



**Community and Economic Development Department Staff Report and Planning  
Commission Recommendation for Municipal Code Amendments**

**Subject:** Amendments to North Bend Municipal Code Chapters 12.08,  
19.06 and 19.07 Concerning Franchise Utilities and Street  
Lighting

**Date:** April 15, 2016

**Summary of proposed amendments:**

The North Bend Municipal Code currently has regulations addressing Franchise Utilities (natural gas, power, street lighting, communications, and cable) in three separate chapters of the code, including Chapter 12.08 *Overhead Utility Lines*, Chapter 19.06, *Design and Construction Standards for Electrical and Street Lighting*, and Chapter 19.07 *Design and Construction Standards for Underground Cable Television Conduits*.

Having these similar regulations for the various franchise utilities in different sections of the code creates complexity and potential confusion. Consolidating these chapters into one new municipal code Chapter 19.06 Franchise Utilities and Street Lighting will simplify implementation and avoid unnecessary overlap.

In particular, the thresholds for when undergrounding of existing overhead utilities is required has been consolidated and clarified, to eliminate conflicting language between chapters 12.08 and 19.06.

Likewise, standards have been established for when street lighting is required for projects, which the City's code has not previously specified.

The amendments also simplify the language of the regulations, delete provisions that are unnecessary or outdated, and refer to the City's Public Works Standards for the construction-related technical details and specifications rather than provide those within the development regulations themselves (technical detail examples include: how deep an underground line needs to be placed below the road grade, utility trenching backfill requirements, light bulb wattage, size of required connecting bolts, etc.)

The draft Chapter 19.06 is included as an attachment. Because of the level of amendments provided, track-changes redline format is not feasible (too messy). However, notations are provided indicating which existing provisions the draft sections come from (and as amended). Also attached for reference are the existing chapters 12.08, 19.06 and 19.07 should you wish to compare.

**Edits following introduction at 3/10/16 Planning Commission Meeting:**

Edits have been made to the draft amendments based on comments provided by the Planning Commission at their 3/10/16 meeting, comments from the CED Council Committee at their 3/15/16 meeting, comments from City staff review, and written comment from Puget Sound Energy and Century Link. Edits to the draft amendments that have been made since the time of the Planning Commission's 3/24/16 meeting are shown in redline/track changes format in the draft. A section was added concerning mitigating the visual presence of electrical transmission lines, and lighting color-temperature has been addressed in the lighting standards per the Planning Commission's request. Of note, the International Dark Sky Association suggests a lower temperature value than does Jeremy Michel from PSE. There are reasons for going both ways, and the Planning Commission considered this information at the 4/14/16 meeting. After a color temperature demonstration and discussion on temperature versus brightness, the Planning Commission adopted the color temperature of 3000k and Arterial brightness increase to .6 foot-candles to their recommendation. Please see further information in Exhibits E - G. The draft includes a maximum color temperature value of 3,000K.

**FINDINGS:**

**SEPA:** The proposed NBMC amendment is subject the State Environmental Policy Act (SEPA). A SEPA Determination of Non-Significance was issued on March 9, 2016. The SEPA Determination of Non-Significance and Checklist are on file with the City.

**Transmittal to Commerce:**

The draft amendments were transmitted to the Department of Commerce as required per RCW 36.70A.106 on March 7, 2016.

**Public Hearing:** A public hearing was held for the proposed amendments at the March 24, 2016 Planning Commission meeting. Comment received is referenced in the Public Comment section below and provided as exhibits to this staff report.

**Municipal Code Amendments Process:**

Municipal Code Amendments are governed by NBMC 20.08.070 through 20.08.110, evaluated in the staff report below.

**Impacts of Proposed Amendments:**

NBMC 20.08.070 requires that applications for municipal code amendments be evaluated for their environmental, economic and cultural impacts. No significant environmental, economic or cultural impacts are anticipated from the proposed amendments.

**Compatibility of Proposed Amendment with North Bend Comprehensive Plan and Development Regulations:**

In accordance with NBMC 20.08.070 and .080, applications for municipal code amendments must be evaluated for compliance with the Comprehensive Plan and Development Regulations.

The proposed amendments are specifically consistent with policies of the Utilities Element of the Comprehensive Plan, including the following:

- U-4.1: Work with the utilities to eliminate existing overhead power lines in the Urban Growth Area, with an emphasis on the downtown commercial zoning district.
- U-4.2: Develop regulations for siting and landscape requirements for utility meter cabinets, terminal boxes and similar above ground utility features.
- U-4.3: Where feasible, require installation of new power and communication lines to be placed underground.

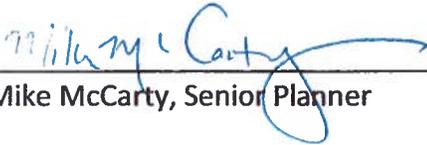
The proposed amendments are also consistent with the Exterior Lighting Standards in NBMC 18.40, which apply to development sites (off street) and which likewise require full-cutoff lighting to minimize glare and light pollution.

**Public Comment:**

Written comment was received from Puget Sound Energy (Exhibits C and D), and from Century Link (Exhibit F). The City Attorney reviewed the City's draft NBMC 19.06 based on the written comments received from Puget Sound Energy and Century Link and suggested edits to the proposed NBMC 19.06 to address some of these comments, which staff have incorporated into the draft. In addition to the written comments, verbal comment was received from Jim Anderson from Tanner Electric at the March 24 Public Hearing, and is available on the recording for that meeting.

**CONCLUSION AND STAFF RECOMMENDATION:**

Based on the findings above, and in consideration of public comment received at the hearing, Staff recommends repealing North Bend Municipal Code Chapters 12.08 and 19.07 in their entirety, and replacement of North Bend Municipal Code 19.06 with that provided in Exhibit A.

  
Mike McCarty, Senior Planner

4/15/2016  
Date

**PLANNING COMMISSION RECOMMENDATION**

Based on the findings above the North Bend Planning Commission recommends **APPROVAL/DENIAL** of the staff recommendation to repeal North Bend Municipal Code Chapters 12.08 and 19.07 in their entirety, and replacement of North Bend Municipal Code 19.06 with that provided in Exhibit A.

  
Planning Commission Chair

4/15/2016  
Date

- Exhibit A: Proposed Municipal Code Amendments – NBMC 12.08, 19.06, and 19.07
- Exhibit B: Existing NBMC Chapters 12.08, 19.06 and 19.07 for reference
- Exhibit C: Letter from Eric Schwalb, Century Link
- Exhibit D: Email and redline edits to earlier draft from Rebecca Nicholas, PSE (PSE edits shown in blue)
- Exhibit E: Email from Jeremy Michel, Puget Sound Energy
- Exhibit F: Email from James Anderson, Tanner Electric
- Exhibit G: IDA Publication – The Promise and Challenges of LED Lighting, International Dark Sky Association.

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North Bend Municipal Code Amendments Chapters 12.08,  
19.06 and 19.08

### **NBMC Chapter 12.08 Overhead Utility lines**

NBMC Chapter 12.08 shall be repealed in its entirety. The contents of this chapter have been incorporated into the update to Chapter 19.06 as provided below.

### **NBMC Chapter 19.07 Design and Construction Standards for Underground Cable Television Conduits**

NBMC Chapter 19.07 shall be repealed in its entirety. The contents of this chapter have been incorporated into the update to Chapter 19.06 as provided below.

