

# MEMORANDUM

CITY/BOROUGH OF JUNEAU  
155 South Seward Street, Juneau, Alaska 99801

**DATE:** November 26, 2014

**TO:** Planning Commission

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

**FILE NO.:** USE2014 0015

**PROPOSAL:** A Conditional Use permit for a Utility Facility.

## 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



### Vicinity Map



### Attachments

Attachment	A	Applicant's Narrative
Attachment	B	Site Plan
Attachment	C	Project Plans

### 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 detracting 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.

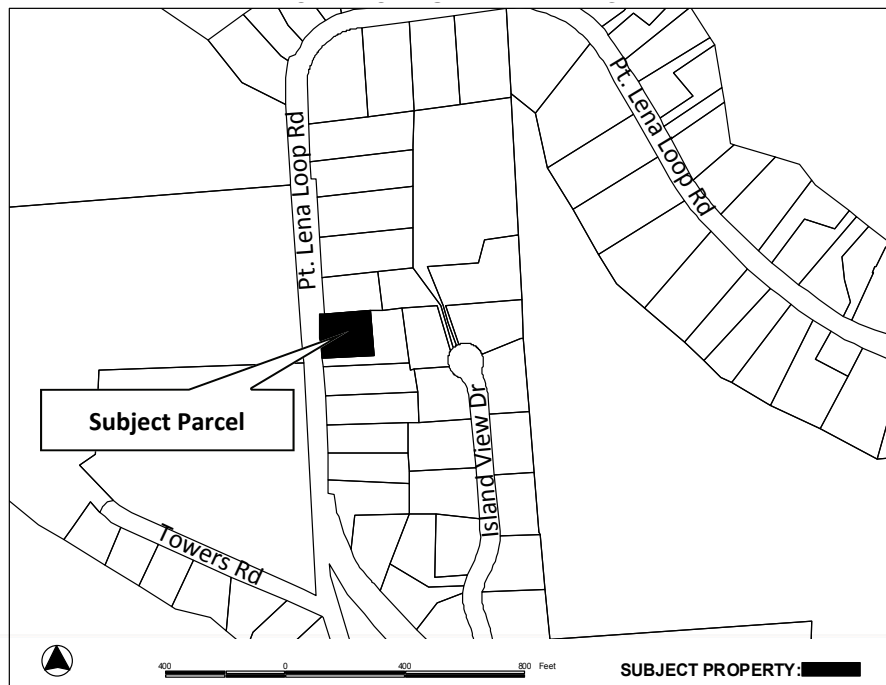
**Recommendation**

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.



# NOTICE OF PUBLIC HEARING



**City & Borough of Juneau**  
Community Development Department  
155 S Seward Street • Juneau, Alaska 99801

**SHIP TO:**



**PROPOSAL:** Conditional Use permit for a Utility Facility.

File No:	USE2014 0015	Applicant:	Bruce Messerschmidt
To:	Adjacent Property Owners	Property PCN:	8-B33-0-102-022-0
Hearing Date:	December 9, 2014	Owner:	Greg & Marla Trollan
Hearing Time:	7:00 PM	Size:	0.60 Acres
Place:	Assembly Chambers Municipal Building 155 South Seward Street Juneau, Alaska 99801	Zoned:	D-3
		Site Address:	17120 Point Lena Loop Road
		Accessed Via:	Point Lena Loop Road

## 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](mailto: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).

*Date notice was printed: November 12, 2014*

# DEVELOPMENT PERMIT APPLICATION

Project Number:	CITY and BOROUGH of JUNEAU	Date Received: 10/10/14
Project Name: (City Staff to Assign Name)		

INFORMATION

**Project Description:**  
Install up to 6 x 50' or communications facility for Atkasut Power and Telephone to contain terminations for Undersea Fiber and Charter collocation facility, this facility will have a on site backup battery bank, and emergency standby generation, there may be need for up to 90' towers in future build out, there will be a on site bathroom facility.

## PROPERTY LOCATION

Street Address: 17120 Lena Loop Road City/Zip: Juneau, Alaska 99801  
 Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot): Lot 22 Lena Point Heights  
 Assessor's Parcel Number(s):

## LANDOWNER/LESSEE

Property Owner's Name: Greg & Maria Trollan Contact Person: Work Phone:  
 Mailing Address: Home Phone: Fax Number:  
 E-mail Address: Other Contact Phone Number(s):

## LANDOWNER/LESSEE CONSENT

Required for Planning Permits, not required for Building/Engineering Permits

I am (we are) the owner(s) or lessee(s) of the property subject to this application and I (we) consent as follows:  
 A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.  
 B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.

X Brian Trolan attorney in fact Juneau Alaska 9/23/14  
 Landowner/Lessee Signature Date  
 X Maria Trolan attorney in fact Juneau Alaska 9/23/14  
 Landowner/Lessee Signature Date

NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.

## APPLICANT

(If the same as Owner, write "Same" and sign and date at X below)

Applicant's Name: Bruce Messerschmidt Contact Person: Work Phone:  
 Mailing Address: Bruce Messerschmidt 907-789-1931  
 P.O. Box 34159 Juneau, Alaska 99803 Home Phone: Fax Number:  
 E-mail Address: bruce.m@apralaska.com Other Contact Phone Number(s):  
 Cell: 907-303-7010  
 X Bruce Messerschmidt 9/20/14  
 Applicant's Signature Date of Application

STAFF APPROVALS

Permit Type	Staff	Date Received	Application Number(s)
Building/Grading Permit			
City/State Project Review and City Land Action			
Inquiry Case (Fee in Lieu, Letter of ZC, Use Not Listed)			
Mining Case (Small, Large, Rural, Extraction, Exploration)			
Sign Approval (If more than one, fill in all applicable permit #'s)			
Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)			
Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)			
Variance Case (De Minimis and all other Variance case types)			
Wetlands Permit			
Zone Change Application			
Other (Describe)			

