DATE: November 26, 2014

TO: Planning Commission

FROM: Eric Feldt, Planner II, CFM
Community Development Department

FILE NO.: USE2014 0015


GENERAL INFORMATION

Applicant: Bruce Messerschmidt

Property Owner: Greg & Marla Trollan

Property Address: 17120 Point Lena Loop Road

Legal Description: LENA POINT HEIGHTS LT 22

Parcel Code Number: 8-B33-0-102-022-0

Site Size: 0.60 Acres

Comprehensive Plan Future Land Use Designation: Rural/ Low Density Residential (RLDR)

Zoning: D-3

Utilities: CBJ Water; On-site Septic

Access: Point Lena Loop Road

Existing Land Use: Vacant

Surrounding Land Use:
North - D-3; Residential; Pt Lena Lp Rd
South - D-3; Residential; Pt Lena Lp Rd
East - D-3; Residential; Pt Lena Lp Rd
West - D-3; NOAA Laboratory; Pt Lena Lp Rd
Project Description
The applicant (Alaska Power & Telephone (AP&T)) requests a Conditional Use permit for the development of a utility facility in Lena Point. See vicinity map. The project consists of a modular building with electrical and heating/cooling components, a small building for a back-up generator and bathroom, and vehicular parking. Perimeter vegetation will be preserved. The existing driveway will be used to access the site.
As noted by the applicant, the purpose of this project is to; 1) Provide a termination point for the existing ocean-laid fiber line, and 2) Consolidate AP&T’s wireless (microwave) network. See Attachment A.

Staff notes that the project description states ‘future tower’. If and when a tower is proposed, it will be reviewed through a separate permit at that time.

**Background**
There have not been any proposed permits or land use activities on this site. The site remains vacant. The lot was platted in 2005 under the Lena Point Heights Subdivision (Plat # 2005-31).

**Analysis**

**Project Site**
The site is located in the Lena Point neighborhood which is primarily developed with low- and medium density single family homes. However, the subject site lies across the street from the large Ted Stevens Marine Research Institute and Alascom telecommunication wireless facility consisting of a tall tower and auxiliary electrical facilities. In this part of Lena Point, residences (and subject site) exist on the right (east) side of Point Lena Loop Road, whereas the industrial/commercial uses exist on the left (west) side of the road. See Vicinity Map.

The site is vacant and contains trees, bushes, and various other types of vegetation. There is an existing septic leach field near the southwestern corner of the site near the road. Small rock piles exist on the site.

The site is located in a D-3 zoning district. Although development in this district is largely single- and two-family residences, small commercial and industrial uses are also permitted.

**Project Design**
The project consists of a communications building (12’ x 52’); a support building containing a back-up generator, bathroom, and battery room; above-ground fuel tank; and, a small vehicular parking area. A perimeter metal fence (typical) and a vehicular entrance gate will secure the site. Beyond the fence, is a preserve vegetation buffer measuring between 12’ and 26’. See Attachments B & C. Vegetation within the first 25 feet of the lot nearby the road must be preserved as required by the Lena Point Heights Subdivision.

The site will be unmanned but infrequent maintenance will be necessary.

**Traffic**
Traffic generated by the project will be infrequent maintenance trips by personnel staff. The applicant states this will be less than what is generated by a residence.
Parking and Circulation
Access to the site from Point Lena Loop Road will be through an existing driveway, shared with Lot 21. This shared access is required by the Lena Point Heights Subdivision. The site’s proposed driveway is only a short distance from the road. Cars entering the site will pass through the security gate and turn immediately into a 3-car parking space in front of the proposed communication building. See Attachment B. This building will block headlight glare toward the adjacent homes.

Noise
The following noise levels are established under the Conditional Use permit section of the CBJ Land Use Code.

*CBJ 49.15.330 (g)*
(11) Sound. Conditions may be imposed to discourage production of more than 65 dBA at the property line during the day or 55 dBA at night.

Staff notes that those decibel levels are enforced at property lines.

The project will create a low ‘humming’ noise from the heating and cooling elements, and noise from the back-up generator. The heating and cooling elements are expected to run more frequently than the generator, which will run once a month for 30 minutes. Since the generator will have a muffler, the humming noise will be more noticeable.

To determine expected noise levels, the applicant took readings from an existing facility. The applicant concluded that from 25 feet away, the humming noise produced 56.7 decibels. Since this is 1.7 decibels above the allowed threshold, staff recommends a condition of approval that the heating/cooling elements be located farther than 25 feet away from the nearest property line or noise attenuators be installed between the building and closest property line.

Public Health or Safety
The site will be secured from the public by a fence and vehicular gate. Only permitted persons are allowed to enter the site. The six-foot tall metal fence will deter non-permitted persons from entering the site. Although barbed-wire may add further security, it is not allowed in this zoning district.

Habitat
There are no sensitive habitats of Title 49 that will be affected by the proposed project.

Lighting
Outdoor lighting will be installed to illuminate the parking area and building entrances. All
outdoor lighting is shown on the Site Plan. The outdoor lighting will be on light poles at heights between 15’-18’ and have light fixture designs to be full cut-off downward illumination. Staff finds this to be consistent with the Land Use Code and will deter horizontal glare onto adjacent lots and street. The applicant explains that this lighting will be turned on only through motion detecting sensor. Since access into the site is controlled through security fencing, the lighting should only be activated during times when personnel are on site.