### **NBMC 19.06 Design and Construction Standards for Electrical and Street Lighting**

The existing NBMC Chapter 19.06 *Design and Construction Standards for Electrical and Street Lighting* shall be replaced with the following:

#### **NBMC Chapter 19.06 FRANCHISE UTILITIES AND STREET LIGHTING**

Sections:

- 19.06.010 Application of Chapter
- 19.06.020 Purpose
- 19.06.030 Public Works Standards
- 19.06.040 Definitions
- 19.06.050 New Utilities
- 19.06.060 Undergrounding of Existing Overhead Utilities
- 19.06.070 Placement of Underground Cable Television Conduits
- 19.06.080 Overhead Electrical Transmission Facilities
- 19.06.090 Liability for Costs.
- 19.06.100 Installation – City Engineer Approval.
- 19.06.110 Street lighting
- 19.06.120 Existing City Franchises Not Affected

#### **19.06.010 Application of Chapter**

The provisions of this chapter shall apply to all new and existing franchise utility systems including, but not limited to, electrical (including street lighting), gas, communications, and all other franchise utilities, except for Major Utility Facilities as defined and regulated under NBMC Title 18.

#### **19.06.020 Purpose**

The purpose of this chapter is to establish minimum requirements for the underground installation and relocation of franchise utilities within the City. It is further the policy of the City to require the underground installation of all new franchise utilities, and the relocation of existing franchise utilities underground when affected by new development or redevelopment under the provisions of this chapter.

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19.06 and 19.08

The City finds that the health, safety, and general welfare of the residents of the community require that all new and relocated facilities specified in this chapter be installed underground.

**Comment [MM1]:** Edits provided by City Attorney following review of comment by PSE and Century Link.

**19.06.030 Public Works Standards**

This chapter provides minimum requirements for franchise utilities and street lighting. Detailed standards and technical specifications pertaining to construction and installation of these facilities are found in the City's Public Works Standards.

**19.06.040 Definitions**

Unless otherwise specified below, definitions shall be as provided under NBMC Title 18, Zoning.

- A. *Electrical distribution facilities* include those electrical utility lines and equipment operating between 120 and 35,000 volts that provide direct service to customers.
- B. *Electrical transmission facilities* include those electrical utility lines and equipment operating above 35,000 volts transmitting power from generating stations to substations.
- C. *New development or redevelopment* for purposes of this section includes any one of the following conditions;
  - 1. A land use or building permit for a new building or land use where frontage improvements are required; or
  - 2. A building permit for a project where the cost of construction equals or exceeds 50 percent of the assessed value of the existing structure on site, excluding interior remodel of existing single family residential structures and auxiliary buildings.

**19.06.050 New Utilities**

All new franchise utility facilities installed for new development or redevelopment shall be placed underground, with the following exceptions:

- A. Electrical transmission facilities.
- B. Wireless Communication Facilities (see applicable code section).
- C. Accessory franchise utility facilities less than 36 inches in height such as meters, junction boxes, transformers, and the like, when placed at least 5 feet from the edge of sidewalk, pavement edge or back of ditch and screened with landscaping compliant with franchise utility standards.
- D. Accessory franchise utility facilities greater than 36 inches in height, when located within a building or placed in a non-prominent location on the side or rear of the building or at least 10 feet from the right of way or other public areas, and located behind a minimum of five feet of Type 1 landscaping pursuant to Chapter 18.18 NBMC and franchise utility standards.

**Comment [MM2]:** This edit per PSE Comment about access to facility difficult if too far from street.

**19.06.060 Undergrounding of Existing Overhead Utilities**

A. Undergrounding with New Development or Redevelopment.

Existing aboveground wiring and related equipment for electrical distribution facilities, communication facilities, and other purposes, except for wireless communication facilities, transformers, junction boxes and the like, shall be relocated underground along the property frontage when the development or redevelopment requires a subdivision or short subdivision pursuant to NBMC 17.12, a binding site plan pursuant to NBMC 17.20, or site plan approval pursuant to NBMC 18.14, except when the right-of-way frontage of the new development or redevelopment is less than 150 feet in width along the frontage containing the aboveground wiring, and

- 1. the new development or redevelopment does not require relocation of the existing aboveground wiring to accommodate the required site or street frontage improvements; or
- 2. the city engineer determines that the undergrounding of the portion of the existing aboveground wiring along the development or redevelopment's street frontage would

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require undergrounding portions of the existing aboveground wiring beyond the development's street frontage, unless such additional undergrounding is no more than 50 feet beyond the property line on either end of the street frontage to connect to logical points of the existing utility system.

B. Where undergrounding is not required for a new development or redevelopment under one of the exemptions listed in Subsection A above, and street frontage improvements are required, the applicant shall provide conduit within the street frontage improvements for the future undergrounding of the above ground wiring. The conduit shall be of sufficient size and dimension to accommodate the projected maximum line size required for all franchise utility facilities to be undergrounded.

**Comment [MM3]:** This provision per Planning Commission recommendation.

C. Undergrounding with Publicly-Funded Street Improvements.

As major publicly-funded street improvements are undertaken within the City and where such programs require electrical, telephone or TV cable distribution facilities relocation, such facilities shall be relocated underground, unless exempted by action of the City Council.

**Comment [MM4]:** This is a combination of 12.08.006 and 12.08.010.

D. Relocation Time Limit.

As overhead franchise utility facilities are relocated underground, the applicant shall have all overhead connections undergrounded and shall connect to the new underground facilities within 90 days of the date of undergrounding completion. A franchise utility provider's compliance with this 90-day time limit is excused if unforeseen events or circumstances beyond the reasonable control of the franchisee, including acts of God, render timely performance impossible, infeasible, or impracticable, or if despite the franchisee's best efforts, performance cannot be timely without posing risks to public safety and service requirements.

**Comment [MM5]:** Replaces existing 12.08.040.

**19.06.070 Placement of Underground Cable Television Conduits**

When an applicant and/or landowner extends basic utilities to serve a building site, cable television conduits shall be laid underground at the same time as those other basic utilities. This will include only the conduits needed for street crossings and for mainline distributions of cable television to each building site throughout any proposed development. All conduit ends shall be brought to each building site property line, elbowed to the final ground elevation and capped. If the proposed development site is for multiple-family occupancy, then the conduit shall be so laid and be of sufficient dimension to ensure that cable television service may be connected to each of the proposed living units.

**Comment [MM6]:** This section added per City Attorney recommendation following review of PSE Comment.

**Comment [MM7]:** Existing 19.07.010

**19.06.080 Overhead Electrical Transmission Facilities**

Franchise Utility Providers proposing new or replaced overhead electrical transmission facilities shall utilize appropriate measures to mitigate the visual appearance of such facilities on surrounding landscapes and views. Measures shall be determined based on the context of the facility and in consultation with the City, and should address pole height, pole spacing, materials and color as necessary to blend with surroundings, and co-location with other facilities to the extent possible.

**Comment [MM8]:** This section added per Planning Commission request to address Transmission line aesthetics.

**19.06.090 Liability for costs**

The applicant and/or landowner shall pay the costs required for the franchise utility provider to install or underground the utilities, including removal of the existing overhead facilities if required, and install conduit to each individual property line, including conduit, trenching and easements; provided, the costs

**Comment [MM9]:** Amends existing 19.07.020

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of extending the utilities and conduit across the frontage of the build-site or development to the next property line shall be eligible for latecomer's agreement.

**19.06.100 Installation – City engineer approval**

Design and installation of new and relocated utilities shall be done by the franchise utility company. All work shall be installed in accordance with industry standards for the associated utility and shall be subject to the approval of the city engineer. The applicant and/or landowner shall provide necessary occupancy rights and easements for the pad-mounted transformers and other accessory facilities necessary for the furnishing of such utilities.

**Comment [MM10]:** Amends existing 19.07.030.

**19.06.110 Street lighting**

**A. When required.**

When a development or redevelopment requires a subdivision or short subdivision pursuant to NBMC 17.12, a binding site plan pursuant to NBMC 17.20, or site plan approval pursuant to NBMC 18.14, the applicant shall provide street lighting within existing and new public rights-of-way in accordance with these standards, if existing street lighting is not already provided.

