UNIVERSITY OF ALASKA FAIRBANKS

BDS

UAF EXTERIOR LIGHTING MASTER PLAN

FINAL 9/3/2013

UAF Exterior Lighting Master Plan

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ABBREVIATIONS AND ACRONYMS

CCT	Correlated Color Temperature in degrees Kelvin
CFL	Compact Fluorescent
CRI	Color Rendering Index
FC	Footcandles
HID	High Intensity Discharge
HPS	High Pressure Sodium
IESNA	Illuminating Engineering Society of North America
IND	Induction
kWh	Kilowatt Hour
LED	Light Emitting Diode
MH	Metal Halide
W	Watts

DEFINITIONS

Ballast A device used with an electric-discharge lamp to obtain the necessary circuit conditions (voltage, current and waveform) for starting and operating.

Color Rendering Index (CRI) A measure of the degree of color shift objects undergo when illuminated by the light source as compared with those same objects when illuminated by a reference source of comparable color temperature. In other words, if a person wearing a blue jacket is standing under a light with a high CRI, the jacket will appear blue to the observer, instead of dark brown as would be the case if standing under a light with a low CRI.

Color Temperature A general expression related to the whiteness of optical radiation on a scale from warm to cool. Color temperatures over 4,000K are called cool colors (blueish white), while lower color temperatures (2,700–3,000 K) are called warm colors (yellowish white through red). For reference, a common fluorescent lamp in an office application has a color temperature of 3,500K-4,100K, while an incandescent bulb is approx. 2,700K

Footcandle The unit of illuminance when the foot is taken as the unit of length. It is the illuminance on a surface one square foot in area on which there is a uniformly distributed flux on one lumen, or the illuminance produced on a surface all points of which are at a distance on one foot from a directionally uniform point source of one candela. In general terms, footcandles are a measure of overall lighting levels in the space.

Glare The sensation produced by luminance within the visual field that is sufficiently greater than the luminance to which the eyes are adapted to cause annoyance, discomfort, or loss in visual performance and visibility.

Incandescent Light Source A light source that uses a filament that is heated to high temperature to react with gases inside a sealed bulb to create light. This type of fixture uses a lot of energy in the form of heat to produce light. The filaments and/or bulb seal deteriorate over a relatively short time period (typically 1,500 to 2,000 hours of operation) compared to other light sources such as fluorescent or LED that have a rated life in the 30,000-60,000 hour range.

Illuminance The density of the luminous flux incident on a surface; it is the quotient of the luminous flux by the area of the surface when the latter is uniformly illuminated. (RP-8-00)

LED Light emitting diode

Luminaire A light emitting appliance (i.e. light fixture) that includes the light source, reflectors, protective lens, lamps, ballast/driver, etc., complete.

Luminous Efficacy of a light source The total luminous flux emitted by a lamp divided by the total lamp power input. It is expressed in lumens per watt and is a good measure of how efficient the luminaire is.

Lux The SI unit of illuminance. 1 fc = 10 lux. See definition for footcandle.

Mesh Net Wireless Network for controlling and monitoring light fixtures via an antenna, with receiver & sender electronics installed inside of the light fixtures. Communication is accomplished with an internet connected computer or with mobile devices equipped with the lighting control application.

Mesopic Mesopic vision is a combination of photopic vision and scotopic vision in low but not quite dark lighting situations. Most night-time outdoor and traffic lighting scenarios are in the mesopic range.

System Wattage The total wattage of the lamp source and the ballast combined.

Uniformity A ratio defined as the maximum to minimum illuminance for a given area.

Visibility The quality or state of being perceivable by the eye. In many outdoor applications, visibility is sometimes defined in terms of the distance at which an object can be just perceived by the eye. In indoor and outdoor applications, it usually is defined in terms of the contrast or size of a standard test object, observed under standardized view-conditions, having the same threshold as the given object.

UAF Mission Statement

The University of Alaska Fairbanks is a Land, Sea, and Space Grant university and an international center for research, education, and the arts, emphasizing the circumpolar North and its diverse peoples. UAF integrates teaching, research, and public service as it educates students for active citizenship and prepares them for lifelong learning and careers.

UAF Core Values (UAF 2010 Strategic Plan)

7) Accountable for and efficient use of university resources

8) Promoting sustainable living in the North.

Introduction

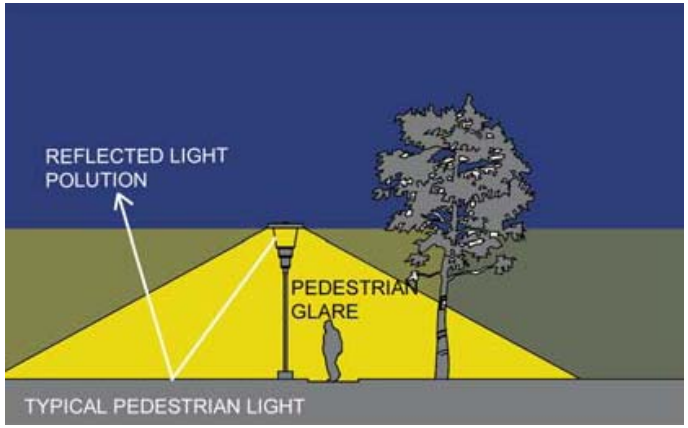
The intent of this document is to establish guidelines for exterior lighting design on the University of Alaska, Fairbanks Campus. It is a companion document to the 2010 Campus Master Plan.

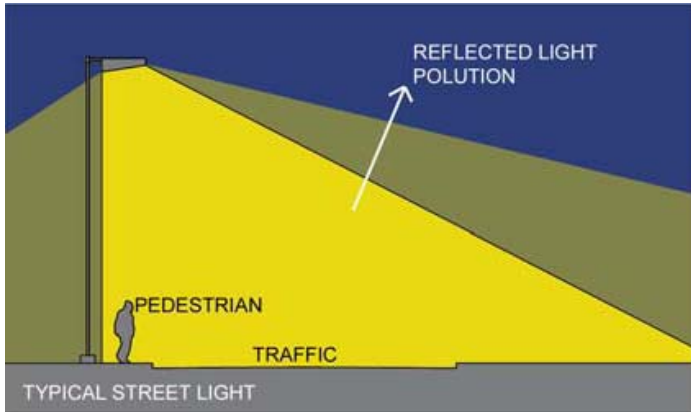
Vision

The campus master exterior lighting plan will strive to create a safe, environmentally responsible outdoor environment that supports the institutional mission at UAF. The plan seeks to utilize proven energy efficient lighting and control solutions to help reduce the carbon footprint of the university, foster a sense of responsible conservation and night sky preservation, and with public perception. The plan also endeavors to provide students with safe and comfortable outdoor environment by utilizing a common theme of well placed and shielded luminaires to provide the right amount of light for the outdoor activities.

Dynamic Document

The campus exterior lighting master plan is a dynamic document that is intended to provide design guidance for exterior artificial illumination for various typical conditions and situations on the Fairbanks Campus as it is used today. Illumination technology and controls discussed in this document are constantly changing in response to environmental concerns, advancements in manufacturing and cost issues as well as changes in user needs or activities on a specific site. However, the concepts for good lighting performance for specific situations addressed in this document are not anticipated to change much over time.





Section 1: Existing Campus Conditions

Elements of the existing campus exterior lighting system have been installed piecemeal without an Exterior Lighting Master plan. This has resulted in a non-uniform, fragmented, and visually chaotic exterior illumination system overall. The age of many luminaires and wiring systems, energy inefficiency, lighting source life spans and maintenance cost, and changing site functions provide financial and operational incentives to invest in new exterior lighting systems, modify luminaire locations and types and to manage the lighting to meet campus safety and energy conservation agendas.

Fairbanks Alaska's harsh northern climate and extended seasonal darkness has contributed to many unique design challenges and solutions over the history of development on the Campus. The use of HPS lamp sources almost exclusively was a result of other light sources not being appropriate in the extremely cold temperatures experienced in Fairbanks. Over-lighting parking lots and trails in some cases may have been well-intended solutions for the long hours of darkness during the winter, which is the most populated season for the University. Simple luminaire poles without special paint or pole bases also eased maintenance of damages after a winter season clearing snow.

Glare is an existing issue of concern that has been vocalized by residents on and off the campus grounds due to the use of expedient but crude floodlighting solutions on the sloping campus terrain and native deciduous site vegetation that does not significantly block horizontal light.

There are multiple instances where aimed building-mounted high output flood lights have been used in lieu of pole mounted roadway, parking, or pathway light luminaires. These

luminaires have contributed to the general acceptance of glare by the campus community.

In some exterior lighting circuits, the lack of a proper grounding conductor has been noted. Addressing the safety of the existing lighting systems will be a priority.

Existing Luminaires

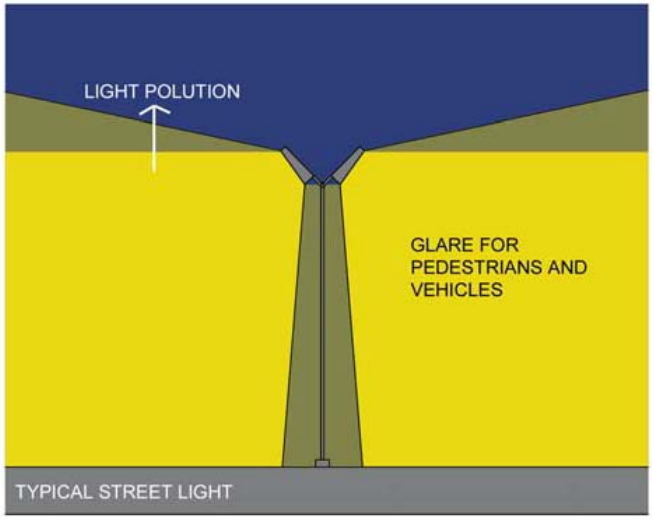
The outdoor campus lighting system is comprised of primarily High Pressure Sodium (HPS) luminaires that are either pole-mounted or building mounted. Typical findings are as follows:

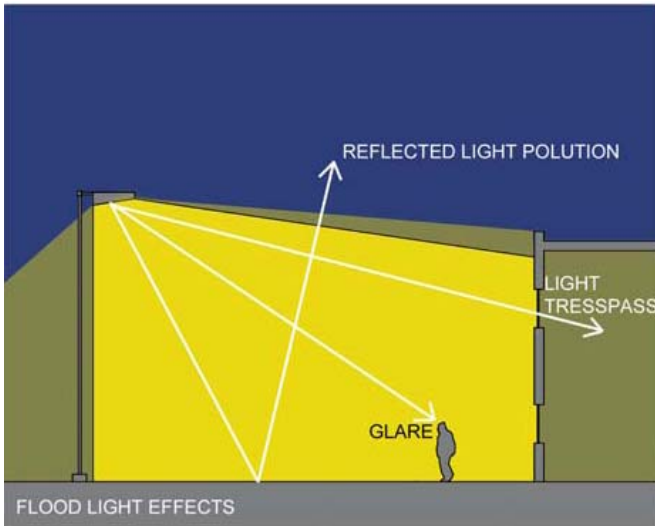
Roadways

In general, the main campus roadways are illuminated using 30'-0" tall aluminum poles with 250W HPS "cobra head" luminaires on approximately 150ft centers. Portions of Yukon Drive and Tanana Loop utilize 250W HPS floodlights on the uphill side of the road, causing glare when viewed by the lower campus residents and neighboring communities down the hill.

Parking Lots

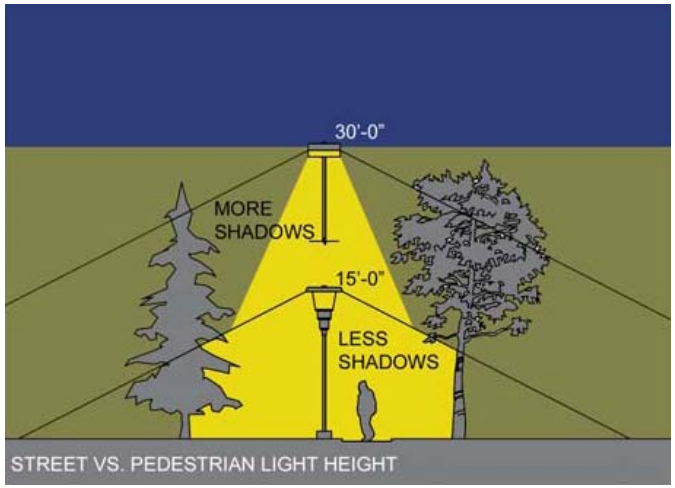
The parking areas around campus have a wide variety of luminaire types, layouts, lighting levels and uniformities. The only common theme was that they all utilized HPS lamp sources.





Sidewalks
The majority of the sidewalk lighting in the older parts of the campus were illuminated using 100W HPS “China Hat” luminaires which direct the majority of the light output in a horizontal direction.

Building Entrances and Facades
Most of the building-mounted exterior lighting consists of unshielded HPS wallpacks on building facades and recessed downlights under entrance canopies.




Typical “China Hat” luminaire utilized on campus walkways

Campus Exterior Lighting Maps

A detailed map of all existing exterior luminaires is included in Appendix A - Campus Existing Exterior Lighting Map and it illustrates the type and location of all existing luminaires that have been catalogued in the Inventory List. The maps include a unique identifier tag for each luminaire which can be used to cross reference the characteristics of each luminaire.

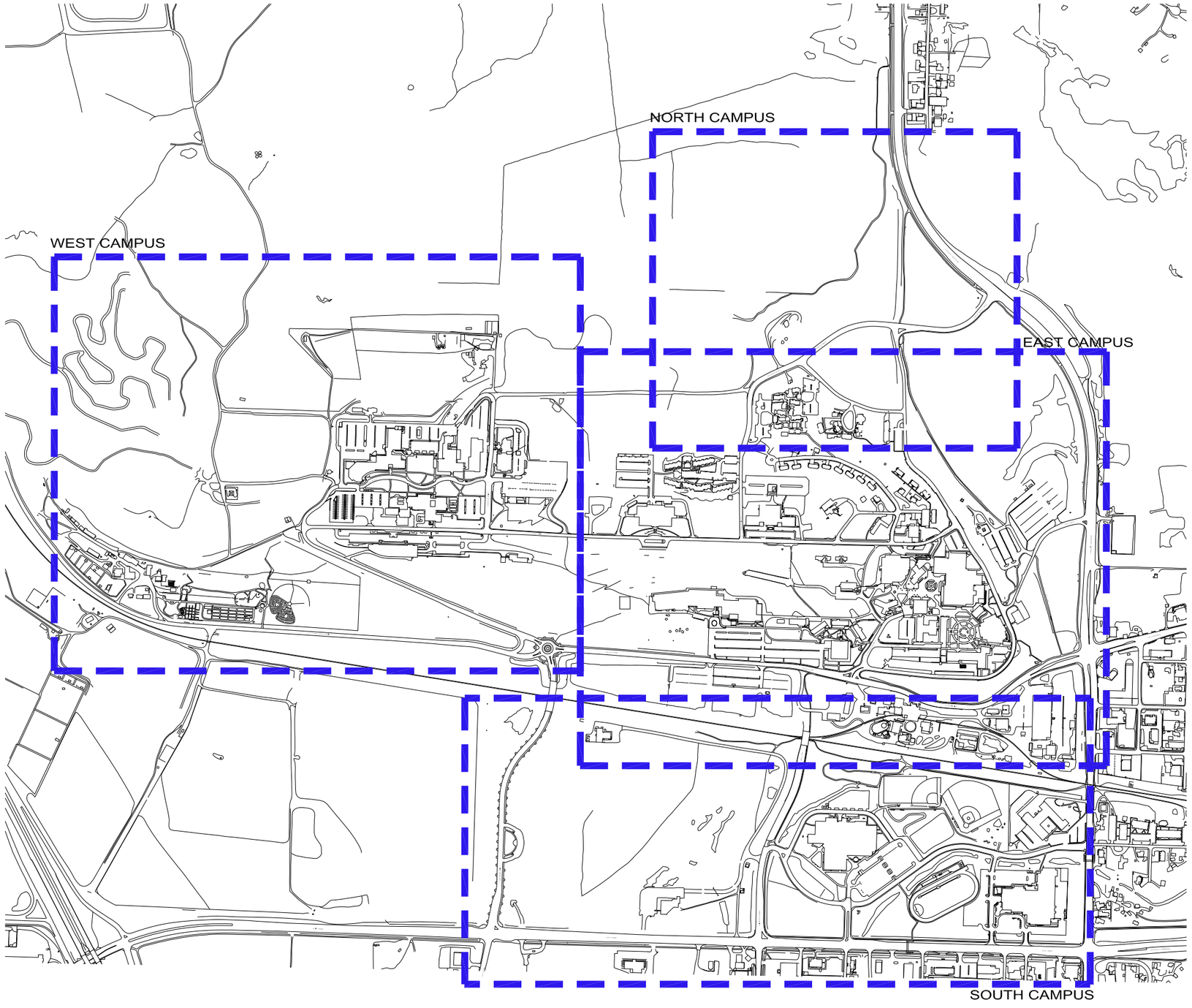
Inventory List

An updated inventory list of the exterior campus lighting is included in Appendix B – Existing Exterior Lighting Inventory List and is considered a working document. Many of the existing lamp types are unknown since it would take a manlift and extensive amount of hours to catalog every exterior light on campus and is not in the scope of this report. Where lamp types were known or assumed, they are detailed as such in the Inventory List.

The Exterior Lighting Map and Inventory included in the document was created in the Fall of 2012. These databases may no longer be up-to-date due to recent construction, luminaire damage or remedial maintenance repairs.

Typical "Shoebox" luminaire utilized in parking lots

Campus Lighting Maps



OVERALL CAMPUS MAP

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DESIGN DEVELOPMENT
DATE
SEPT 2013
LOCATION
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UAF EXTERIOR LIGHTING MASTER PLAN

EAST CAMPUS

LEGEND

EXISTING LED LIGHT

EXISTING INCANDESCENT/ METAL HALIDE LIGHT

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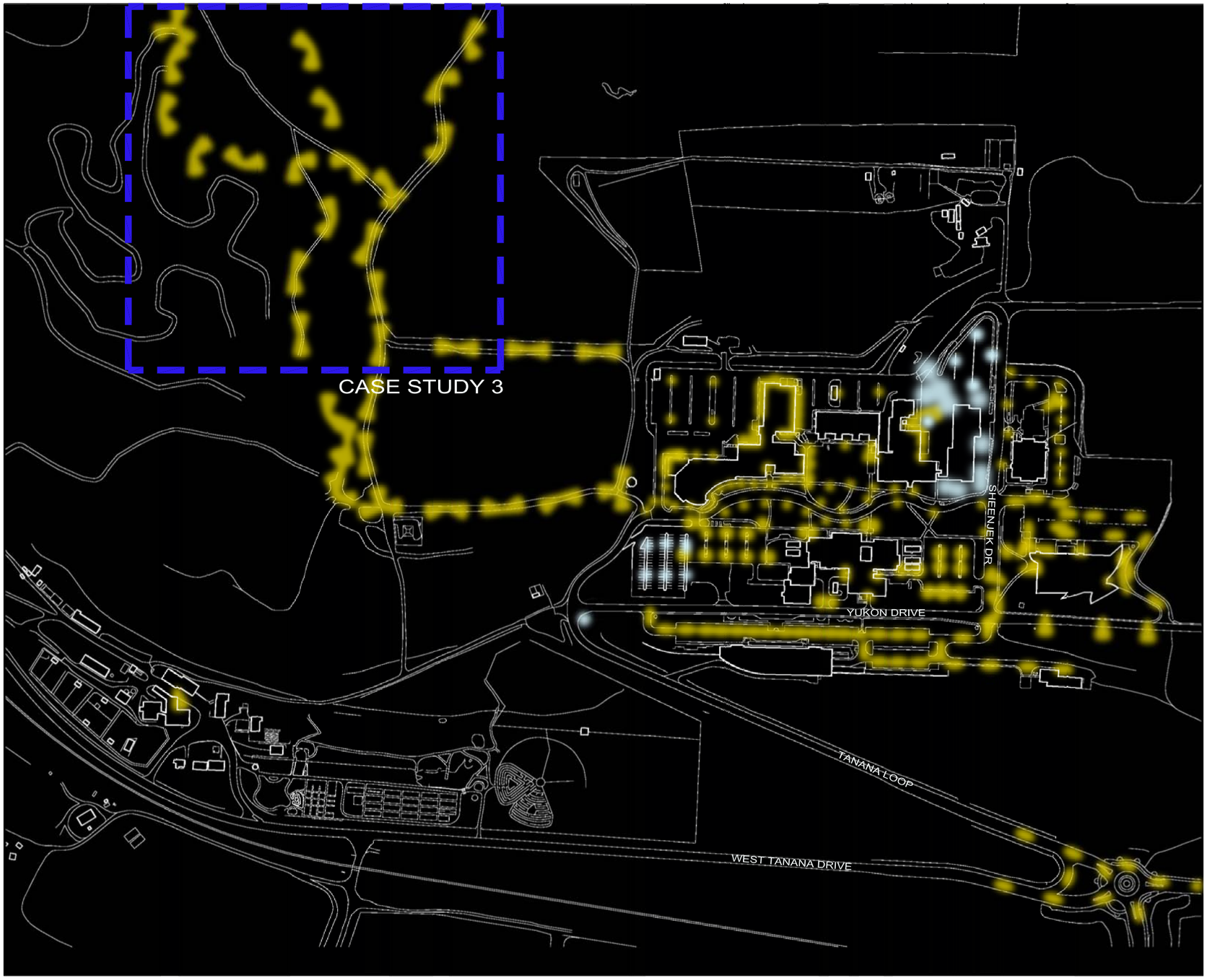

WEST CAMPUS

LEGEND

EXISTING LED LIGHT

EXISTING INCANDESCENT/ METAL HALIDE LIGHT

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LED LIGHT

EXISTING
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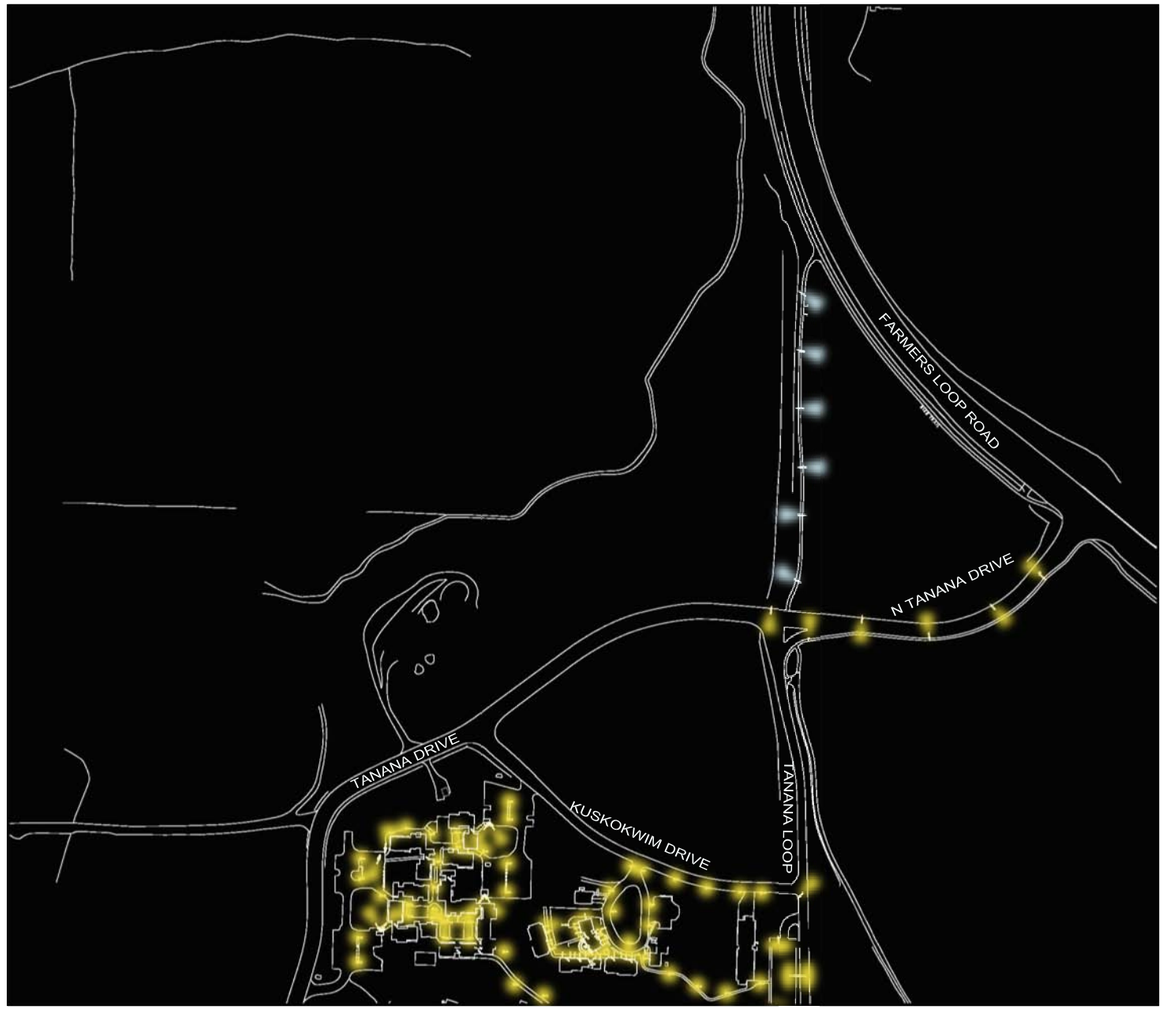