**Property Value or Neighborhood Harmony**

Since the project is industrial in nature and is proposed next to existing residences, staff’s must determine the appropriateness of the project in the neighborhood. The Land Use Code states the following about Conditional Use permits:

> A conditional use is a use that may or may not be appropriate in a particular zoning district according to the character, intensity, or size of that or surrounding uses. The conditional use permit procedure is intended to afford the commission the flexibility necessary to make determinations appropriate to individual sites. The commission may attach to the permit those conditions listed in subsection (g) of this section as well as any further conditions necessary to mitigate external adverse impacts. If the commission determines that these impacts cannot be satisfactorily overcome, the permit shall be denied.

The impacts of an industrial use in a residential neighborhood may result in real or perceived negative affects to adjacent homes. The proposed use will result in a long, narrow building which is of a scale and massing not normally found in the neighborhood. Noise levels from the project may be louder or more of a nuisance than a typical residence. Resulting traffic levels from the project is likely to be lower than a typical home.

To preserve the residential feel of the neighborhood, staff finds that the project shall either be less visible to nearby homes and street or be designed to look like a residence. The applicant’s site plan shows a perimeter vegetation strip. Staff’s notes a required 25’ vegetative buffer along the front of the site. The foliage will block views during the summer but open views during the fall and winter. The northern (left) area of the site has the least amount of vegetation and offer little buffering. Enhancing this vegetation with new plants may be challenging due to the rocky condition of the soil. Installing a sign-obscuring fence may block views but would likely need to be at least eight feet high to achieve this blockage. A fence this large might instead detract from the residential setting. Another way to lessen the industrial look is to have the proposed buildings consist of siding that is common on nearby homes to help mimic a residential use. Staff spoke with the applicant about this idea and it was found to be acceptable. Staff recommends a condition of approval for the siding to match or be similar to nearby homes. With the perimeter vegetation shown on the site plan and using siding material and color that matches or is similar to nearby homes, staff finds the look of the buildings will not be a detraacting element to the neighborhood.
Staff has addressed future noise levels under Noise and has found that with recommended conditions, it will not result in a negative impact to the neighborhood.

With the recommended conditions, staff finds that Property Value and Neighborhood Harmony will be preserved.

**Conformity with Adopted Plans**
The CBJ Land Use code permits types of lands uses according to specific zoning districts. Some uses are non-discretionary (guaranteed approval) while others are discretionary, such as a Conditional Use permit. If it is found that the project does not result in a decrease in property value, neighborhood harmony, and public health and safety, the project is granted. An Intermediate Utility is listed as a permissible use in the D-3 district under Section 17.150, 49.25.300 of the Land Use code if a Conditional Use permit is granted. Staff finds that with the recommended conditions, the project will preserve those aforementioned elements and conforms to the CBJ Land Use code.

The 2013 CBJ Comprehensive Plan designates the neighborhood as Rural/Low Density Residential (RLDR), which is defined as

> land at densities of one to three dwelling units per acre, based on existing platting and capability of the land to accommodate on-site septic systems and wells or whether the land is served by municipal water and sewer service.

The definition of RLDR does not state commercial, utility, or industrial uses. However, the underlying D-3 district does allow commercial uses and may appear in direct conflict with the RLDR. Since the RLDR definition does not prohibit commercial uses, a proposed commercial use would not be non-conforming per se.

Due to the limited developable land and the need to grow local economy and housing supply, commercial projects may encroach into residential neighborhoods and vice versa. The following policy of the 2013 Comprehensive Plan states this critical issue:

**POLICY 10.4. TO MINIMIZE CONFLICTS BETWEEN RESIDENTIAL AREAS AND NEARBY RECREATIONAL, COMMERCIAL, OR INDUSTRIAL USES THAT WOULD GENERATE ADVERSE IMPACTS TO EXISTING RESIDENTIAL AREAS THROUGH APPROPRIATE LAND USE LOCATIONAL DECISIONS AND REGULATORY MEASURES.**

**Development Guidelines**

**10.4 - DG1** New development, particularly in-fill development on vacant land within established neighborhoods, should be designed in such a way as to promote compatibility in scale and massing as the adjacent or nearby built environment and should ensure privacy, light and air to adjacent homes. Density alone should not be considered as a criterion for determining neighborhood harmony within the Urban Service Area provided that:
A. Light, air and privacy is assured to adjacent residential occupants;
B. Parking for the subject project is screened or hidden from view from public streets and from adjacent residential neighbors; and,
C. Project-serving roads and intersections are improved to a Level of Service D or better. When these criteria are met, higher density development is encouraged.

10.4 - DG2 When a developer extends public or private utilities and infrastructure, such as sewer service, roads or electrical lines, to a particular parcel or development, care should be taken to ensure that adjacent lands and infrastructure that would be affected by the new development are adequately improved by the developer to accommodate the proposed project’s traffic as well as new traffic or use anticipated by the growth-inducing impacts of such services or infrastructure extensions. For example, when a water or sewer main or road is extended to a property, it should be sized to serve development at a similar scale and density on adjoining properties.