**Comment [MM11]:** Existing code does not specify what projects trigger street lighting.

**B. Ownership.**

1. Public street lights. Street lights within public rights-of-way shall be owned by the City or Franchise Utility Provider, or as otherwise determined through utility franchise agreements.
2. Private street lights. Street lights on or along private alleys, roads or streets, on private property, or not otherwise within a public right-of-way, shall be privately owned and operated.

**C. Billing to franchise utility providers for energy use for all street lights internal to new residential subdivisions shall be paid for by the homeowners association of the subdivision. All street lights along all other public streets shall be paid for by the City.**

**D. Energy conservation lighting fixtures.**

All new street lighting shall utilize LED fixtures, or other equivalent best available technology that provides sufficient lumen output while reducing energy consumption, except where necessary to match existing lighting fixtures in an infill situation. To provide warmer lighting tones that reduce glare and night-sky pollution, fixtures shall provide a correlated light color temperature not to exceed 3,000 Kelvin.

**Comment [MM12]:** This edit is provided based on Planning Commission request, and is based on review of International Dark Sky Association (IDA) information and comment from Jeremy Michel from Puget Sound Energy Intolight. Higher # = more blue color = more efficient. IDA recommends max of 3,000K for dark sky certification, but Mr. Michel stated that most lighting manufacturers now utilize 4,000 as the best balance between light temperature and efficiency, and that PSE installs most LED lighting at 4,000K. PC recommends 3,000K for North Bend, considering rural character.

**E. Minimum lighting requirements.**

Street lighting shall be provided at all intersections within and abutting the development, at the end of dead-end streets containing more than three homes, at the apex of sharp curves, and in any additional areas where determined necessary for safety by the Public Works Director, such as crosswalks. Street lighting shall utilize full cut-off fixtures to minimize glare. The street lighting shall be designed to provide a minimum light intensity at intersections as specified in the table below, or greater when determined necessary for safety by the Public Works Director. Detailed construction and facility street lighting specifications, including specified pole and fixture design in certain areas, are provided in the Public Works Standards.

**Comment [MM13]:** Replaces existing 19.06.020. Specifies minimum requirement that lighting required at intersections, corners and dead ends, rather than broadly throughout a development. This is a policy decision on lighting levels desired. Also now specifies full-cutoff requirement to minimize glare.

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19.06 and 19.08

Street Classification	Average Lighting
	Foot-Candles in areas where lighting is required
Arterial	0.6
Collector	0.4
LocalAccess/Half-Street	0.4

**19.06.120 Existing City franchises not affected.**

This chapter shall not affect or waive any right or obligation of a City franchise for use of the City right-of-way, and shall be applied consistent with any applicable tariffs and regulations of the Washington Utilities and Transportation Commission. If a provision of this chapter conflicts with a provision of a franchise agreement or ordinance, the provision of the franchise agreement or ordinance shall control.

Exhibit B - Existing Code for reference

Exhibit B

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## Chapter 12.08 OVERHEAD UTILITY LINES<sup>1</sup>

### Sections:

- 12.08.003 Findings.
- 12.08.006 Underground utility policy.
- 12.08.010 Required when.
- 12.08.020 Overhead facilities – Maintenance unlawful when.
- 12.08.030 Overhead facilities – Continued use application.
- 12.08.040 Overhead facilities – Relocation time limit.
- 12.08.050 Right to receive services.
- 12.08.060 Determination of obligations.
- 12.08.070 Property owner's responsibility – Relocation.
- 12.08.080 Authority to order disconnection, removal
- 12.08.090 Violation – Penalty.

#### **12.08.003 Findings.**

The council does find that with the increased intensity of use of the properties and streets within the city that the health, safety and welfare of the residents of the community require that electric, telephone and TV cable distribution facilities be relocated underground as soon as practicable. (Ord. 374 § 1, 1973).

#### **12.08.006 Underground utility policy.**

The policy of the city shall be that as major street improvement programs are undertaken within the city and where such programs require electrical, telephone or TV cable distribution facilities relocation, such facilities shall be relocated underground. (Ord. 374 § 2, 1973).

#### **12.08.010 Required when.**

The council, when ordering the improvement of any street, whether financed by local improvement district, city funds or state or federal funds, shall determine whether the relocation of the electric, telephone, or TV cable distribution facilities underground shall be required and, if so, the manner of payment therefor. (Ord. 374 § 3, 1973).

#### **12.08.020 Overhead facilities – Maintenance unlawful when.**

It is unlawful for any person or firm to maintain or permit to be maintained any overhead electric, telephone, or TV cable distribution facilities adjacent to the underground facilities on or after 90 days from the installation of the underground facilities. (Ord. 374 § 4, 1973).

#### **12.08.030 Overhead facilities – Continued use application.**

Application may be made to the director of public works for permission to continue the use of any overhead electrical, telephone, or TV cable distribution facilities adjacent to an underground facility, when the enforcement of the terms of this chapter would cause unnecessary hardship. Appeal from the decision of the director of public works may be made to the city council and said appeal shall be filed within 20 days of the written decision of the director of public works. (Ord. 500 § 1, 1980; Ord. 374 § 5, 1973).

#### **12.08.040 Overhead facilities – Relocation time limit.**

Prior to the completion of the installation of such underground electric, telephone, or TV cable distribution facilities, the city shall notify the property owners of the time within which the relocation of overhead to underground facilities must be accomplished in order to continue to

enjoy the right to receive electric, telephone, or TV cable utility service in accordance with the applicable tariff rules and regulations on file with the Washington Utilities & Transportation Commission. (Ord. 374 § 6, 1973).

**12.08.050 Right to receive services.**

On and after the time established by the city, the right to continue to receive utility services shall be conditioned upon the removal of such overhead facilities. (Ord. 374 § 7, 1973).

**12.08.060 Determination of obligations.**

The obligations of the persons receiving electrical, telephone, or TV cable service, and the obligation of the utilities involved with respect to the cost of relocating such utility shall be as provided by ordinance of the city and the applicable tariff rules and regulations of the respective utilities as filed with the Washington Utilities & Transportation Commission. (Ord. 374 § 8, 1973).

**12.08.070 Property owner's responsibility – Relocation.**

Subject to the aforesaid tariff rules and regulations, it shall be the property owner's responsibility to provide all necessary labor and materials for any necessary rewiring and physical relocation of the existing facilities between the primary location and the point at which secondary service is received on the customer's premises. The property owner shall also provide necessary occupancy rights for pad-mounted transformers necessary for the furnishing of such utilities that are subject to the tariff rules and regulations filed with the Washington Utilities & Transportation Commission. (Ord. 374 § 9, 1973).

**12.08.080 Authority to order disconnection, removal.**

The director of public works will have the authority to order the disconnection and removal of any and all overhead electrical, telephone, and TV cable utility service supplying utility service to noncomplying property owners. (Ord. 500 § 2, 1980; Ord. 374 § 10, 1973).

**12.08.090 Violation – Penalty.**

Any violation of this chapter shall be remedied based on the provisions as set forth in NBMC 20.10.100. (Ord. 1088 § 3 (part), 1999; Ord. 374 § 11, 1973).

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<sup>1</sup>For statutory provisions authorizing cities to acquire and operate utilities, see RCW 35.92.050; for the provision authorizing first class cities to regulate the use of electricity upon public streets, see RCW 35.22.280(7); for provisions authorizing first class cities to determine what work shall be done and who shall bear the cost, see RCW 35.22.280 (13).

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**The North Bend Municipal Code is current through Ordinance 1574, passed December 8, 2015.**  
Disclaimer: The City Clerk's Office has the official version of the North Bend Municipal Code. Users should contact the City Clerk's Office for ordinances passed subsequent to the ordinance cited above.