NORTH CAMPUS

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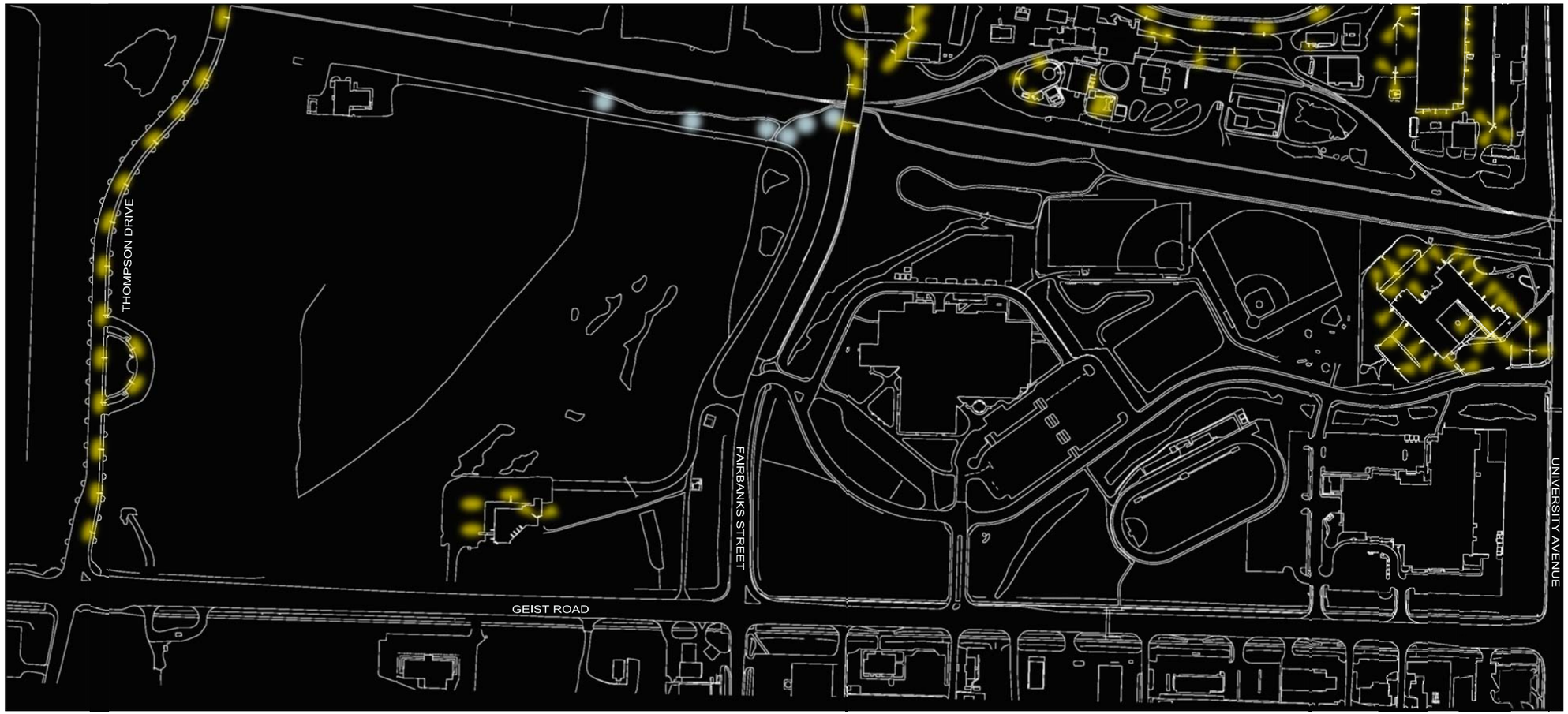

SOUTH CAMPUS

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Section 2: Campus Lighting Goals

The Exterior Master Lighting Plan should achieve the following objectives:

1. Help create the sense of a pleasant night campus community by encouraging a cohesive lighting design theme.
2. Enhance user-friendliness, safety and way-finding of the Campus for users by defining drives and pathways. Recognize that uniform lighting is often more important than the amount of lighting when establishing the sense of a safe, well-lit area.
3. Limit the range of light luminaire styles and finishes being installed during new construction or remodel/upgrade work throughout the campus for a cohesive appearance and reduce maintenance inventory and maintenance demand.
4. Enhance the night time environment by implementing white light sources.
5. Enhance energy savings by implementing campus wide energy efficient light sources and lighting controls that allow changes in intensity or shut off based on function and low activity demand.
6. Minimizing light pollution, light trespass, sky glow, and glare. Lighting designs shall first meet recognized guidelines that address safety and security, and secondly shall avoid negative impacts defined as ‘light pollution’ on the surrounding natural habitat and users.

7. Minimize possible adverse effects of man-made lighted environments on users and non-human occupants referencing latest scientific studies.
8. Implementing lighting one-for-one replacements where it makes the most sense
9. Minimize inventory and maintenance costs.
10. Utilize “legacy luminaires” sourced from companies with a track record for providing retrofit kits to repair, upgrade or renovate existing luminaires to accommodate changing lighting technology.

Overall Goals

This document will supplement UAF’s Campus Master Plan with the goal of maintaining and improving visual continuity and an overall quality of experience throughout the campus. The exterior lighting goals can be grouped into five distinct categories

- Lighting Performance
- Safety and Security
- Identity and Image
- Energy and the Environment
- Maintenance

Lighting Performance
This goal focuses on the delivery of light in a manner that provides the best visibility for pedestrians and drivers in all weather conditions by utilizing the following techniques:

- Proper subject contrast control
- Eliminating glare
- Providing proper uniformity
- High quality color rendition

Security and Security
Safety involves providing light on hazards so that they are detected with sufficient reaction time. Hazards may include pedestrian path and vehicle intersections, crosswalks, stairs, and ramps and wandering moose. The lighting system, along with other site design elements, must provide visual information to assist users to avoid accidents or loss of bearings.

Security is often referred to as the perception of safety. Providing improved security conditions involves lighting potentially hazardous locations and situations. For example, adequate lighting conditions can increase the time available for a person to change direction, find refuge, or call for help. Lighting can also act as a deterrent by increasing the visibility, and thus reducing the sense of vulnerability in an area of concern. Proper lighting can attract more people to use designated areas or trails. Higher usage may discourage undesired behavior or activities. Lighting can also assist with exterior security camera monitoring when the light source is properly aimed and located. This must be carefully considered, however, because increased light levels do not necessarily equate to increased visibility, and the glare introduced by a higher wattage light source can actually be counterproductive.

Lighting is required in many secure areas to ensure that no encroachment goes unnoticed. Most of campus does not fall into this 'secure' lighting condition; however, the security of residents on campus revolves mostly on the perception aspect of this issue

The goal for safety and security is to develop a lighting approach for the campus that integrates good visibility in a hierarchal manner, including a network of 'safe' sidewalks linking parking to the residence halls and to campus access points

Identity and Image
UAF has a unique identity and image. The lighting function and aesthetics should be designed to enhance the campus image. The majority of the daylight hours occurs when there is no snow on the ground. However, only a few months of the active student year do not have snow. The campus exterior lighting can accommodate both environments through careful equipment selection and the use of an intelligent lighting control system.
The goal for identity and image is to develop a cohesive aesthetic plan for the campus lighting and the equipment selected to deliver the lighting.

- Consider the lighting performance issues as part of this aesthetic plan on the larger scale first.
- Develop equipment selection standards that work in conjunction with this lighting performance approach that has been selected.
- Consider both nighttime and daytime impacts of the lighting equipment.
- Consider the aesthetic benefits of the color of the light in addition to the visibility benefits of the 'white light'

Energy and the Environment
Environmentally sensitive lighting includes minimizing light trespass and light pollution, and minimizing energy consumption through lighting equipment selection and operation controls.

Maintenance
Exterior lighting equipment is a significant source of maintenance expense for UAF. This includes labor, materials and specialty equipment to access and maintain lighting. Measures can be taken to reduce these ongoing expenses and improve the reliability of the system to make it easier to keep the lighting equipment fully functional by consolidating equipment and lamp types, selecting reliable long life lamp technologies and equipment, and centralize controls to reduce lighting operating time or intensity where appropriate for specific areas or functions.

Specific Goals: Areas of Concern

Reduce the use of floodlighting. Eliminate the use of floodlights in street lighting and parking lot applications and other situations where a different type of illumination may be more appropriate to achieve good results. This will reduce the level of glare experienced on campus and reduce the visual impact of the campus at night.

Address pathway safety. Highlight decision making and conflict points. Identify and address changes of grade and stairway conditions that currently are not sufficiently lighted. This will improve pedestrian safety at crossings and other hazardous locations.

Minimize light trespass in residential areas. Reduce the light on building windows for residential buildings. Improve way finding in the residential sections of campus through lower level lighting. This will reduce the intrusive light in bedroom

windows and improve the general environment of the residential sections on campus. Improving the quality of light in residential areas will enhance the perception of security with the increase in visibility.

Implement white light sources. Through any retrofit or new construction project, utilize white light sources for general area lighting. This will improve the aesthetics of the campus, reduce energy consumption, and with careful selection of equipment, can enable an adaptive lighting system, which allows for sophisticated controls and energy saving strategies. An adaptive lighting system will allow for the light levels to be dimmed according to activity levels through automated centralized controls.

Campus Neighborhood/Precinct Distinction

Establish a hierarchy of destination points, conflict points, and ambient lighting to aid in way finding and produce a more consistent visual aesthetic on the campus. Illuminate signage on building facades and street navigation signage to aid in way finding. This produces a cohesive campus environment and makes navigation at night easier for visitors. Where practical, provide families of luminaires and poles for distinct campus precincts that complement the site and buildings and primary occupancy or function of the adjacent buildings. As example, residence areas need good smaller scale low level lighting that will likely be continuously on during any dark period, versus administrative buildings and parking lots or service areas with more limited operational time periods.

Section 3: Design Guidelines

The following standards will establish a framework for selecting campus exterior luminaire and lamps to achieve a unified look and feel.

New construction and remodel work that includes exterior lighting shall be reviewed by Campus Planning and Construction Staff during design phases, prior to bid, and during construction to ensure it meets these standards. Requests for exceptions shall be reviewed by Campus Planning in all cases (certain activity areas such as sports, or specific aesthetic designs).

The Campus Master Plan Committee should be consulted for input whenever previously unlit areas of the campus are to be permanently illuminated or the existing illumination level is substantially increased or illuminated using light sources mounted higher than typical for adjacent lighting sources. Significant modifications to existing trees and shrubs to accommodate artificial lighting penetrations shall also be brought to the attention of the Committee. Work related to illuminating roads, trails, parking lots and building entrances do not require Campus Master Planning Committee input unless the illumination will be intentionally brighter or from taller light sources than the exterior lighting design standards for the campus setting.

General Luminaire Criteria

The scale, size, and style of the exterior lighting shall be limited to a small number of luminaire types and are divided into categories based on function and with respect to the campus precinct installed. See appendix C for Lighting Design Criteria.

Northern Design issues in Fairbanks are unique and need to be addressed. Issues include extremely cold temperatures, ice fog, frost, long hours of darkness in the winter and snow covered campus for most of the campus activities. As such, lighting equipment must capable of operating at temperatures of -50 degrees F.

Lamps: Utilize 4,000 degree Kelvin (K) white LED lamps for all exterior luminaires with a minimum Color Rendering Index (CRI) value of 70. Colored accent luminaires or color changing luminaires may be considered on a case-by-case basis, however cool white light with a large amount of blue content has an effect on flora, fauna, and human circadian cycles and should be minimized or avoided. Light colors should not be greater than 4100K (moonlight).

Power Supplies/Drivers: Provide a UL listed power supply as recommended by the LED fixture manufacturer for operation of the luminaire's LED lamps. Power supply shall operate at the supply voltage and shall be listed for starting and operating the lamps at –40F. (Although conditions get much colder, at the time of this report, there are no manufacturer's we are aware of that will provide a listing lower than -40F).

Controls: All exterior luminaires shall be equipped with 0-10V dimming capabilities or be able to provide multi-level switching or dimming to allow reduced lighting levels at each luminaire. All pole-mounted luminaires shall have the capability to have a mesh network controller and motion sensor installed. All exterior controls shall operate at -40F and shall not have significant performance degradation. (e.g. Previous tests of mesh network system found that the system operated at -40F, but the range dropped significantly as the temperature dropped and when the temperature was -40F, the mesh network was only operable to a few feet away. That is not acceptable)

Housing/Lens: All exterior luminaires except those installed under covered canopies shall be IP65 rated with protective lens and an anodized aluminum or black/dark bronze finish color. Different luminaire colors will be considered on a case-by-case basis to match those in the precinct. Building mounted luminaires may be a different color to match or compliment architectural features of the building. Where luminaires are subject to damage, polycarbonate lenses and high-impact housings shall be provided.

Poles: All luminaire poles shall be round, tapered steel poles and color to match installed luminaires. Poles in parking lots shall be provided with concrete protective ring where subject to vehicle damage, roadway poles shall be equipped with a breakaway base. Roadway poles near entranceways and all pedestrian poles shall be provided with hardware to mount banners. Maximum pole heights shall be as follows:

- Roadway Poles: All roadways shall have poles heights standardized at 30'-35'. In special circumstances, such as terrain changes, the pole height may be varied.
- Parking and Service Area Poles: All parking and service areas shall have pole heights standardized at 20'-30'. In special circumstances such as very large parking lots the pole height may be increased as long as the mounting height ratio is maintained.
- Pedestrian Poles: All pedestrian trails shall have pole heights standardized at 10'-17'. In special

circumstances, such as higher speed pedestrian traffic (skiing, biking), the pole height may be varied.

Power Circuit: Raceways and conductors serving pole-mounted exterior luminaires shall be installed in accordance with UAF Electrical standards, specifically the underground raceways or cables need to be installed to allow for significant ground movement, shall be supplied with a dedicated equipment grounding conductor. Where new poles are installed, an additional conduit or raceway shall be installed for future control or security wiring. A type 1A junction box shall be provided near the base of each pole.

Accessories: All pedestrian and parking area pole-mounted luminaires shall have a festoon GFCI receptacle installed with a locking cover.

Security: Provisions for adding security cameras at each light pole shall be provided and coordinated with Campus Security.
Future Considerations: The recommendations in this master plan are based on the technology that is either proven or reliable at the time of this report. There are many other lighting design and control concepts that are being developed that should be evaluated as the technology progresses such as:

- Integral cameras in each pole-mounted luminaire that would function as both security cameras and as motion sensors.
- Motion sensors on roadway luminaires, if approved by the Department of Transportation.
- Smartphone controlled luminaires which would allow the students to increase lighting levels or change colors. This could apply to accent lighting or pathway lighting.

Other technologies and controls may develop and should be considered by the design team and discussed with UAF staff when they are reliable and suitable for the installation.

Wireless Network: Some existing or new poles may be utilized to broadcast the campus wi-fi system. Coordinate with UAF network systems office to determine if applicable.

Specific Design Criteria

Roadway Luminaire: All roadway mounted luminaires shall utilize appropriate light distribution patterns (i.e. Type II) and lumen output for the area.

Parking and Service Luminaire: All parking and service areas shall employ area type luminaire heads with appropriate light distribution patterns, cut-off profile and lumen output for the area.

Pedestrian Scale Luminaire: All illuminated pedestrian trails shall employ area type luminaire heads with appropriate light distribution patterns and lumen output for the area. Use of omni directional bollard lights is not appropriate

Special Luminaires: Special lighting conditions may be desirable for landscape, campus entryway lighting, wayfinding, event and accent lighting (event and art highlighting), and building mounted façade lighting. Incorporating the University colors, blue and gold, and iconic Fairbanks themes, such as the Northern Lights, is encouraged in the design for special lighting conditions. Special Luminaires need to successfully address seasonal conditions (snow, dust and rain), site maintenance methods, and seasonal ground movement, vandal resistance as well as minimal maintenance attention to ensure durability and efficacy.

Artwork and Monument Lighting: Where an object such as a freestanding sculpture is to be externally illuminated, the preference would be to illuminate it from an elevated location such as a building or pole to keep the luminaire above the snow level. Coordinate with UAF Facility Services for installing luminaires on existing buildings and for power/control connections. Where this is not practical or possible, ground or stem mounted, shielded luminaires may be used where either installed 24" above grade or where supplied with means to melt the snow on the lens. Fixture housing shall match or compliment the ground surface where installed. Follow IESNA guidelines for lighting intensities and uniformities. Barn door louvers or other suitable means shall be provided to control glare and spill light. Decorative artwork lighting shall automatically be reduced to a minimum of 50% level or extinguished entirely after designated viewing schedule (i.e. normal viewing hours).

Prohibited Luminaires:

- Exterior floodlighting luminaires shall not be used except for special activities with limited operational hours or where properly shielded and less than 1000 lumen output.
- Exterior in-grade lighting is not to be used due to snow cover, snow berm obstructions and melt water and irrigation water infiltration issues.
- Incandescent or HID luminaires

Exceptions

- Seasonal plug-in lighting.
- High security areas.

Lighting Controls

A centralized, campus-wide mesh network lighting control system shall be provided throughout the campus. UAF has tested a mesh network system by Lumewave with mixed results. A new pilot plan should be tested with another manufacturer for evaluation/approval by UAF staff. Possible manufacturer solutions are as follows:

1. Phillips "AmpLight" system
2. Acuity "Roam" system
3. Hubbell "wiHUBB" system

The purpose and benefit of a mesh network system are as follows:

- Control of on/off times of exterior luminaires
- Energy consumption metering (revenue grade)
- Develop adaptive lighting protocols to correspond with traffic and pedestrian flows
- Logging of operating hours for each individual lamp
- Remotely program output of entire street light network
- Effectively plan lamp luminaire locations and installations
- Reduce maintenance costs and increase public safety through the development of proactive maintenance schedules – alerts by email for lamp failures
- Quickly generate reports for installation planning, maintenance programs and energy usage

The centralized lighting control system will perform the task of communicating with each luminaire, utilizing a base station and a device mounted on each of the lights or a circuit of lights to be controlled. The mesh network software shall allow for the authorized user to interface, via a web portal, to the base station, which then communicates to each of the devices.

The ability to manage the energy consumption and operation of an entire lighting system is extremely powerful. Given the nature of the climate at UAF, energy consumption can be curtailed for snow cover, holiday breaks, and special events. Additionally, with the alert messages, maintenance can be scheduled during periods of low activity (holiday breaks) and during the summer. Because the operating hours are logged, this information can be beneficial for warranty repair claims as well. In addition, during a heightened security event, Campus Security would be able to turn all of the light on to full brightness.

The goal is to have all exterior lighting connected to the system, however, this will not be practical for all locations, specifically building mounted lighting. As a minimum, provisions shall be made for the lighting to tie into the campus system in the future or if the lights are already controlled by a local lighting control or DDC system, that an interface be provided between the building system and the campus mesh network for basic monitoring and/or control.

In addition, motion sensors shall be considered wherever practical to allow lower levels of lighting when the area is unoccupied. Further research is still needed to determine whether motion sensors are a safe approach to utilize on roadways, but in parking lots, plazas, sidewalks, etc. motion sensors should be provided where possible.

Lighting Level Guidelines

Unless otherwise noted, all lighting design shall comply with the latest adopted IESNA (Illuminating Engineering Society of North America) guidelines. Specifically, paragraph 26.2 of the IESNA 10th Edition Lighting Handbook which requires that the lighting designer "*Establish the lowest luminance criteria appropriate to the need*.". See Appendix C for Lighting Design Criteria and proposed footcandle levels and uniformities for different areas around campus.

Lighting Zones: Lighting zones are intended to allow for relatively higher illumination intensities in commercial districts while protecting the more light-sensitive neighborhoods and residential areas from excessive or misdirected light. The zone shall be assigned per IESNA requirements, with the following assumptions as the zone requirements apply to the campus:

LZ0 No Ambient Lighting
(Non-illuminated hiking and nature trails or similar.)

LZ1 Low Ambient Lighting
(Residential areas, walkways between facilities or similar)

LZ2 Medium Ambient Lighting
(Main gathering places, 24/7 facilities, etc)

LZ3/LZ4 Not applicable on UAF campus

Mesopic multipliers: These values shall be considered where the luminance of the environment puts the observer in a mesopic state of adaption. Specifically, refer to IESNA Handbook 10, Table 12.7 – *Pedestrian Way Mesopic Multiplier Example Worksheet* for determining lighting levels and illuminance criteria for pedestrian walkways. Note that since snow covers the campus most of the long darkness months, the lighting system should be designed for this highly reflective ground cover. The snow has a much higher reflectance than the ground in the summer months (grass, asphalt, etc.). This high reflectance actually means that less light is needed when there is snow on the ground. The reliable snow conditions support a multi-level control strategy (dimming light levels or multi-level lighting capability) due to the high reflectance of the snow during the winter months. Light distribution and color spectrum should be selected to light areas even in fog and

frost conditions. In addition, way finding lighting may be very effective and attractive in these low contrast environments.

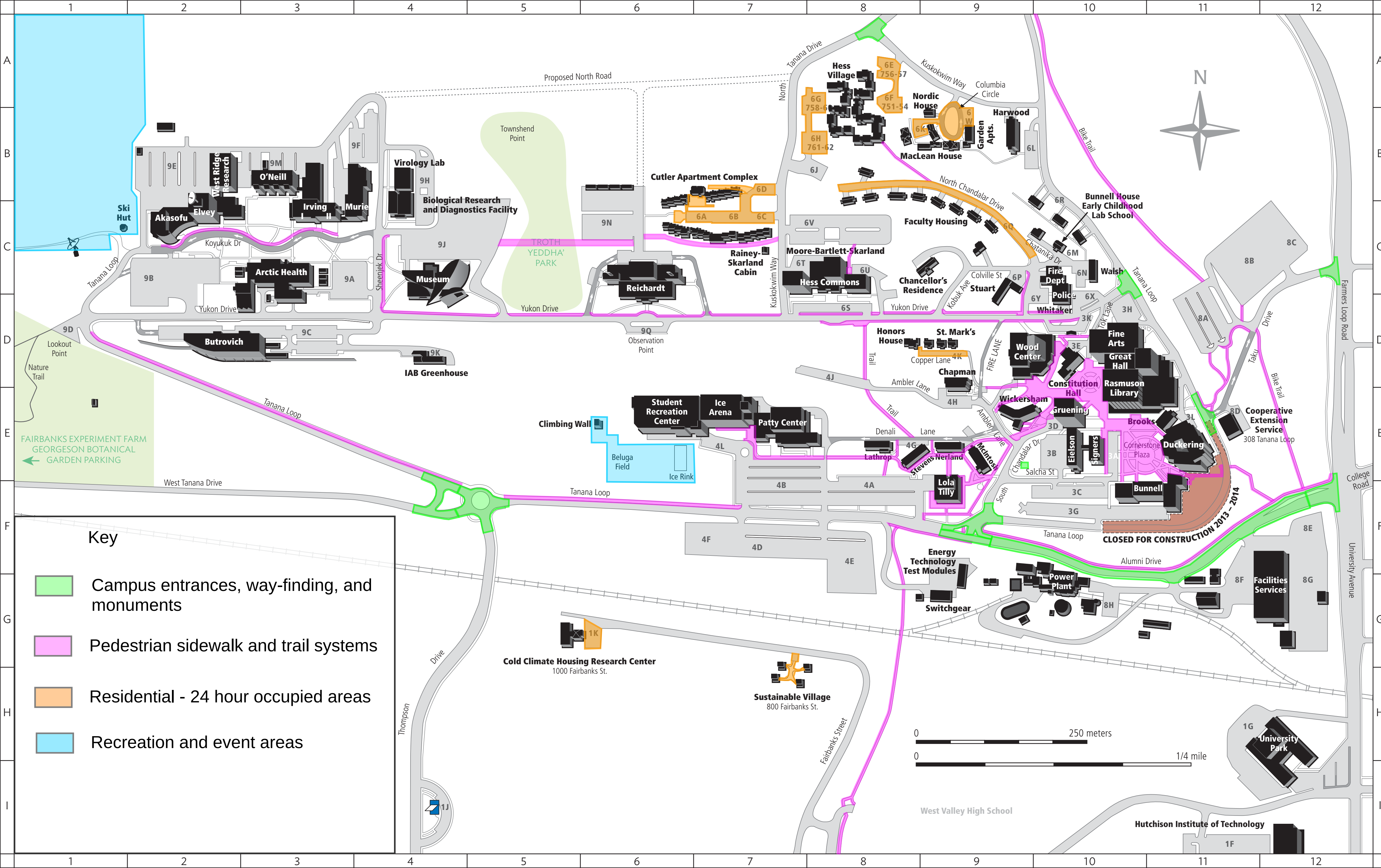
Lighting Hierarchy: The most effective lighting schemes involve equipment hierarchy.

Roadways and parking lots are the first layer with uniform, low level lighting. Roadway intersections and crosswalks are a second level providing higher lighting levels that provide appropriate lighting on pedestrians in crosswalks. Other levels include building entrances, stair locations, exterior activity spaces, and decorative lighting for art and building facades. These must all be integrated to provide a cohesive and logical visual approach for the nighttime campus.

Hierarchy is also very important to aid in “way finding”; the task where an observer must look over an environment and develop an understanding of the layout of the space so they can navigate from one place to another without confusion. By placing a higher importance on the destination (building or campus entries, parking lot access points, stair locations), the visual environment becomes easier to understand. This is important for observers that are new to the campus, and especially for vehicle drivers, as distraction while driving is the leading cause of accidents.

Lighting Calculations: Point-by-point lighting calculations including luminaire product data sheets shall be submitted to UAF Facility Services for approval of all new luminaires added.