Comments: **Public Notice Sign Form filled out and in the file**

Permit Intake Initials: BME

TO BE COMPLETED BY THE APPLICANT

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

# 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

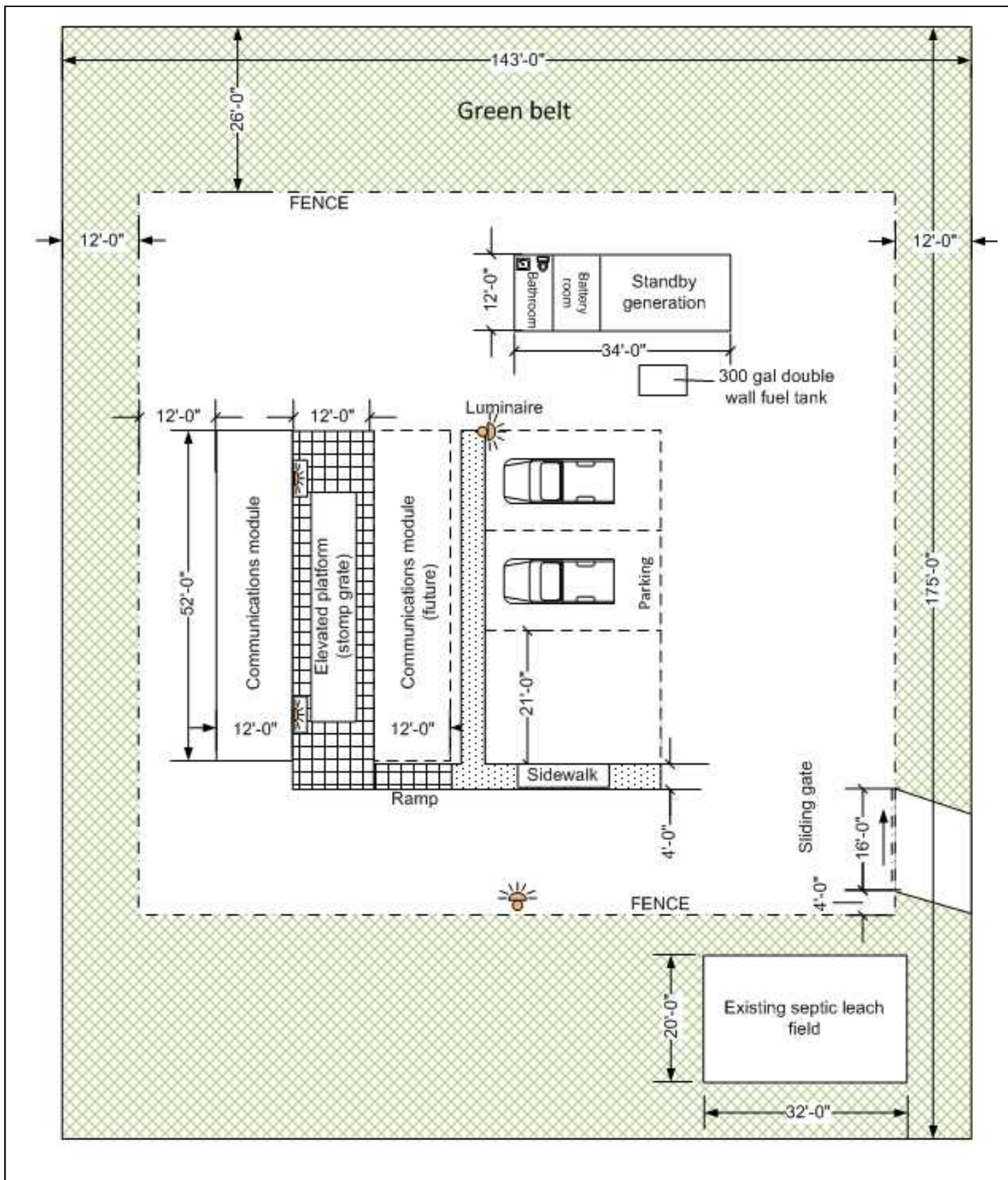
Alaska Power & Telephone

[bruce.m@aptalaska.com](mailto:bruce.m@aptalaska.com)

907-789-1951

907-303-7010





Attachment B

**BUILDING EXTERIOR**

☒ BLUF  
☐ OZARK  
☐ GREY  
☐ OTHER \_\_\_\_\_

**PROJECT**  
ARIZONA NEVADA TOWER CORP.  
**JOB NO.**  
0909-08  
**SITE NAMES**  
NV1018 HIDDEN VALLEY, NV  
**SIZE**  
10' W OD X 48' L OD X 9' H ID

**NOTE:**  
 This IS an Example  
 of Building Design to  
 be used for project

DRAWING TITLE	DRAWING NUMBER
DRAWING INDEX _____	AGB8336 PAGE 1 OF 8
REVISION LOC _____	AGB8336 PAGE 2 OF 8
INTERIOR LAYOUTS _____	AGB8336 PAGE 3 OF 8
ELEVATION VIEWS _____	AGB8336 PAGE 4 OF 8
ELECTRICAL SCHEMATIC _____	AGB8336 PAGE 5 OF 8
BUILDING CONSTRUCTION DETAILS _____	AGB8336 PAGE 6 OF 8
BUILDING CONSTRUCTION DETAILS _____	AGB8336 PAGE 7 OF 8
BUILDING CONSTRUCTION DETAILS _____	AGB8336 PAGE 8 OF 8
BUILDING SKID ASSEMBLY _____	5B1048 PAGE 1 OF 1
BUILDING FOUNDATION DESIGN _____	S15B1048 PAGE 1 OF 1

USAGE  
 CONSTRUCTION TYPE \_\_\_\_\_  
 OCCUPANCY GROUP \_\_\_\_\_  
 STORIES \_\_\_\_\_  
 BASIC WIND SPEED \_\_\_\_\_  
 FLOOR LOAD \_\_\_\_\_  
 ROOF LOAD \_\_\_\_\_  
 FLOOR AREA \_\_\_\_\_  
 BUILDING HGT. \_\_\_\_\_  
 SEISMIC DESIGN CATEGORY \_\_\_\_\_  
 WIND PROSJEURE CATEGORY \_\_\_\_\_

UNMANNED TELECOMMUNICATION SHELTER  
 CODES:  
 2006 INTERNATIONAL BUILDING CODE (IBC)  
 2003 NATIONAL ELECTRICAL CODE (NEC)

**THERMO BOND**  
 P.O. Box 445 Elk Point, SD

Scale: NONE	Title: DRAWING INDEX
Date: 9/17/09	Revised:
Drawn By: MM	Drawn By: AGB8336
Approved By:	Page 1 of 8