Implementing Actions
10.4 - IA2 Maintain and consider enhancing Title 49 Land Use Code requirements for buffering and screening between residential and commercial/industrial uses and careful review of site development plans. Great care should be taken to incorporate design features, materials and good neighbor operating practices into the non-residential development permit in order to mitigate potential adverse noise, dust, odor and glare impacts to adjacent residential neighbors.
Such operating practices should be incorporated as conditions of any permit for a nonresidential land use located within 200 feet of a residential use or neighborhood.

With staff’s recommended conditions relating to the project’s resulting noise levels, outdoor glare, and visual aesthetics, the project conforms to the above policy, development guideline, and implementing action.

Public Comment
Staff has received comments from the neighborhood over the phone with specific concerns about future noise levels resulting from the project. Staff’s recommended conditions pertaining to the heating/cooling elements and back-up generator will ensure the project’s noise levels comply with the Land Use Code.

Findings
CBJ §49.15.330 (e)(1), Review of Director’s Determinations, states that the Planning Commission shall review the Director's report to consider:

1. Whether the application is complete;
2. Whether the proposed use is appropriate according to the Table of Permissible Uses; and,
3. Whether the development as proposed will comply with the other requirements of this chapter.

The Commission shall adopt the Director’s determination on the three items above unless it finds, by a preponderance of the evidence, that the Director's determination was in error, and
states its reasoning for each finding with particularity.

CBJ §49.15.330 (f), Commission Determinations, states that even if the Commission adopts the Director’s determination, it may nonetheless deny or condition the permit if it concludes, based upon its own independent review of the information submitted at the public hearing, that the development will more probably than not:

1. Materially endanger the public health or safety;
2. Substantially decrease the value of or be out of harmony with property in the neighboring area; or,
3. Not be in general conformity with the comprehensive plan, thoroughfare plan, or other officially adopted plans.

Per CBJ §49.15.330 (e) & (f), Review of Director's & Commission’s Determinations, the Director makes the following findings on the proposed development:

1. **Is the application for the requested conditional use permit complete?**

   **Yes.** Staff finds the application contains the information necessary to conduct full review of the proposed operations. The application submittal by the applicant, including the appropriate fees, substantially conforms to the requirements of CBJ Chapter 49.15.

2. **Is the proposed use appropriate according to the Table of Permissible Uses?**

   **Yes.** The requested permit is appropriate according to the Table of Permissible Uses. The permit is listed at CBJ §49.25.300, Section 17.150 for the D-3 zoning district.

3. **Will the proposed development comply with the other requirements of this chapter?**

   **Yes.** The proposed development complies with the other requirements of this chapter. Public notice of this project was provided in the November 28, 2014 and December 8, 2014 issues of the Juneau Empire's "Your Municipality" section, and a Notice of Public Hearing was mailed to all property owners within 500 feet of the subject parcel. Moreover, a Public Notice Sign was posted on the subject parcel, visible from the public Right of Way.

4. **Will the proposed development materially endanger the public health or safety?**

   **No.** The site will be secured with a fence and locked entrance gate. There is no evidence leading to find that the approval of this project will result in endangering the health or safety of the public.
5. Will the proposed development substantially decrease the value of or be out of harmony with property in the neighboring area?

No. With staff’s recommended conditions, the project will not decrease the value of or be out of harmony with property in the neighboring area.

6. Will the proposed development be in general conformity with the land use plan, thoroughfare plan, or other officially adopted plans?

Yes. With staff’s recommended conditions, the proposed development will be in general conformance with the CBJ Land Use Code and Comprehensive Plan.

Per CBJ §49.70.900 (b)(3), General Provisions, the Director makes the following Juneau Coastal Management Program consistency determination:

7. Will the proposed development comply with the Juneau Coastal Management Program?

N/A. The proposed development is not relevant to the Juneau Coastal Management Program.

Recommendation
It is recommended that the Planning Commission adopt the Director's analysis and findings and grant the requested Conditional Use permit. The permit would allow the development of a utility facility. The approval is subject to the following conditions:

1. Prior to issuance of a Building permit, the building containing heating/cooling elements shall be located farther than 25 feet away from the nearest property line or noise attenuators be installed between the building and closest property lines.

2. Prior to final inspection of the project, a noise measurement shall be performed by CDD and the applicant at the nearest property lines which results in 55 dBA or less. If noise levels exceed 55 dBA, the applicant shall make internal changes to whichever component results in the dBA exceedance. Substantial changes to outside appearance of the site or building shall not be allowed.

3. Prior to issuance of a Building permit, the applicant shall submit a picture or illustration and narrative of the future residential building siding for both proposed buildings. The siding shall match or be similar in material and color with the most adjacent homes to the site.

4. Prior to issuance of a Building permit, the applicant shall submit specific light fixture designs and light pole height not to exceed 18 feet and be a full cut-off design.
**PROPOSAL:** Conditional Use permit for a Utility Facility.