Campus Zoning Map



Key
Campus entrances, way-finding, and monuments
Pedestrian sidewalk and trail systems
Residential - 24 hour occupied areas
Recreation and event areas
N
0
250 meters
0
1/4 mile
Ski Hut
Akasofu
Elvey
West Ridge Research
O'Neill
9M
Irving
Murie
9E
9F
Virology Lab
9H
Biological Research and Diagnostics Facility
Townshend Point
TROTH YEDDHA' PARK
Proposed North Road
9N
Cutler Apartment Complex
6D
6A
6B
6C
Rainey-Skarland Cabin
Koyukuk Dr
Arctic Health
9A
9B
9J
Museum
Reichardt
Yukon Drive
Sheenjek Dr
Kuskokwim Way
9D
Lookout Point
Nature Trail
Butrovich
9C
9Q
Observation Point
9K
IAB Greenhouse
Tanana Loop
Tanana Drive
North
Hess Village
6E
756-57
6F
751-54
6G
758-61
6H
761-62
6K
Nordic House
Columbia Circle
Harwood
Garden Apts.
6L
MacLean House
6J
Kuskokwim Way
North Chandalar Drive
Faculty Housing
6Q
6R
Bunnell House Early Childhood Lab School
6M
Chatanika Dr
6V
Moore-Bartlett-Skarland
6T
6U
Hess Commons
6S
Chancellor's Residence
Colville St
6P
Stuart
Kobuk Ave
Fire Dept
Police
Whitaker
6Y
6N
6X
Walsh
3H
3K
Tok Lane
8A
8B
8C
Farmers Loop Road
Taku Drive
Bike Trail
Honors House
St. Mark's
Copper Lane
4K
Chapman
Ambler Lane
4J
4H
Trail
FIRE LANE
Wood Center
3E
Fine Arts
Great Hall
Constitution Hall
Rasmuson Library
Wickersham
Gruening
Brooks
3L
8D
Cooperative Extension Service
308 Tanana Loop
Student Recreation Center
Ice Arena
Patty Center
Climbing Wall
Beluga Field
Ice Rink
4L
Denali Lane
Lathrop
4G
Stevens
Nerland
McIntosh
Chandalar Dr
3D
3B
3A
Eielson
Signers'
Cornerstone Plaza
Duckering
Salcha St
3C
3G
Bunnell
South
Lola Tilly
4B
4A
Tanana Loop
CLOSED FOR CONSTRUCTION 2013 - 2014
College Road
FAIRBANKS EXPERIMENT FARM GEORGESON BOTANICAL GARDEN PARKING
West Tanana Drive
4F
4D
4E
Energy Technology Test Modules
Switchgear
Power Plant
8H
Alumni Drive
8E
8F
Facilities Services
8G
University Avenue
Thompson Drive
1K
Cold Climate Housing Research Center
1000 Fairbanks St.
Sustainable Village
800 Fairbanks St.
Fairbanks Street
1J
1G
University Park
West Valley High School
Hutchison Institute of Technology
1F

Section 4: Implementation

The following section will establish a framework for incorporating the elements of the Exterior Lighting Master Plan into practice.

Phasing Plan

Short-Term

1. Roadway Lighting project: This is currently under design and will need to be coordinated ASAP.
2. Wood Center Retrofit.
3. Any other projects that are funded and in design or early construction.

Mid-Term

1. Parking Lot Lighting
2. Walkway Lighting

Long-Term

1. Building Mounted Lights

Section 5: Case Studies

Three case studies were prepared to demonstrate application of the Master Plan concepts:

- Case Study #1 – Ambler Lane
- Case Study #2 – Taku Parking Lots
- Case Study #3 – Potato Fields

Case Study #1- Ambler Lane

Case Study #1 – Ambler Lane/Chapman Bldg Parking

Existing conditions

Area of Study: The area studied includes the parking lot in front of the Chapman building, the unpaved parking lot to the west and the roadway that connects the two parking areas (Ambler Lane).

Existing Lighting Deficiencies: The parking lot in front of the Chapman Building is poorly illuminated with both pole and building-mounted floodlights. This creates an extreme amount of glare when approaching the building and provides very uneven lighting distribution. Ambler Lane is illuminated in a similar manner with pole-mounted floodlights which are aimed toward the drivers. The unpaved parking lot has (3) pol-mounted fixtures which provide a very small amount of light near the poles and do not adequately light the parking areas per IES requirements.

Existing Luminaires: The existing parking lot in front of the Chapman Building is illuminated with one 30'-0" pole with (3ea) 400W HPS floodlights as well as (2ea) 400W HPS floodlights on the roof of the Chapman bldg. The lighting along Ambler Lane consists of one 25'-0" pole with (2ea) 250W HPS floodlights. The unpaved parking lot is illuminated with (3ea) 70W "China Hat" luminaires.

Existing Controls: The existing luminaires are controlled by a photocell, turning the lights ON at dusk and OFF at dawn.

Proposed Changes

Target Lighting Levels: The roadway lighting is considered Backdrive-Intermediate-Local per the IES handbook and therefore requires 0.6fc average with a 6:1 max/min. The parking lot lighting adjacent the building and in the remote lots can be considered as either basic lighting levels (0.2fc min with 20:1 max/min) or enhanced security levels (0.5fc min with 15:1 max/min) depending on the activity levels and if security cameras are in use. This case study has designed the lighting in the parking areas to meet enhanced security levels and will have a dimming system that can dim the lights down to basic levels if needed to save energy and provide the "*lowest luminance criteria appropriate to the need*" per IES recommendations. Note that a total Light Loss Factor (LLF) of 0.7 was assumed in the calculations.

New Luminaires:

Roadway areas: The existing pole spacing is not conducive for retrofitting since the poles are spaced too far apart to meet IES requirements with a one-for-one replacement. As a result, new 25'-0" tall tapered steel poles with a single 9,000 lumen, 139W LED luminaires with type II distribution will be provided on approximately 120ft centers. This will provide the first hierarchy in the lighting scheme, with uniform, low level lighting. For purposes of this calculation, we utilized the GE "Evolve" series luminaires.

Parking areas: Once again, the existing pole spacing is not adequate for one-to-one replacements and will require new poles. We selected 25'-0" tall tapered steel poles with concrete protective rings and 10,860 lumen, 165W LED luminaires with Type III distribution. The poles were located on one side of the lot in order to provide even illumination throughout the parking areas. Per Figures 1-1 and 1-2, it is clear how much more uniform the LED solution is compared to the existing HPS floodlighting and China Hats.

Controls: The LED luminaires will be equipped with 0-10V dimming ballasts and hub for mesh network wireless control. The control sequence would utilize an astronomic time schedule and/or photocell to turn the fixtures ON (with override capability via mesh network wireless control system). The design concept is to have luminaires dimmed to 40% (0.2fc min) under normal operation and increased to 100% output for security levels (0.5fc min) where desired by campus security or where UAF staff determines that higher lighting levels are required for other reasons (i.e. special event). Roadway luminaires will operate at 100% level when the photocell or astronomic timer requires the fixture to be illuminated via the mesh network system.

Accessories: Each light pole will be provided with a lockable 120V GFCI festoon receptacle and 1" conduit/cable or pullstring for security cameras to be added. The luminaire poles shall have the capability to have banners added.

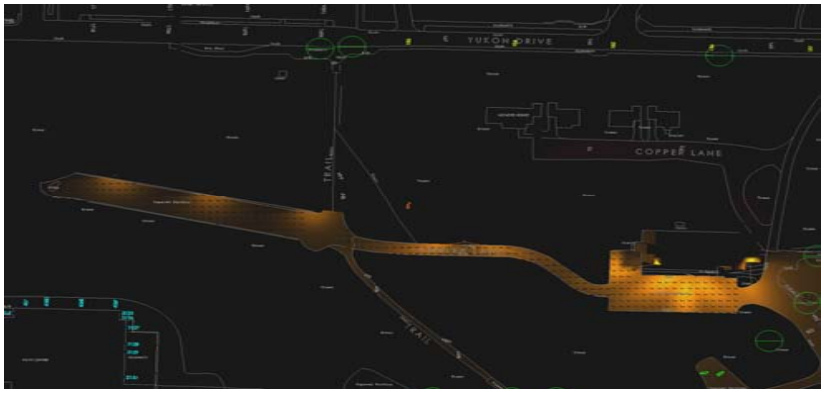


Figure 1-1: Existing Lighting – HPS floods and China Hats

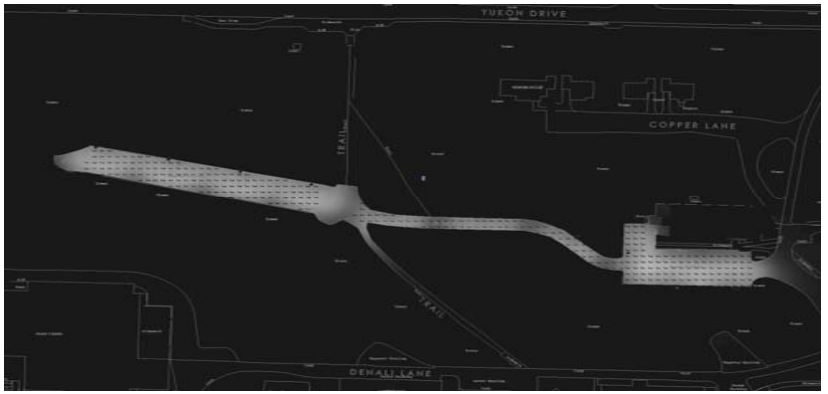


Figure 1-2: New lighting – LED

Figure 1-3: LED Luminaire Used in Case Study

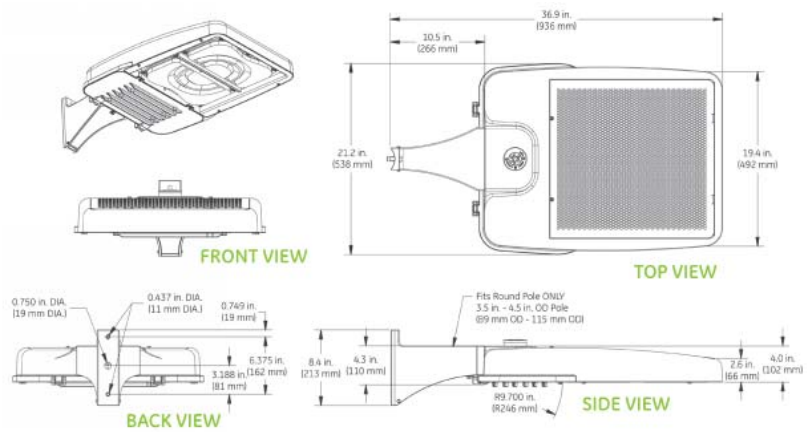


Table 1-1: Summary of Lighting Levels

Case Study #1 - Ambler Lane/Chapman Parking Lots Summary of Lighting Levels						
Location	Avg fc	Max fc	Min fc	Avg/Min	Max/Min	Comply?
Recommended Values						
Chapman			0.5		15:1	
Ambler	0.6			6:1		
Unpaved			0.5		15:1	
Existing Conditions						
Chapman	1.61	5.7	0.01	N/A	N/A	No
Ambler	0.4	1.6	0.00	N/A	N/A	No
Unpaved	0.07	0.5	0.00	N/A	N/A	No
Retrofit Recommendations						
Chapman	1.33	2.4	0.5	2.7:1	4.8:1	Yes
Ambler	0.82	1.4	0.3	2.7:1	4.7:1	Yes
Unpaved	1.28	1.8	0.5	2.6:1	3.6:1	Yes

Table 1-2: Summary of Energy Consumption and Savings – Ambler Lane

Case Study #1 - Ambler Lane/Chapman Parking Lots Summary of Energy Consumption and Savings						
Quantity	System Watts	Lamp	Mounting Height	Power Usage (W)	Hours of Operation per Year	Energy Use (kWh)
Existing Conditions						
10	Varies	HPS	Varies	3,183	5,300	16,870
Retrofit Recommendations						
10	Varies	LED	25'	1,546	4,211	6,510
Power Savings (W) (Luminaire Only)						**1,637**
% Savings						**51%**
Energy Savings (kWh)* (Luminaire and Control System)						**13,289**
% Savings						**79%**

* Assumes that 75% of the time the lights are dimmed to 40% output

Figure 2-1 – Taku Parking Lots


Figure 2-2 – Existing floodlights in Taku Parking Lot

Case Study #2- Taku Parking Lots

Existing conditions

Area of Study: The area studied includes the paved and unpaved Taku parking lots (8A, 8B and a portion of 8C).

Existing Lighting Deficiencies: The Taku parking lots are poorly illuminated with HPS floodlights. The floodlights are aimed at a very high angle which creates considerable glare and provides uneven lighting distribution. As a whole, the parking areas are too dim and not illuminated per minimum IES requirements. Per discussion with campus staff, this parking lot has historically had the most break-ins.

Existing Luminaires: The existing parking lot is illuminated with 250W HPS floodlights mounted on 30'-0" wooden poles

Existing Controls: The existing luminaires are controlled by a photocell, turning the lights ON at dusk and OFF at dawn.

Proposed Changes

Target Lighting Levels: The parking lot can be considered as either basic lighting levels (0.2fc min with 20:1 max/min) or enhanced security levels (0.5fc min with 15:1 max/min) depending on the activity levels and where security cameras are in use. This case study has designed the lighting in the parking areas to meet enhanced security levels and will have a dimming system that can dim the lights down to basic levels if needed to save energy and provide the "*lowest luminance criteria appropriate to the need*" per IES recommendations. Note that a total Light Loss Factor (LLF) of 0.7 was assumed in the calculations.

New Luminaires:
Parking areas: The existing poles should not be reused. The existing wood poles do not fit in with the master plan concept for lighting poles. In addition, the pole spacing is too far apart to allow for one-for-one replacements and meet IES standards. For the case study, 30'-0" tall tapered steel poles with concrete protective rings and 11,780 lumen, 178W LED luminaires with Type IV and V distribution. The poles were spaced throughout the lot to provide even illumination in the parking and side driveway areas. Per Figures 2-2 and 2-3, the LED solution is much more uniform compared to the existing HPS floodlighting. For purposes of this calculation, we utilized the GE "Evolve" series luminaires.

Controls: The LED luminaires will be equipped with 0-10V dimming ballasts and hub for mesh network wireless control. Control sequence would utilize an astronomic time schedule and/or photocell to turn the fixtures ON (with override capability via mesh network wireless control system). The design concept is to have the parking lot luminaires normally set to 100% output for security levels (0.5fc min) and then dimmed to 40% (0.2fc min) during early morning hours (between 2am-5am).

Accessories: Each light pole will be provided with a lockable 120V GFCI festoon receptacle and 1" conduit/cable or pullstring for security cameras to be added. The luminaire poles shall have the capability to have banners added.

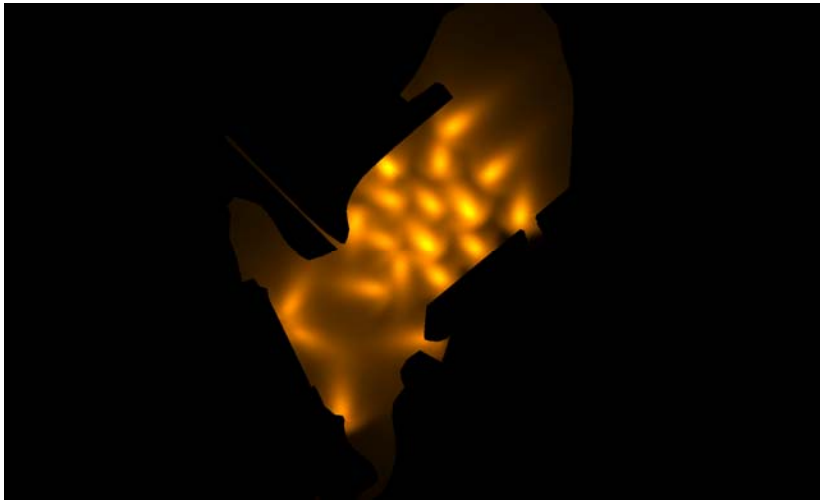


Figure 2-3: Existing Lighting – HPS floods

Figure 2-4: New lighting – LED

Figure 2-4: LED Luminaire Used in Case Study

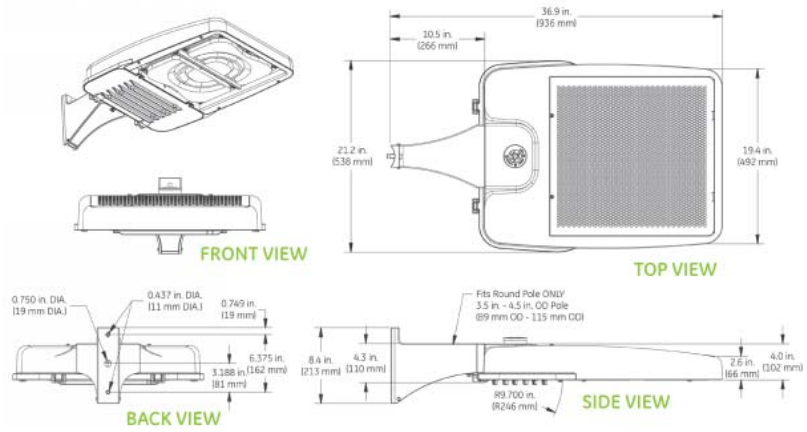


Table 2-1: Summary of Lighting Levels

Case Study #2 - Taku Parking Lots Summary of Lighting Levels						
Location	Avg fc	Max fc	Min fc	Avg/Min	Max/Min	Comply ?
Recommended Values						
Parking			0.5		15:1	
Existing Conditions						
Lot 8A	0.2	1.2	0.00	N/A	N/A	No
Lot 8B	0.4	3.1	0.00	N/A	N/A	No
Retrofit Recommendations						
Lot 8A	1.8	2.5	0.6	3.0:1	4.2:1	Yes
Lot 8B	1.2	1.9	0.5	2.4:1	3.8:1	Yes

Table 2-2: Summary of Energy Consumption and Savings – Taku Parking Lots

Case Study #2 - Taku Parking Lot Summary of Energy Consumption and Savings						
Quantity	System Watts	Lamp	Mounting Height	Power Usage (Watts)	Hours of Operation per Year	Energy Use (kWh)
Existing Conditions						
18	295	HPS	30'	5,310	5,300	28,143
Retrofit Recommendations						
39	178	LED	30'	6,942	4,211	29,233
Power Savings (W) (Luminaire Only)						**-1,632**
% Savings						**-31%**
Energy Savings (kWh)* (Luminaire and Control System)						**3,295**
% Savings						**12%**

* Assumes that 25% of the time the lights are dimmed to 40% output

Note on energy savings: The primary reason for upgrading the lighting in this parking lot is for safety, the current parking lot is well under lit and significantly more luminaires and poles are required to adequately illuminate the parking lot. Note that if the fixtures can be dimmed for a portion of the evening, it would equate to a small energy savings.

Figure 3-1 – Existing Floodlights along Ski Trails

Case Study #3- Potato Fields Ski Trails

Existing conditions

Area of Study: This particular loop of the North Campus Ski Trails is near Smith Lake and is currently illuminated.

Existing Lighting Deficiencies: The trails are illuminated with HPS floodlights which do a relatively good job of spreading out the light, but have an intense glare since the luminaires are set up two per pole and are always pointed directly in your field of vision along the trail. The typical spacing for the luminaries around this loop is approximately 200 feet, except where there is a gap in coverage on the northwest side.

Existing Luminaires: The portion of the trail that is part of this study consists of 11 wooden poles with (2ea) 250W HPS floodlights on each pole. See Figure 3-1 for typical installation.

Existing Controls: The existing luminaires are controlled by a photocell, turning the lights ON at dusk and OFF at dawn.

Proposed Changes

Target Lighting Levels: IES does not provide recommended lighting levels for cross-country ski trails, but it does recommend 0.5fc for walkways remote from roads as well as 0.5fc avg for downhill skiing. This seems to be on the high end of the design criteria and should be considered near trailheads and obstacles. See discussion below in controls regarding mesopic adaptive state. Note that a total Light Loss Factor (LLF) of 0.7 was assumed in the calculations.

New Luminaires:
Parking areas: In this example, it would be appropriate to reuse the wooden poles since this is on an unpaved trail through the forest. The majority of the pole spacing is adequate to accommodate a single 11,500 lumen, 125W LED luminaire with Type II distribution. This would allow a one-for-two replacement where the two HPS floodlights on each pole could be removed and replaced with a single LED fixture that is properly aligned with the trail. Adding two more poles in the northwest corner would complete the illuminated loop in a uniform fashion. Per Figures 3-2 and 3-3, it is clear that the LED solution is similar in distribution, however the biggest difference is that the LED luminaire has zero uplight and minimizes glare on the skiers. For purposes of this calculation, we utilized the Kim “Altitude” series luminaires.

Controls: The LED luminaires will be equipped with 0-10V dimming ballasts and hub for mesh network wireless control. The control sequence would utilize an astronomic time

schedule and/or photocell to turn the fixtures ON (with override capability via mesh network wireless control system). It is recommend to dim (tune) each fixture accordingly to allow for an mesopic adaptive approach as the skiers eyes adjust to the dark surroundings the further they get from trailheads. The lighting levels can be lower along the straight stretches without intersections or obstacles and higher near the intersections and trailheads.

After normal hours of use, (e.g. 12am-4am) the lights should either be extinguished or dimmed to 20% level by the mesh network control system.

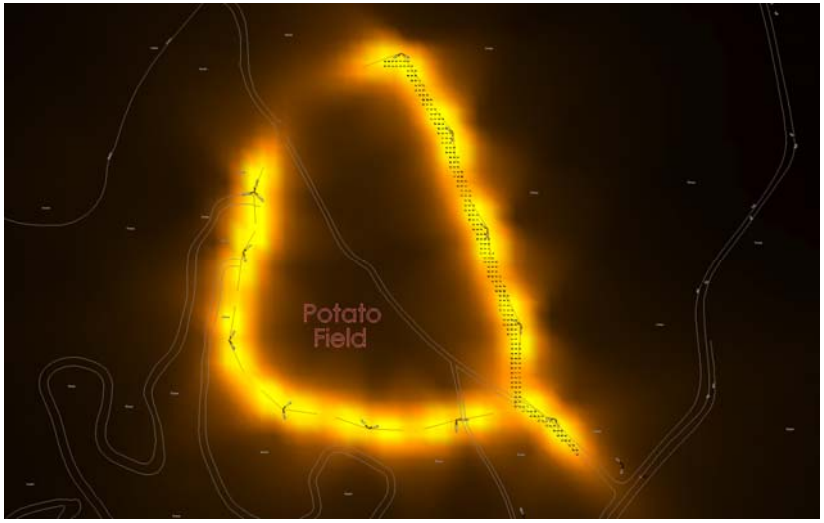


Figure 3-3: Existing Lighting – HPS floods

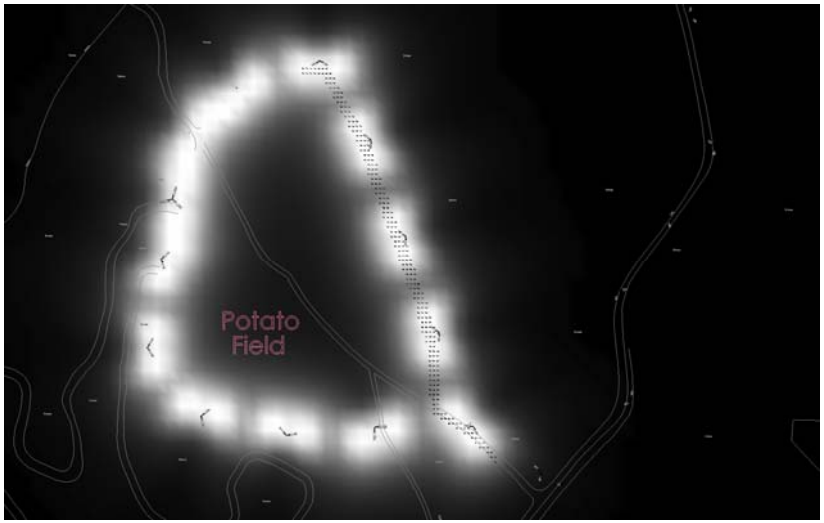


Figure 3-4: New lighting – LED (shown at 100% level)

Figure 3-4: LED Luminaire Used in Case Study

Table 3-1: Summary of Lighting Levels

Case Study #3 - Potato Fields Ski Loop						
Summary of Lighting Levels						
Location	Avg fc	Max fc	Min fc	Avg/Min	Max/Min	Meet IES?
Recommended Values						
	0.5			4:1	10:1	
Existing Conditions						
Trail	0.59	2.3	0.1	5.9:1	23:1	No
Retrofit Recommendations						
Trail	0.5	1.2	0.1	4.9:1	12:1	No*

* New design does not quite meet uniformity for pedestrian ways and bikeways, due to existing pole spacing. There is not a defined level for ski trials. We feel the layout is close and would be acceptable.