# GENERAL NOTES

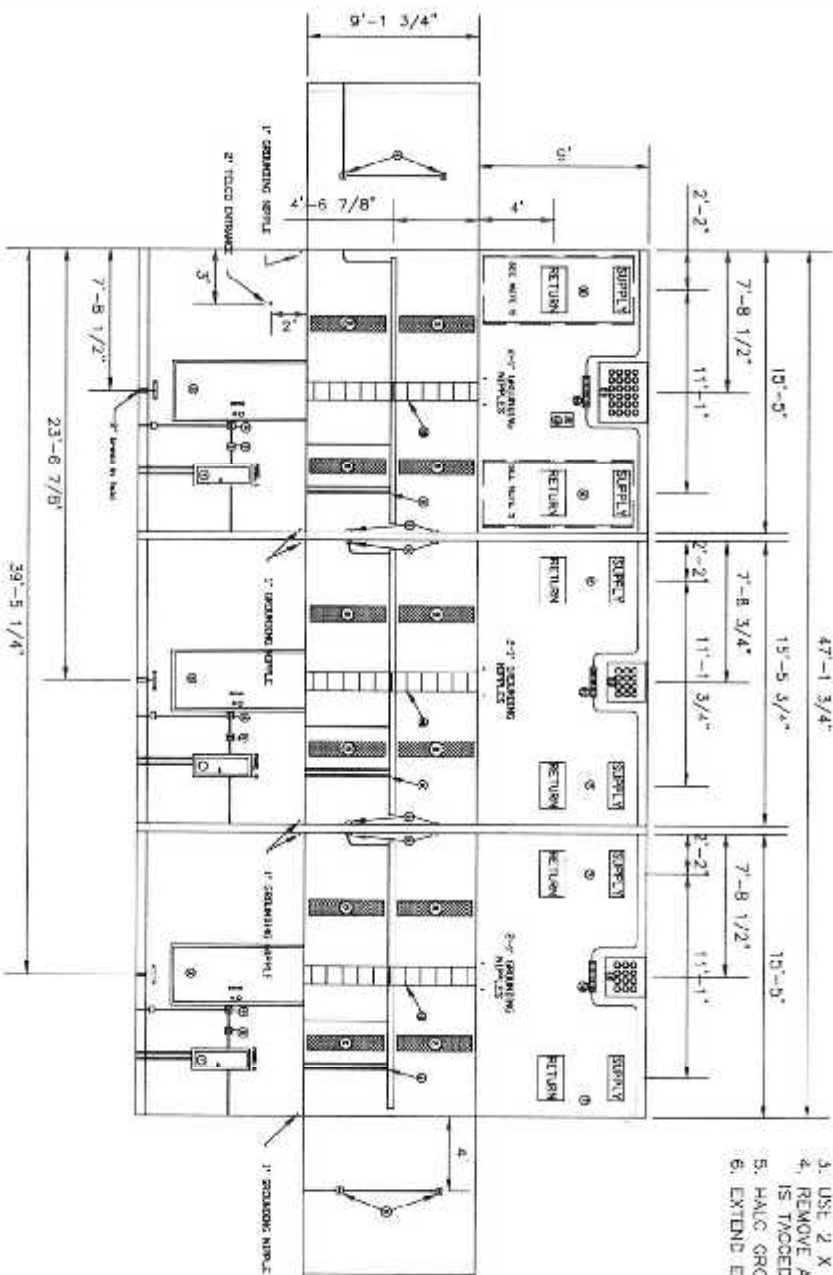
## ELECTRICAL NOTES

1. ALL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC-2005).
2. ALL ELECTRICAL MATERIALS SHALL BE U.L. LISTED AND CLASSIFIED AS SUITABLE FOR THE PURPOSE SPECIFIED.
3. ALL WIRING SHALL BE SURFACE MOUNTED IN A RACEWAY OR EMT CONDUIT USING APPROVED CONNECTORS, COUPLINGS, AND CLAMPS. ALL CONDUIT SHALL BE ANCHORED IN PLACE AT APPROXIMATELY EVERY 4 FT.
4. ALL WIRING SHALL BE A SOLID CONDUCTOR, THIN OR THIN COPPER, NO SMALLER THAN A #12.
5. ALL WIRE RUNS SHALL BE CONTINUOUS.
6. LOW VOLTAGE WIRE MAY BE STRANDED.
7. ALL WIRING SHALL BE TESTED AND INSPECTED PRIOR TO SHIPMENT.
8. GREEN GROUND CONDUCTORS SHALL BE RUN TO ALL OF THE BUILDING A/C POWERED DEVICES. CONDUIT SHALL NOT BE USED AS THE SOLE SOURCE OF GROUND.
9. ALL ALARM DEVICES WIRING SHALL BE RUN IN ITS OWN CONDUIT TO THE ALARM CABINET.

**THE THERMO BOND**

P.O. Box 445 Elk Point, SD

Scale	Rev.	REVISION LOG
Date 09/17/09		GENERAL NOTES
Drawn By MW	Revised	Drawing Number ACB336
Authorized For	Customer And Drawing Version	Page 2 of 8



- NOTE:
1. ALL DIMENSIONS ARE INSIDE DIMENSIONS.
  2. MOUNT CABLE LADDER AT 7'-2" A.F.F.
  3. USE 2 X 4 HEADERS AND DOUBLE STUDS IN HVAC WALL.
  4. REMOVE AIR CONDITIONERS FOR SHIPMENT. ASSURE THAT ALL WIRING IS TACCELED FOR RE-CONNECTION BY THE CUSTOMER AT THE SITE.
  5. HVAC GROUNDING IN EACH ROOM PER R-56 STANDARDS.
  6. EXTEND ELECTRICAL ENTRANCE NIPPLE 3" PAST THE EXTERIOR AGGREGATE.

NO.	QTY.	DESCRIPTION
15.		A/R 12" CABLE LADDER @ 7'-2" A.F.F.
14.		3 GFCI EXTERIOR RECEPTACLE
13.		1 MC300CA MASTER CONTROLLER
12.		7 CABLE ENTRANCE, 31334 (12 PORT)
11.		1 CABLE ENTRANCE, 31340 (24 PORT)
10.		3 MASTER GROUND BAR CH14420
9.		A/R 1" 4" SQ. WIRE RACEWAY WITH COVER
8.		12 4" 2 BULB FLUORESCENT LIGHT FIXTURE
7.		4 CUTOFF FOR FUTURE 5 TON BOND AIR CONDITIONER
6.		2 BOND 5 TON AIR COND. W/ SWN HEAT & DESHIRT
5.		15 DUPLEX RECEPTACLES
4.		6 LIGHT SWITCH, SPEC. GRADE
3.		3 X 7" STEEL INSULATED DOOR AND FRAME W/BLOCK
		ON ENAMEL PAINT (PLYCO SERIES 88) W/S.S. BALL
		BEARING HINGES W/NON REMOVABLE PINS, SCHLAGE
		PASSAGE W/DEMO BOLT
2.		3 VANDOL PROOF EXTERIOR LIGHT SIGNCOO
1.		3 120/240V. SINGLE PHASE, 42 POSITION DISTRIBUTION
		PANEL W/200A. MAIN BREAKER, CH492000K

LIST OF MATERIAL

**THERMO BOND**

P.O. Box 445 Elk Point, SD

Scale: 5/32" = 1'

Date: 5/21/05

Drawn By: MM

Interior Layout for 10'W. X 48'L. X 9'11. DLDG.

Project: ARIZONA NEVADA TOWER CORP.

Job No.: 0909-08

Site Name: NV1018 HIDDEN VALLEY, NV

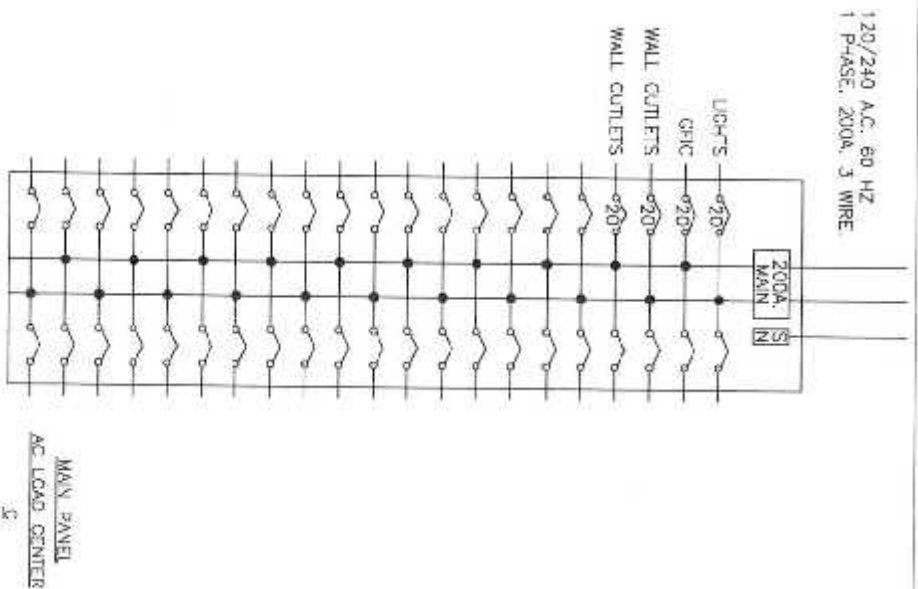
Approved By: [Signature]

