets. These projects will occur in one of two ways. Adjacent property owners may successfully complete a Petition Process and the cost for installation will be paid by property owners through assessments. Streetlight projects may also occur on these streets based on a City capital program as funds allow.

In all of the above circumstances, neighborhood, grants, or other resources can also be used to fund the installation of street lighting. Such funds can be used to *buy down* or eliminate the cost of assessments. The City continues to pursue other funding resources to improve street lighting.

Calculated Project Assessment Rate (CPAR)

The Calculated Project Assessment Rate (CPAR) is the cost of lighting that will be assessed to each property to fund the installation of a project. The CPAR will differ due to assessable influence area, field conditions and installation costs of such systems and will be calculated for each individual project. The CPAR rate is determined by Public Works and is paid as a property tax assessment over a period up to 20 years. The cost of a lighting project includes preliminary engineering, administration, design, installation, inspection, and final closeout.

Grants and Joint Partnership Costs

The City continues to improve the street lighting system through routine maintenance (General Fund dollars) and capital improvements, but also seeks federal and state grant resources when these are available. In addition, the City coordinates with other government agencies, colleges and universities to encourage their financial partnership to fund the capital cost of street light installation when applicable.

The City manages the street lighting contract and partnership with Xcel Energy to improve the wood pole lighting system. The City is currently discussing rebate programs for installation of LED fixtures on the metal and wood pole systems.

Other Street Lighting Costs

- End of Service Life: On CBD and PSLC streets, the cost of refurbishing or replacing a street lighting system will be paid by the City as funds allow.

For Residential and other non-CBD and PSLC streets, adjacent property owners will decide about the replacement of an existing metal pole street lighting system through a Petition Process coordinated by Public Works. If the petition is successful, the cost of updating street lighting system will be paid by property owners through an assessment. If the petition is not successful, lighting will be removed and a wood pole system installed at no additional cost to adjacent property owners.

- Above Standard Lighting Installation: All costs (capital, operating, and maintenance) for additional lighting installed above the Standards as detailed in this Policy will be requested and borne by adjacent property owners, including above-standard lighting on CBD and PSLC streets.
- Street Lighting Operation and Maintenance Costs: Street lighting that has been installed in the public street right-of-way and to these Policy Standards will be owned by the City. Operation and maintenance costs for street lighting built to Policy Standards will be paid by the City.

If street lighting is allowed to be installed above these Policy Standards, then the operation and maintenance costs for the above-standard lighting will be paid annually by adjacent property owners through assessments.