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Existing Code

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**Chapter 19.06  
DESIGN AND CONSTRUCTION STANDARDS FOR ELECTRICAL AND STREET  
LIGHTING**

**Sections:**

19.06.010 Generally.

19.06.020 Street lighting specifications.

**19.06.010 Generally.**

A. All new wiring for any utilities shall be buried with pad-mounted transformers, unless exempted pursuant to subsection B of this section. Design and installation of the system shall be done by the franchise utility company. Design shall be submitted to the city engineer for review prior to installation.

B. Burying new wiring shall not be required in the following circumstances:

1. There is existing overhead wiring;
2. The aboveground wiring is located within an existing city street right-of-way;
3. The existing aboveground wiring is not an immediate threat to the public health, safety and welfare;
4. The existing aboveground wiring is being relocated solely for the purpose of allowing the maintenance, repair or reconstruction of an existing city street. (Ord. 972 § 1, 1995; Ord. 720 § 57, 1987).

**19.06.020 Street lighting specifications.**

Street lighting shall be provided using either mercury vapor, metal halide or sodium fixtures, mounted on poles. Poles designed specifically and exclusively for street lighting shall be break-away type. System shall be designed to provide a minimum light intensity of 0.04 footcandles within street rights-of-way. (Ord. 720 § 58, 1987).

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Existing Code

Ex. B Exhibit B P. 4 of 4

**Chapter 19.07  
DESIGN AND CONSTRUCTION STANDARDS FOR UNDERGROUND CABLE  
TELEVISION CONDUITS**

**Sections:**

- 19.07.010 Undergrounding of conduits.  
19.07.020 Liability for costs.  
19.07.030 Installation standards – City engineer approval.

**19.07.010 Undergrounding of conduits.**

When a developer and/or landowner extends basic utilities to serve a building site, cable television conduits shall be laid underground at the same time as those other basic utilities. This will include only the conduits needed for street crossings and for mainline distributions of cable television to each building site throughout any proposed development. All conduit ends shall be brought to each building site property line, elbowed to the final ground elevation and capped. If the proposed development site is for multiple-family occupancy, then the conduit shall be so laid and be of sufficient dimension to ensure that cable television service may be connected to each of the proposed living units. In addition, the cable television conduit shall be extended across the proposed development and/or building site to the next property line to ensure availability of hookup to the next lot and/or building site. The conduit shall be of sufficient size and dimension to accommodate the projected maximum numbers of users for the line, such projection to be made by the city engineer. (Ord. 720 § 60, 1987).

**19.07.020 Liability for costs.**

The developer and/or landowner shall pay the costs required to install such cable television conduit to each individual property line, including conduit, trenching and easements; provided, the costs of extending the cable television conduit across the frontage of the build-site or development to the next property line shall be eligible for latecomer's agreement as in the case of the extension of other utilities. (Ord. 720 § 61, 1987).

**19.07.030 Installation standards – City engineer approval.**

All conduits shall be installed in accordance with industry standards for cable television conduits and shall be subject to the approval of the city engineer. (Ord. 720 § 62, 1987).

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March 24, 2016

**Via Email**

Mike McCarty  
Senior Planner  
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**Re: Comments to Proposed NBMC Chapter 19.06**

Dear Mr. McCarty:

Pursuant to the "Notice of SEPA Determination of Nonsignificance (DNS) and Public Hearing," requesting written comments to Proposed NBMC Chapter 19.06 by 4:30 p.m. on March 24, 2016, please accept these comments submitted on behalf of CenturyTel of Washington, Inc. d/b/a CenturyLink.

CenturyLink's primary concern with the existing and proposed City ordinances is the extent to which they appear to conflict with existing rights held by CenturyLink and other telecommunications companies pursuant to state law. Although the City has a right to impose certain requirements deriving from its local zoning and police powers, those laws cannot "conflict with federal or state laws, rules, or regulations that specifically apply to the design, construction, and operation of facilities." RCW 35.99.040.

All telecommunications companies have the right to "erect poles...for supporting the insulators, wires and other necessary fixtures of their lines." RCW 80.36.040. Pole infrastructure is the most cost-effective, proven, and efficient method of deploying a wireline utility network and CenturyLink relies upon this state right to reach customers throughout the City and beyond.

The City's code is directly in conflict with these state rights. **NBMC 19.06.010** sets forth the City's preference that "all new and existing" utility facilities "be installed underground." **NBMC 19.06.020** requires "that all new facilities ...be installed underground." These code provisions are overbroad and conflict with the RCW, which specifically allows for poles to be built and maintained and indicates that poles do not inherently create a health or safety risk.

CenturyLink is further concerned with **NBMC 19.06.060**, which requires relocation to underground of facilities where necessitated by "major publicly-funded street improvements."

This code provision is silent regarding state law, which requires that a pole-owning utility must be reimbursed by the City for the incremental costs of burying facilities. See RCW 35.99.060(3)(b). Further, if those street improvements are undertaken with the primary goal of beautification or aesthetics, the City is required to pay the full cost of that relocation. See RCW 35.99.060(3)(c). Also, where street improvements are caused by a private development, the third party beneficiary is required to bear such costs. See RCW 35.99.060(4). Nowhere does the NBMC reflect these legal requirements, raising the likelihood of dispute in the future.

CenturyLink supports inclusion and expansion of subsection (C) in the proposed NBMC 19.06.060, which the City Administrator has suggested be struck. Utilities need a process to appeal from undergrounding demands that cause unnecessary hardship or are unlawful. Although cost is one such burden of relocation, another example arises where existing easements permit only aerial (pole) facilities. The NBMC provides that landowners shall provide an easement for certain facilities, but it does nothing to ensure that easements can be obtained at a fair price (if at all) for burial of all facilities.

In subsection (D), CenturyLink opposes a hard and fast 90-day timeframe to relocate facilities underground. Major relocations take considerable time, and require considerable planning to avoid harm to service, including 911. As noted above, easements may be difficult or impossible to obtain. Delays caused by other utilities or the City also can increase the time to complete any project. CenturyLink would prefer the City give reasonable timeframes to relocate that are based upon the totality of the circumstances (and an opportunity to challenge the request in subsection (C) above).

\* \* \*

We hope that the City will consider CenturyLink's concerns by revising its draft code provision in accordance with state law, including provisions that make clear that installation of poles is permissible, and that relocation or undergrounding of facilities is not always at utility cost. Thank you.

Sincerely,



Eric J. Schwalb

cc: Brad Hodges, CenturyLink Supervisor Area Plant  
Tina Colvin, CenturyLink Network Paralegal

**Mike McCarty**

---

**From:** Nicholas, Rebecca A <rebecca.nicholas@pse.com>  
**Sent:** Friday, March 18, 2016 11:20 AM  
**To:** Mike McCarty  
**Subject:** RE: City of North Bend Franchise Utilities Regulations Amendments  
**Attachments:** New NBMC 19 06 Franchise Utilities and Street Lighting-KR comments.rtf

Hello Mike, here are the suggested edits from PSE Standards.

This is the link for relocation for Municipal relocations. It talks about acceptable systems that can be undergrounded.

[http://pse.com/aboutpse/Rates/Documents/elec\\_sch\\_074.pdf](http://pse.com/aboutpse/Rates/Documents/elec_sch_074.pdf)

19.06.060 D, Relocation Time Limit; You may consider "Force Majeure" language since there may be instances 90 days is not enough due to (for us) storms, etc.

I will forward your voice message to Jeremy about billing the lighting systems.