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<th>USE2014 0015</th>
<th>Applicant:</th>
<th>Bruce Messerschmidt</th>
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<td>To:</td>
<td>Adjacent Property Owners</td>
<td>Property PCN:</td>
<td>8-B33-0-102-022-0</td>
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<td>Hearing Date:</td>
<td>December 9, 2014</td>
<td>Owner:</td>
<td>Greg &amp; Marla Trollan</td>
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<td>Municipal Building</td>
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**PROPERTY OWNERS PLEASE NOTE:**

You are invited to attend this Public Hearing and present oral testimony. The Planning Commission will also consider written testimony. You are encouraged to submit written material to the Community Development Department 14 days prior to the Public Hearing. Materials received by this deadline are included in the information packet given to the Planning Commission a week before the Public Hearing. Written material received after the deadline will be provided to the Planning Commission at the Public Hearing.

If you have questions, please contact Eric Feldt at eric.feldt@juneau.org or at 586-0764.

Planning Commission Agendas, Staff Reports and Meeting Results can be viewed at [www.juneau.org/plancomm](http://www.juneau.org/plancomm).
DEVELOPMENT PERMIT APPLICATION

CITY and BOROUGH of JUNEAU

Project Number

Project Name

Date Received: 10/10/14

PROPERTY LOCATION

Street Address
17129 Lena Loop Road

City/Zip
Juneau, Alaska 99801

Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot)
Lot 44 Census Point 1 Heights

Assessor's Parcel Number(s)

LANDOWNER/LESSEE

Property Owner's Name
Greg & Maria Fahlen

Mailing Address

E-mail Address

LANDOWNER/LESSEE CONSENT

I am (we are) the owner(are) or lessee(s) of the property subject to this application and I (we) consent to the following:

A. I am applying for a use or activity review for development on my (our) property with my (our) signature(s) below.
B. I have given permission for officers and employees of the City and Borough of Juneau to inspect my property at any time for purposes of this application.

X Greg Fahlen: Attorney in Fact for Greg Fahlen 9/30/14
X Maria Fahlen 9/30/14

APPLICANT

Applicant's Name
Bruce Messerschmidt

Mailing Address
P.O. Box 34159 Juneau, Alaska 99803

E-mail Address
bruce.m@apc.alaska.com

APPLICANT Signature

OFFICE USE ONLY BELOW THIS LINE

Permit Type

City/State

Project Type

City Land Action

Permit Approval

City Plan Review

Public Notice

Application Number(s)

RECEIVED 10/10/14 USE 14-015

STAFF APPROVALS

Subdivision

Use Approval (Apartment, Residential, Cottage Housing, Mobile Home Parks, Non-Mobile Apartment)

Variance Case (De Minimis and or other Variance case types)

Wetlands

Permits

Zone Change

Application

Other (Describe)

Comments:

Public Notice Sign Form filled out and in the file

Permit intake initials

NOTE: DEVELOPMENT PERMIT APPLICATION FORMS MUST ACCOMPANY ALL OTHER COMMUNITY DEVELOPMENT DEPARTMENT APPLICATIONS

Revised November 1976
ALLOWABLE/CONDITIONAL USE PERMIT APPLICATION

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**TYPE OF ALLOWABLE OR CONDITIONAL USE PERMIT REQUESTED**

- [ ] Accessory Apartment*** (AAP) [ ] Driveway in Right-of-Way (ADW)
- [x] Use Listed in §49.25.300 (Table of Permissible Uses)

Please list the Table of Permissible Uses Category: Intermediate Utility 17.050

***An Accessory Apartment Application will also be required.

**DESCRIBE THE PROJECT FOR WHICH AN ALLOWABLE OR CONDITIONAL USE APPROVAL IS NEEDED.**

Project Scope is to place a 12’x52’ Thermo Bond communications building, and a second structure containing emergency backup generation, battery room, and bathroom, we have identified the future addition of a second Communications shelter. A small tower may be a future option with proper permitting at that time.

**IS THIS A MODIFICATION OF AN EXISTING APPROVAL?**

- [x] No
- [ ] Yes - Case #

**CURRENT USE OF LAND OR BUILDING(S):**

Vacant Residential land

**PROPOSED USE OF LAND OR BUILDING(S):**

Communications Facility for termination of Under Sea Fiber, this site will consolidate all AP&T Wireless’s Transport network. It will also serve as a Carrier Interconnect as needed.

**UTILITIES PROPOSED:**

- [x] Water: Public
- [ ] On Site
- [ ] Sewer: Public
- [x] On Site

**SITE AND BUILDING SPECIFICS:**

- Total Area of Lot 26180 square feet
- Total Area of Existing Structure(s) None square feet
- Total Area of Proposed Structure(s) 1100 square feet

**EXTERNAL LIGHTING:**

- Existing to remain [ ] No
- Proposed [ ] Yes – Provide fixture information, cutoff sheets, and location of lighting fixtures
- Proposed [ ] Yes – Provide fixture information, cutoff sheets, and location of lighting fixtures

**PROJECT NARRATIVE AND SUBMITTAL CHECKLIST:**

- [x] Site Plan
- [x] Floor Plan of proposed buildings
- [x] Elevation view of existing and proposed buildings
- [ ] Proposed Vegetative Cover

- [ ] Existing and proposed parking areas (including dimensions) and proposed traffic circulation
- [ ] Existing Physical Features of the site (drainage, habitat, hazard areas, etc.)