Page: 3 OF 8

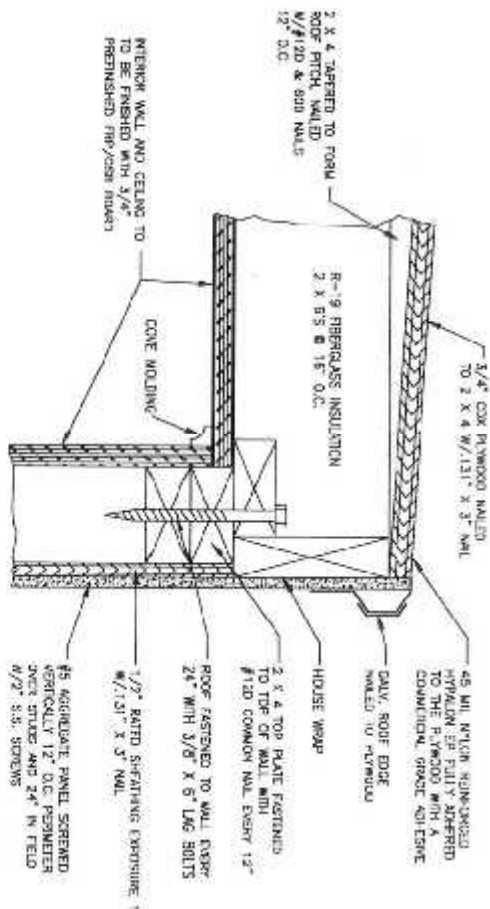




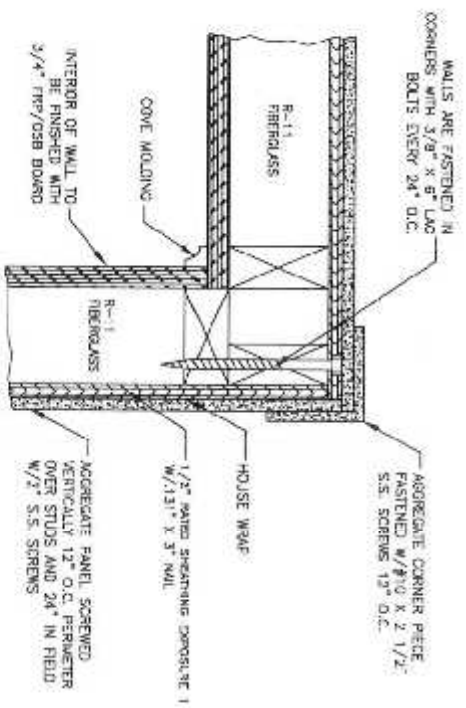
120/240 A.C. 60 HZ  
1 P-WIRE, 200A, 3 WIRE



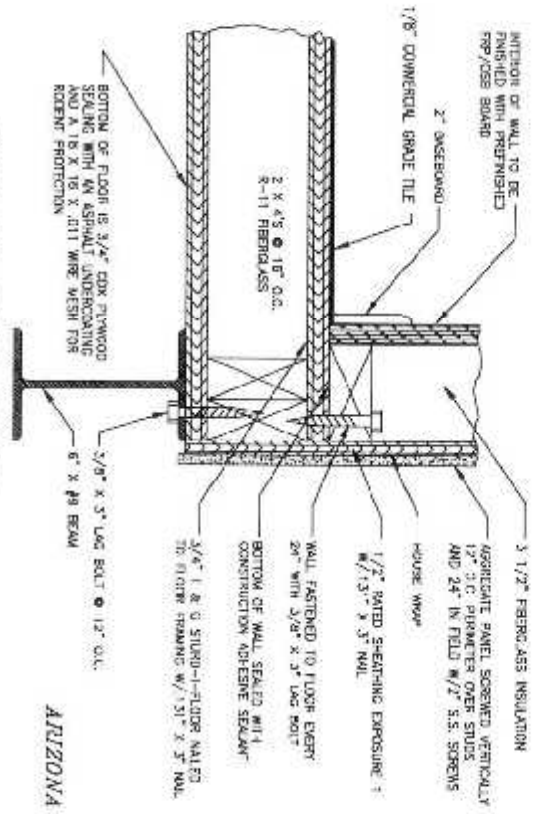
<div style="display: flex; justify-content: space-between;"> <div> <b>THE THERMO BOND</b>          P.O. Box 445 Elk Point, SD       </div> <div> <b>HERITAGE, LLC</b> </div> </div>	
Scale: NCNE	Title: GENERAL NOTES AND AC LOAD CENTER
Date: 9/21/09	Revision:
Drawn By: AMM	Design Number: A450036
Approved By:	Page 5 of 8



WALL TO ROOF DETAIL



WALL CORNER DETAIL

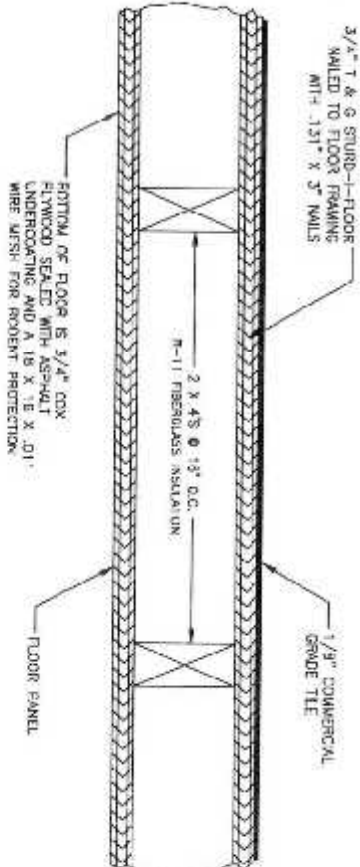


WALL TO FLOOR DETAIL

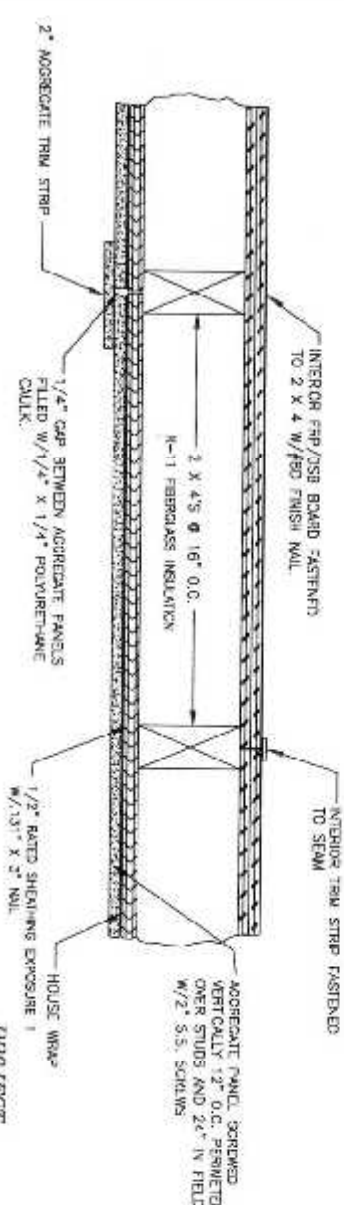
PROJECT  
ARIZONA NEVADA TOWER CORP.  
JOB NO.  
0909-08  
SITE NAME  
N71081 HIDDEN VALLEY, NV

- NOTES:
1. ALL PLYWOOD SHALL BE NAILED EVERY 6" AROUND PERIMETER AND EVERY 12" IN FIELD.
  2. HOUSE WRAP TO BE INSTALLED 1/8" BELOW SHEETING AND EXTEND TO TOP OF TOP PLATE. ALL SEAMS TO BE LAPPED 6" AND TAPED W/SEAM TAPE.
  3. ALL SCREW HOLES THROUGH PANELS FILLED WITH POLYURETHANE CAULK PRIOR TO SCREW BEING INSTALLED.
  4. ALL STRUCTURAL LUMBER SHALL BE SPT #1 OR #2