Figure 3-5: Life Cycle Cost Analysis

Site Specific Information			
Cost per kWh	$0.2300	Inflation Rate	3.00%
kW Demand Charge	$11.06	Energy Inflation Rate	0.50%
Hours Used Per Day	14.52	Installation Labor Rate	$80.00
Days per Week	7	Maintenance Labor Rate	$60.00
Weeks per Year	52	Analysis (Years)	20

Luminare Specifications		
	Existing	Option B
Fixture Series	Exist 250W MH	125W LED Pole Lite
Lamp Type	250W MH	125W LED
Number of Luminaires	22	12
Cost Per Luminare	$0.00	$1,600.00
Labor Per Luminaire	$0.00	$240.00
Lamp Life (hours)*	20,000	100,000
# of Lamps	1	1
Watts per Lamp	291	125
Total Wattage	291	125
Lumens per Lamp	20000	11563
Luminare Efficiency	78.0%	N/A
Ballast Factor	1.00	1.00
Total Delivered Lumens	15600	11563
Lumens per Watt	53.61	92.50
Dimming		
% of time at full level	100%	75%
Dimming level %	100%	20%
Cost Analysis		
Costs	**Existing**	**Option B**
Initial Cost	$0.00	$25,080.00
Annual Energy Charge (kWH)	$7,782.36	$1,458.74
Annual Energy Charge (kWD)	$849.67	$199.08
Total Annual Energy Cost	$8,632.04	$1,657.82
Relamping Costs		
All Lamps Replaced By (Yrs.)*	2.65	18.92
Relamp Cost - Material	$330.00	$1,800.00
Relamp Cost - Labor	$2,640.00	$1,800.00
Relamp Cost - Recycling	$11.00	$12.00
Total Relamp Cost	$2,981.00	$3,612.00

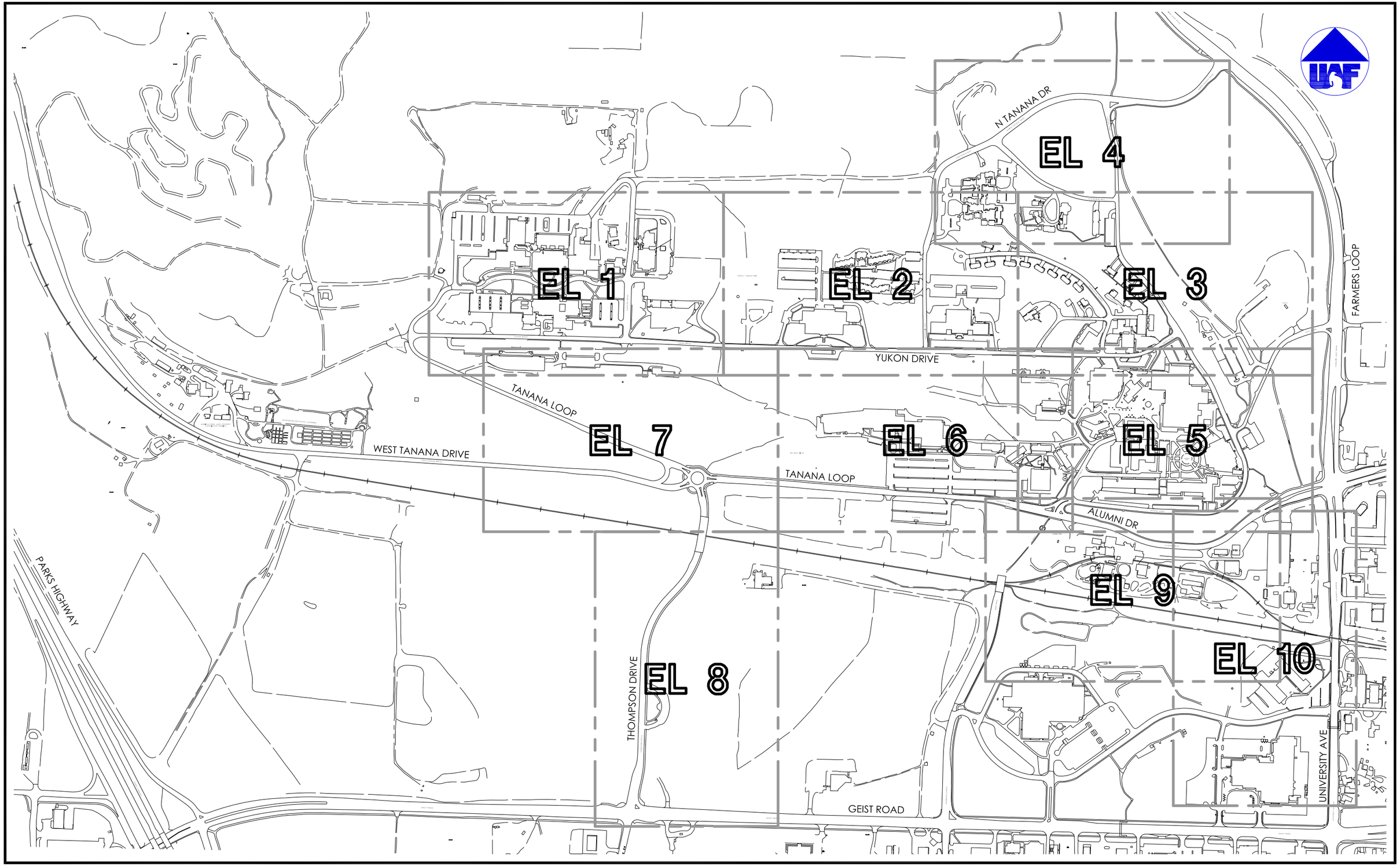
* Group relamping assumed at 70% rated life for non-LED sources

Time Until Payback			Total Lifetime Savings
Years	Months	Days	
3	1	4	$155,905.04

Section 6: Appendices

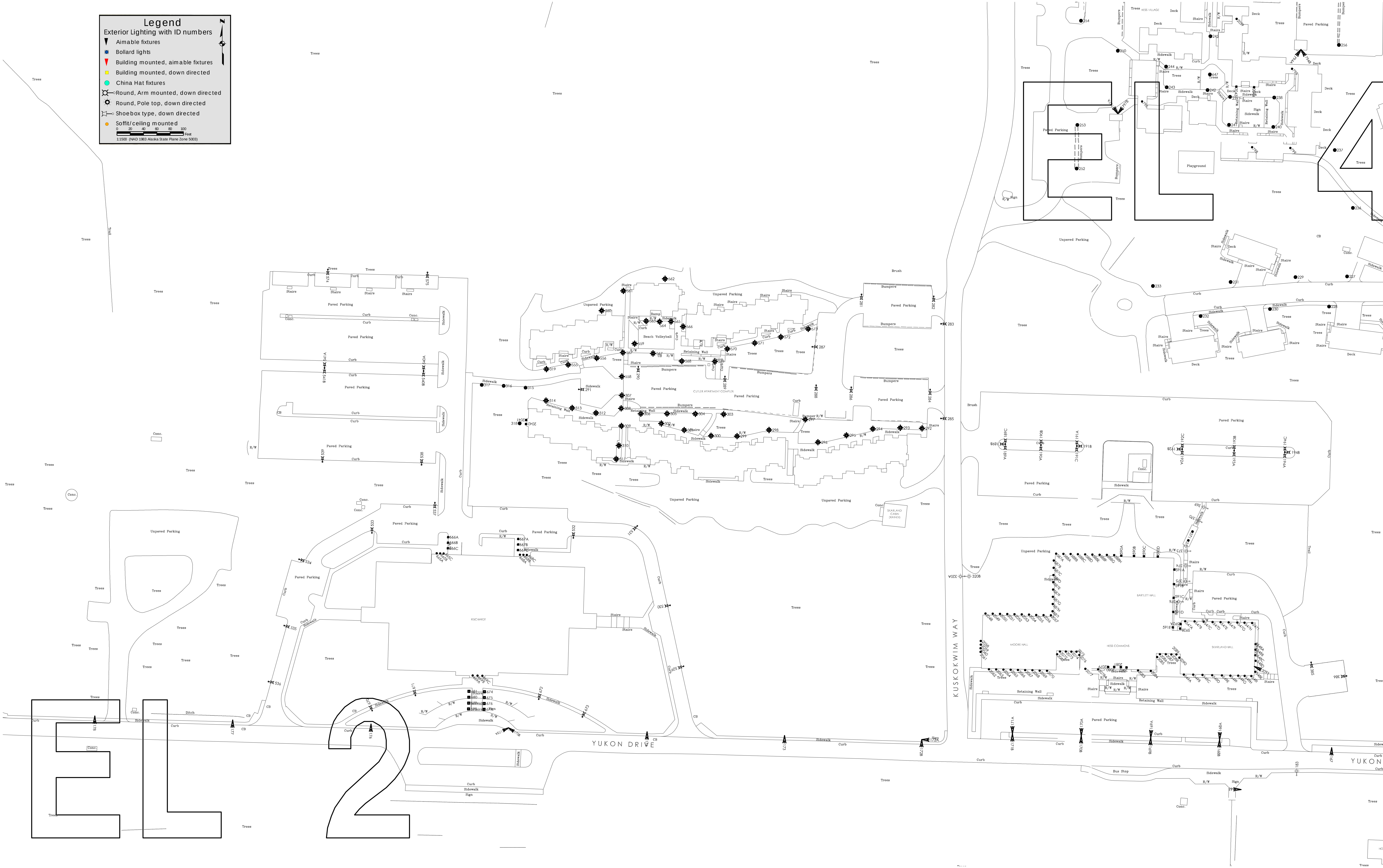
Appendix A –Campus Existing Exterior Lighting Map

Campus Wide Exterior Lights

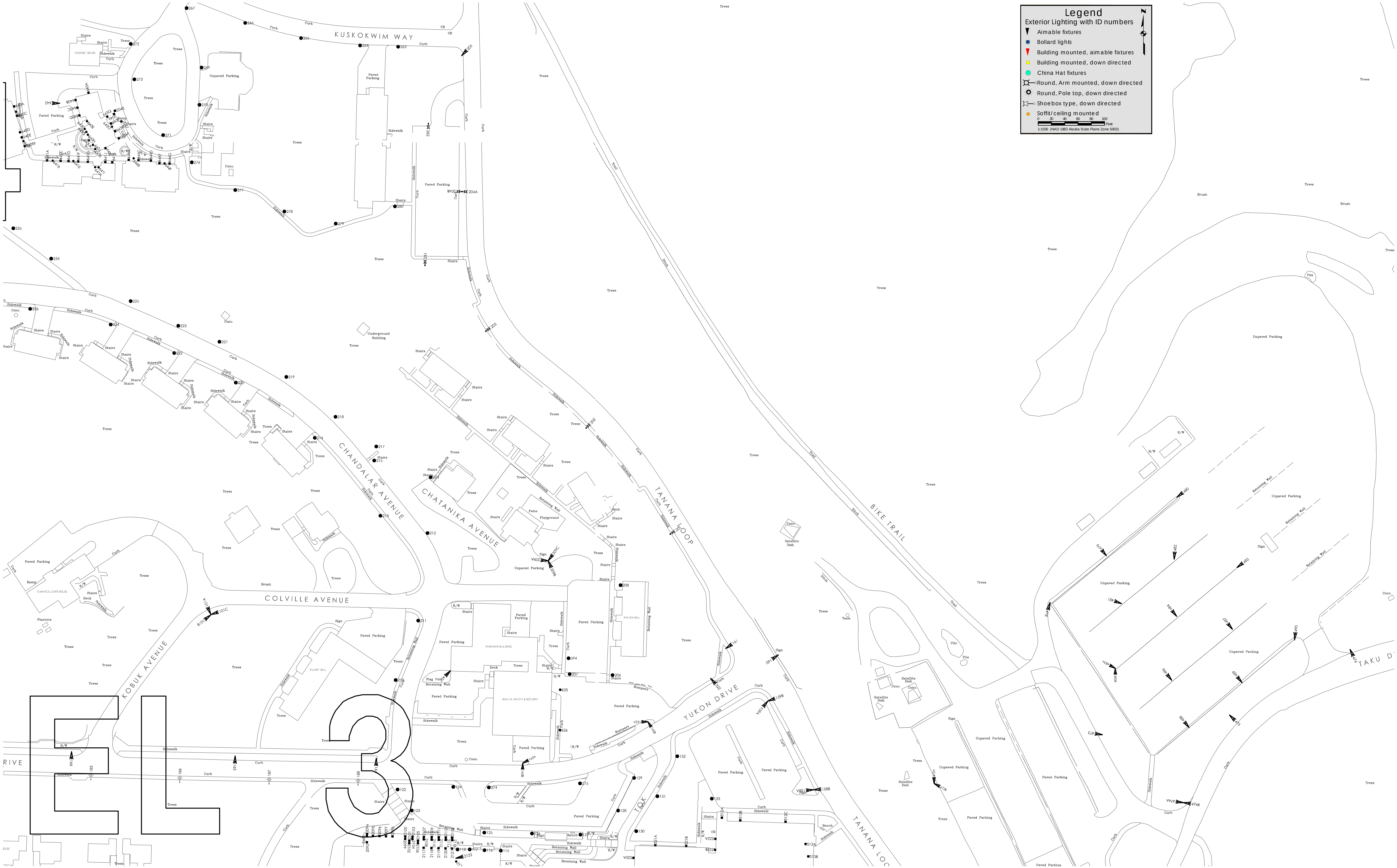


Index


Legend
Exterior Lighting with ID numbers
Aimable fixtures
Bollard lights
Building mounted, aimable fixtures
Building mounted, down directed
China Hat fixtures
Round, Arm mounted, down directed
Round, Pole top, down directed
Shoebox type, down directed
Soffit/ceiling mounted
0 20 40 60 80 100
Feet
1:1500 (NAD 1983 Alaska State Plane Zone 5003)
N
KOYUKUK DRIVE
YUKON DRIVE
SHEENJEK DRIVE
WEST RIDGE RESEARCH
MUSEUM OF THE NORTH
SAND VOLLEYBALL COURT
Paved Parking
Unpaved Parking
Under Construction
Retaining Wall
Sidewalk
Trees
EL1



Legend
Exterior Lighting with ID numbers
Aimable fixtures
Bollard lights
Building mounted, aimable fixtures
Building mounted, down directed
China Hat fixtures
Round, Arm mounted, down directed
Round, Pole top, down directed
Shoebox type, down directed
Soffit/ceiling mounted
0 20 40 60 80 100
Feet
1:1500 (NAD 1983 Alaska State Plane Zone 5003)
EL 2
EL 4
YUKON DRIVE
KUSKOKWIM WAY
Unpaved Parking
Paved Parking
Beach Volleyball
Playground
Trees

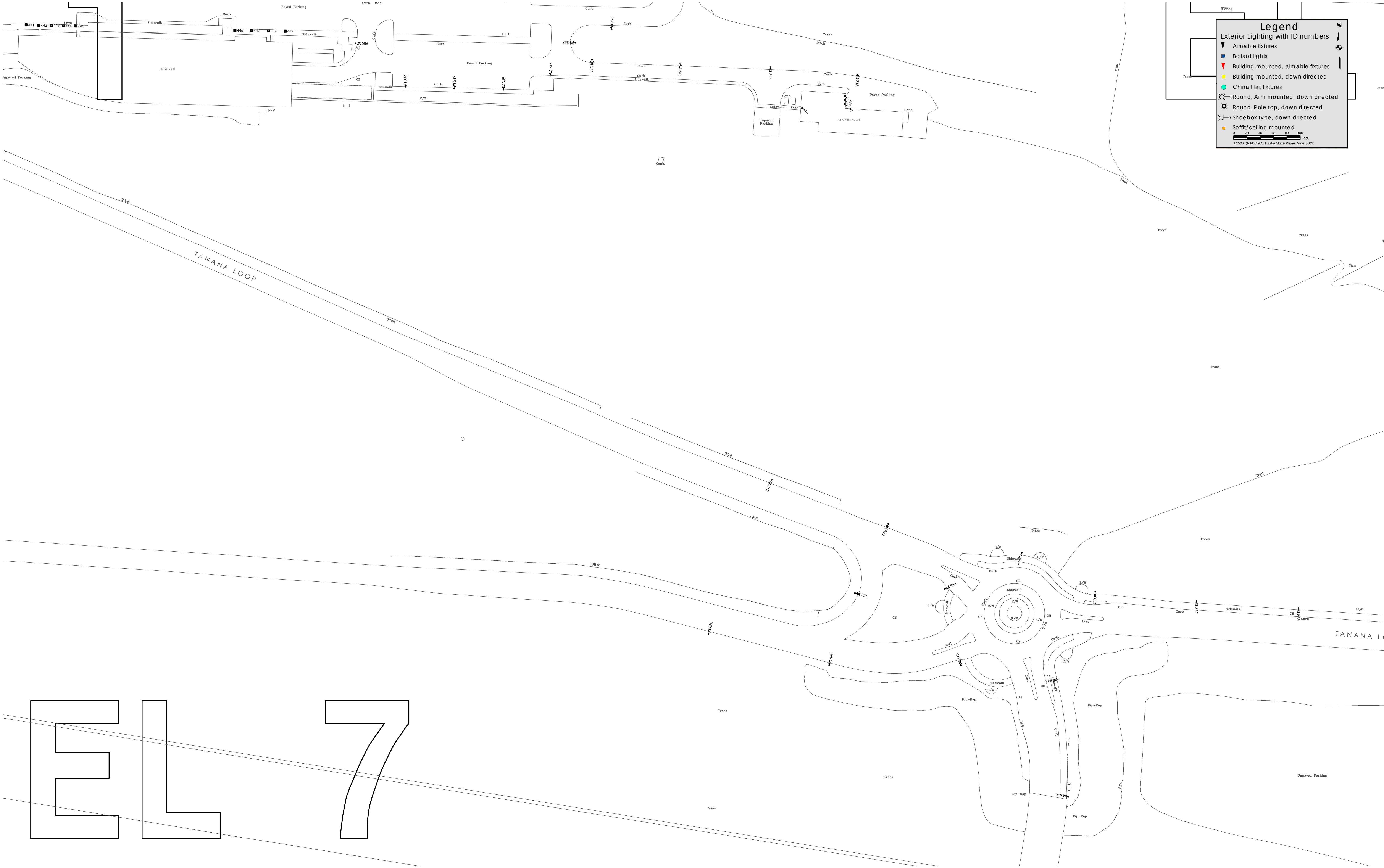


EL3
Legend
Exterior Lighting with ID numbers
Aimable fixtures
Bollard lights
Building mounted, aimable fixtures
Building mounted, down directed
China Hat fixtures
Round, Arm mounted, down directed
Round, Pole top, down directed
Shoebox type, down directed
Soffit/ceiling mounted
1:1500 (NAD 1983 Alaska State Plane Zone 5003)
KUSKOKWIM WAY
CHANDALAR AVENUE
CHATANIKA AVENUE
COLVILLE AVENUE
KOBUK AVENUE
TANANA LOOP
YUKON DRIVE
BIKE TRAIL
TOK
TAKU D
Underground Building
Unpaved Parking
Paved Parking
Playground
WHITAKER BUILDING
HEALTH, SAFETY & SECURITY
WALSH HALL
STUART HALL
CHANCELLOR'S HOUSE

NORTH TANANA DRIVE
KUSKOKWIM WAY
TANANA LOOP
BIKE TRAIL
NORTH TANANA DRIVE
KUSKOKWIM WAY
E
L
4
Paved Parking
Unpaved Parking
Playground
Trees
Legend
Exterior Lighting with ID numbers
Aimable fixtures
Bollard lights
Building mounted, aimable fixtures
Building mounted, down directed
China Hat fixtures
Round, Arm mounted, down directed
Round, Pole top, down directed
Shoebox type, down directed
Soffit/ceiling mounted
0 20 40 60 80 100
Feet
1:1500 (NAD 1983 Alaska State Plane Zone 5003)

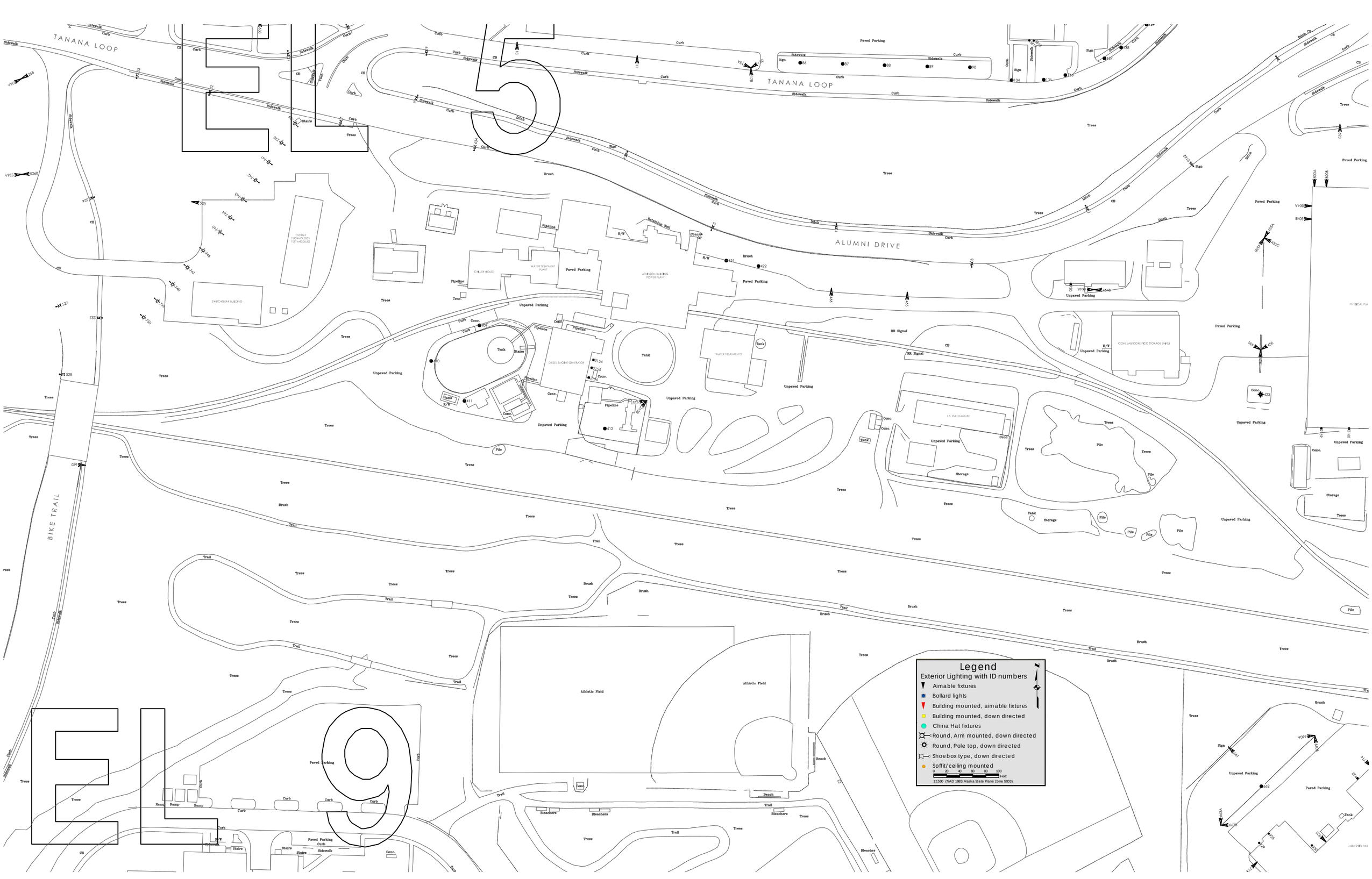
EL3
EL5
Legend
Exterior Lighting with ID numbers
Aimable fixtures
Bollard lights
Building mounted, aimable fixtures
Building mounted, down directed
China Hat fixtures
Round, Arm mounted, down directed
Round, Pole top, down directed
Shoebox type, down directed
Soffit/ceiling mounted
0 20 40 60 80 100 Feet
1:1500 (NAD 1983 Alaska State Plane Zone 5003)
COPPER LANE
TANANA LOOP
YUKON DRIVE
SALCHA STREET
S. CHANDALAR DRIVE
TOK
BIKE TRAIL
Paved Parking
Unpaved Parking
Trees
Sidewalk
Curb
Stairs
Retaining Wall

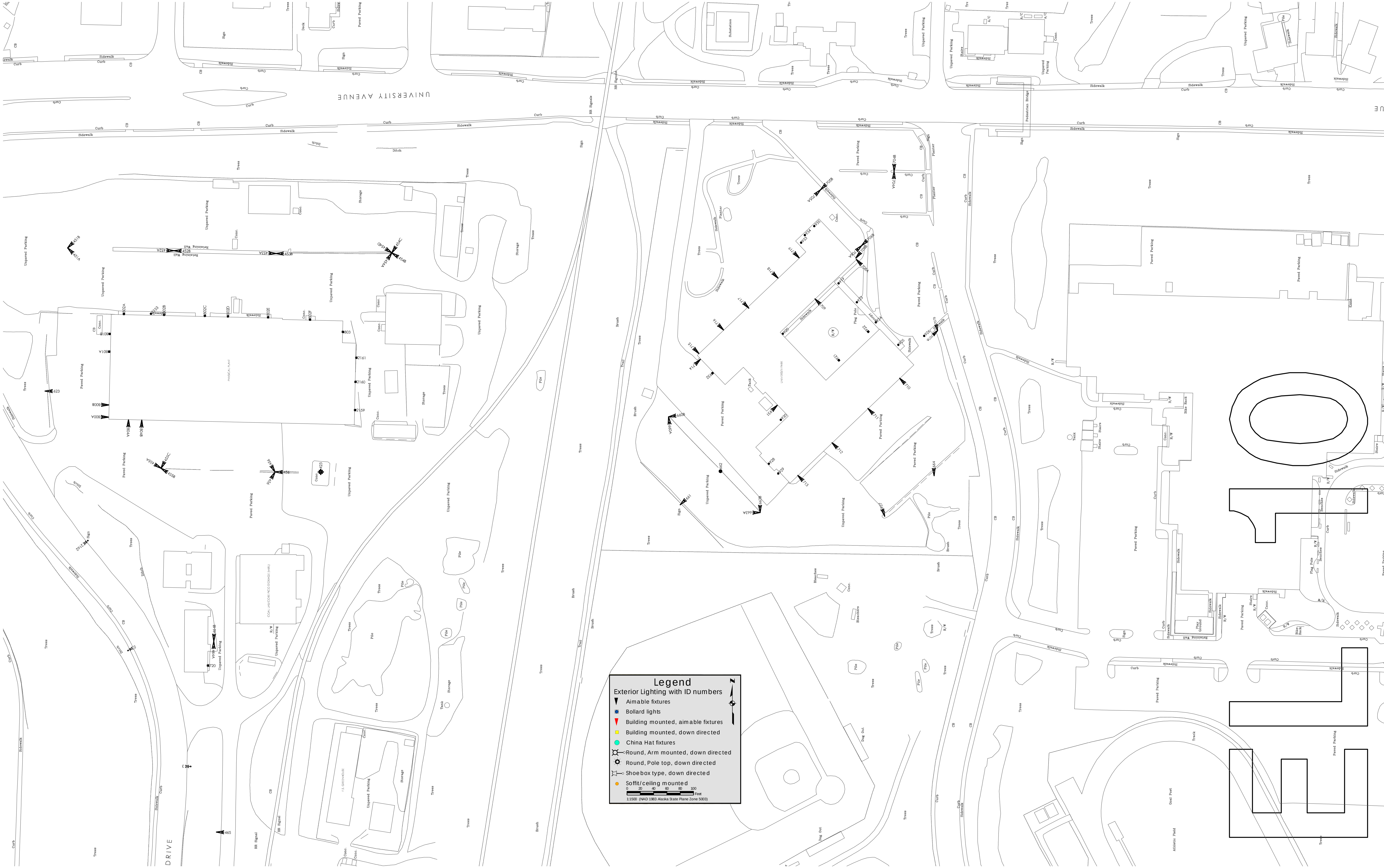
EL 2
EL 5
EL 6
EL 7
YUKON DRIVE
COPPER LANE
AMBLER LANE
DENALI LANE
TANANA LOOP
TRAIL
Legend
Exterior Lighting with ID numbers
Aimable fixtures
Bollard lights
Building mounted, aimable fixtures
Building mounted, down directed
China Hat fixtures
Round, Arm mounted, down directed
Round, Pole top, down directed
Shoebox type, down directed
Soffit/ceiling mounted
Feet
1:1500 (NAD 1983 Alaska State Plane Zone 5003)
Unpaved Parking
Paved Parking
Trees
Sidewalk
Curb