Have a good weekend

Becky

*Rebecca Nicholas  
Puget Sound Energy  
Municipal Liaison Manager  
206-716-2716  
6500 Ursula Place S  
Seattle, WA 98108  
[rebecca.nicholas@pse.com](mailto:rebecca.nicholas@pse.com)*

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**From:** Mike McCarty [<mailto:MMCCARTY@NORTHBENDWA.GOV>]  
**Sent:** Thursday, March 17, 2016 10:34 AM  
**To:** 'bradley.hodges@centurylink.com'; 'terry\_davis@cable.comcast.com'; 'steve@tannerelectric.coop'; Nicholas, Rebecca A  
**Cc:** Gina Estep; Mark Rigos  
**Subject:** RE: City of North Bend Franchise Utilities Regulations Amendments

Franchise Utility Providers,

I want to provide you with some minor updates that we have added to our earlier draft that I sent you on March 8. Note that the entire document is a new draft, but the language that has been shown in redline format is what has been added since I last sent this to you on March 8. If you haven't already started your comments to me, please use this version. Also, I need to have the staff report and updated regulations to the Planning Commission by tomorrow morning, so if you have any comments or suggested edits that you would like the City to consider and include in the Planning Commission packet, please provide those to me by tomorrow morning.

Thank you again!  
Mike

**Mike McCarty**

Senior Planner  
City of North Bend Community and Economic Development  
PO Box 896  
North Bend, WA 98045  
phone: (425) 888-7649  
fax: (425) 888-5636



---

**From:** Mike McCarty  
**Sent:** Tuesday, March 08, 2016 4:34 PM  
**To:** 'bradley.hodges@centurylink.com'; 'terry\_davis@cable.comcast.com'; 'steve@tannerelectric.coop'; 'Nicholas, Rebecca A'  
**Cc:** Gina Estep; Mark Rigos  
**Subject:** City of North Bend Franchise Utilities Regulations Amendments

Franchise Utility Providers to North Bend,  
The City of North Bend is updating our regulations pertaining to Franchise Utilities, including electricity, communications, gas, street lighting, and cable television. Attached you will find a notice of SEPA Determination of Non-Significance and Public Hearing for the amendments, a staff report to the Planning Commission, and the proposed draft regulations. At the back of the staff report you will also find the existing code sections for comparison, should you wish.

I have also added a word-version of the draft that contains additional proposed code language addressing the triggers for when undergrounding existing overhead utilities is required, as that section was not provided in the staff report. We would appreciate your review and comment on these draft amendments. Any suggested redline/track changes edits you may wish to provide in the word-draft would also be appreciated.

We have a public hearing on this topic at the March 24, 2016 Planning Commission Meeting, 7pm at City Hall. Thank you in advance for your review, and we would appreciate any comments you may offer.

Sincerely,  
Mike

**Mike McCarty**  
Senior Planner  
City of North Bend Community and Economic Development  
PO Box 896  
North Bend, WA 98045  
phone: (425) 888-7649  
fax: (425) 888-5636



PSE Redline edits (shown in blue)

**NBMC Chapter 12.08 Overhead Utility lines**

NBMC Chapter 12.08 shall be repealed in its entirety. The contents of this chapter have been incorporated into the update to Chapter 19.06 as provided below.

**NBMC Chapter 19.07 Design and Construction Standards for Underground Cable Television Conduits**

NBMC Chapter 19.07 shall be repealed in its entirety. The contents of this chapter has been incorporated into the update to Chapter 19.06 as provided below.

**NBMC 19.06 Design and Construction Standards for Electrical and Street Lighting**

The existing NBMC Chapter 19.06 *Design and Construction Standards for Electrical and Street Lighting* shall be replaced with the following:

**NBMC Chapter 19.06  
FRANCHISE UTILITIES AND STREET LIGHTING**

Sections:

- 19.06.010 Application of Chapter
- 19.06.020 Purpose
- 19.06.030 Public Works Standards
- 19.06.040 Definitions
- 19.06.050 New Utilities
- 19.06.060 Undergrounding of Existing Overhead Utilities
- 19.06.070 Placement of Underground Cable Television Conduits
- 19.06.080 Liability for costs.
- 19.06.090 Installation – City engineer approval.
- 19.06.100 Street lighting

**19.06.010 Application of Chapter**

The provisions of this chapter shall apply to all new and existing franchise utility systems including, but not limited to, electrical (including street lighting), gas, communications, and all other franchise utilities, except for Major Utility Facilities as defined and regulated under NBMC Title 18.

**19.06.020 Purpose**

The purpose of this chapter is to establish minimum requirements for the underground installation and relocation of franchise utilities within the City. It is further the policy of the City to require the underground installation of all new and existing franchise utilities. The City finds that the health, safety, and general welfare of the residents of the community require that all new facilities specified in this chapter be installed underground.

**19.06.030 Public Works Standards**

# PSE Redline Edits (in blue)

This chapter provides minimum requirements for franchise utilities and street lighting. Detailed standards and technical specifications pertaining to construction and installation of these facilities are found in the City's Public Works Standards.

## 19.06.040 Definitions

Unless otherwise specified below, definitions shall be as provided under NBMC Title 18, Zoning.

**A.** Electrical distribution facilities include those electrical utility facilities lines and equipment operating between 120 and 35,000 volts that transfer electrical power from substations along local wiring provide direct service to customers.

**B.** Electrical transmission facilities include those electrical utility facilities that transfer electrical powerlines and equipment operating above 35,000 volts transmitting power from generating stations to substations.

**B.** ~~The terms #~~ New development or redevelopment for purposes of this section include any one of the following conditions;

~~A.~~ 1. A land use or building permit for a new building or land use where frontage improvements are required; or

~~B.~~ 2. A building permit for a project where the cost of construction equals or exceeds 50 percent of the assessed value of the existing structure on site, excluding interior remodel of existing single family residential structures and auxiliary buildings; ~~or.~~

**Comment [KCR1]:** This is further described under NBMC Title 18, definitions.

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## 19.06.050 New Utilities

All new franchise utility facilities installed for new development or redevelopment shall be placed underground, with the following exceptions:

**A.** Electrical transmission facilities.

**B.** Wireless Communication Facilities (see applicable code section).

**C.** Accessory franchise utility facilities less than 36 inches in height such as meters, junction boxes, transformers, and the like, when placed at least 5 feet from the edge of sidewalk, pavement edge or back of ditch and screened with landscaping compliant with franchise utility standards.

**D.** Accessory franchise utility facilities greater than 36 inches in height, when located within a building or placed in a non-prominent location on the side or rear of the building or at least 30 feet from the right of way or other public areas, and located behind a minimum of five feet of Type 1 landscaping pursuant to Chapter 18.18 NBMC and franchise utility standards.

**Comment [KCR2]:** This statement works for large transformers but I am concerned about padmounted switchgear that is typically installed during Sch 74 conversions or in conjunction with high-density mixed use development. PSE switches serve multiple blocks of customers and are critical to electric operations during emergency restoration – We would rather they be treated differently than transformers and allowed in more prominent areas (such as 10' from ROW) for ease of identification and access. The quantity of switches PSE installs is much lower than the quantity of transformers so the aesthetic impact is not as large to locate our switches closer to the ROW.

**Comment [KCR3]:** [http://pse.com/safety/Tree-Trimming/Documents/1225\\_energy\\_landscaping.pdf](http://pse.com/safety/Tree-Trimming/Documents/1225_energy_landscaping.pdf)

PSE Electric Standards is also developing a screening practices standard for padmount equipment.

**Comment [MM4]:** Auburn provides this threshold. Do we want the same thing?????

**Comment [KCR5]:** Since distribution facilities are already defined per 19.06.040 A, describing the voltage of the facility seems redundant.