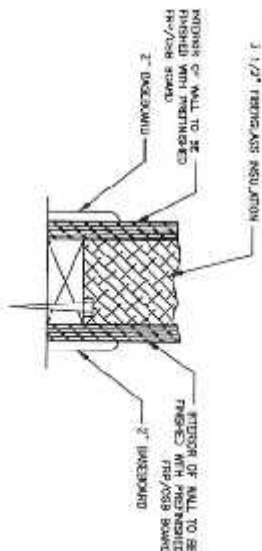
<b>THERMO BOND</b>	
P.O. Box 445 Elk Point, SD	
Scale: NONE	Title: BUILDING CONSTRUCTION
Date: 9/11/19	Details: DETAILS
Drawn By: WMA	Checked By: AGES356
Approved By:	Page: 6 of 8



FLOOR DETAIL



WALL DETAIL

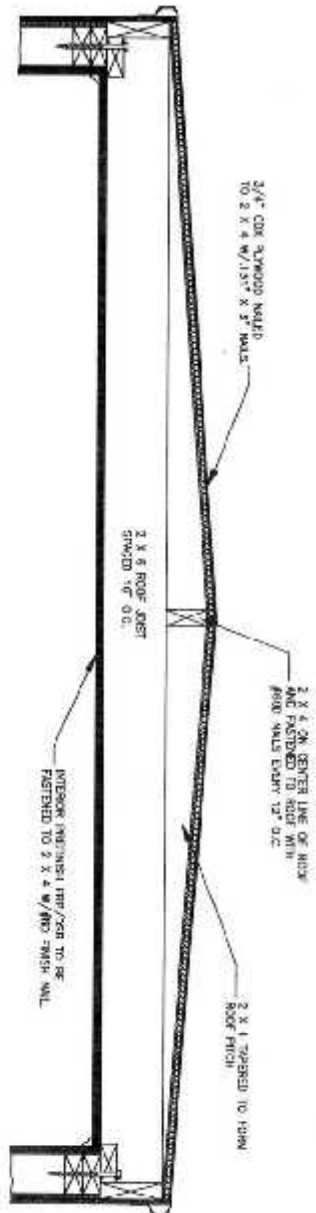


INTERIOR WALL DETAIL

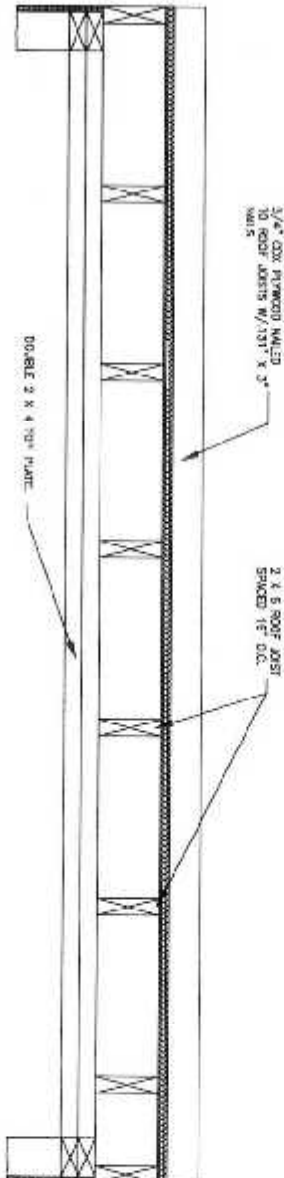
- NOTES:
1. ALL PLYWOOD SHALL BE NAILED EVERY 6" AROUND PERIMETER AND EVERY 12" IN FIELD.
  2. HOUSE WRAP TO BE INSTALLED 1/8" BELOW SHEETING AND EXTEND TO TOP OF TOP PLATE. ALL SEAMS TO BE LAPPED 6" AND TAPED W/SEAM TAPE.
  3. ALL SCREW HOLES THROUGH PANELS FILLED WITH POLYURETHANE CAULK PRIOR TO SCREW BEING INSTALLED.
  4. ALL STRUCTURAL LAMBER SHALL BE SPC #1 OR #2.

PROJECT  
ARIZONA NEVADA TOWER CORP.  
JOB NO.  
0309-08  
SITE NAME  
N17081 HIDDEN VALLEY, NV

<b>THERMO BOND</b> P.O. Box 445 Elk Point SD	
Scale: NONE	Drawn: BUILDING CONSTRUCTION
Date: 9/17/19	Details: DETAILS
Drawn By: MM	Checked By: AGB336
Approved By:	Page 7 of 8



ROOF STRUCTURE END DETAIL



ROOF STRUCTURE SIDE DETAIL

PROJECT  
ARIZONA NEVADA TOWER CORP.  
JOB NO.  
0909-08  
SITE NAME  
NVIORH HIDDEN VALLEY, NV

NOTES:

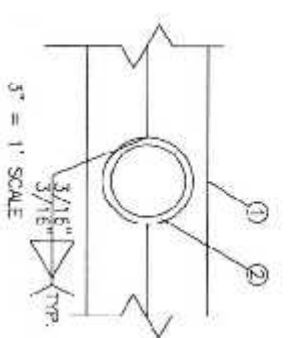
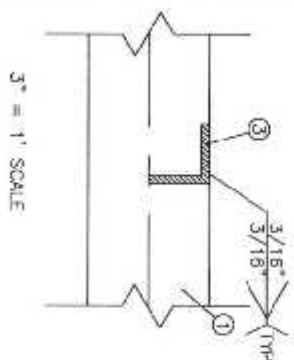
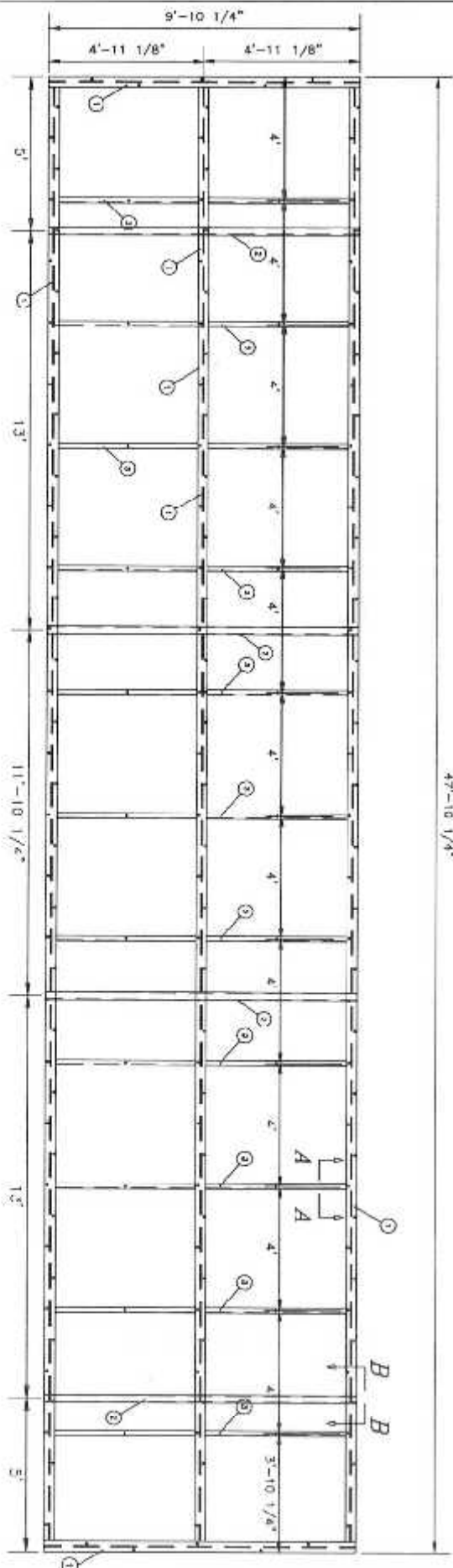
1. ALL PLYWOOD SHALL BE NAILED EVERY 6" AROUND PERIMETER AND EVERY 12" IN FIELD.
2. HOUSE WRAP TO BE INSTALLED 1/8" BELOW SHEETING AND EXTEND TO TOP OF TOP PLATE. ALL SEAMS TO BE LAPPED 6" AND TAPED W/SEAM TAPE.
3. ALL SCREW HOLES THROUGH PANELS FILLED WITH POLYURETHANE CAULK PRIOR TO SCREW BEING INSTALLED.
4. ALL STRUCTURAL LUMBER SHALL BE SPEC #1 OR #2