**ALLOWABLE/CONDITIONAL USE FEES**

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**NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM**

Revised December 2009 - IPDFMS2010 Applications
Alaska Power & Telephone

Project Narrative

AP&T is in the planning to install a communications facility to terminate our Undersea fiber projects and interconnect with our Southeast Alaska Microwave Network and other Carriers. This will be a unmanned facility with low traffic flow, AP&T intention is to build this to maintain the lowest impact on surrounding properties.

1) Zoning – Lot is currently Zoned D3

2) Setbacks - required Setback is 25’ front and rear, 10’ o the sides, our intention is to maintain at least 12’ of setback on the sides and 30’ front and 26’ rear.

3) Height building heights should not exceed 14 feet once installed. Buildings will be installed on a pier foundation and an elevated stomp grate platform.

4) Lot coverage (10%) – Lot is 26180 SqFt, total buildings will be approximately 1100SqFt (4.2%) Initially, and 1724 SqFt including future build out or 6.5% of total property.

5) Landscaping (20% vegetative cover) – AS drawn we will have 41% or 10,866 SqFt of vegetative cover once we clear building area leaving 12’ on sides and 30’ front and 26’ rear of natural vegetation.

6) Lighting - there will be automated lighting placed above entrance doors, and two lights in the parking area these will all have directional hoods on them to limit impact on neighbors.

7) Building will be pre-engineered building built by Thermo bond, they will have multiple access doors, they will be heated with a Bard HVAC system or equivalent with redundant unit, these are capable of heating and Air conditioning.

8) Fire District – we visited with the Fire Marshal’s office and have taken his advice and comments into consideration on our Designs.

9) Parking there is Three parking places provided on the site, one Handicap accessible an two normal parking place Identified on Site Plan.

10) Traffic - in pre-permitting meeting traffic use was determined to be well below normal residential use after construction phase.
11) Engineering – there will be engineered drawings for com buildings provided. Site drawing not required to be engineered.

12) Noise - Backup generation will be running once a month for testing for 30 min to an hour, or during a power outage. Generation will have quiet muffler installed.

   HVAC - we had our Safety director do some field testing at our Haines site, two units running the DB level was 56.7 dbA at 25', with units off the noise level was 47.3 dbA.

13) Drainage - this lot is made up of shot rock, building are designed to use natural runoff.

14) Utilities – we would be utilizing city water and the existing on-site septic system.

15) Wetland – No wetlands on Property

16) Habitat - No habitat issues

17) Hazard land – No land hazards

18) Flood – Not located in Flood Plane

19) Other agency reviews – Not required

If you have any additional questions please contact me.

Thank you

Bruce Messerschmidt
GM Telecom Operations
Alaska Power & Telephone
bruce.m@aptalaska.com
907-789-1951
907-303-7010
Attachment C

ThermBond

Building Foundation Design
Building Skid Assembly
Building Construction Details
Building Construction Details
Building Construction Details
Building Construction Details
Building Construction Details
Building Construction Details
Electrical Schematic
Elevation Views
Interior Layouts
Revision Locs
Drawing Index

Drawing Number
10. W. 00 X 49.1. OD X 9. H 1D

SIZE
Nevada Hidden Valley, NV
SITE NAMES
0909-08
JOB NO.
Arizona Nevada Tower Corp

NOTE:
This is an example of a drawing title.

To be used for project of building design.
Thermo Bond

Concrete Cover:
2. All Wire Mesh to have a minimum of 2500 psi when compression strength of 4000 psi with
   1. Concrete shall attain a minimum ultimate
   2. Concrete cover to have a minimum of 2

Notes:
The Lumark Wall-Pak Series of wall luminaires provides traditional architectural style with high performance energy efficient illumination. Rugged die-cast aluminum construction, stainless steel hardware tolerance, with a safety and gasketed optical compartment make the Wall-Pak virtually impervious to contaminants. IES listed. Six available lamp wanes including patent pending energy efficient LED, pulse start metal halide, compact fluorescent, ceramic metal halide, standard metal halide, and high pressure sodium. UL/US wet location listed. The Wall-Pak luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairwells and loading docks.

**SPECIFICATION FEATURES**

**Housing**
- Rugged one-piece die-cast aluminum housing and hinged, removable die-cast aluminum door. One-piece silicone gasket seals the optical chamber. UL Type 4X wet location listed and IP65 ingress protection rated. Not recommended for car wash applications.

**Electrical**
- Ballasts, LED driver and related electrical components are hard mounted to the die-cast housing for optimal heat sinking and operating efficiency. Wiring is extended through a silicone gasket at the back of the housing. Three 3/8" threaded conduit entry points for thru-branch wiring. LED thermal management system incorporates both conduction and natural convection to transfer heat away from LED sources. Integral LED electronic driver incorporates internal fusing designed to withstand a 3x surge load and is Class 2 rated for 120-277V with an operating temperature of -30 to 60°C.