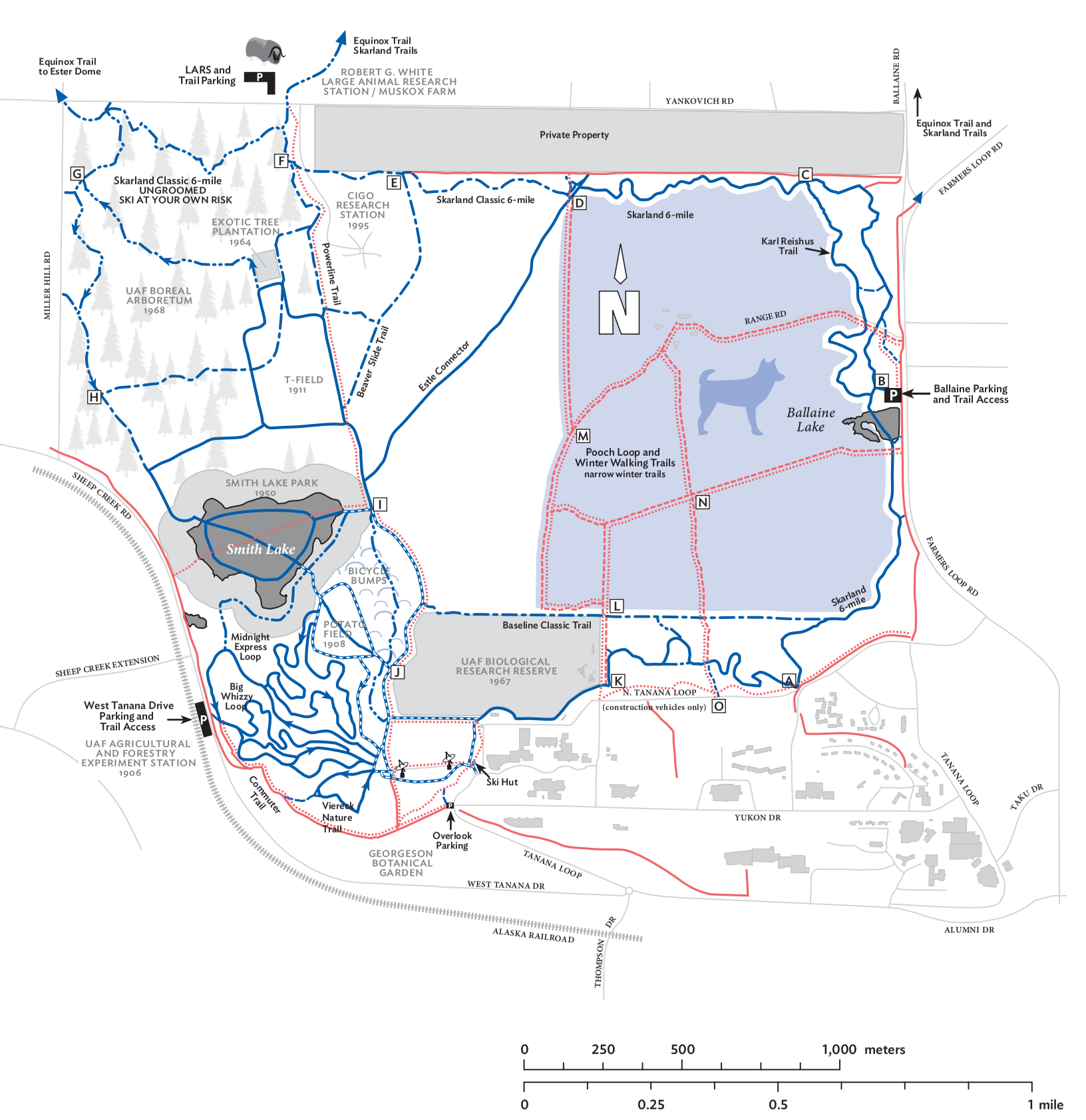


Legend
Exterior Lighting with ID numbers
Aimable fixtures
Bollard lights
Building mounted, aimable fixtures
Building mounted, down directed
China Hat fixtures
Round, Arm mounted, down directed
Round, Pole top, down directed
Shoebox type, down directed
Soffit/ceiling mounted
0 20 40 60 80 100 Feet
1:1500 (NAD 1983 Alaska State Plane Zone 5003)
EL 7
TANANA LOOP
Paved Parking
Unpaved Parking
Sidewalk
Curb
Ditch
Trees
Trail
Rip-Rap
Sign


Legend
Exterior Lighting with ID numbers
Aimable fixtures
Bollard lights
Building mounted, aimable fixtures
Building mounted, down directed
China Hat fixtures
Round, Arm mounted, down directed
Round, Pole top, down directed
Shoebox type, down directed
Soffit/ceiling mounted
0 20 40 60 80 100
Feet
1:1500 (NAD 1983 Alaska State Plane Zone 5003)
N
GEIST ROAD
THOMPSON DRIVE
Trail
Trees
Brush
Paved Parking
Unpaved Parking
Retaining Wall
Sidewalk
Curb
Stairs
Tank
Ditch
Sign


TANANA LOOP
ALUMNI DRIVE
BIKE TRAIL
Legend
Exterior Lighting with ID numbers
Aimable fixtures
Bollard lights
Building mounted, aimable fixtures
Building mounted, down directed
China Hat fixtures
Round, Arm mounted, down directed
Round, Pole top, down directed
Shoebox type, down directed
Soffit/ceiling mounted
0 20 40 60 80 100
Feet
1150I (NAD 1983 Alaska State Plane Zone 5003)
Unpaved Parking
Paved Parking
Trees
Brush
Trail
Sidewalk
Curb
Ditch
Pipeline
Tank
Pile
Storage
Bleachers
Bench
Athletic Field
ENERGY TECHNOLOGY TEST MODULES
SWITCHGEAR BUILDING
CHILLER HOUSE
WATER TREATMENT PLANT
ATKINSON BUILDING POWER PLANT
DIESEL ENGINE GENERATOR
WATER TREATMENT 2
F.S. GREENHOUSE
COAL LAB/CORE/H2O STORAGE (NRL)
PHYSICAL PLA


UNIVERSITY AVENUE
Legend
Exterior Lighting with ID numbers
Aimable fixtures
Bollard lights
Building mounted, aimable fixtures
Building mounted, down directed
China Hat fixtures
Round, Arm mounted, down directed
Round, Pole top, down directed
Shoebox type, down directed
Soffit/ceiling mounted
0 20 40 60 80 100
Feet
1:1500 (NAD 1983 Alaska State Plane Zone 5003)
N


Equinox Trail to Ester Dome
LARS and Trail Parking
Equinox Trail Skarland Trails
ROBERT G. WHITE LARGE ANIMAL RESEARCH STATION / MUSKOX FARM
YANKOVICH RD
BALLAINE RD
Equinox Trail and Skarland Trails
Private Property
FARMERS LOOP RD
Skarland Classic 6-mile UNGROOMED SKI AT YOUR OWN RISK
EXOTIC TREE PLANTATION 1964
CIGO RESEARCH STATION 1995
Skarland Classic 6-mile
Skarland 6-mile
Karl Reishus Trail
MILLER HILL RD
UAF BOREAL ARBORETUM 1968
Powerline Trail
Beaver Slide Trail
Estle Connector
T-FIELD 1911
RANGE RD
Ballaine Parking and Trail Access
Ballaine Lake
Pooch Loop and Winter Walking Trails
narrow winter trails
SHEEP CREEK RD
SMITH LAKE PARK 1950
Smith Lake
BICYCLE BUMPS
POTATO FIELD 1908
Midnight Express Loop
Baseline Classic Trail
Skarland 6-mile
UAF BIOLOGICAL RESEARCH RESERVE 1967
SHEEP CREEK EXTENSION
Big Whizzy Loop
N. TANANA LOOP
(construction vehicles only)
West Tanana Drive Parking and Trail Access
UAF AGRICULTURAL AND FORESTRY EXPERIMENT STATION 1906
Commuter Trail
Viereck Nature Trail
Ski Hut
Overlook Parking
GEORGESON BOTANICAL GARDEN
TANANA LOOP
YUKON DR
TAKU DR
WEST TANANA DR
ALASKA RAILROAD
THOMPSON DR
ALUMNI DR
0 250 500 1,000 meters
0 0.25 0.5 1 mile

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Appendix B – Existing Exterior Lighting Inventory List

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
1	Alumni Drive	Roadway	Cobra head	HPS	250				Phys Plant West Lot V2
2	Alumni Drive	Roadway	Cobra head						Phys Plant West Lot V2
3	Alumni Drive	Roadway	Cobra head						Phys Plant West Lot V2
4	Alumni Drive	Roadway	Cobra head						Phys Plant West Lot V2
5	Alumni Drive	Roadway	Cobra head	HPS	250				Phys Plant West Lot V2
6	Alumni Drive	Roadway	Cobra head						Phys Plant West Lot V2
7	Alumni Drive	Roadway	Cobra head	HPS	250				Nenana East Lot Y2
8	Alumni Drive	Roadway	Cobra head	HPS	250				Nenana East Lot Y2
9	Tanana Loop	Roadway	Cobra head	HPS	250				Nenana East Lot Y2
10	Tanana Loop	Roadway	Aimed flood	HPS	250				S. Wall Bunnell
11	Tanana Loop	Roadway	Aimed flood						S. Wall Bunnell
12A	P/Tanana Lp	Roadway	Aimed flood	HPS	250				S. Wall Bunnell
12B	P/Tanana Lp	Roadway	Aimed flood						S. Wall Bunnell
12C	P/Tanana Lp	Roadway	Aimed flood						S. Wall Bunnell
13	S. Chandalar	Roadway	Cobra head	HPS	250				Nenana East Lot Y2
14	S. Chandalar	Roadway	Aimed flood	HPS	400				
15A	S. Chandalar	Roadway	Aimed flood	HPS	400	rta	20'		Eielson roof
15B	S. Chandalar	Roadway	Aimed flood	HPS	400	rta	20'		Eielson roof
16A	S. Chandalar	Roadway	Aimed flood	HPS	250	rta	20'		Eielson roof
16B	S. Chandalar	Roadway	Aimed flood	HPS	250	rta	20'		Eielson roof
17	Bunnell Lot P	Parking	Aimed flood	HPS	250	rta			Eielson roof
18A	Eielson Meters Lot Q	Parking	Aimed flood						Eielson roof
18B	Eielson Meters Lot Q	Parking	Aimed flood						Eielson roof
19A	Eielson Meters Lot Q	Parking	Aimed flood						Eielson roof
19B	Eielson Meters Lot Q	Parking	Aimed flood						Eielson roof
20A	R/Plaza Pool	Parking	Aimed flood	HPS	250	rts	20'	natural alum	DDC from Bunnell
20B	R/Plaza Pool	Pedestrian	Aimed flood	HPS	250	rts	20'	natural alum	DDC from Bunnell
21	Tanana Loop	Roadway	Cobra head	HPS	250				Nenana East Lot Y2
22	Tanana Loop	Roadway	Cobra head	HPS	250				Nenana East Lot Y2
23	Tanana Loop	Roadway	Cobra head	HPS					Nenana East Lot Y2
24	Tanana Loop	Roadway	Cobra head	HPS		brown rta	30'		Nenana East Lot Y2
25	Commons Lot W	Parking	Aimed flood	HPS	250				Commons Lot W
26A	Y2/Fairbanks St.	Parking	Aimed flood	HPS	400	rta	20'		Nenana East Lot Y2
26B	Y2/Fairbanks St.	Roadway	Aimed flood	HPS	400	rta	20'		Nenana East Lot Y2
27A	Commons Lot W	Parking	Aimed flood	HPS	400				Commons Lot W
27B	Commons Lot W	Parking	Aimed flood	HPS	400				Commons Lot W
28A	Commons Lot W	Parking	Aimed flood	HPS	400				Commons Lot W
28B	Commons Lot W	Parking	Aimed flood	HPS	400				Commons Lot W
29A	Commons Lot W	Parking	Aimed flood	HPS	400				Commons Lot W
29B	Commons Lot W	Parking	Aimed flood	HPS	400				Commons Lot W

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
30A	Commons Lot W	Parking	Aimed flood	HPS					Commons Lot W
30B	Commons Lot W	Parking	Aimed flood	HPS					Commons Lot W
31A	Commons Lot W	Parking	Aimed flood	HPS					Commons Lot W
31B	Commons Lot W	Parking	Aimed flood	HPS					Commons Lot W
32A	Patty Lot X	Pedestrian	Aimed flood						Patty Ice Penthouse E wall
32B	Patty Lot X	Pedestrian	Aimed flood						Patty Ice Penthouse E wall
33	Tanana Loop	Roadway	Cobra head	HPS		brown rta			Nenana East Lot Y2
34A	Patty Lot X	Parking	Aimed flood	HPS			20'		Commons Lot W
34B	Patty Lot X	Parking	Aimed flood	HPS			20'		Commons Lot W
35A	Patty Lot X	Parking	Aimed flood	HPS	400		20'		Commons Lot W
35B	Patty Lot X	Roadway	Aimed flood	HPS	400		20'		Commons Lot W
35C	Patty Lot X	Roadway	Aimed flood	HPS	400		20'		Commons Lot W
36A	Nenana Lot Y2	Parking	Aimed flood	HPS	250		20'		Commons Lot W
36B	Nenana Lot Y2	Parking	Aimed flood	HPS			20'		Commons Lot W
36C	Nenana Lot Y2	Parking	Aimed flood	HPS			20'		Commons Lot W
37A	Nenana Lot Y1	Parking	Aimed flood	HPS	250				Nenana East Lot Y2
37B	Nenana Lot Y1	Parking	Aimed flood	HPS	250				Nenana East Lot Y2
37C	Nenana Lot Y1	Parking	Aimed flood	HPS	250				Nenana East Lot Y2
38A	Nenana Lot Y1	Parking	Aimed flood	HPS	250		20'		Nenana East Lot Y2
38B	Nenana Lot Y1	Parking	Aimed flood	HPS	400		20'		Nenana East Lot Y2
39A	Eielson South entry	Bldg Entrance	Bldg Soffit			n/a	bldg		
39B	Eielson South entry	Bldg Entrance	Bldg Soffit			n/a	bldg		
40A	Commons Lot W	Pedestrian	Aimed flood	HPS					Commons Lot W
40B	Commons Lot W	Parking	Aimed flood	HPS					Commons Lot W
41A	Patty Lot X	Parking	Aimed flood	HPS			20'		Commons Lot W
41B	Patty Lot X	Parking	Aimed flood	HPS			20'		Commons Lot W
41C	Patty Lot X	Parking	Aimed flood	HPS			20'		Commons Lot W
42A	Patty Lot X	Parking	Aimed flood	HPS	250		20'		Commons Lot W
42B	Patty Lot X	Parking	Aimed flood	HPS	250		20'		Commons Lot W
42C	Patty Lot X	Parking	Aimed flood	HPS			20'		Commons Lot W
43	Patty Lot X	Parking	Aimed flood	HPS					Patty Gym N Wall
44	Patty Lot X	Pedestrian	China Hat	HPS					Patty Gym N Wall
45	Patty Lot X	Pedestrian	China Hat	HPS					Patty Gym N Wall
46	Patty Lot X	Pedestrian	China Hat	HPS					Patty Gym N Wall
47	Patty Lot X	Pedestrian	China Hat	HPS					Patty Gym N Wall
48	Lower Commons	Pedestrian	China Hat	HPS					Commons Lot W
49	Lower Commons	Pedestrian	China Hat	HPS					Patty Gym N Wall
50	Eielson West Lot S	Parking	Aimed flood						Eielson roof
51A	Eielson West Lot S	Parking	Aimed flood						Eielson roof
51B	Eielson West Lot S	Parking	Aimed flood						Eielson roof
52	Cooper	Roadway	Aimed flood	HPS	250	rts	20'	natural alum	Eielson roof

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
53A	S. Chandalar	Roadway	Aimed flood	HPS	250				Eielson roof
53B	S. Chandalar	Roadway	Aimed flood	HPS	250				Eielson roof
54	S. Chandalar	Roadway	Aimed flood	HPS	250				Eielson roof
55	Constitution Plaza	Pedestrian	Shoebox	HPS	100	sss	18'	light bronze	
56	Gruening Lot T	Bldg Entrance	Bldg Soffit			n/a	bldg		
57	Constitution Plaza	Pedestrian	Shoebox	HPS	100	sss	18'	light bronze	
58	Constitution Plaza	Pedestrian	Shoebox	HPS	100	sss	18'	light bronze	
59	Constitution Plaza	Pedestrian	Shoebox	HPS	100	sss	18'	light bronze	
60	Constitution Plaza	Pedestrian	Shoebox	HPS	100	sss	18'	light bronze	
61A	Champan Lot J	Parking	Aimed flood	HPS	400	rts	30'	natural finis	Chapman roof
61B	Champan Lot J	Parking	Aimed flood	HPS	400	rts	30'	natural finis	Chapman roof
61C	Champan Lot J	Parking	Aimed flood	HPS	400	rts	30'	natural finis	Chapman roof
62A	Ambler Lane	Roadway	Aimed flood						Haida Lot I
62B	Ambler Lane	Roadway	Aimed flood						Haida Lot I
63A	Upper/Lower Walk	Trail	Aimed flood						Haida Lot I
63B	Upper/Lower Walk	Trail	Aimed flood						Haida Lot I
64A	Upper/Lower Walk	Trail	Aimed flood						Haida Lot I
64B	Upper/Lower Walk	Trail	Aimed flood						Haida Lot I
65	Upper/Lower Walk	Trail	Aimed flood	HPS	250	rta	20'	natural alum	Haida Lot I
66	Haida Lot I	Parking	China Hat						Haida Lot I
67	Haida Lot I	Parking	China Hat	HPS	70				Haida Lot I
68	Haida Lot I	Parking	China Hat	HPS	70				Haida Lot I
69	Lower Dorms	Pedestrian	China Hat	HPS					Patty Gym N Wall
70	LT Commons - East Side	Pedestrian	China Hat						
71	LT Commons - East Side	Pedestrian	China Hat	HPS	70				
72	Copper Lane	Parking	Aimed flood						Chapman roof
73	Copper Lane	Parking	Aimed flood						Chapman roof
74A	Nenana Lot Y3	Parking	Aimed flood	HPS		wooden			Nenana East Lot Y2
74B	Nenana Lot Y3	Parking	Aimed flood	HPS		wooden			Nenana East Lot Y2
75	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
76	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
77	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
78	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
79	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
80	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
81	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
82	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
83	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
84	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
85	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
86	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
87	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
88	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
89	Bunnell Lot P	Pedestrian	China Hat				8'		S. Wall Bunnell
90	Bunnell Lot P	Pedestrian	China Hat	HPS	70		8'		S. Wall Bunnell
91A	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
91B	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
91C	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
91D	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
91E	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
91F	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
91G	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
91H	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
92A	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
92B	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
92C	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
92D	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
92E	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
92F	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
92G	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
92H	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
93A	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
93B	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
93C	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
93D	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
93E	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
93F	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
93G	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
93H	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
94A	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
94B	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
94C	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
94D	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
94E	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
94F	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
94G	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
94H	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
94I	Gruening	Pedestrian	Bldg Soffit			n/a	soffit		Gruening roof
95	Plaza	Pedestrian	China Hat	HPS	70	rta	10'		DDC from Bunnell
96	Plaza	Pedestrian	China Hat	HPS	70	rta	10'		DDC from Bunnell
97	Plaza	Pedestrian	China Hat	HPS	70	rta	10'		DDC from Bunnell
98	Plaza	Pedestrian	China Hat	HPS	70	rta	10'		DDC from Bunnell

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
99	Plaza	Pedestrian	China Hat	HPS	70	rta	10'		DDC from Bunnell
100A	R/Plaza	Parking	Aimed flood	HPS	250	rts	20'	natural alum	DDC from Bunnell
100B	R/Plaza	Pedestrian	Aimed flood	HPS	250	rts	20'	natural alum	DDC from Bunnell
101A	Colville	Roadway	Aimed flood			rta	20'		South of Upper Dorms
101B	Colville	Roadway	Aimed flood			rta	20'		South of Upper Dorms
101C	Colville	Roadway	Aimed flood			rta	20'		South of Upper Dorms
102	Wood Ctr/Wick	Pedestrian	China Hat			rta	8'		
103	Wood Ctr/Wick	Pedestrian	China Hat			rta	8'		
104	Wood Ctr/Wick	Pedestrian	China Hat			rta	8'		
105	Wood Ctr/Wick	Pedestrian	China Hat	HPS	70	rta	8'		
106	Gruening	Pedestrian	Bollard	HPS	70	bollard	3'		
107	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
108	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
109	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
110	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
111	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
112	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
113	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
114	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
115	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
116	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
117	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
118	Wood Center deck	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
119	Fine Arts West	Pedestrian	Bollard			bollard			
120	Fine Arts West	Pedestrian	Bollard			bollard			
121	Fine Arts West	Pedestrian	Bollard			bollard			
122	WC stairs	Pedestrian	China Hat						North of FA-Arts
123	WC stairs	Pedestrian	China Hat						North of FA-Arts
124	WC Bus turnout	Pedestrian	China Hat		70				North of FA-Arts
125	WC Bus turnout	Pedestrian	China Hat						North of FA-Arts
126	WC Bus turnout	Pedestrian	China Hat	HPS	70				North of FA-Arts
127	WC Bus turnout	Pedestrian	China Hat	HPS	70				North of FA-Arts
128	City Bus Stop Lot JJ	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	North of FA-Arts
129	City Bus Stop Lot JJ	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	North of FA-Arts
130	Tok Street	Pedestrian	China Hat						North of FA-Arts
131	Tok Street	Pedestrian	China Hat	HPS	70				North of FA-Arts
132	Tok Street	Pedestrian	China Hat	HPS	70				North of FA-Arts
133	Fine Arts Lot N	Pedestrian	China Hat						North of FA-Arts
134	Tanana Loop	Pedestrian	China Hat			rta	8'		S. Wall Bunnell
135	Tanana Loop	Pedestrian	China Hat			rta	8'		S. Wall Bunnell
136	Tanana Loop	Pedestrian	China Hat		70	rta	8'		S. Wall Bunnell

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
137	Tanana Loop	Pedestrian	China Hat			rta	8'		S. Wall Bunnell
138	Tanana Loop	Pedestrian	China Hat			rta	8'		S. Wall Bunnell
139	Tanana Loop	Pedestrian	China Hat			rta	8'		S. Wall Bunnell
140	Tanana Loop	Pedestrian	China Hat			rta	8'		S. Wall Bunnell
141A	Duckering Lot O	Parking	Aimed flood			rta	25'		Duckering roof
141B	Duckering Lot O	Roadway	Aimed flood			rta	25'		Duckering roof
142	Duckering Lot O	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Duckering roof
143	Tanana Loop	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Duckering roof
144	Tanana Loop	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Duckering roof
145	Tanana Loop	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Duckering roof
146	Tanana Loop	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Duckering roof
147	Tanana Loop	Roadway	Aimed flood			rta	25'	natural alum	Duckering roof
148	Tanana Loop	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Duckering roof
149	Tanana Loop	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Duckering roof
150	Tanana Loop	Roadway	Aimed flood	HPS	250	rta	25'	natural alum	Duckering roof
151	Taku Dr.	Pedestrian	Aimed flood	HPS	250	rta	25'	natural alum	Duckering roof
152	Tanana Loop	Roadway	Aimed flood	HPS	250	rta	25'	natural alum	Duckering roof
153	Brooks Lot GG	Roadway	Shoebox	HPS	250	sss	25'	tan	Library roof
154	Brooks Lot GG	Roadway	Shoebox	HPS	250	sss	25'	tan	Library roof
155	Tanana Loop	Roadway	Shoebox	HPS	250	sss	25'	tan	Library roof
156A	Tanana Loop	Roadway	Aimed flood	HPS	250	rta	25'	natural alum	
156B	Tanana Loop	Roadway	Aimed flood	HPS	250	rta	25'	natural alum	
157	Tanana Loop	Roadway	Aimed flood	HPS	250	rta	25'	natural alum	
158A	Fine Arts Lot N/Tanana Lp	Roadway	Aimed flood	HPS	250	rta	20'	natural alum	
158B	Fine Arts Lot N/Tanana Lp	Roadway	Aimed flood	HPS	250	rta	20'	natural alum	
159A	Fine Arts Lot N/Tanana Lp	Roadway	Aimed flood	HPS	400	rta	20'	natural alum	
159B	Fine Arts Lot N/Tanana Lp	Roadway	Aimed flood	HPS	400	rta	20'	natural alum	
160	Tanana Loop	Roadway	Aimed flood	HPS	400				
161	Tanana Loop	Roadway	Aimed flood	HPS	250	rta			Harwood roof
162A	Security Lot L/Yukon Dr.	Roadway	Aimed flood						South of Upper Dorms
162B	Security Lot L/Yukon Dr.	Roadway	Aimed flood						South of Upper Dorms
163A	Security Lot L/Yukon Dr.	Roadway	Aimed flood			rta			South of Upper Dorms
163B	Security Lot L/Yukon Dr.	Roadway	Aimed flood			rta			South of Upper Dorms
164	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		South of Upper Dorms
165	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		South of Upper Dorms
166	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		South of Upper Dorms
167	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		South of Upper Dorms
168A	MBS Front Lot G/Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	25'	natural alum	Skarland roof
168B	MBS Front Lot G/Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	25'	natural alum	Skarland roof
169A	MBS Front Lot G/Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	25'	natural alum	Skarland roof
169B	MBS Front Lot G/Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	25'	natural alum	Skarland roof