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## 19.06.060 Undergrounding of Existing Overhead Utilities

**A.** Undergrounding with New Development or Redevelopment. Existing aboveground wiring and related equipment for electrical distribution facilities, less than 15,000 volts, communication facilities, and other purposes, except for wireless communication facilities, transformers, vaults, junction boxes and the like, shall be relocated underground along the property frontage when the development or redevelopment requires a subdivision or short subdivision pursuant to NBMC 17.12, a binding site plan pursuant to NBMC 17.20, or site plan approval pursuant to NBMC 18.14, except when either any of the following circumstances apply:

1. The right-of-way frontage of the new development or redevelopment is less than 150 feet in width along the frontage containing the aboveground wiring, and

a. the new development or redevelopment does not require relocation of the existing aboveground wiring to accommodate the required site or street frontage improvements; or

b. ~~The right of way frontage of the new development or redevelopment is less than 150 feet in width along the frontage containing the aboveground wiring and~~ the city engineer determines that the undergrounding of the portion of the existing aboveground wiring along the development or redevelopment's street frontage would require undergrounding portions of the existing of the existing aboveground wiring beyond the development's

# PSE redline edits (in blue)

street frontage, unless such additional undergrounding is no more than 50 feet beyond the property line on either end of the street frontage to connect to logical points of the existing utility system; or:

2. When the total cost of undergrounding is greater than two and one-half percent of the valuation of the new development or redevelopment, as determined by the summation of the valuation on all required development permits.

**Comment [MM6]:** This section comes out of the Woodinville Code.

2.3. Where undergrounding is not required for a new development or redevelopment under one of the above exemptions and street frontage improvements are required, the applicant shall provide conduit within the street frontage improvements for the future undergrounding of the above ground wiring.

**Comment [MM7]:** Per Planning Commission recommendation.

### B. Undergrounding with Publicly-Funded Street Improvements.

As major publicly-funded street improvements are undertaken within the City and where such programs require electrical, telephone or TV cable distribution facilities relocation, such facilities shall be relocated underground, unless exempted by action of the City Council.

**Comment [MM8]:** This is a combination of 12.08.006 and 12.08.010.

### ~~C. Continued Use Application.~~

~~Application may be made to the Public Works Director for permission to continue the use of any overhead electrical, telephone, or TV cable distribution facilities adjacent to an underground facility, when the enforcement of the terms of this chapter would cause unnecessary hardship. Appeal from the decision of the Public Works Director may be made to the City Council, subject to filing said appeal shall within 20 days of the written decision of the Public Works Director.—~~

**Comment [MM9]:** Existing 12.08.030. Proposed for deletion per City Administrator suggestion, as too vague. This is proposed for replacement with the exemption under A.2 above.

### D. Relocation Time Limit.

As overhead franchise utility facilities are relocated underground, the applicant shall have all overhead connections undergrounded and shall connect to the new underground facilities within 90 days of the date of undergrounding completion. In addition, the cable television conduit shall be extended across the proposed development and/or building site to the next property line to ensure availability of hookup to the next lot and/or building site. The conduit shall be of sufficient size and dimension to accommodate the projected maximum numbers of users for the line, such projection to be made by the city engineer.

**Comment [MM10]:** Replaces existing 12.08.040.

### 19.06.070 Placement of Underground Cable Television Conduits

When an applicant and/or landowner extends basic utilities to serve a building site, cable television conduits shall be laid underground at the same time as those other basic utilities. This will include only the conduits needed for street crossings and for mainline distributions of cable television to each building site throughout any proposed development. All conduit ends shall be brought to each building site property line, elbowed to the final ground elevation and capped. If the proposed development site is for multiple-family occupancy, then the conduit shall be so laid and be of sufficient dimension to ensure that cable television service may be connected to each of the proposed living units.

**Comment [MM11]:** Existing 19.07.010

### 19.06.080 Liability for costs

The applicant and/or landowner shall pay the costs required for the franchise utility provider to install or underground the utilities, including removal of the existing overhead facilities if required, and install conduit to each individual property line, including conduit, trenching and easements; provided, the costs of extending the utilities and conduit across the frontage of the build-site or development to the next property line shall be eligible for latecomer's agreement.

**Comment [MM12]:** Amends existing 19.07.020

### 19.06.090 Installation – City engineer approval

**Comment [MM13]:** Amends existing 19.07.030.

PSE edits (in blue)

Design and installation of new and relocated utilities shall be done by the franchise utility company. All work shall be installed in accordance with industry standards for the associated utility and shall be subject to the approval of the city engineer. The applicant and/or landowner shall provide necessary occupancy rights and easements for the pad-mounted transformers and other accessory facilities necessary for the furnishing of such utilities.

**19.06.100 Street lighting**

**A. When required.**

When a development or redevelopment requires a subdivision or short subdivision pursuant to NBMC 17.12, a binding site plan pursuant to NBMC 17.20, or site plan approval pursuant to NBMC 18.14, the applicant shall provide street lighting within existing and new public rights-of-way in accordance with these standards, if existing street lighting is not already provided.

**Comment [MM14]:** Existing code does not specify what projects trigger street lighting.

**B. Ownership.**

1. Public street lights. Street lights within public rights-of-way shall be owned by the City or Franchise Utility Provider, or as otherwise determined through utility franchise agreements.

**Comment [MM15]:** PSE proposes to convert all to they will take maintenance responsibility from City if they maintain ownership.

2. Private street lights. Street lights on or along private alleys, roads or streets, on private property, or not otherwise within a public right-of-way, shall be privately owned and operated.

**C. Energy conservation lighting fixtures.**

All new street lighting fixtures shall utilize LED bulbs, or other equivalent best available technology that reduces energy consumption.

**D. Minimum lighting requirements.**

Street lighting shall be provided at all intersections within and abutting the development, at the end of dead-end streets containing more than three homes, at the apex of sharp curves, and in any additional areas where determined necessary for safety by the Public Works Director, such as crosswalks. Street lighting shall utilize full cut-off fixtures to minimize glare, except in the downtown core on North Bend Way (between the South Fork Snoqualmie River and the Cedar Falls Way roundabout), Bendigo Boulevard, and Downing Avenue as necessary to match existing decorative street lighting globes. The

**Comment [MM16]:** Replaces existing 19.06.020. Specifies minimum requirement that lighting required at intersections, corners and dead ends, rather than broadly throughout a development. This is a policy decision on lighting levels desired. Also now specifies full-cutoff requirement to minimize glare.

Street lighting shall be designed to provide a minimum light intensity at intersections as specified in the table below, or greater when determined necessary for safety by the Public Works Director. Detailed construction and facility street lighting specifications are provided in the Public Works Standards.

**Comment [MM17]:** Per CED Committee recommendation.

Street Classification	Average Lighting
	Foot-Candles in areas where lighting is required
Arterial	0.6
Collector	0.4
Local Access/Half-Street	0.4

PSE edits (in blue)

**19.06.110 Existing City franchises not affected.**

This chapter shall not affect or waive any right or obligation of a City franchise for use of the City right-of-way, and shall be applied consistent with any applicable tariffs and regulations of the Washington Utilities and Transportation Commission. If a provision of this chapter conflicts with a provision of a franchise agreement or ordinance, the provision of the franchise agreement or ordinance shall control.

**Mike McCarty**

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**From:** Michel, Jeremy <Jeremy.Michel@pse.com>  
**Sent:** Thursday, March 31, 2016 10:23 AM  
**To:** Mike McCarty  
**Cc:** Nicholas, Rebecca A; Gina Estep; James Anderson (jim@tannerelectric.coop)  
**Subject:** RE: New NBMC 19 06 Franchise Utilities and Street Lighting

Good Morning Mike,

Thanks for reaching out. I think it is wise to consider these issues while you are updating regulations. A little history should be shared. When LED street lighting technology was first introduced to municipalities and utilities, the color temperature was at 5,000K or even higher. The name of the game was mostly energy efficiency, while taking small amount of consideration to good lighting practices or what the customer wanted. Seattle City light was an early adopter and they continue to work through some of the challenges of their 5,000K lighting system. PSE was cautious about early adoption and we worked at length with our manufacturers and customers for several years with multiple test sites around our region. There was much to consider and a wide range of voices to be heard. Just a few years ago PSE began installing roadway lighting at 4,000K color temperature. The street lighting industry generally follows Recommended Lighting Practices established by the Illuminating Engineering Society (IES). These Recommended practices are developed through various committees and include technical members from across the US. All of our customers aim to light to minimum footcandle recommendations based on IES published ANSI/IES RP-8-14. We work closely with IES as PSE has 2 members serving on IES committees. IES and PSE work well to comply with Dark Sky Association recommendations and has for years. By practice, PSE installs Dark Sky Association compliant full cut off fixtures for municipal roadway lighting (GE Evolve Cobra Head Fixtures) at 4,000K color temperature. Generally speaking most street light providers have established 4K as their sweet spot between energy efficiency and lumen output while providing the light customers want.