**THERMO BOND**  
BUILDING, LLC.

P.O. Box 445 Elk Point SD

Scale:	NONE	Title:	BUILDING CONSTRUCTION DETAILS
Date:	9/17/19	Designer:	MM
Drawn By:	MM	Checker:	MM
Approved By:		Checker:	MM





SECTION "B-B"

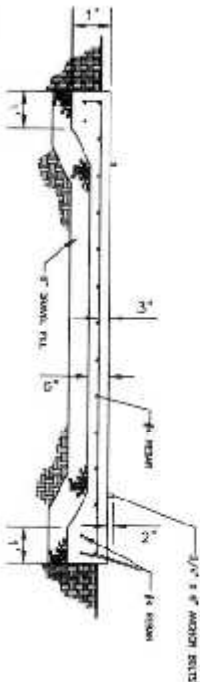
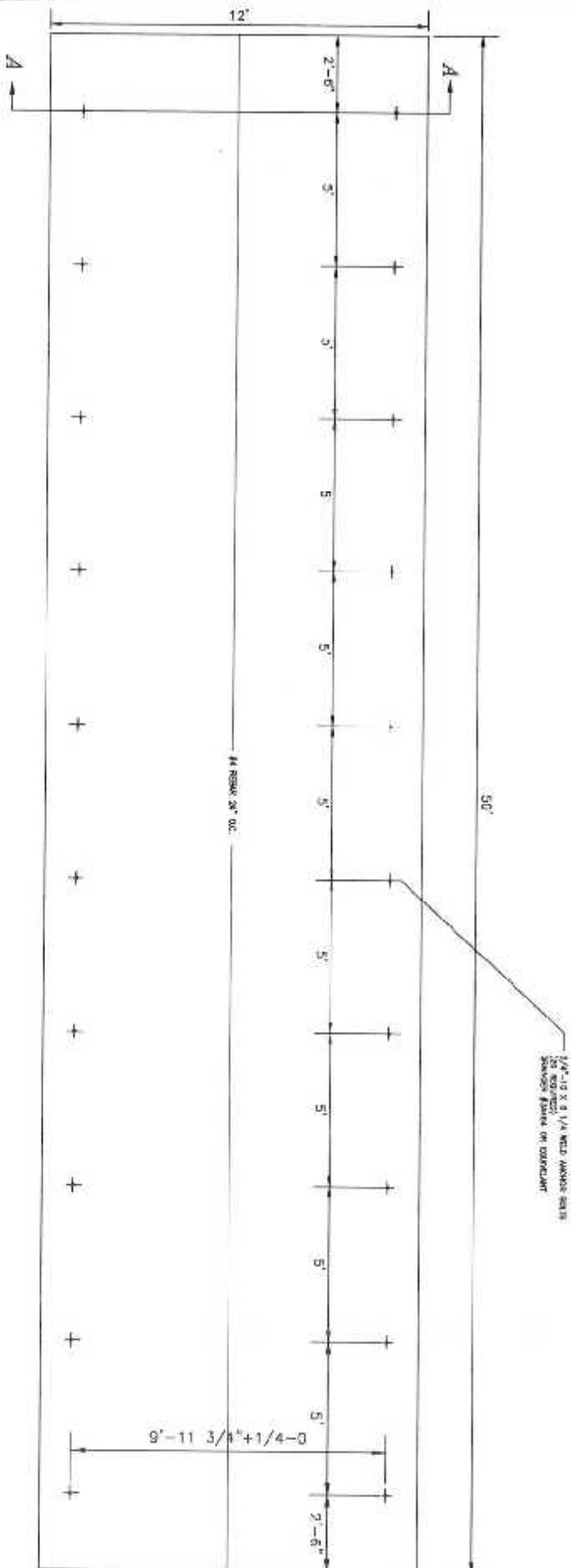
**WELDED ASSEMBLY**

NOTES:  
1. FINISH: PAINTED WITH RUST PREVENTATIVE PAINT.  
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS SHOWN ON THIS DRAWING SHALL HAVE THE FOLLOWING TOLERANCE:  
FRACTION  $\pm 1/8"$   
ANGLE  $\pm 2^\circ$

NO.		QTY	DESC.	UNIT	WEIGHT
1	22	1587002	ANGLE, SUPPORT (2 X 2 X 1/4)		305.84
2	4		PIPE SUPPORT (3" NOM. SCH. 40)		298.44
3	5	1086020	BEAM SUPPORT (W6 X 94) GRADE 50		1451.44

**LIST OF MATERIAL**

<b>THERMO BOND</b>		P.O. Box 445 Elk Point, SD	
Scale	AS NOTED	Drawn	MM
Date	9/21/09	Checked	
Approved By		Issued	1581048
P.O. Box 445 Elk Point, SD		FOR 10' X 48' BUILDING	
THERMO BOND		PAGE 1 OF 1	



SECTION "A-A"

- NOTES:
1. CONCRETE SHALL ATTAIN A MINIMUM ULTIMATE COMPRESSION STRENGTH OF 4000 PSI WITHIN 28 DAYS.
  2. ALL WIRE MESH TO HAVE A MINIMUM OF 2\"/>

<b>THE THERMO BOND</b> BUILDING & B.L.C. P.O. Box 445 Elk Point, SD	
Scale: 5/16" = 1'	Title: SLAB BUILDING FOUNDATION
Date: 9/21/06	FOR 10' X 48' BUILDING
Drawn By: MM	Project:
Reviewed By:	Quantity and Change Status:
Drawing Number: 515B1046 Page: 1 OF 1	

## DESCRIPTION

The Lumark Wal-Pak Series of wall luminaires provides traditional architectural style with high performance energy efficient illumination. Rugged die-cast aluminum construction, stainless steel hardware along with a sealed and gasketed optical compartment make the Wal-Pak virtually impenetrable to contaminants. IP65 Rated. Six available lamp sources including patent pending energy efficient LED, pulse start metal halide, compact fluorescent, ceramic metal halide, standard metal halide and high pressure sodium. UL/cUL wet location listed. The Wal-Pak wall luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways 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 optics chamber. UL 1598 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 1/2" threaded conduit entry points allow for thru-branch wiring. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from LED sources. Integral LED electronic driver incorporates internal fusing designed to withstand a 3kV surge test and is Class 2 rated for 120-277V with an operating temperature of -30° to 60°C.