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
170A	MBS Front Lot G/Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	25'	atural alum	Skarland roof
170B	MBS Front Lot G/Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	25'	atural alum	Skarland roof
171A	MBS Front Lot G/Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	25'	atural alum	Skarland roof
171B	MBS Front Lot G/Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	25'	atural alum	Skarland roof
172A	Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	25'		Skarland roof
172B	Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	25'		Skarland roof
173	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		Skarland roof
174	Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	20'		Skarland roof
175A	Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	20'	atural alum	
175B	Yukon Dr.	Roadway	Aimed flood	HPS	250	rta	20'		Skarland roof
176	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		Skarland roof
177	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		Skarland roof
178	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		Skarland roof
179	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		Skarland roof
180	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		Skarland roof
181	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		Skarland roof
182A	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		Skarland roof
182B	Yukon Dr.	Roadway	Aimed flood	HPS	400	rta	20'		Skarland roof
183	Yukon Dr.			HPS	150	white ra	20'		South of Upper Dorms
184	Yukon Dr.			HPS	150	white ra	20'		South of Upper Dorms
185	Yukon Dr.			HPS	150	white ra	20'		South of Upper Dorms
186	Yukon Dr.			HPS	150	white ra	20'		South of Upper Dorms
187	Yukon Dr.			HPS	150	white ra	20'		South of Upper Dorms
188	Yukon Dr.			HPS	150	white ra	20'		South of Upper Dorms
189A	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
189B	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
189C	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
190A	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
190B	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
191A	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
191B	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
191C	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
192A	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
192B	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
192C	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
193A	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
193B	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
194A	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
194B	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
194C	MBS North Lot E1	Parking	Shoebox	HPS	400	Lithonia S	30'		North MBS Lot E1
195A	Nenana Lot Y3			HPS		wooden			Nenana East Lot Y2

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
195B	Nenana Lot Y3			HPS		wooden			Nenana East Lot Y2
196	Library entrance	Pedestrian	Bldg Soffit	HPS	150	square	20'	Bronze	Library roof
197	Library entrance	Pedestrian	Bldg Soffit	HPS	150	square	20'	Bronze	Library roof
198	Library entrance	Pedestrian	Bldg Soffit	HPS	150	square	20'	Bronze	Library roof
199	Library entrance	Pedestrian	Bldg Soffit	HPS	150	square	20'	Bronze	Library roof
200	Library entrance	Pedestrian	Bldg Soffit	HPS	150	square	20'	Bronze	Library roof
201	Tanana Loop	Roadway	Aimed flood						Harwood roof
202	Tanana Loop	Roadway	Aimed flood	HPS	250				Harwood roof
203	Tanana Loop	Roadway	Aimed flood						Harwood roof
204A	Harwood Lot CC/Tanana Lp	Roadway	Aimed flood						Harwood roof
204B	Harwood Lot CC/Tanana Lp	Parking	Aimed flood						Harwood roof
205	Tanana Loop	Roadway	Aimed flood				25'		Harwood roof
206	Walsh Hall Lot M	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
207	Walsh Hall Lot M	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
208	Walsh Hall Lot M	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
209A	Bunnell House Lot AAA/Chatanika			HPS	250	rta	25'	natural alum	Harwood roof
209B	Bunnell House Lot AAA/Chatanika			HPS	250	rta	25'	natural alum	Harwood roof
209C	Bunnell House Lot AAA/Chatanika			HPS	250	rta	25'	natural alum	Harwood roof
210	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
211	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
212	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
213	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
214	Chatanika	Pedestrian	China Hat	HPS	250				Harwood roof
215	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
216	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
217	Chatanika	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
218	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
219	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
220	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
221	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
222	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
223	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
224	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
225	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
226	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
227	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
228	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
229	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
230	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
231	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
232	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
233	N. Chandalar	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	Harwood roof
234	Chandalar/Hess walk	Pedestrian	China Hat	HPS	100	rta	15'	natural alum	
235	Chandalar/Hess walk	Pedestrian	China Hat	HPS	100	rta	15'	natural alum	
236	Chandalar/Hess walk	Pedestrian	China Hat	HPS	100	rta	15'	natural alum	
237	Chandalar/Hess walk	Pedestrian	China Hat	HPS	100	rta	8'	natural alum	
238	Hess Village	Pedestrian	Cobra head	HPS	100	rts	12'	dark bronze	FS752, north wall
239	Hess Village	Pedestrian	Cobra head	HPS	100	rts	12'	dark bronze	FS752, north wall
240	Hess Village	Pedestrian	Cobra head	HPS	100	rts	12'	dark bronze	FS752, north wall
241	Hess Village	Pedestrian	Cobra head	HPS	100	rts	12'	dark bronze	FS752, north wall
242	Hess Village	Pedestrian	Cobra head	HPS	50	Squ. Straigh	10'	wooden	
243	Hess Village	Pedestrian	Mushroom head	HPS	50	Squ. Straigh	10'	wooden	
244	Hess Village	Pedestrian	Mushroom head	HPS	50	Squ. Straigh	10'	wooden	
245	Hess Village	Pedestrian	Mushroom head						
246	Hess Village	Pedestrian	Mushroom head						
247	Hess Village	Pedestrian	Mushroom head						
248	Hess Village	Pedestrian	Mushroom head						
249	Hess Village	Pedestrian	Mushroom head	HPS	70	Squ. Straigh	10'	wooden	
250	Hess Village	Pedestrian	Mushroom head						
251	Hess Village	Pedestrian	Mushroom head	HPS	70	Squ. Straigh	10'	wooden	
252	Hess Village SW Lot Z4	Parking	China Hat						
253	Hess Village SW Lot Z4	Parking	China Hat	HPS	70				
254	Hess Village NW Lot Z3	Parking	China Hat	HPS	70	rta	12'	natural alum	
255	Hess Village NW Lot Z3	Parking	China Hat	HPS	70	rta	12'	natural alum	
256	Hess Village SE Lot Z2	Parking	China Hat	HPS	70	rta	12'	natural alum	
257	Hess Village SE Lot Z2	Parking	China Hat	HPS	70	rta	12'	natural alum	
258	Hess Village NE Lot Z1	Parking	China Hat	HPS	70	rta	12'	natural alum	top of light
259	Hess Village NE Lot Z1	Parking	China Hat	HPS	70	rta	12'	natural alum	top of light
260	Copper Lane	Pedestrian	Bldg Soffit	HPS	400	stanchion	bldg		FS561, roof
261	Harwood Lot CC	Parking	Aimed flood						Harwood roof
262	Harwood Lot CC	Parking	Aimed flood	HPS	250				Harwood roof
263	Kuskokwim	Pedestrian	China Hat			rta	8'		Harwood roof
264	Kuskokwim	Pedestrian	China Hat			rta	8'		Harwood roof
265	Kuskokwim	Pedestrian	China Hat			rta	8'		Harwood roof
266	Kuskokwim	Pedestrian	China Hat			rta	8'		Harwood roof
267	Kuskokwim	Pedestrian	China Hat	HPS	70	rta	8'		Harwood roof
268	Kuskokwim	Pedestrian	China Hat	HPS	70	rta	8'		Harwood roof
269	Columbia Circle	Pedestrian	China Hat	HPS	70	rta	8'		Harwood roof
270	Columbia Circle	Pedestrian	China Hat			rta	8'		Harwood roof
271	Columbia Circle	Pedestrian	China Hat	HPS	70	rta	8'		Harwood roof
272	Columbia Circle	Pedestrian	China Hat			rta	8'		Harwood roof
273	Columbia Circle	Pedestrian	China Hat	HPS	70	rta	8'		Harwood roof

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
274	Yukon Dr.	Pedestrian	China Hat	HPS	100	rta	8'		North of FA-Arts
275	Yukon Dr.	Pedestrian	China Hat	HPS	100	rta	8'		North of FA-Arts
276	Garden/Harwood walk	Pedestrian	China Hat			rta	8'		Harwood roof
277	Garden/Harwood walk	Pedestrian	China Hat			rta	8'		Harwood roof
278	Garden/Harwood walk	Pedestrian	China Hat	HPS	70	rta	8'		Harwood roof
279	Garden/Harwood walk	Pedestrian	China Hat	HPS	70	rta	8'		Harwood roof
280	Garden/Harwood walk	Pedestrian	China Hat			rta	8'		Harwood roof
281	CAC Lot F4	Parking	Aimed flood	HPS	250	sa	25'	bronze	FS774 North Wall
282	CAC Lot F4	Parking	Aimed flood	HPS	250	sa	25'	bronze	FS774 North Wall
283	Kuskokwim	Roadway	Aimed flood	HPS	250	sa	25'	bronze	FS774 North Wall
284	CAC Lot F3	Roadway	Aimed flood	HPS	250	sa	25'	bronze	FS774 North Wall
285	CAC Lot F3	Parking	Aimed flood	HPS	250	sa	25'	bronze	FS774 North Wall
286	CAC Lot F3	Parking	Aimed flood	HPS	250	sa	25'	bronze	FS774 North Wall
287	CAC Lot F2	Parking	Aimed flood	HPS	250	sa	25'	bronze	FS774 North Wall
288	CAC Lot F2	Parking	Aimed flood			sa	25'	bronze	FS774 North Wall
289	CAC Lot F2	Parking	Aimed flood			sa	25'	bronze	FS774 North Wall
290	CAC Lot F1	Parking	Aimed flood			sa	25'	bronze	FS774 North Wall
291	CAC Lot F1	Pedestrian	Aimed flood			sa	25'	bronze	FS774 North Wall
292	CAC	Pedestrian	Mushroom head			rsa	10'	black	FS774 North Wall
293	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
294	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
295	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
296	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
297	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
298	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
299	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
300	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
301	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
302	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
303	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
304	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
305	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
306	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
307	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
308	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
309	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
310	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
311	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
312	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
313	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall
314	CAC	Pedestrian	Mushroom head	HPS	50	rsa	10'	black	FS774 North Wall

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
315	CAC	Pedestrian	China Hat			rta	10'		FS774 North Wall
316	CAC	Pedestrian	China Hat	HPS	70	rta	10'		FS774 North Wall
317	CAC	Pedestrian	China Hat	HPS		rta	10'		FS774 North Wall
318	CAC	Pedestrian	China Hat	HPS	50	rta	10'		FS774 North Wall
319	CAC	Pedestrian	Mushroom head			ra	10'		FS774 North Wall
320A	Kuskokwim	Roadway	Shoebox	HPS	250	rts	25'	bronze	North MBS Lot E1
320B	Kuskokwim	Roadway	Shoebox	HPS	250	rts	25'	bronze	North MBS Lot E1
321A	Eielson North entry	Pedestrian	Bldg Soffit			n/a	bldg		
321B	Eielson North entry	Pedestrian	Bldg Soffit			n/a	bldg		
322	Yukon Dr.			HPS	250	rta	25'	natural alum	South of Upper Dorms
323	Chapman Lot J	Parking	Aimed flood	HPS	400	stanchion	bldg		Chapman, roof
324	Chapman Lot J	Parking	Aimed flood	HPS	400	stanchion	bldg		Chapman, roof
325	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
326	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
327	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
328	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
329	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
330	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
331	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
332	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
333	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
334	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
335	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
336	Butrovich Lot SS	Parking	Shoebox	HPS	100 (?)	White RTA	25'		
337	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
338	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
339	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
340	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
341	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
342	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
343	IAB Greenhouse Lot BBB	Parking	Shoebox	HPS	400				
344	IAB Greenhouse Lot BBB	Parking	Shoebox		250				
345	IAB Greenhouse Lot BBB	Parking	Shoebox		250				
346	IAB Greenhouse Lot BBB	Parking	Shoebox		250				
347	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		on condensor roof
348	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
349	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
350	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
351	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
352	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
353A	AHRB East entry	Pedestrian	Bldg Soffit	HPS		n/a	bldg		

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
353B	AHRB East entry	Pedestrian	Bldg Soffit	HPS		n/a	bldg		
354A	AHRB East entry	Pedestrian	Bldg Soffit	HPS		n/a	bldg		
354B	AHRB East entry	Pedestrian	Bldg Soffit	HPS		n/a	bldg		
355	AHRB East mechanical	Pedestrian	Bldg Soffit	HPS		n/a	bldg		
356A	IARC Front entry	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		DDC from NSF
356B	IARC Front entry	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		DDC from NSF
357A	IARC Rear entry	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		DDC from NSF
357B	IARC Rear entry	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		DDC from NSF
358A	IARC Mechanical yard	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg		DDC from NSF
358B	IARC Mechanical yard	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg		DDC from NSF
358C	IARC Mechanical yard	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg		DDC from NSF
358D	IARC Mechanical yard	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg		DDC from NSF
359	Elvey Front entry	Pedestrian	Bldg Soffit	HPS		n/a	bldg		
360	AHRB East Lot C	Pedestrian	China Hat						
361	AHRB East Lot C	Pedestrian	China Hat						
362	AHRB East Lot C	Pedestrian	China Hat						
363	AHRB East Lot C	Parking	China Hat						
364	AHRB East Lot C	Parking	China Hat						
365	AHRB East Lot C	Parking	China Hat						
366	AHRB East Lot C	Parking	China Hat						
367	AHRB East Lot C	Pedestrian	China Hat						
368	AHRB East Lot C	Pedestrian	China Hat						
369	MBS North Stairs	Pedestrian	Shepard's Hook	HPS	150	black rss	15'		North MBS Lot E1
370	MBS North Stairs	Pedestrian	Shepard's Hook	HPS	150	black rss	15'		North MBS Lot E1
371	MBS North Stairs	Pedestrian	Soffit	HPS	250	canopy	canopy		North MBS Lot E1
372	MBS North Stairs	Pedestrian	Soffit	HPS	250	canopy	canopy		North MBS Lot E1
373	MBS North Stairs	Pedestrian	Shepard's Hook	HPS	150	black rss	10'		North MBS Lot E1
374	MBS North Stairs	Pedestrian	Shepard's Hook	HPS	150	black rss	10'		North MBS Lot E1
375	MBS North Stairs	Pedestrian	Shepard's Hook	HPS	150	black rss	12'		North MBS Lot E1
376	MBS North Stairs	Pedestrian	Shepard's Hook	HPS	150	black rss	12'		North MBS Lot E1
377A	Bunnell NW Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
377B	Bunnell NW Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
377C	Bunnell NW Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
378A	Bunnell NE Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
378B	Bunnell NE Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
378C	Bunnell NE Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
378D	Bunnell NE Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
378E	Bunnell NE Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
379A	Bunnell NE End	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg		DDC
379B	Bunnell NE End	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg		DDC
379C	Bunnell NE End	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg		DDC

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
380	Bunnell East Schiable	Pedestrian	Bldg Soffit	HPS	70	n/a	bldg		DDC
381A	Bunnell SE Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
381B	Bunnell SE Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
382A	Bunnell South Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
382B	Bunnell South Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
382C	Bunnell South Entry	Pedestrian	Soffit	HPS	70	n/a	bldg		DDC
383A	Bunnell W upper & lower	Pedestrian	Bldg Soffit	HPS	70	n/a	bldg		DDC
383B	Bunnell W upper & lower	Pedestrian	Bldg Soffit	HPS	70	n/a	bldg		DDC
384A	Bunnell West Sign	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg		DDC
384B	Bunnell West Sign	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg		DDC
385	MBS East Dumpster	Task/Safety	Shoebox	HPS	150	rss	20'	bronze	South of Upper Dorms
386	MBS East Dumpster	Task/Safety	Shoebox	HPS	150	rss	20'	bronze	South of Upper Dorms
387	Tanana Loop	Roadway	Post Top						DDC from NSF
388	Tanana Loop	Roadway	Post Top						DDC from NSF
389	AHRB NE Entrance	Pedestrian	China Hat						
390	AHRB NE Entrance	Pedestrian	China Hat						
391	AHRB NW Entrance	Pedestrian	China Hat						
392	AHRB NW Entrance	Pedestrian	China Hat	HPS	70				
393	AHRB West Lot D	Pedestrian	China Hat						
394	AHRB West Lot D	Pedestrian	China Hat						
395	AHRB West Lot D	Parking	China Hat	HPS	70				
396	AHRB West Lot D	Parking	China Hat						
397	AHRB West Lot D	Parking	China Hat						
398	AHRB West Lot D	Parking	China Hat						
399	AHRB West Lot D	Parking	China Hat						
400	AHRB West Lot D	Parking	China Hat						
401	Koyukuk Dr.	Parking	China Hat						
402	Koyukuk Dr.	Parking	China Hat						
403	AHRB West Lot D	Parking	China Hat						
404E	Patty Ice Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Ice Penthouse E wall
404F	Patty Ice Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Ice Penthouse E wall
404G	Patty Ice Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Ice Penthouse E wall
404H	Patty Ice Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Ice Penthouse E wall
404I	Patty Ice Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Ice Penthouse E wall
404J	Patty Ice Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Ice Penthouse E wall
405	Patty Ice Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Ice Penthouse E wall
406	Patty Ice Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Ice Penthouse E wall
407	Patty Center Gym Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Gym N Wall
408D	Patty Center Gym Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Gym N Wall
408E	Patty Center Gym Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Gym N Wall
408F	Patty Center Gym Rear Exit	Pedestrian	Bldg Soffit			n/a	bldg		Patty Gym N Wall

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
409	Power Plant	Pedestrian	China Hat	MV	400				
410	Power Plant	Pedestrian	China Hat	MV	400				
411	Power Plant	Pedestrian	China Hat	MV	400				
412	Power Plant	Pedestrian	China Hat						
413	Irving Lot HH	Parking	Bldg Soffit			n/a	bldg		
414	Irving Lot HH	Parking	Bldg Soffit			n/a	bldg		
415A	Irving Lot HH	Parking	Aimed flood		400				Irving I N wall grnd lvl
415B	Irving Lot HH	Parking	Aimed flood		400				Irving I N wall grnd lvl
416	Elvey walk	Pedestrian	China Hat			rta	8'		Elvey roof
417	Elvey walk	Pedestrian	China Hat			rta	8'		Elvey roof
418	Elvey Walk	Pedestrian	China Hat	HPS	70	rta	8'		Elvey roof
419	O'Neill front walk	Pedestrian	Mushroom head	HPS	250	rdco PRA5	30'		Irving I SW roof
420	O'Neill front walk	Pedestrian	Aimed flood			n/a	bldg		
421	Power Plant Lot ZZ	Parking	China Hat						
422	Power Plant Lot ZZ	Parking	China Hat						
423	Physical Plant West Lot V2	Parking	Mushroom head						
424	Elvey deck	Pedestrian	China Hat			rta	8'		Elvey roof
425	Elvey deck	Pedestrian	China Hat			rta	8'		Elvey roof
426	Duckering Lot O	Pedestrian	China Hat				8'		S. Wall Bunnell
427	Duckering Lot O	Pedestrian	China Hat				8'		S. Wall Bunnell
428	Duckering Lot O	Pedestrian	China Hat				8'		Duckering roof
429	Duckering Lot O	Pedestrian	China Hat				8'		Duckering roof
430	Duckering Lot O	Pedestrian	China Hat	HPS	70		8'		Duckering roof
431	Duckering Lot O	Pedestrian	China Hat				8'		Duckering roof
432	Duckering Lot O	Pedestrian	China Hat				8'		Duckering roof
433	Duckering Lot O	Pedestrian	China Hat				8'		Duckering roof
434	Duckering Lot O	Pedestrian	China Hat				8'		Duckering roof
435	Duckering SE entrance	Pedestrian	Bollard	MH	70	bollard		dark bronze	Duckering roof
436	Duckering SE entrance	Pedestrian	Bollard	MH	70	bollard		dark bronze	Duckering roof
437	Duckering SE entrance	Pedestrian	Bollard	MH	70	bollard		dark bronze	Duckering roof
438	Duckering SE entrance	Pedestrian	Bollard	MH	70	bollard		dark bronze	Duckering roof
439	Duckering SE entrance	Pedestrian	Bollard	MH	70	bollard		dark bronze	Duckering roof
440	Duckering SE entrance	Pedestrian	Bollard	MH	70	bollard		dark bronze	Duckering roof
441	Butrovich Lot SS	Pedestrian	Bollard	HPS	70	bollard			
442	Butrovich Lot SS	Pedestrian	Bollard	HPS	70	bollard			
443	Butrovich Lot SS	Pedestrian	Bollard	HPS	70	bollard			
444	Butrovich Lot SS	Pedestrian	Bollard	HPS	70	bollard			
445	Butrovich Lot SS	Pedestrian	Bollard	HPS	150	bollard			
446	Butrovich Lot SS	Pedestrian	Bollard	HPS	150	bollard			
447	Butrovich Lot SS	Pedestrian	Bollard	HPS	150	bollard			
448	Butrovich Lot SS	Pedestrian	Bollard	HPS	150	bollard			

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
449	Butrovich Lot SS	Pedestrian	Bollard	HPS	70	bollard			
450A	Physical Plant North Lot V1	Parking	Aimed flood	HPS	400	rta			
450B	Physical Plant North Lot V1	Parking	Aimed flood	HPS	400	rta			
451A	Physical Plant North Lot V1	Parking	Aimed flood	HPS	400	rta			
451B	Physical Plant North Lot V1	Parking	Aimed flood	HPS	400	rta			
452A	Physical Plant East Lot V3	Parking	Aimed flood	HPS	400	rta			
452B	Physical Plant East Lot V3	Parking	Aimed flood	HPS	400	rta			
453A	Physical Plant East Lot V3	Parking	Aimed flood	HPS	400	rta			
453B	Physical Plant East Lot V3	Parking	Aimed flood	HPS	400	rta			
454A	Physical Plant East Lot V3	Parking	Aimed flood			rta			
454B	Physical Plant East Lot V3	Parking	Aimed flood			rta			
454C	Physical Plant East Lot V3	Parking	Aimed flood			rta			
454D	Physical Plant East Lot V3	Parking	Aimed flood			rta			
455A	Physical Plant West Lot V2	Parking	Aimed flood			rta			Phys Plant West Lot V2
455B	Physical Plant West Lot V2	Parking	Aimed flood			rta			Phys Plant West Lot V2
455C	Physical Plant West Lot V2	Parking	Aimed flood			rta			Phys Plant West Lot V2
456A	Physical Plant West Lot V2	Parking	Aimed flood	HPS	400	rta			Phys Plant West Lot V2
456B	Physical Plant West Lot V2	Parking	Aimed flood	HPS	400	rta			Phys Plant West Lot V2
456C	Physical Plant West Lot V2	Parking	Aimed flood	HPS	400	rta			Phys Plant West Lot V2
457	Whitaker Lot K	Task/Safety	Aimed flood						
458	Duckering stairs	Pedestrian	China Hat	HPS	250		15'		Duckering roof
459	Duckering S entrance	Pedestrian	Bldg Soffit	mogul base	150	n/a	bldg		
460	Duckering stairs	Pedestrian	China Hat	HPS	250		15'		Duckering roof
461	Duckering stairs	Pedestrian	China Hat	HPS	250		15'		Duckering roof
462	Duckering stairs	Pedestrian	China Hat	HPS	250		15'		Duckering roof
463	Duckering stairs	Pedestrian	China Hat	HPS	250		15'		Duckering roof
464A	Ratlab	Parking	Aimed flood	HPS	250				Phys Plant West Lot V2
464B	Ratlab	Parking	Aimed flood	HPS	250				Phys Plant West Lot V2
465	Power Plant Lot ZZ	Parking	Aimed flood	HPS	250				
466	Power Plant Lot ZZ	Parking	Aimed flood	HPS	250				
467	Lower Dorms Dumpster	Task/Safety	Cobra head	HPS		sa			Eielson roof
468	Lower Dorms Dumpster	Task/Safety	Cobra head	HPS		sa			Eielson roof
469	Taku Dr.	Roadway	Aimed flood	HPS	250	rta	25'	atural alum	Duckering roof
470	Taku Dr.	Roadway	Aimed flood	HPS	250	rta			Duckering roof
471A	Ballaine Lot AA	Pedestrian	Aimed flood	HPS	400	rta			Ballaine Lot AA
471B	Ballaine Lot AA	Pedestrian	Aimed flood	HPS	400	rta			Ballaine Lot AA
472A	Ballaine Lot AA	Pedestrian	Aimed flood	HPS	400	wooden	20'		Ballaine Lot AA
472B	Ballaine Lot AA	Pedestrian	Aimed flood	HPS	400	wooden	20'		Ballaine Lot AA
473	Ballaine Lot AA	Pedestrian	Aimed flood	HPS	250	rta		atural alum	Ballaine Lot AA
474A	Taku Dr.	Pedestrian	Aimed flood	HPS	250	rta		atural alum	Ballaine Lot AA
474B	Taku Dr.	Roadway	Aimed flood	HPS	250	rta		atural alum	Ballaine Lot AA