PSE is able to install decorative, residential, in-plat lighting products at 3,000K color temperature and some of our municipalities are able to offer that for builders to install in plat, local classification roadways. PSE has a variety of decorative (post top, pendant mount) fixtures available in 3,000K color temperature. The City of Duvall has selected the Holophane Granville fixture at 3,000K as their in-plat standard. They did this while keeping collector and major roadway classifications to be illuminated at 4,000K color temperature.

In my opinion, I would not suggest limiting the product offered for the City. I don't think it in the best interest of good lighting practices or for the ongoing growth of North Bend. No one knows what the next street lighting technology will be and I don't recommend writing your regulations on a technology and industry that is shifting and driving to excellence, ie through better chips, drivers, etc. There would be challenges with limited product offering as well as it is PSE standard practice to install roadway lighting at 4,000K .

I would be happy to discuss further if you'd like. Feel free to give me a call directly at 425-462-3363.

Regards,  
Jeremy

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**From:** Mike McCarty [mailto:MMCCARTY@NORTHBENDWA.GOV]  
**Sent:** Wednesday, March 30, 2016 3:00 PM  
**To:** Michel, Jeremy; James Anderson (jim@tannerelectric.coop)  
**Cc:** Nicholas, Rebecca A; Gina Estep  
**Subject:** RE: New NBMC 19 06 Franchise Utilities and Street Lighting

Hi Jeremy and Jim,

As you are aware, the City of North Bend is updating our Franchise Utilities and Street Lighting Regulations. Regarding street lighting, our Planning Commission is interested to address color temperature with new fixtures (particularly with LED bulbs typically having a harsh blue-white color temperature) to further reduce glare and provide dark-sky protection. The International Dark Sky Association (IDA) provides a Fixture Seal of Approval program that requires certified lights to have a listed correlated color temperature configuration of 3,000K and lower (up to 3,220K actual measured value – ANSI C78.377). See information from their website at the following: <http://darksky.org/fsa/>

In your opinion, would it be reasonable for the City of North Bend to require new streetlights be IDA Fixture Seal of Approval certified, or otherwise require this maximum color temperature configuration? It seems like a good idea, but I'm not familiar with this program, and whether it would limit lighting fixtures to only a few manufacturers, and/or result in very costly lighting. Please let me know if you are familiar with this program, and if you have suggestions. Similarly, would it possible to simply use an amber-colored lens below the actual bulb to achieve the same result?

Thank you,  
Mike

**Mike McCarty**

Senior Planner  
City of North Bend Community and Economic Development  
PO Box 896  
North Bend, WA 98045  
phone: (425) 888-7649  
fax: (425) 888-5636



---

**From:** Michel, Jeremy [<mailto:Jeremy.Michel@pse.com>]  
**Sent:** Thursday, March 17, 2016 1:59 PM  
**To:** Mike McCarty  
**Cc:** Nicholas, Rebecca A  
**Subject:** RE: New NBMC 19 06 Franchise Utilities and Street Lighting

Hi Mike,

The terminology allows for the City OR franchise utility to own and maintain lights in the City of North Bend ROW, so it looks good to me. I suggest the edits below in yellow, to the updates you've already done. I suggest adding "fixtures" instead of lamps as lamps are old technology. The LED diodes/chips are part of the fixture- No lamps needed. And I would add "sufficient lumen output" as that's the original lighting objective, while reducing energy consumption. I've seen where a municipality will lose sight of meeting the original lighting need in effort to save money.

C. Energy conservation lighting fixtures.

All new street lighting fixtures shall utilize LED fixtures, or other equivalent best available technology that produces sufficient lumen output while reduces energy consumption.

If you need any further street lighting input, don't hesitate to reach out.

Thank you,  
Jeremy

**From:** Mike McCarty [<mailto:MMCCARTY@NORTHBENDWA.GOV>]  
**Sent:** Thursday, March 17, 2016 10:29 AM  
**To:** Michel, Jeremy  
**Subject:** New NBMC 19 06 Franchise Utilities and Street Lighting

Jeremy,  
Thank you very much for the phone conversation. I'm providing you the current draft of our franchise utilities regulations, and would appreciate any comments that you might have.

Sincerely,  
Mike

**Mike McCarty**  
Senior Planner  
City of North Bend Community and Economic Development  
PO Box 896  
North Bend, WA 98045  
phone: (425) 888-7649  
fax: (425) 888-5636



**Mike McCarty**

---

**From:** Jim Anderson <jim@tannerelectric.coop>  
**Sent:** Monday, April 04, 2016 8:54 AM  
**To:** Mike McCarty  
**Cc:** Gina Estep  
**Subject:** RE: New NBMC 19 06 Franchise Utilities and Street Lighting

Hi Mike and Gina,

Sorry for the delayed response I have been out of the office until today.

I agree with Jeremy on limiting your options as new technology emerges. There has been such a large improvement in LED products in just the past year you could find yourselves having to make amendments to the Franchise Utilities and Street Lighting Regulations annually. I will be meeting with our lighting representative in Spokane next week, I will do some research on your question.

In regards to the transmission line question, I believe that other than the addition of the transmission line to the new Tanner Middle Fork Substation there will be no more lines built in this area that I know of at this time. The design of these lines can be made to be as less obtrusive as possible. Tanner will design our lines to lower the visual impact and to blend the structures into the environment as well as the lines. I will meet with you soon to go over the design of the transmission line and possible structures that will be used.

Regards, Jim

James Anderson  
Manager of Operations and Engineering  
jim@tannerelectric.coop  
425-888-0623  
425-888-5688 fax



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**From:** Mike McCarty [mailto:MMCCARTY@NORTHBENDWA.GOV]  
**Sent:** Wednesday, March 30, 2016 3:00 PM  
**To:** 'Michel, Jeremy' <Jeremy.Michel@pse.com>; Jim Anderson <jim@tannerelectric.coop>  
**Cc:** Nicholas, Rebecca A <rebecca.nicholas@pse.com>; Gina Estep <GESTEP@NORTHBENDWA.GOV>  
**Subject:** RE: New NBMC 19 06 Franchise Utilities and Street Lighting

Hi Jeremy and Jim,

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In your opinion, would it be reasonable for the City of North Bend to require new streetlights be IDA Fixture Seal of Approval certified, or otherwise require this maximum color temperature configuration? It seems like a good idea, but I'm not familiar with this program, and whether it would limit lighting fixtures to only a few manufacturers, and/or result in very costly lighting. Please let me know if you are familiar with this program, and if you have suggestions. Similarly, would it possible to simply use an amber-colored lens below the actual bulb to achieve the same result?

Thank you,

Mike

Mike McCarty

Senior Planner

City of North Bend Community and Economic Development

PO Box 896

North Bend, WA 98045

phone: (425) 888-7649

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# THE PROMISE AND CHALLENGES OF LED LIGHTING: A PRACTICAL GUIDE

A PUBLICATION OF THE  
INTERNATIONAL DARK-SKY ASSOCIATION

The light-emitting diode (LED) is transforming the way we light our cities and towns, offering a once-in-a-lifetime chance to radically improve how we use energy and our outdoor spaces at night. With this opportunity comes an obligation to manage these changes responsibly and sustainably. The stakes are high and the potential rewards great, but outcomes depend critically on policymakers and the public having access to reliable information. IDA developed this document to provide planners, lighting designers and public officials an overview of the most important aspects of LED lighting and the choices and challenges involved in its municipal implementation.