Wal-Pak LED systems maintain greater than 70% of the initial light output after 50,000 hours of operation. UL listed HID high power factor ballasts are Class H insulation rated (metal halide: 150, 175, 200, 250, 320, 350, 400W [-30°C / -20°F], (high pressure sodium: 60, 70, 100, 150, 250, 400W [-43°C / -40°F]). High efficiency HID ballasts are available in 120V, 208V, 240V, 277V, 347V and 480V. Compact fluorescent high power factor ballasts are Class P insulation rated for 120-277V and have a starting temperature of -18°C / 0°F.

### Optical

Highly reflective anodized aluminum reflectors provide high efficiency illumination. Optical assemblies include impact resistant borosilicate refractive glass. Solite™ flat diamond patterned glass and full cutoff IESNA compliant configurations. Patent pending, solid state LED luminaires are thermally optimized with 2400 or 4000 sourced lumen package modules. HID models are offered in horizontal medium or mogul-

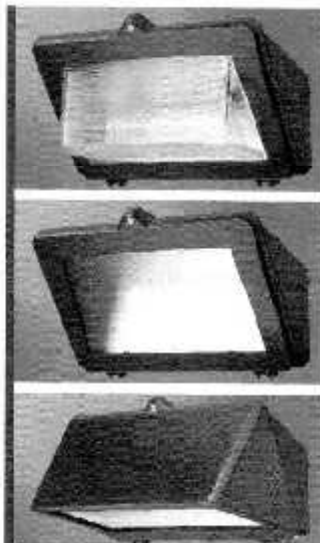
based metal halide (MH / MP) or high pressure sodium (HP) lamps. T6 ceramic metal halide (CM) and 4-pin compact fluorescent (CF) lamp models offer high efficiency energy saving illumination.

### 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 door are protected with 5-stage TGIC dark bronze polyester powder coat paint. Premium TGIC powder coat finishes withstand extreme climate changes while providing optimal color and gloss retention. Optional 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

32 - 140W

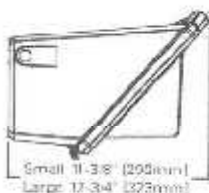
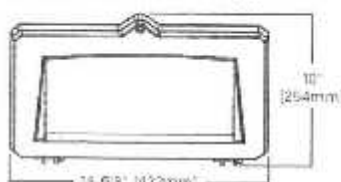
Compact Fluorescent

## WALL MOUNT LUMINAIRE

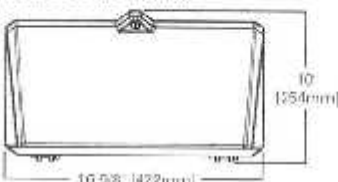
**DARK SKY FCO COMPLIANT**

## DIMENSIONS

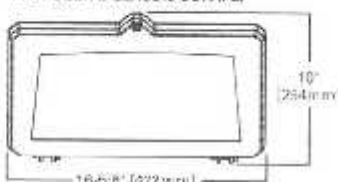
### BOROSILICATE GLASS DOOR (GL)



### FULL CUTOFF DOOR (FC)



### FLAT SOLITE GLASS DOOR (FL)



## TECHNICAL DATA

UL/cUL Wet Location Listed  
IP65 Rated  
40°C Maximum Ambient Temperature  
External Supply Wiring 50°C Maximum  
CISA 3c ARRA, (100-70 Compliance)  
LM79 / LM80 Compliant

## ENERGY DATA

### Reactor Ballast Input Watts

60W HPS NPF (66 Watts)  
70W HPS NPF (82 Watts)  
100W HPS NPF (116 Watts)  
150W HPS NPF (175 Watts)

### High Reactance Ballast Input Watts

60W MP HPF (68 Watts)  
70W MP HPF (84 Watts)  
100W MP HPF (123 Watts)  
150W MP HPF (185 Watts)

### CWA Ballast Input Watts

200W IPS HPF (252 Watts)  
200W MP HPF (227 Watts) (1)  
250W MP HPF (283 Watts) (1)  
320W MP HPF (365 Watts) (1)  
360W MP HPF (406 Watts) (1)  
400W HPS HPF (461 Watts) (1)  
400W MP HPF (452 Watts) (1)

## SHIPPING DATA

### Approximate Net Weight

22.42 lbs (10.19 kg) ADH52-103 pc  
2012 06-14 09.08.16





**Galleon™**  
LED Area and Site Luminaire

McGraw-Edison



**Cooper Lighting**  
by **EAT•N**

*Parking Lighting*



**Innovation** you can rely on™




## 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 3,000 to over 53,000 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 of 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 surge
- >L90 60,000 hours at 40°C, compliant with IESNA TM-21
- 120V-277V 50/60Hz, 347V 60Hz 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 TGIC 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.



Gray



Bronze



Black



Dark Platinum



Graphite Metallic



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 housings 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" O.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 Galleon 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 Galleon LED Luminaire operates up to six times longer than traditional metal halide fixtures.

## Low Maintenance

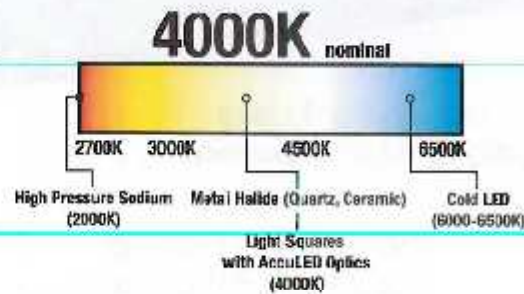
With simple quick disconnects, the Light Squares are easily removed in the field for replacement or for the rotation of the optics.



NOTE: Complies with IESNA TM-21

## 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 Galleon 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.



## House 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

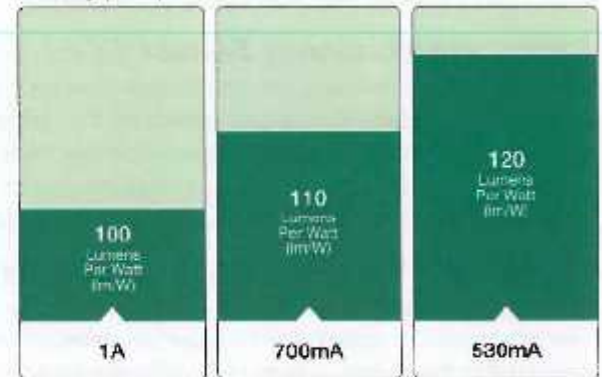
## Performance and Scalability

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)

Number of Light Squares	Drive Current		
	530mA	700mA	1A
1	30	38	58
2	54	72	107
3	80	105	157
4	105	138	215
5	130	176	284
6	159	210	315
7	184	243	370
8	209	276	421
9	234	314	475
10	259	340	528

Efficacy (lm/W)