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
475	Taku Dr.	Roadway	Aimed flood			rta			Ballaine Lot AA
476	Taku Dr.	Roadway	Aimed flood	HPS	250	rta			Ballaine Lot AA
477	Taku Dr.	Roadway	Aimed flood	HPS	250	rta			Ballaine Lot AA
478	Taku Lot BB1	Parking	Aimed flood	HPS	400	wooden	35'		Ballaine Lot AA
479	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
480	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
481	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
482	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
483A	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
483B	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
484	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
485	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
486	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
487	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
488	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
489	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
490	Taku Lot BB1	Parking	Aimed flood	HPS	250	wooden	30'		Ballaine Lot AA
	0								
491	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
492	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
493	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
494	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
495	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
496	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
497	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
498	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
499	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
500	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
501	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
502	Elvey walk	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
503	Elvey walk	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
504	Elvey walk	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
505	Irving walk	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
506	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
507	Koyukuk Dr.	Roadway	Mushroom head	HPS	150	rdco PRA4	15'		Irving I SW roof
508	Koyukuk Dr.	Roadway	Mushroom head	HPS	250	rdco PRA5	30'		Irving I SW roof
509	Koyukuk Dr.	Roadway	Mushroom head	HPS	250	rdco PRA5	30'		Irving I SW roof
510	Koyukuk Dr.	Roadway	Mushroom head	HPS	250	rdco PRA5	30'		Irving I SW roof
511	Sheenjek Way	Roadway	Mushroom head	HPS	250/400	rdco PRA5	30'		Irving I SW roof
512A	FA Music North	Pedestrian	Bldg Soffit	HPS	70/250/250	n/a	bldg		Fine Arts Music roof
512B	FA Music North	Pedestrian	Bldg Soffit	HPS	70/250/250	n/a	bldg		Fine Arts Music roof

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
512C	FA Music North	Pedestrian	Bldg Soffit	HPS	70/250/250	n/a	bldg		Fine Arts Music roof
513A	FA Music East	Pedestrian	Bldg Soffit	HPS	0/70/250/25	n/a	bldg		Fine Arts Music roof
513B	FA Music East	Pedestrian	Bldg Soffit	HPS	0/70/250/25	n/a	bldg		Fine Arts Music roof
513C	FA Music East	Pedestrian	Bldg Soffit	HPS	0/70/250/25	n/a	bldg		Fine Arts Music roof
513D	FA Music East	Pedestrian	Bldg Soffit	HPS	0/70/250/25	n/a	bldg		Fine Arts Music roof
514A	FA Theater North	Pedestrian	Bldg Soffit	HPS	70/70/250	n/a	bldg		Fine Arts Music roof
514B	FA Theater North	Pedestrian	Bldg Soffit	HPS	70/70/250	n/a	bldg		Fine Arts Music roof
514C	FA Theater North	Pedestrian	Bldg Soffit	HPS	70/70/250	n/a	bldg		Fine Arts Music roof
515	FA Theater Stage Dock	Pedestrian	Bldg Soffit	HPS	250	n/a	bldg		Fine Arts Music roof
516	FA Theater East	Pedestrian	Bldg Soffit	HPS	250	n/a	bldg		Fine Arts Music roof
517A	Library East Receiving	Pedestrian	Bldg Soffit	HPS	70	n/a	bldg		Fine Arts Music roof
517B	Library East Receiving	Pedestrian	Bldg Soffit	HPS	70	n/a	bldg		Fine Arts Music roof
517C	Library East Receiving	Pedestrian	Bldg Soffit	HPS	70	n/a	bldg		Fine Arts Music roof
517D	Library East Receiving	Pedestrian	Bldg Soffit	HPS	70	n/a	bldg		Fine Arts Music roof
518A	Library East Walking Deck	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Library roof
518B	Library East Walking Deck	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Library roof
518C	Library East Walking Deck	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Library roof
519A	FA Great Hall Entrance	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg, ceiling		Fine Arts Music roof
519B	FA Great Hall Entrance	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg, ceiling		Fine Arts Music roof
519C	FA Great Hall Entrance	Pedestrian	Bldg Soffit	HPS	150	n/a	bldg, ceiling		Fine Arts Music roof
520A	FA Arts West	Pedestrian	Bldg Soffit	HPS	250	n/a	bldg		Fine Arts Music roof
520B	FA Arts West	Pedestrian	Bldg Soffit	HPS	250	n/a	bldg		Fine Arts Music roof
521A	FA Arts North	Pedestrian	Bldg Soffit	HPS	250	n/a	bldg		Fine Arts Music roof
521B	FA Arts North	Pedestrian	Bldg Soffit	HPS	250	n/a	bldg		Fine Arts Music roof
522A	FA Music West	Pedestrian	Bldg Soffit	HPS	70	n/a	bldg		Fine Arts Music roof
522B	FA Music West	Pedestrian	Bldg Soffit	HPS	70	n/a	bldg		Fine Arts Music roof
523	Noatak Park	Pedestrian	Aimed flood	HPS		Wooden			Nenana East Lot Y2
524	Fairbanks St.	Pedestrian	Cobra head	HPS	250				Nenana East Lot Y2
525	Fairbanks St.	Pedestrian	Cobra head	HPS	250				Nenana East Lot Y2
526A	Y2/Fairbanks St.	Pedestrian	Aimed flood	HPS	400	rta	20'		Nenana East Lot Y2
526B	Y2/Fairbanks St.	Roadway	Aimed flood	HPS	250	rta	20'		Nenana East Lot Y2
527	Fairbanks St.	Pedestrian	Cobra head	HPS	250				Nenana East Lot Y2
528	Fairbanks St.	Pedestrian	Cobra head	HPS	250				Nenana East Lot Y2
529	NSF Exit	Roadway	Shoebox	HPS	400	brown sq	35'		
530	NSF Exit	Roadway	Shoebox	HPS	400	brown sq	35'		
531	NSF Exit	Roadway	Shoebox	HPS	400	brown sq	35'		
532	NSF Exit	Roadway	Shoebox	HPS	400	brown sq	35'		
533	NSF Lot FF	Parking	Shoebox	HPS	400	brown sq	35'		
534	NSF Entrance	Roadway	Shoebox	HPS	400	brown sq	35'		
535	NSF Entrance	Roadway	Shoebox	HPS	400	brown sq	35'		
536	NSF Entrance	Roadway	Shoebox	HPS	400	brown sq	35'		

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
537	NSF Lot FF	Parking	Shoebox	HPS	400	brown sq	35'		
538	NSF Lot FF	Parking	Shoebox	HPS	400	brown sq	35'		
539	NSF Lot FF	Parking	Shoebox	HPS	400	brown sq	35'		
540A	NSF Lot FF	Parking	Shoebox	HPS	400	brown sq	35'		
540B	NSF Lot FF	Parking	Shoebox	HPS	400	brown sq	35'		
541A	NSF Lot FF	Parking	Shoebox	HPS	250	brown sq	35'		
541B	NSF Lot FF	Parking	Shoebox	HPS	250	brown sq	35'		
542	Library South Entrance	Pedestrian	Shoebox	HPS	150	sa	12'		Library roof
543	Library South Entrance	Pedestrian	Shoebox	HPS	150	sa	12'		Library roof
544	Library South Entrance	Pedestrian	Shoebox	HPS	150	sa	12'		Library roof
545	Library South Entrance	Pedestrian	Shoebox	HPS	150	sa	12'		Library roof
546	Library South Entrance	Pedestrian	Shoebox	HPS	150	sa	12'		Library roof
547	Skarland	Pedestrian	Bldg Soffit						Skarland roof
548A	Skarland	Pedestrian	Bldg Soffit						Skarland roof
548B	Skarland	Pedestrian	Bldg Soffit						Skarland roof
548C	Skarland	Pedestrian	Bldg Soffit						Skarland roof
548D	Skarland	Pedestrian	Bldg Soffit						Skarland roof
548E	Skarland	Pedestrian	Bldg Soffit						Skarland roof
549A	Skarland	Pedestrian	Bldg Soffit						Skarland roof
549B	Skarland	Pedestrian	Bldg Soffit						Skarland roof
549C	Skarland	Pedestrian	Bldg Soffit						Skarland roof
549D	Skarland	Pedestrian	Bldg Soffit						Skarland roof
549E	Skarland	Pedestrian	Bldg Soffit						Skarland roof
549F	Skarland	Pedestrian	Bldg Soffit						Skarland roof
549G	Skarland	Pedestrian	Bldg Soffit						Skarland roof
549H	Skarland	Pedestrian	Bldg Soffit						Skarland roof
549I	Skarland	Pedestrian	Bldg Soffit						Skarland roof
550	Wood Center West wall	Pedestrian	Aimed flood			n/a	bldg		
551	Wood Center West wall	Pedestrian	Aimed flood			n/a	bldg		
552	Wood Center deck	Pedestrian	China Hat						
553	Constitution Plaza	Pedestrian	Aimed flood						
554	Upper/Lower Walk								Haida Lot I
555	CAC	Pedestrian	Mushroom head			ra	10'		FS774 North Wall
556	CAC	Pedestrian	Mushroom head			ra	10'		FS774 North Wall
557	CAC	Pedestrian	Mushroom head						FS774 North Wall
558	CAC	Pedestrian	Mushroom head						FS774 North Wall
559	CAC	Pedestrian	Mushroom head						FS774 North Wall
560	CAC	Pedestrian	Mushroom head						FS774 North Wall
561	CAC	Pedestrian	Mushroom head						FS774 North Wall
562	CAC	Pedestrian	Mushroom head						FS774 North Wall
563	CAC	Pedestrian	Mushroom head			ra	10'		FS774 North Wall

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
564	CAC	Pedestrian	Mushroom head						FS774 North Wall
565	CAC	Pedestrian	Mushroom head			ra	10'		FS774 North Wall
566	CAC	Pedestrian	Mushroom head						FS774 North Wall
567	CAC	Pedestrian	Mushroom head			ra	10'		FS774 North Wall
568	CAC	Pedestrian	Mushroom head						FS774 North Wall
569	CAC	Pedestrian	Mushroom head						FS774 North Wall
570	CAC	Pedestrian	Mushroom head			ra	10'		FS774 North Wall
571	CAC	Pedestrian	Mushroom head			ra	10'		FS774 North Wall
572	CAC	Pedestrian	Mushroom head			ra	10'		FS774 North Wall
573	CAC	Pedestrian	Mushroom head			ra	10'		FS774 North Wall
574	NSF Lot FF	Parking	Shoebox	HPS	400	brown sq	35'		
575	NSF Lot FF	Parking	Shoebox	HPS	400	brown sq	35'		
576	O'Neill Lot NN	Parking	China Hat	HPS	400	rta	35'		DDC from NSF
577	O'Neill Lot NN	Parking	China Hat	HPS	400	rta	35'		DDC from NSF
578	Sheenjek Lot SL	Parking	China Hat	HPS	250	rta	35'		Sheenjek Lot SL
579	Sheenjek Lot SL	Parking	China Hat	HPS	250	rta	35'		Sheenjek Lot SL
580	Sheenjek Lot SL	Parking	China Hat	HPS	250	rta	35'		Sheenjek Lot SL
581	Sheenjek Lot SL	Parking	China Hat	HPS	250	rta	35'		Sheenjek Lot SL
582	Elvey Lot A1	Parking	Mushroom head	HPS	250	rta	35'	bronze	DDC from NSF
583	Elvey Lot A1	Parking	Mushroom head	HPS	250	rta	35'	bronze	DDC from NSF
584	Elvey Lot A1	Parking	Mushroom head	HPS	250	rta	35'	bronze	DDC from NSF
585	Elvey Lot A1	Parking	Mushroom head	HPS	250	rta	35'	bronze	DDC from NSF
586	Butrovich Lot SS	Parking	Shoebox	HPS	150	White RTA	25'		
587A	Hess Commons North side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
587B	Hess Commons North side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
587C	Hess Commons North side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
587D	Hess Commons North side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
587E	Hess Commons North side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
587F	Hess Commons North side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
587G	Hess Commons North side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
587H	Hess Commons North side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
587I	Hess Commons North side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
588A	Hess Commons West side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
588B	Hess Commons West side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
588C	Hess Commons West side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
588D	Hess Commons West side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
588E	Hess Commons West side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
588F	Hess Commons West side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
588G	Hess Commons West side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
588H	Hess Commons West side	Pedestrian	Bldg Soffit			n/a	soffit		Bartlett roof
589	Farm Hort/Agron			HPS	100				

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
590A	Bartlett, North side	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Bartlett roof
590B	Bartlett, North side	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Bartlett roof
590C	Bartlett, North side	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Bartlett roof
590D	Bartlett, North side	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Bartlett roof
591A	Bartlett, East walk	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Bartlett roof
591B	Bartlett, East walk	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Bartlett roof
591C	Bartlett, East walk	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Bartlett roof
591D	Bartlett, East walk	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Bartlett roof
591E	Bartlett, East walk	Pedestrian	Bldg Soffit	HPS		n/a	bldg		Bartlett roof
592A	Skarland, West walk	Pedestrian	Bldg Soffit	HPS	100	n/a	bldg		Bartlett roof
592B	Skarland, West walk	Pedestrian	Bldg Soffit	HPS	100	n/a	bldg		Bartlett roof
593	Irving Lot HH	Pedestrian	Bldg Soffit						
594	Walsh Hall Lot M	Parking	China Hat						Harwood roof
595	Patty Lot X	Pedestrian	Aimed flood						Patty Ice Penthouse E wall
596	Lathrop	Pedestrian	Aimed flood						
597	Lathrop	Pedestrian	Aimed flood						
598	Lathrop	Roadway	Aimed flood	HPS	50				
599	Lathrop	Roadway	Aimed flood						
600	Lathrop	Roadway	Aimed flood						
601	Lathrop	Pedestrian	Bldg Soffit	HPS	50				
602	Lathrop	Pedestrian	Bldg Soffit	HPS	50				
603	Stevens	Pedestrian	Aimed flood						
604	Stevens	Pedestrian	Aimed flood						
605	Stevens	Pedestrian	Aimed flood						
606	Stevens	Pedestrian	Aimed flood	HPS	50				
607A	Stevens	Pedestrian	Aimed flood	HPS	50				
607B	Stevens	Pedestrian	Aimed flood	HPS	50				
608	Tanana Loop			HPS	250				Nenana East Lot Y2
609	Patty Center Gym	Pedestrian	Aimed flood			n/a	bldg		Patty Gym N Wall
610	IAB Greenhouse	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		
611	Tanana Loop	Pedestrian	Aimed flood	HPS	400	n/a	bldg		Duckering roof
612	Duckering E walk	Pedestrian	Bollard	MH	70	bollard		dark bronze	Duckering roof
613	Library Lot GG	Parking	Shoebox						Library roof
614	Duckering W walk	Pedestrian	Bldg Soffit						
615	Duckering W walk	Pedestrian	Bldg Soffit						
616	Denali Lane	Roadway	Aimed flood						
617	Denali Lane	Roadway	Aimed flood						
618	Nerland	Pedestrian	Aimed flood						
619	Nerland	Pedestrian	Aimed flood	HPS	50				
620	Nerland	Pedestrian	Aimed flood						
621	Nerland	Pedestrian	Aimed flood						

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
622	Nerland	Pedestrian	Aimed flood	HPS	50				
623	Physical Plant West Lot V2	Parking	Aimed flood						Phys Plant West Lot V2
624	Patty Ice Front	Pedestrian	Aimed flood	HPS		n/a	bldg		Patty Ice E Wall Penthouse
625	Patty Ice Front	Pedestrian	Aimed flood	HPS		n/a	bldg		Patty Ice E Wall Penthouse
626	Patty Center Gym	Pedestrian	Bldg Soffit	MV?		n/a	bldg		Patty Gym N Wall
627	Patty Center Gym	Pedestrian	Bldg Soffit	MV?		n/a	bldg		Patty Gym N Wall
628	McIntosh	Pedestrian	Aimed flood						
629	McIntosh	Pedestrian	Aimed flood	HPS	150				
630	McIntosh	Pedestrian	Aimed flood						
631	McIntosh	Pedestrian	Aimed flood	HPS	70				
632	LT Commons - Bridge	Pedestrian	China Hat	HPS	70				
633	LT Commons - Bridge	Pedestrian	China Hat						
634	Alumni Drive	Roadway	Shoebox	HPS					Nenana East Lot Y2
635	Security Lot L	Pedestrian	Bldg Soffit						
636	Security Lot L	Pedestrian	Bldg Soffit						
637A	IAB Greenhouse	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		
637B	IAB Greenhouse	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		
637C	IAB Greenhouse	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		
638	S of LT Commons	Pedestrian	Aimed flood	HPS					Commons Lot W
639	McIntosh	Pedestrian	Aimed flood						Eielson roof
640A	Inupiat Lot OO					n/a	bldg		FS778 West wall
640B	Inupiat Lot OO					n/a	soffit		FS778 West wall
640C	Inupiat Lot OO					n/a	bldg		FS778 West wall
640D	Inupiat Lot OO					n/a	bldg		FS778 West wall
640E	Inupiat Lot OO					n/a	bldg		FS778 West wall
640F	Inupiat Lot OO					n/a	soffit		FS778 West wall
640G	Inupiat Lot OO					n/a	bldg		FS778 West wall
641A	Inupiat walk					n/a	bldg		FS779 South wall
641B	Inupiat walk					n/a	soffit		FS779 South wall
641C	Inupiat walk					n/a	bldg		FS779 South wall
641D	Inupiat walk					n/a	bldg		FS779 South wall
641E	Inupiat walk					n/a	soffit		FS779 South wall
641F	Inupiat walk					n/a	bldg		FS779 South wall
641G	Inupiat walk					n/a	bldg		FS779 South wall
641H	Inupiat walk					n/a	soffit		FS779 South wall
641I	Inupiat walk					n/a	soffit		FS779 South wall
641J	Inupiat walk					n/a	bldg		FS779 South wall
641K	Inupiat walk					n/a	bldg		FS779 South wall
642	Inupiat Lot OO					bolt, attach	20-25?		FS777 West wall
643A	Inupiat walk					n/a	bldg		FS777 West wall
643B	Inupiat walk					n/a	bldg		FS777 West wall

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
643C	Inupiat walk					n/a	bldg		FS777 West wall
643D	Inupiat walk					n/a	bldg		FS777 West wall
643E	Inupiat walk					n/a	soffit		FS777 West wall
643F	Inupiat walk					n/a	soffit		FS777 West wall
643G	Inupiat walk					n/a	soffit		FS777 West wall
643H	Inupiat walk					n/a	soffit		FS777 West wall
643I	Inupiat walk					n/a	soffit		FS777 West wall
643J	Inupiat walk					n/a	soffit		FS777 West wall
643K	Inupiat walk					n/a	soffit		FS777 West wall
643L	Inupiat walk					n/a	bldg		FS777 West wall
643M	Inupiat walk					n/a	bldg		FS777 West wall
643N	Inupiat walk					n/a	bldg		FS777 West wall
643O	Inupiat walk					n/a	soffit		FS777 West wall
643P	Inupiat walk					n/a	bldg		FS777 West wall
643Q	Inupiat walk					n/a	bldg		FS777 West wall
644A	Inupiat walk					n/a	bldg		FS780 South wall
644B	Inupiat walk					n/a	soffit		FS780 South wall
644C	Inupiat walk					n/a	bldg		FS780 South wall
644D	Inupiat walk					n/a	bldg		FS780 South wall
644E	Inupiat walk					n/a	bldg		FS780 South wall
644F	Inupiat walk					n/a	soffit		FS780 South wall
644G	Inupiat walk					n/a	bldg		FS780 South wall
645	Hess Village	Pedestrian	Mushroom head						
646	Hess Village	Pedestrian	Mushroom head						
647	Hess Village	Pedestrian	Mushroom head						
648A	Upper/Lower Walk								Haida Lot I
648B	Upper/Lower Walk								Haida Lot I
649	Elvey Lot A1	Pedestrian	Bldg Soffit			bldg	bldg		Elvey roof
650	Elvey Lot A1	Pedestrian	Bldg Soffit			bldg	bldg		Elvey roof
651	N. Tanana	Roadway	Aimed flood	HPS	250	brown rta	30'		Harwood roof
652	N. Tanana	Roadway	Aimed flood	HPS	250	brown rta	30'		Harwood roof
653	N. Tanana	Roadway	Aimed flood	HPS	250	brown rta	30'		Harwood roof
654	N. Tanana	Roadway	Aimed flood	HPS	250	brown rta	30'		Harwood roof
655	N. Tanana	Roadway	Aimed flood	HPS	250	brown rta	30'		Harwood roof
656	LT Commons - E Canopy	Pedestrian	Canopy	LED	30	n/a	n/a	n/a	
657	LT Commons - E Canopy	Pedestrian	Canopy	LED	30	n/a	n/a	n/a	
658	LT Commons - E Canopy	Pedestrian	Canopy	LED	30	n/a	n/a	n/a	
659	LT Commons - E Canopy	Pedestrian	Canopy	LED	30	n/a	n/a	n/a	
660A	UPark Lot X4	Parking	Aimed flood			wooden	20'		
660B	UPark Lot X4	Parking	Aimed flood			wooden	20'		
661	UPark Lot X4	Parking	Aimed flood			wooden	20'		

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
662	UPark Lot X4	Parking	Aimed flood	HPS	70	rta	10'		
663A	UPark Lot X4	Parking	Aimed flood			wooden	20'		
663B	UPark Lot X4	Parking	Aimed flood			wooden	20'		
664	UPark Lot X4	Parking	Aimed flood			wooden	20'		
665A	NSF NW Entry	Pedestrian	Bldg Soffit			n/a	soffit		
665B	NSF NW Entry	Pedestrian	Bldg Soffit			n/a	soffit		
665C	NSF NW Entry	Pedestrian	Bldg Soffit			n/a	soffit		
666A	NSF NW Walk	Pedestrian	Bldg Soffit			n/a	in wall		
666B	NSF NW Walk	Pedestrian	Bldg Soffit			n/a	in wall		
666C	NSF NW Walk	Pedestrian	Bldg Soffit			n/a	in wall		
667A	NSF NE Walk	Pedestrian	Bldg Soffit			n/a	in wall		
667B	NSF NE Walk	Pedestrian	Bldg Soffit			n/a	in wall		
667C	NSF NE Walk	Pedestrian	Bldg Soffit			n/a	in wall		
668A	NSF NE Entry	Pedestrian	Bldg Soffit			n/a	soffit		
668B	NSF NE Entry	Pedestrian	Bldg Soffit			n/a	soffit		
668C	NSF NE Entry	Pedestrian	Bldg Soffit			n/a	soffit		
669A	NSF South Entry	Pedestrian	Bldg Soffit			n/a	soffit		
669B	NSF South Entry	Pedestrian	Bldg Soffit			n/a	soffit		
669C	NSF South Entry	Pedestrian	Bldg Soffit			n/a	soffit		
670	NSF Front	Pedestrian	Shoebox	HPS	250	sss	15'	brown	
671	NSF Front	Pedestrian	Shoebox	HPS	250	sss	15'	brown	
672	NSF Front	Pedestrian	Shoebox	HPS	250	sss	15'	brown	
673	NSF Front	Pedestrian	Shoebox	HPS	250	sss	15'	brown	
674	NSF Front	Pedestrian	Bollard			bollard			
675	NSF Front	Pedestrian	Bollard			bollard			
676	NSF Front	Pedestrian	Bollard			bollard			
677	NSF Front	Pedestrian	Bollard			bollard			
678	NSF Front	Pedestrian	Bollard			bollard			
679	NSF Front	Pedestrian	Bollard			bollard			
680	NSF Front	Pedestrian	Bollard			bollard			
681	NSF Front	Pedestrian	Bollard			bollard			
682	Fairbanks St.	Pedestrian	Aimed flood	HPS		rta	25'		Nenana East Lot Y2
683	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
684	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
685	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
686	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
687	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
688	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
689	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
690	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
691	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
692	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
693	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
694	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
695	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
696	Koyukuk Dr.	Pedestrian	China Hat						DDC from NSF
697	IARC West walk	Pedestrian	China Hat						DDC from NSF
698	IARC West walk	Pedestrian	China Hat						DDC from NSF
699	IARC West walk	Pedestrian	China Hat						DDC from NSF
700	Elvey Lot A1	Pedestrian	China Hat						DDC from NSF
701	Elvey Lot A1	Pedestrian	China Hat						DDC from NSF
702	Elvey Lot A1	Pedestrian	China Hat						DDC from NSF
703	Elvey Lot A1	Pedestrian	China Hat						DDC from NSF
704A	UPark Lot X4	Parking	Aimed flood	HPS	250				
704B	UPark Lot X4	Parking	Aimed flood	HPS	250				
705A	UPark Lot X4	Parking	Aimed flood						
705B	UPark Lot X4	Parking	Aimed flood						
706A	UPark Lot X4	Parking	Aimed flood	HPS	400				
706B	UPark Lot X4	Parking	Aimed flood	HPS	400				
707A	UPark Lot X4	Parking	Aimed flood	HPS	400				
707B	UPark Lot X4	Parking	Aimed flood	HPS	400				
708A	UPark Lot X4	Parking	Aimed flood						
708B	UPark Lot X4	Parking	Aimed flood						
709	U-Park	Parking	Aimed flood						
710	UPark Lot X4	Parking	Aimed flood	HPS		n/a	bldg		
711	UPark Lot X4	Parking	Aimed flood	HPS		n/a	bldg		
712	UPark Lot X4	Parking	Aimed flood	HPS		n/a	bldg		
713	UPark Lot X4	Parking	Aimed flood	HPS		n/a	bldg		
714	UPark Lot X4	Parking	Aimed flood			n/a	bldg		
715	U-Park	Parking	Aimed flood			n/a	bldg		
716	U-Park	Parking	Aimed flood			n/a	bldg		
717	U-Park	Parking	Aimed flood			n/a	bldg		
718	U-Park	Parking	Aimed flood			n/a	bldg		
719	U-Park	Parking	Aimed flood			n/a	bldg		
720	Ratlab entry	Parking	Bldg Soffit			n/a	bldg		
721	Great Hall	Pedestrian	Bollard	HPS	50	n/a	step light		
722	Great Hall	Pedestrian	Bollard	HPS	50	n/a	step light		
723	Great Hall	Pedestrian	Bollard	HPS	50	n/a	step light		
724	Great Hall	Pedestrian	Bollard	HPS	50	n/a	step light		
725	Constitution Hall	Pedestrian	Bollard	HPS	50	n/a	step light		
726	Constitution Hall	Pedestrian	Bollard	HPS	50	n/a	step light		
727	Constitution Hall	Pedestrian	Bollard	HPS	50	n/a	step light		