**Optical**
- Highly reflective anodized aluminum reflectors provide high efficiency illumination. Optical assemblies include impact resistant borosilicate refractive glass. 50% 4" flat diamond patterned glass and full cutoff IESNA compliant configurations. Parent pending, solid state LED luminaires are thermally optimized with 2400 or 4003 sourced lumens of packaging modules. HID modules are offered in horizontal and modular based metal halide (MH/HPI) or high pressure sodium (HPS) lamps, 16 ceramic metal halide (CM) and 4-pin compact fluorescent (CFL) lamp models offer high efficiency energy saving illumination.

**Door Assembly**
- Single point, captive stainless steel hardware secures the removable hinged door allowing for ease of installation and maintenance. Door assembly is hinged at the bottom for easy removal, installation and re-lamping.

**Finish**
- Housing and doors are protected with 5-stage TGIC dark bronze polyester powder coat paint. Premium TGIC, powder coat finishes withimester extreme changes while providing optimal color and gloss retention. Expanded premium colors are available.

**WP WAL-PAK**
- 2400 - 4000 Lumens LED
- 39 - 400W
- High Pressure Sodium
- Pulse Start Metal Halide
- Metal Halide
- Ceramic Metal Halide
- 12 - 140W
- Compact Fluorescent

**TECHNICAL DATA**
- UL/US. Wet Location Listed
- T40 Rated
- 40% Maximum Ambient Temperature
- External Supply, Wiring 50°C Maximum
- GSA, C, A, B, E, I, K: 1.00 Equivalent (LM/LV40LFA100)

**ENERGY DATA**
- Reactor Ballast Input Watts: 225 WPS, HPS: 50 Watts
- 700W HPS- HPI: 60 Watts
- 100W HPS- HPI: 100 Watts
- 150W HPS- HPI: 175 Watts
- High Pressure Sodium Ballast Input Watts: 100W MP-WPS: 165 Watts
- 200W MP-WPS: 240 Watts
- 275W MP-WPS: 320 Watts
- 395W MP-WPS: 480 Watts
- 450W HPS- HPI: 480 Watts
- 40W MP-WPS: 65 Watts

**SHIPPING DATA**
- Approximate Net Weight: 24.63 lbs 11.65 kg
- Dimensions: 45.32 x 30.5 x 11.43 cm

COOPER Lighting
www.cooperlighting.com
Customer First Center 1121 Highway 74 South Peachtree City, GA 30269  770.486.4603  FAX 770.486.8011
Visit our web site at www.cooperlighting.com

NOTE: Specifications and dimensions subject to change without notice.
Galleon™
LED Area and Site Luminaire

Cooper Lighting
by Eaton
Area and Site Lighting Redefined

A New Benchmark in Performance and Features
The Galleon LED luminaire delivers a new level of performance and versatility for commercial area, site and roadway applications. Incorporating industry-leading, patented optics, the Galleon LED luminaire offers a choice of 16 specialized optical distributions that deliver superior control and maximize light levels. With a choice of 30 lumen packages, the Galleon LED luminaire allows scalability from 3,100 to over 83,000 delivered lumens. The 4000K/70 CRI is standard, with 6000K/70 CRI and 3000K/70 CRI options available.

Long Life with Low Maintenance Costs
In addition to delivering superior performance, the Galleon LED luminaire is designed for low maintenance, long life and low cost or ownership. These are key benefits that provide compelling justification to retrofit traditional HID solutions, or allow end users to capitalize on these advantages in new construction applications. The Galleon LED luminaire can be tailored to meet your most important needs without compromising on specification features. The LED components and fixture housing are IP66 rated, which provides years of reliable operation with minimal service requirements.
Engineered for Reliability

At Eaton’s Cooper Lighting business we believe credibility is the key to our success. We are committed to providing LED solutions that meet the highest standards of reliability and performance. Our deep-rooted understanding of outdoor product markets and application needs have been resulted through decades of supplying quality products, service and support.
Design Excellence

Stepping Up to the Challenge
The Galleon LED luminaire delivers exceptional performance in a highly scalable, low-profile design. The patented, high-efficiency AccuLED Optics® system provides uniform and energy-conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. With HID equivalents ranging from 100W up to 1000W, the Galleon LED luminaire is designed to meet the toughest lighting challenges.

Construction
- Extruded aluminum driver enclosure
- Heavy-wall die-cast aluminum end caps
- 3G vibration rated
- IP66-rated housing and LED Light Squares
- Optional tool-less entry

Electrical
- Operates in -40°C to 40°C ambient with optional high ambient 50°C ambient configuration
- Proprietary circuit module designed to withstand 10kV of transient line surges
- >90% 60,000 hours at 40°C, compliant with IESNA TM-21
- 120V-277V 50/60Hz, 347V 50Hz or 480V 60Hz operation

Controls
- Standard with 0-10V dimming driver(s)
- Optional occupancy sensor
- Optional wireless control and monitoring system

Finish
- Five-stage, super durable TGC paint resists extreme weather conditions while providing optimal color and gloss retention.
  - It's available in standard grey or optional bronze, black, dark platinum, graphite metallic or white.