## What is LED?

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LEDs use solid-state technology to convert electricity into light. They are a variant of semiconductor devices that enable miniaturized computing devices like PCs and smartphones. Put simply, LEDs are very small light bulbs that fit into an electrical circuit. Unlike traditional incandescent bulbs, they don't have a filament that burns out and they don't get very warm.

Initially, LEDs only emitted red, yellow, or green light, but now white LEDs are widely available. Early LEDs were relatively inefficient regarding energy use and the amount of light emitted, but due to technological advances LED efficiency and light output have doubled about every three years. Because of their improved quality and lower prices, LEDs are now replacing conventional high-intensity discharge (HID) lamp types for outdoor lighting in communities around the world.

## Why Adopt This Technology?

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LEDs are very efficient at converting electrical energy to light. This means LED lighting can generate the same quantity of light for a fraction of the cost and energy usage compared to conventional lighting technologies. The use of LED lamps coupled with modern luminaire design allows for reduced illuminance without compromising safety. LEDs help lower carbon emissions by reducing the demand for energy, which is still largely produced by burning fossil fuels. Another benefit of LEDs is better control over the spectral content of light. There are many LED options available that provide accurate color rendition without emitting excessive amounts of potentially harmful blue light. (see below).

Relative to other commonly used outdoor lamps LEDs are thought to be extremely long-lived. Laboratory studies indicate lifetime ratings in the range of 25,000-100,000 hours of continuous operation, making them virtually maintenance-free. When turned on, LEDs are instantly at full brightness, unlike HID lamps that have a significant time delay. LEDs also have very low mini-

lum energy thresholds to produce light, meaning they can be dimmed to much lower illumination levels when less light is needed, resulting in further energy savings.

### **Product Selection Considerations**

Choosing LED products for outdoor lighting applications involves a series of considerations and tradeoffs. These include:

- **Luminous Efficiency (Watts-to-lumens):** How many lumens of light are produced per input Watt of electricity? More importantly, how many lumens from the light source are meeting the task (“Fixture Lumens” vs. “Lamp Lumens”)
- **Lumen Output:** How much light is produced relative to the amount required for a particular task? When replacing existing fixtures it is important to use the only level of illumination needed, and not to adopt unneeded increases in brightness.
- **Correlated Color Temperature (CCT):** Does the light have a "warm" or "cool" quality?
- **Color Rendering Index (CRI):** How accurately does the light render colors to the human eye? A high CRI is not needed for all situations. The need for good color rendition should be considered relative to the lighting application in question.
- **Adaptive Control Integration:** Does the lighting make use of adaptive controls such as dimmers, timers, and/or motion sensors? These controls are the wave of the future in outdoor lighting and achieve additional energy savings, improve light source efficacy and increase visual task performance. It is important to build in the ability to make use of adaptive controls during the adoption of designs for new lighting installations, even if they will not immediately be implemented.
- **Heat Mitigation:** Is the lamp housing designed to adequately dissipate heat? Because LED efficiency decreases with rising operating temperature, controlling heat emitted by LED lamps is critical in warm climates.
- **Lumen Depreciation:** How robust is the lamp against efficiency loss over time? Manufacturers typically quote “L70,” the expected use time until a bulb reaches 70% of its initial light output.

Closely related to all these factors is expense: How much will LED replacement solutions cost? The price of commercial LED lighting products continues to drop, and capital cost recovery times for new LED street light installations, once 10 years or more, are now typically less than five years and continue to decline. As barriers to implementation fall, LED is gaining momentum as a lighting technology of choice in new outdoor installations.

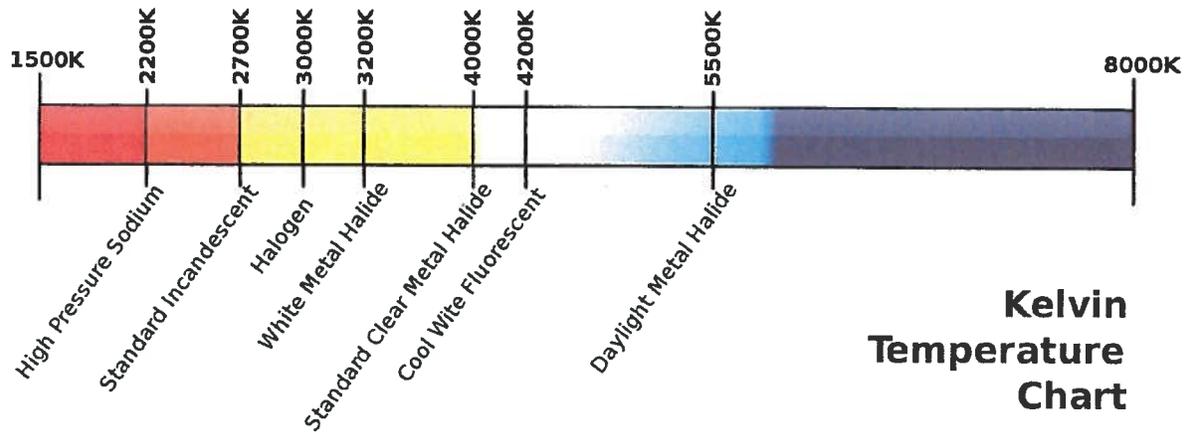
### **Blue Light Is Bad**

New technical capabilities often come with unanticipated challenges. White LED lighting often has significant levels of potentially hazardous blue light. IDA published a report<sup>1</sup> in 2010 detailing the hazards of blue-rich white light sources. In the years since, scientific evidence has solidified around its conclusions.

Outdoor lighting with high blue light content is more likely to contribute to light pollution because it has a significantly larger geographic reach than lighting with less blue light. Blue-rich

<sup>1</sup> <http://www.darksky.org/assets/documents/Reports/IDA-Blue-Rich-Light-White-Paper.pdf>

white light sources are also known to increase glare and compromise human vision, especially in the aging eye. These lights create potential road safety problems for motorists and pedestrians alike. In natural settings, blue light at night has been shown to adversely affect wildlife behavior and reproduction. This is true even in cities, which are often stopover points for migratory species.



The promise of cheaper outdoor lighting based on electricity and maintenance savings from LED conversion should be weighed against other factors, such as the blue light content of white LEDs. Blue-rich sources are the most efficient LEDs in terms of the conversion of electricity to light, and therefore have the lowest electricity cost to produce a given amount of light compared to “warmer,” less efficient white LED lamps. Every effort should be made to diminish or eliminate blue light exposure after dark.

**IDA Recommends**

There are already many white LED options now available on the outdoor lighting market and that number will only rise in the future. IDA has developed a set of recommendations for those choosing lighting systems. These suggestions will aid in the selection of lighting that is energy and cost efficient, yet ensures safety and security, protects wildlife, and promotes the goal of dark night skies. These include:

- **Always choose fully shielded fixtures** that emit no light upward
- **Use “warm-white” or filtered LEDs** (CCT < 3,000 K; S/P ratio < 1.2) to minimize blue emission
- **Look for products with adaptive controls** like dimmers, timers, and motion sensors
- **Consider dimming or turning off the lights during overnight hours**
- **Avoid the temptation to overlight** because of the higher luminous efficiency of LEDs.
- **Only light the exact space and in the amount required for particular tasks**

Learn more about outdoor lighting, blue light at night, and dark skies on the IDA website at [www.darksky.org](http://www.darksky.org).