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
728	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
729	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
730	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
731	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
732	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
733	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
734	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
735	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
736	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
737	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
738	Constitution Plaza	Pedestrian	Bollard	HPS	50	n/a	step light		
739	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
740	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
741	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
742	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
743	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
744	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
745	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
746	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
747	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
748	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
749	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
750	Noatak Park	Pedestrian	Cobra head	HPS	70	Fiberglass	10'	Green	Nenana East Lot Y2
751	N. Tanana Bike path	Trail	Aimed flood	LED	175	rta	25'	natural alum	Harwood roof
752	N. Tanana Bike path	Trail	Aimed flood	LED	175	rta	25'	natural alum	Harwood roof
753	N. Tanana Bike path	Trail	Aimed flood	LED	175	rta	25'	natural alum	Harwood roof
754	N. Tanana Bike path	Trail	Aimed flood	LED	175	rta	25'	natural alum	Harwood roof
755	N. Tanana Bike path	Trail	Aimed flood	LED	175	rta	25'	natural alum	Harwood roof
756	N. Tanana Bike path	Trail	Aimed flood	LED	175	rta	25'	natural alum	Harwood roof
757	Museum lawn sculpture west side	Pedestrian	Aimed flood	MH	250				Museum NW roof
758	Museum	Pedestrian	Aimed flood					brown	Museum NW roof
759	Museum	Pedestrian	Aimed flood					brown	Museum NW roof
760	Museum			MH	175			brown	Museum NW roof
761	Museum			MH	175			brown	Museum NW roof
762	Museum	Roadway	Shoebox	PSMH	320	rta	30'		Museum NW roof
763	Museum	Roadway	Shoebox	PSMH	320	rta	30'		Museum NW roof
764	Museum	Roadway	Shoebox	PSMH	320	rta	30'		Museum NW roof
765	Museum	Parking	Shoebox	PSMH	320	rta	30'		Museum NW roof
766	Museum	Parking	Shoebox	PSMH	320	rta	30'		Museum NW roof
767	Museum	Parking	Shoebox	PSMH	320	rta	30'		Museum NW roof
768	Museum	Parking	Shoebox	PSMH	320	rta	30'		Museum NW roof

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
769	Museum	Parking	Shoebox	PSMH	320	rta	30'		Museum NW roof
770	Museum	Parking	Shoebox	PSMH	320	rta	30'		Museum NW roof
771	Museum	Parking	Shoebox	PSMH	320	rta	30'		Museum NW roof
772	Museum	Parking	Shoebox	PSMH	320	rta	30'		Museum NW roof
773	Museum	Parking	Shoebox	PSMH	320	rta	30'		Museum NW roof
774	Museum	Parking	Shoebox	PSMH	150	ra	12'	white	Museum NW roof
775	Museum	Parking	Shoebox	PSMH	150	ra	12'	white	Museum NW roof
776	Museum	Parking	Shoebox	PSMH	150	ra	12'	white	Museum NW roof
777	Museum	Parking	Shoebox	PSMH	150	ra	12'	white	Museum NW roof
778	Museum	Parking	Shoebox	PSMH	150	ra	12'	white	Museum NW roof
779	Museum	Parking	Shoebox	PSMH	150	ra	12'	white	Museum NW roof
780	Museum	Pedestrian	Bldg Soffit	PSMH	150	n/a	bldg	n/a	Museum NW roof
781	Museum	Pedestrian	Bldg Soffit	PSMH	150	n/a	bldg	n/a	Museum NW roof
782	Museum	Pedestrian	Bldg Soffit	PSMH	150	n/a	bldg	n/a	Museum NW roof
783	Museum	Pedestrian	Bldg Soffit	PSMH	150	n/a	bldg	n/a	Museum NW roof
784	Museum	Pedestrian	Bldg Soffit	PSMH	150	n/a	bldg	n/a	Museum NW roof
785	Museum	Pedestrian	Bldg Soffit	PSMH	70	n/a	bldg	n/a	Museum NW roof
786	Museum	Pedestrian	Bldg Soffit	PSMH	70	n/a	bldg	n/a	Museum NW roof
787	Museum	Pedestrian	Bldg Soffit	PSMH	70	n/a	bldg	n/a	Museum NW roof
788	Museum	Pedestrian	Bldg Soffit	PSMH	70	n/a	bldg	n/a	Museum NW roof
789A	Hess Village, Dumpster Bldg	Task/Safety	Aimed flood	Inc		n/a	bldg		
789B	Hess Village, Dumpster Bldg	Task/Safety	Aimed flood	Inc		n/a	bldg		
790	Hess Village	Pedestrian	Bldg Soffit	HPS	50	n/a	soffit		
791	Hess Village	Pedestrian	Bldg Soffit	Inc		n/a	bldg		
792	Hess Village	Pedestrian	Bldg Soffit	HPS		n/a	soffit		
793A	Hess Village, Dumpster Bldg	Task/Safety	Aimed flood	Inc		n/a	bldg		
793B	Hess Village, Dumpster Bldg	Task/Safety	Aimed flood	Inc		n/a	bldg		
794A	Hess Village, Dumpster Bldg	Task/Safety	Aimed flood	Inc	90	n/a	bldg		
794B	Hess Village, Dumpster Bldg	Task/Safety	Aimed flood	Inc	90	n/a	bldg		
795	Hess Village	Pedestrian	Bldg Soffit	HPS	50	n/a	soffit		
796	Hess Village	Pedestrian	Bldg Soffit	HPS		n/a	soffit		
797A	Hess Village, Dumpster Bldg	Task/Safety	Aimed flood	Inc		n/a	bldg		
797B	Hess Village, Dumpster Bldg	Task/Safety	Aimed flood	Inc		n/a	bldg		
798	Hess Village	Pedestrian	Bldg Soffit	HPS	50	n/a	soffit		
799	Hess Village	Pedestrian	Bldg Soffit	HPS		n/a	soffit		
800A	Facilities Services sign	Parking	Aimed flood	Halogen	500	n/a	bldg		
800B	Facilities Services sign	Parking	Aimed flood	Halogen	500	n/a	bldg		
801A	Physical Plant North side	Parking	Bldg Soffit	HPS	100	n/a	bldg		Phys Plant NE roof
801B	Physical Plant North side	Parking	Bldg Soffit	HPS	100	n/a	bldg		Phys Plant NE roof
802A	Physical Plant East side	Parking	Bldg Soffit	HPS	100	n/a	bldg		Phys Plant NE roof
802B	Physical Plant East side	Parking	Bldg Soffit	HPS	100	n/a	bldg		Phys Plant NE roof

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
802C	Physical Plant East side	Parking	Bldg Soffit	HPS	100	n/a	bldg		Phys Plant NE roof
802D	Physical Plant East side	Parking	Bldg Soffit	HPS	100	n/a	bldg		Phys Plant NE roof
802E	Physical Plant East side	Parking	Bldg Soffit	HPS	100	n/a	bldg		Phys Plant NE roof
802F	Physical Plant East side	Parking	Bldg Soffit	HPS	100	n/a	bldg		Phys Plant NE roof
803	Physical Plant South side	Parking	Bldg Soffit	HPS	100	n/a	bldg		Phys Plant NE roof
804A	Facilities Services sign	Parking	Aimed flood	Halogen	500	n/a	bldg		
804B	Facilities Services sign	Parking	Aimed flood	Halogen	500	n/a	bldg		
805A	Library South Entrance	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		Library roof
805B	Library South Entrance	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		Library roof
805C	Library South Entrance	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		Library roof
805D	Library South Entrance	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		Library roof
806A	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806B	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806C	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806D	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806E	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806F	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806G	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806H	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806I	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806J	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806K	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806L	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806M	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806N	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
806O	SRC North Soffit	Pedestrian	Bldg Soffit	HPS	70	n/a	soffit		unknown
807A	Admin Service Center E lot			HPS	250			brown	
807B	Admin Service Center E lot			HPS	250			brown	
808A	Admin Service Center E lot							brown	
808B	Admin Service Center E lot							brown	
809	p					n/a	bldg	n/a	
810A	Admin Service Center W lot							brown	
810B	Admin Service Center W lot							brown	
811	Admin Service Center W entry					n/a	bldg	n/a	
812A	Admin Service Center W lot							brown	
812B	Admin Service Center W lot							brown	
813	Admin Service Center E entry					n/a	bldg	n/a	
814	Harper Bldg lot	Parking	Shoebox			rta		brown	
815	Harper Bldg W Mech Rm Entry	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
816	Harper Bldg W Wall	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
817	Harper Bldg, W Entry soffitt	Pedestrian	Bldg Soffit			n/a	bldg	n/a	

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
818	Harper Bldg W Wall	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
819	Harper Bldg lot	Parking	Shoebox			rta		brown	
820	Harper Bldg lot	Parking	Shoebox			rta		brown	
821	Harper Bldg, NE canopy	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
822	Harper Bldg, NE canopy	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
823	Harper Bldg, NE canopy	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
824	Harper Bldg, NE vestibule	Pedestrian	Bldg Soffit	Halogen	50	n/a	bldg	n/a	
825	Harper Bldg, S soffitt	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
826	Harper Bldg, S soffitt	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
827	Harper Bldg, S soffitt	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
828	Harper Bldg, S soffitt	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
829A	Harper Bldg, flag light	Task/Safety	Aimed flood	Halogen		n/a	bldg	n/a	
829B	Harper Bldg, flag light	Task/Safety	Aimed flood	Halogen		n/a	bldg	n/a	
830	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
831	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
832	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
833	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
834	Thompson Drive pulloff	Roadway	Shoebox		250	assa	30'	dark bronze	
835	Thompson Drive parking kiosk	Roadway	Canopy	CFL		n/a	n/a	n/a	
836	Thompson Drive pulloff	Roadway	Shoebox		250	assa	30'	dark bronze	
837	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
838	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
839	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
840	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
841	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
842	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
843	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
844	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
845	Thompson Drive (bridge)	Roadway	Shoebox		250	assa	30'	dark bronze	
846	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
847	Thompson Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
848	West Tanana Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
849	West Tanana Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
850	West Tanana Drive	Roadway	Shoebox		250	assa	30'	dark bronze	
851	Tanana Loop/W Tanana Drive				250	assa	30'	dark bronze	
852	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	
853	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	
854	Tanana Loop Roundabout	Roadway	Shoebox		250	assa	30'	dark bronze	
855	Tanana Loop Roundabout	Roadway	Shoebox		250	assa	30'	dark bronze	
856	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	
857	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
858	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	
859	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	
860	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	
861	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	
862	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	
863	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	
864	Tanana Loop	Roadway	Shoebox		250	assa	30'	dark bronze	
865	Forestry bldg			HPS		n/a	bldg	n/a	
866	Forestry bldg			HPS		n/a	bldg	n/a	
867A	Forestry bldg					n/a	bldg	n/a	on fixture
867B	Forestry bldg					n/a	bldg	n/a	
868	Forestry bldg			inc?		n/a	bldg	n/a	
869	Forestry bldg			inc?		n/a	bldg	n/a	
870	Forestry bldg			HPS		n/a	bldg	n/a	
871	Forestry bldg			HPS		n/a	bldg	n/a	
872	Forestry bldg			HPS		n/a	bldg	n/a	
919	U-Park, walkway canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
920	U-Park, walkway canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
921	U-Park	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
922	U-Park	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
923	U-Park, walkway canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
924	U-Park, walkway canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
925	U-Park, walkway canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	Next to fixture
926	U-Park, parking permit kiosk	Pedestrian	Bldg Soffit	CFL		n/a	bldg	n/a	
927	UPark Lot X4	Parking	Aimed flood			wooden			
928	U-Park, under canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
929	U-Park, under canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
930	U-Park, under canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
931	U-Park			HPS		n/a	bldg	n/a	
932	U-Park, wallpack	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
933	U-Park, under canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
934	U-Park, under canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
935	U-Park, under canopy	Pedestrian	Bldg Soffit	HPS		n/a	bldg	n/a	
936	WRRB, west side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
937	WRRB, west side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
938	WRRB, west side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
939	WRRB, west side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
940	WRRB, west side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
941	WRRB, west side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
942	WRRB, west side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
943	WRRB, north side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
944	WRRB, north side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
945	WRRB, north side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
946	WRRB, east side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
947	WRRB, east side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
948	WRRB, east side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
949	WRRB, east side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
950	WRRB, south side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
951	WRRB, south side	Pedestrian	Bldg Soffit			n/a	bldg	n/a	
952	WRRB, east entry soffitt			HPS		n/a	bldg	n/a	
953	WRRB, east entry soffitt			HPS		n/a	bldg	n/a	
954	WRRB, west entry soffitt			HPS		n/a	bldg	n/a	
955	WRRB, west entry soffitt			HPS		n/a	bldg	n/a	
956	WRRB, north entry soffitt			HPS		n/a	bldg	n/a	
957	Bunnell flag light			MH	175	n/a	bldg	n/a	
958	Bunnell flag light			MH	175	n/a	bldg	n/a	
959	Yukon Dr/Tanana Lp			LED	140		21	brown	
960	LT Commons - E Canopy	Pedestrian	Bldg Soffit	LED	30	n/a	n/a	n/a	
961	LT Commons - E Canopy	Pedestrian	Bldg Soffit	LED	30	n/a	n/a	n/a	
L1A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L1B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L10A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L10B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L10C	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L11A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L11B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L12A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L12B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L13A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L13B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L14A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L14B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L15A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L15B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L16A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L16B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L17A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L17B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L2A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L2B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L3A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L3B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
L4A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L4B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L5A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L5B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L6A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L6B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L7A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L7B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L8A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L8B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
L9	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
T1	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T10	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden	35'		
T2A	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T2B	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T3A	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T3B	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T4A	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T4B	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T5A	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T5B	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T6A	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T6B	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T7A	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T7B	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T8A	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T8B	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T9A	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
T9B	Ski Trail	Task/Safety	Aimed flood	HPS	150	wooden			
U1A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U1B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U10A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U10B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U11A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U11B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U12A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U12B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U13A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U13B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U14A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U14B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
U15A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U15B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U2A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U2B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U3A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U3B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U4A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U4B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U5A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U5B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U6A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U6B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U7A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U7B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U7C	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U8A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U8B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U8C	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U9A	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
U9B	Ski Trail	Task/Safety	Aimed flood	HPS	250	wooden			
2001	Arctic Health West (New)								
2002	Arctic Health West (New)								
2003	Arctic Health West (New)								
2004	Arctic Health West (New)								
2005	Arctic Health West (New)								
2006	Arctic Health West (New)								
2007	Arctic Health West (New)								
2008	Arctic Health West (New)								
2009	Arctic Health West (New)								
2010	Arctic Health West (New)								
2011	Arctic Health West (New)								
2012	Arctic Health West (New)								
2013	Arctic Health West (New)								
2014	Arctic Health West (New)								
2015	Arctic Health West (New)								
2016	0								
2017	0								
2018	0								
2019	0								
2020	0								
2021	0								

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
2022	0								
2023	0								
2024	0								
2025	0								
2026	0								
2027	0								
2028	0								
2029	0								
2030	0								
2031	0								
2032	0								
2033	0								
2034	0								
2035	0								
2036	0								
2037	0								
2038	0								
2039	0								
2040	0								
2041	0								
2042	0								
2043	0								
2044	0								
2045	0								
2046	0								
2047	0								
2048	0								
2049	0								
2050	0								
2051	0								
2052	0								
2053	0								
2054	0								
2055	0								
2056	0								
2057	0								
2058	0								
2059	0								
2060	0								
2061	0								
2062	0								

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
2063	0								
2064	0								
2065	0								
2066	0								
2067	0								
2068	0								
2069	0								
2070	0								
2071	0								
2072	0								
2073	0								
2074	0								
2075	0								
2076	0								
2077	0								
2078	0								
2079	0								
2080	0								
2081	0								
2082	0								
2083	0								
2084	0								
2085	0								
2086	0								
2087	0								
2088	0								
2089	0								
2090	0								
2091	Hess Commons			HPS	150	n/a	n/a	n/a	
2092	0								
2093	0								
2094	0								
2095	0								
2096	0								
2097	0								
2098	0								
2099	0								
2100	0								
2101	0								
2102	0								
2103	0								

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
2104	0								
2105	0								
2106	0								
2107	0								
2108	0								
2109	0								
2110	0								
2111	0								
2112	0								
2113	0								
2114	0								
2115	0								
2116	0								
2117	0								
2118	0								
2119	0								
2120	0								
2121	0								
2122	0								
2123	0								
2124	0								
2125	0								
2126	0								
2127	0								
2128	0								
2129	0								
2130	0								
2131	0								
2132	0								
2133	0								
2134	0								
2135	0								
2136	outside Wickersham			HPS	70	rss	10'	dark brown	
2137	0								
2138	0								
2139	0								
2140	0								
2141	0								
2142	0								
2143	0								
2144	0								

ID	Bldg / Site Name			Luminaire Specs		Mounting type			Control
Light fixture	Location	Function	Type	Lamp type	Wattage	Pole	Height	Color	Photocell Location
2145	0								
2146	0								
2147	0								
2148	0								
2149	0								
2150	0								
2151	0								
2152	0								
2153	0								
2154	0								
2155	0								
2156	0								
2157	0								
2158	0								
2159	0								
2160	0								
2161	0								
2162	0								
2163	0								

Appendix C – Lighting Design Criteria

The attached appendix provides guidance for lighting levels, uniformities, luminaire types, pole types and control solutions for different locations around campus. Note that the scale, size, and style of the exterior lighting should be limited to a small number of luminaire types based on function and with respect to the campus precinct installed. See discussion under Section 3.

Due to the varied shapes and styles of LED luminaires, it will be difficult to find a luminaire shape/style that has three manufacturers that are exactly equivalent. It is most important to choose a type and style in a precinct and stay with that luminaire type, color and pole style.

One consideration for a luminaire to tie the precincts together would be to select a walkway fixture (no substitutes) to replace the “China Hats” that has more of a timeless or elegant look to it, such as the Kim “Bounce” luminaire, Louis Poulsen “Albertslund Mini Post or “LP Nest” luminaire, or similar. Exact type to be determined by coordination with the lighting designer and UAF staff.

APPENDIX C - LIGHTING DESIGN CRITERIA

ILLUMINATION ZONE	CONTROL LEVEL	LUMINAIRE CHARACTERISTIC	AVG fc	FTC UNIFORMITY	LIGHTING ZONE	COMMENTS
WALKS - HOUSING	2	B	.2fc horiz .1fc vert	4:1 avg/min 10:1 max/min	LZ1	Notes 1,2
WALKS - CLASSROOM BUILDINGS	2	B	.2fc horiz .1fc vert	4:1 avg/min 10:1 max/min	LZ1	Notes 1,2
WALKS - CAMPUS CORE	2	B	.2fc horiz .1fc vert	4:1 avg/min 10:1 max/min	LZ1	Notes 1,2
WALKS - TO EVENT SPACE	2,4	B	.2fc horiz .1fc vert	4:1 avg/min 10:1 max/min	LZ1	Notes 1,2
WALKS - ADMINSTRATIVE SPACES	2	B	.2fc horiz .1fc vert	4:1 avg/min 10:1 max/min	LZ1	Notes 1,2
WALKS - PARKING LOTS PERIMETER	2	A/B	.2fc horiz .1fc vert	4:1 avg/min 10:1 max/min	LZ1	May be illuminated with parking area luminaires if practical
WALKS - ADJACENT ROADWAY - RESIDENTIAL AREAS	2	B/F	.5fc horiz .5fc vert	4:1 avg/min 10:1 max/min	LZ1	Notes 1,2. May be illuminated with roadway luminaires if practical.
WALKS - ADJACENT ROADWAY - INTERMEDIATE AREAS	2	B/F	.6fc horiz 1.0fc vert	4:1 avg/min 10:1 max/min	LZ1	Notes 1,2. May be illuminated with roadway luminaires if practical.

APPENDIX C - LIGHTING DESIGN CRITERIA

ILLUMINATION ZONE	CONTROL LEVEL	LUMINAIRE CHARACTERISTIC	AVG fc	FTC UNIFORMITY	LIGHTING ZONE	COMMENTS
BUS/SHUTTLE STOPS & LINKS - MEDIUM ACTIVITY	3	F	.5fc horiz .3fc vert	2:1 avg/min 3:1 max/min (4:1 avg/min vert)	LZ2	Note 3,6
BUS/SHUTTLE STOPS & LINKS - LOW ACTIVITY	3	F	.2fc horiz .05fc vert	2:1 avg/min 3:1 max/min	LZ1	Note 2,6
TRAILS - BIKE /PEDESTRIAN (DISTANT FROM ROADS)	3	C	.5fc horiz .5fc vert	4:1 avg/min 10:1 max/min	LZ1	Notes 1,2
TRAILS - SKIING /RUNNING	3	C	.5fc horiz .5fc vert	4:1 avg/min 10:1 max/min	LZ0 or LZ1	Notes 1,3,4. Determine need for illumination first.
TRAILS - RECREATIONAL	3	C	.2fc horiz .1fc vert	4:1 avg/min 10:1 max/min	LZ0 or LZ1	Notes 1,2,4. Determine need for illumination first.
TRAILS - CAMPUS/COMMUNITY CONNECTORS	3	C	.4fc horiz .2fc vert	4:1 avg/min 10:1 max/min	LZ0 or LZ1	Notes 1,3. Determine need for illumination first.
OUTDOOR GATHERING AREAS (PLAZAS)	2	D	1.0fc horiz .5fc vert	4:1 avg/min 5:1 max/min	LZ1	Notes 3,5
PARKING LOT- DAY /EVE USE	2	A	.5fc min .25fc vert	15:1 max/min	LZ2	Note 6

APPENDIX C - LIGHTING DESIGN CRITERIA

ILLUMINATION ZONE	CONTROL LEVEL	LUMINAIRE CHARACTERISTIC	AVG fc	FTC UNIFORMITY	LIGHTING ZONE	COMMENTS
PARKING LOT - STUDENT HOUSING	2	A	.5fc min	15:1 max/min	LZ1	Note 6
PARKING LOT DAY USE	2	A	.5fc min	15:1 max/min	LZ1	Note 6
PARKING LOT EVENT USE	2,4	A	.5fc min	15:1 max/min	LZ2	Note 6
BUILDING ENTRANCES 24/7	1	E	*	*	LZ1 or LZ2	Lighting levels Per IESNA Vol 10 - Table 22.2.
BUILDING ENTRANCES 8-5 MF	2	E	*	*	LZ1 or LZ2	Lighting levels Per IESNA Vol 10 - Table 22.2.
ROADWAY LIGHTING	1	G	*	*	LZ1/LZ2	Lighting levels per IES RP-9.

COMMENTS

1 Walkway entrances and wayfinding areas should be illuminated slightly higher. Where walkways have sufficient length, lighting levels may be decreased along the path to account for Mesopic State of Adaption per IESNA guidelines.

2 Assumes Low Activity Level with 50% of Observers <25 years of age.

3 Assumes Medium Activity Level with 50% of Observers <25 years of age.

4 Verify need for illumination first. Levels shown are for LZ1. If determined that area is sensitive and LZ0, reduce levels accordingly. Uniformity ratios and pole heights may be slightly higher to reduce number or poles.

5 Uniformity ratios may be increased after hours per IESNA recommendations.

6 Lighting levels indicated are for security lighting levels. Basic lighting levels (0.2fc, 20:1 max/min) may also be considered where CCTV cameras are not provided or where surrounding lighting levels are very low. Lighting controls may also operate the lights at basic levels to save energy during infrequent use where deemed appropriate and approved by campus security.

APPENDIX C - LIGHTING DESIGN CRITERIA

LUMINAIRE CHARACTERISTIC	LUMINAIRE DESCRIPTION
A	Recommended luminaire types include medium to high pole-mounted luminaires (20-30ft).
B	Recommended luminaire types include short (12-14ft), decorative poles, bollards, landscape lighting, etc.
C	Recommended luminaire types include either short (12-14ft) or medium to high pole-mounted luminaires (20-30ft). Decorative bollards may be considered at waypoints.
D	Recommended luminaire types include short (12-14ft), decorative poles, bollards, landscape lighting, etc.
E	Recommended luminaire types include decorative wall sconces, recess downlights in soffits, bollards, etc.
F	Recommended luminaire types include roadway luminaires, decorative poles and/or bollards
G	Recommended luminaire types include arm-mountd roadway luminaires on high poles (30-40ft)

CONTROL LEVEL	CONTROL DESCRIPTION
1	All ON/All OFF via photocell/astronomic timer, remote override
2	Photocell/astronomic timer ON, reduced (30% min) levels after hours, remote override
3	Photocell/astronomic timer ON, Reduced (30% min) levels after hours, OFF at late evening, remote override
4	Special Event lighting may include higher levels, different colors, etc. Triggered from timeclock or remote override.