Warranty
- Five year warranty

Surge Protection
A 10kV common surge (line-to-ground) and differential surge (line-to-line) mode protection is standard.

NEMA Twistlock Photocontrol Receptacle
Optional gasketed receptacle for mounting standard NEMA photocontrol (order separately)

Light Square Trim Plate Finish
An optional finish to match LED trim plates to the housing's exterior allows luminaire to blend seamlessly in any site lighting application.
Die-cast Aluminum Heat Sinks

Scalable Lumen Packages from 3,000 to 53,000 Lumens

IP66-Rated Housing and LED Light Squares

Mounting Options

Occupancy Sensor
The optional motion sensor reduces energy use for site lighting applications.

Mast Arm Adapter
An optional cast aluminum mast arm adapter secures fixture head to nominal 2" (2-3/8" C.D. pipe size) horizontal steel tenon arm.

Wall Mount Bracket
An optional wall-mount plate is secured to wall by four lag bolts (supplied by others).
Scalable Illumination with LED Light Squares

Energy Savings and Environmental Stewardship
The simplest and most effective way to reduce a lighting fixture's impact on the environment is to minimize its energy consumption. By incorporating Light Squares from Eaton's Cooper Lighting business, the Galileo LED luminaire provides energy savings up to 75 percent compared to standard HID solutions.

Long Life
With a 60,000+ hour rated life (at greater than 90 percent lumen maintenance), the Galileo LED Luminaire operates up to six times longer than traditional metal halide fixtures.

Low Maintenance
With simple quick disconnects, the Light Squares are easily removed in the field for replacement or for the rotation of the optics.

Warm White Color
Lighting designers, architects and specifying engineers have long preferred light sources that provide a balanced spectral power distribution and warm white light. Many LED solutions standardize on a cool blue 5000-6000K correlated color temperature (CCT) to maximize lumen output. The Galileo LED Luminaire provides warm white light at a standard 4000K CCT with no sacrifice in lumen output.

Superior Efficiency and Control
With efficiencies as high as 95 percent, the patented AccuLED Optics® system is up to 30 percent more efficient than traditional HID optical systems. Available in 16 optional distributions, this system provides the flexibility and performance required for outdoor applications.

Houso Side Shield
For stringent light trespass requirements and the ultimate level of backlight control, a house side shield accessory is available for factory or field installation. Designed to seamlessly integrate with the SL2, SL3, SL4, and AFL distributions, the house side shield virtually eliminates backlight and also enhances visual comfort.
Optical Performance Redefined

Performance and Scalability
The Galleon LED luminaire is designed around superior optical performance and scalability. With a choice of 30 lumen packages and 16 optical distributions, the optimal configuration can be used to maximize light levels while minimizing operating costs.

Power Consumption (Watts)

<table>
<thead>
<tr>
<th>Number of Light Squares</th>
<th>650mA</th>
<th>700mA</th>
<th>1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>32</td>
<td>86</td>
</tr>
<tr>
<td>2</td>
<td>54</td>
<td>72</td>
<td>107</td>
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<tr>
<td>3</td>
<td>80</td>
<td>105</td>
<td>157</td>
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<tr>
<td>4</td>
<td>105</td>
<td>138</td>
<td>213</td>
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<tr>
<td>5</td>
<td>130</td>
<td>176</td>
<td>384</td>
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<tr>
<td>6</td>
<td>156</td>
<td>210</td>
<td>316</td>
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<tr>
<td>7</td>
<td>184</td>
<td>243</td>
<td>370</td>
</tr>
<tr>
<td>8</td>
<td>209</td>
<td>279</td>
<td>421</td>
</tr>
<tr>
<td>9</td>
<td>234</td>
<td>314</td>
<td>475</td>
</tr>
</tbody>
</table>

Efficiency (lm/W)

<table>
<thead>
<tr>
<th>Lumen Per Watt (lm/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
</tr>
<tr>
<td>110</td>
</tr>
<tr>
<td>120</td>
</tr>
</tbody>
</table>

Optical Distributions
The Galleon luminaire has a choice of seven asymmetric area, three asymmetric roadway, three symmetric and three specialized distributions.
Occupancy Sensing

Accelerate Payback on your Investment
To further enhance energy savings, the Galileo luminaire offers an optional occupancy sensor that is integral to each individual luminaire. When the area surrounding the luminaire is unoccupied, the sensor has the ability to reduce light levels and power consumption. In addition to financial benefits, all the control options for the Galileo luminaire are designed to be simple and cost-effective ASHRAE and Title 24 compliant solutions.

Dimming Occupancy Sensor (DOS)
When the DOS option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The sensor is factory preset to dim down to approximately 50 percent lumen output with a time delay of five minutes. To change these settings, a FSIR-100 accessory can be purchased. The FSIR-100 is a wireless configuration tool that allows the dimming level, time delay, sensitivity and other parameters to be changed. Consult a representative from Eaton's Cooper Lighting business for additional details.

LumaWatt Wireless Control and Monitoring System (DIMRF-LW and DIMRF-LN)
The LumaWatt system is best described as a peer-to-peer wireless network of luminaire-integrated sensors that operate in accordance with programmable profiles. The end user can create and manage sensor profiles with browser-based management software and broadcast the sensors as necessary via wireless gateways. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. For additional details, refer to www.cooperlighting.com.

Dimming Occupancy Sensor (DOS)

LumaWatt (DIMRF-LW and DIMRF-LN)
Scheduled Dimming and Occupancy Detection

For outdoor parking area applications, lighting should be dimmed or turned off within one hour of business closing. Scheduled dimming and occupancy detection can be combined to reduce maximum lighting levels outside business hours.尕 asserts that security lighting is available on occupancy detection.

Sides of Drive Fixture Location
Fixture Spacing = 160' x 120' on center
20 fixtures per 80' wide drive lane, 40 fixtures total for 420' x 120' parking deck.

IESNA Lighting Handbook 10th Edition
Illuminance Values for Area and Site Applications

Parking Lot Design Guide

<table>
<thead>
<tr>
<th></th>
<th>Minimum Horizontal Illuminance</th>
<th>Uniformity Ratio Min / Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>2.0 / 0.2</td>
<td>30:1</td>
</tr>
<tr>
<td>Basic Enhanced</td>
<td>5.0 / 0.5</td>
<td>15:1</td>
</tr>
<tr>
<td>Security</td>
<td>15.0 / 1.0</td>
<td>10:1</td>
</tr>
<tr>
<td>High Security</td>
<td>30.0 - 60.0</td>
<td>8:1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Minimum Vertical Illuminance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>1.0</td>
</tr>
<tr>
<td>Basic Enhanced</td>
<td>5.0</td>
</tr>
<tr>
<td>Security</td>
<td>5.0 - 10.0</td>
</tr>
<tr>
<td>High Security</td>
<td>20.0 - 60.0</td>
</tr>
</tbody>
</table>

NOTE:
1. Measured on parking surface without shadowing from any object.
2. For facial recognition measured at 6' above the parking surface at the point of lowest horizontal illuminance.

Energy Savings Calculations

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Daily Hours of Operation</th>
<th>Control Event</th>
<th>Annual Load kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 Sensor Integrated Luminaires 1b' on Mounting Height, Centered at 120' x 160'</td>
<td>11</td>
<td>100% On</td>
<td>28.944</td>
</tr>
</tbody>
</table>

Control Schedule
- 7:00 PM-11:30 AM
  - 4
  - 100% On
  | 12.52k
- 11:30 PM-5:00 AM
  - 7
  - 40% On, On Occupancy 70%
  | 7.20k

Total Controlled Load | 11 | 2 Events | 17.891
Energy Saving: 38%
Configuration Flexibility

A New Level of Scalable Solutions

The Galileo LED luminaire is available in one to 10 Light Squares. As the number of Light Squares increases, the luminaire width increases proportionally.

Pole Mounting Configurations

The standard Galileo LED luminaire configuration is designed to mount to a round or square pole. When mounting two or more fixtures at 90° or 120° apart, a longer Extended Arm (EA) may be required. Please refer to the table below to determine when the Extended Arm is required and designate "EA" in the catalog logic.

<table>
<thead>
<tr>
<th>Configuration</th>
<th>90° Apart</th>
<th>120° Apart</th>
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<tbody>
<tr>
<td>GLEON-5E01</td>
<td>7&quot; Arm (Std)</td>
<td>7&quot; Arm (Std)</td>
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<tr>
<td>GLEON-5E02</td>
<td>7&quot; Arm (Std)</td>
<td>7&quot; Arm (Std)</td>
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<tr>
<td>GLEON-5E03</td>
<td>7&quot; Arm (Std)</td>
<td>7&quot; Arm (Std)</td>
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<td>GLEON-5E04</td>
<td>7&quot; Arm (Std)</td>
<td>7&quot; Arm (Std)</td>
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<td>GLEON-5E05</td>
<td>10&quot; EA (Req'd)</td>
<td>7&quot; Arm (Std)</td>
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<td>GLEON-5E06</td>
<td>10&quot; EA (Req'd)</td>
<td>7&quot; Arm (Std)</td>
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<td>13&quot; EA (Req'd)</td>
<td>13&quot; EA (Req'd)</td>
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<td>GLEON-5E08</td>
<td>13&quot; EA (Req'd)</td>
<td>13&quot; EA (Req'd)</td>
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<tr>
<td>GLEON-5E09</td>
<td>13&quot; EA (Req'd)</td>
<td>13&quot; EA (Req'd)</td>
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<tr>
<td>GLEON-5E10</td>
<td>13&quot; EA (Req'd)</td>
<td>13&quot; EA (Req'd)</td>
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</tbody>
</table>

*NOTES: 1. Round poles are D-4, 120°; Square poles are D-4, 120°; Round poles are D-4, 180°*
<table>
<thead>
<tr>
<th>Eaton's Cooper Lighting Business</th>
<th>Our Lighting Product Brands</th>
<th>Our Controls Product Brands</th>
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<tbody>
<tr>
<td>Headquarters</td>
<td>Halo</td>
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<td>Zero BB</td>
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<td>P: 770-486-4800</td>
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<td>RSA</td>
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<td>Canada Sales</td>
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