Lower Initial Cost

Lower Operating Cost

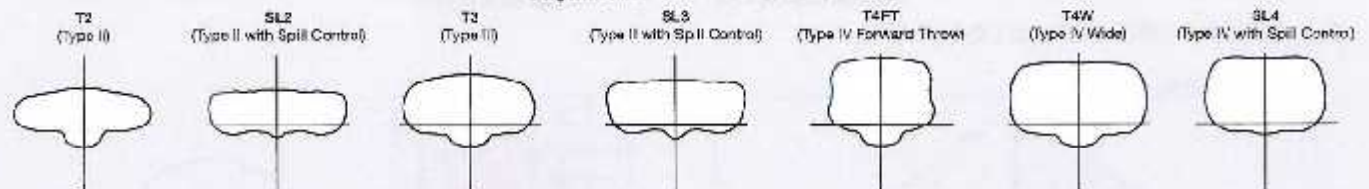
NOTE: Nominal efficacy at 4000K CCT



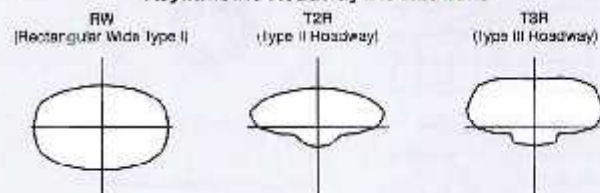
## Optical Distributions

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

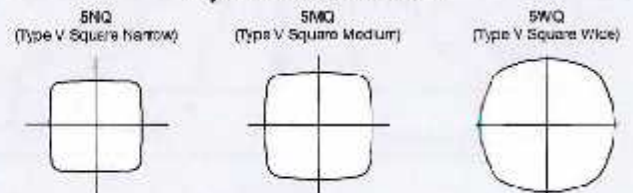
Asymmetric Area Distributions



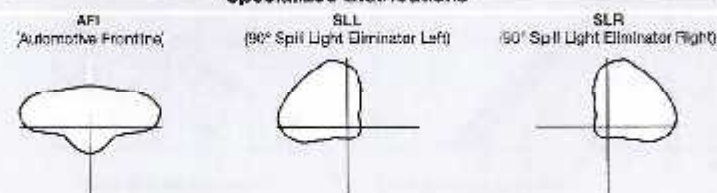
Asymmetric Roadway Distributions



Symmetric Distributions



Specialized Distributions



# Occupancy Sensing

## Accelerate Payback on your Investment

To further enhance energy savings, the Galleon 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 Galleon luminaire are designed to be simple and cost-effective ASHRAE and Title 24 compliant solutions.

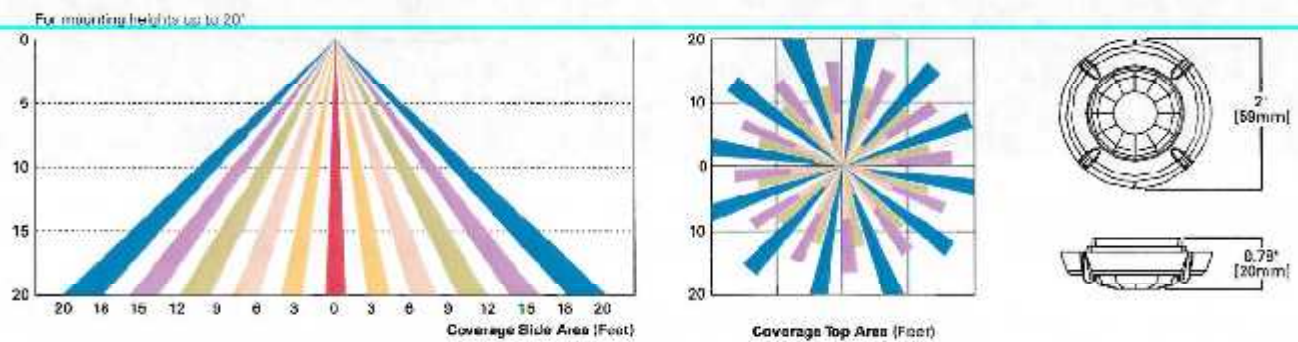
### Dimming Occupancy Sensor (DOS)

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.

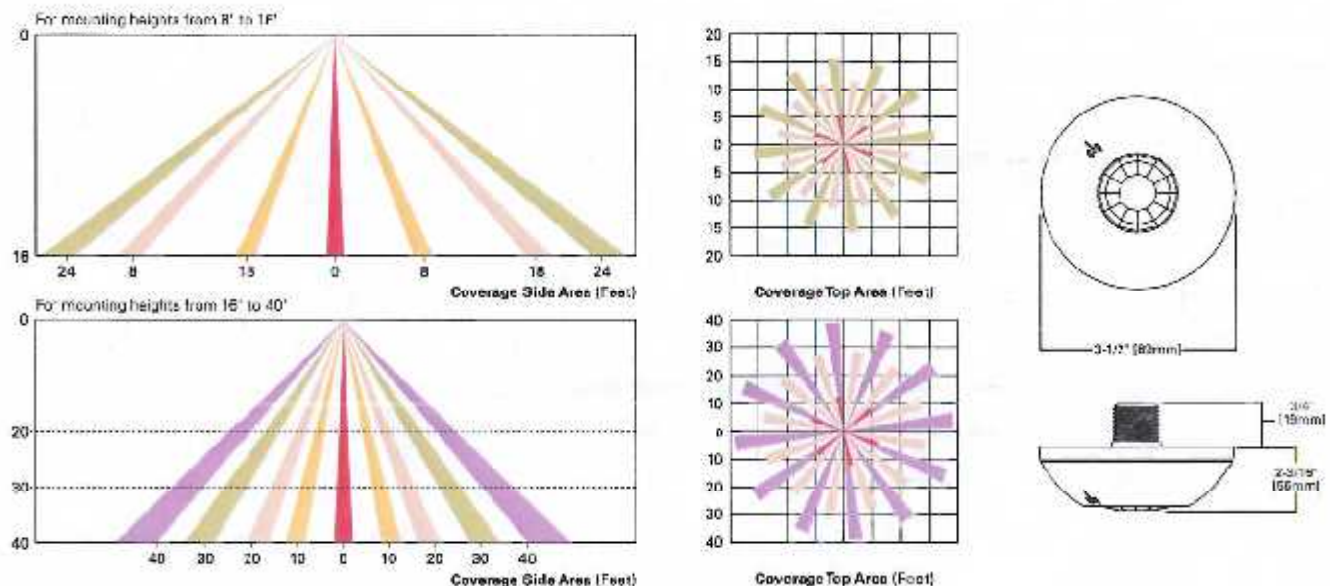
### LumaWatt Wireless Control and Monitoring System (DIMRF-LW and DIMRF-LN)

The LumaWatt system is best described as a peer-to-peer wireless network of luminaire-integral sensors that operate in accordance with programmable profiles. The end user can create and manage sensor profiles with browser-based management software and broadcast to 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](http://www.cooperlighting.com).

### Dimming Occupancy Sensor (DOS)



### LumaWatt (DIMRF-LW and DIMRF-LN)





# Scheduled Dimming and Occupancy Detection

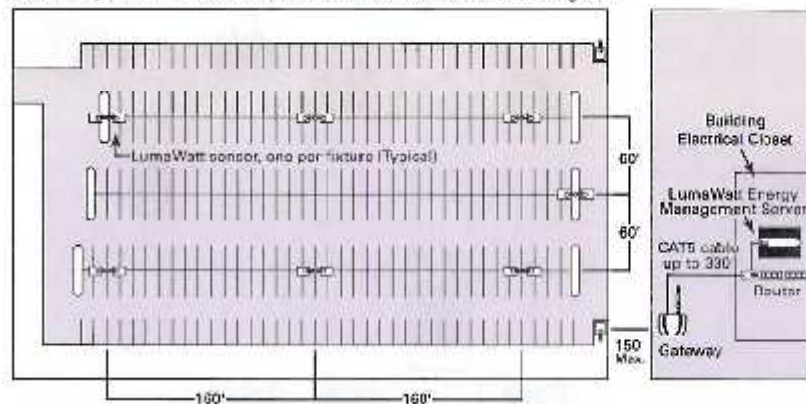


For outdoor parking area applications, lighting should be dimmed or turned off within one hour of business closing. Scheduled dimming and occupancy detection can be combined to reduce maximum lighting levels outside business hours. Egress and security lighting is available on occupancy detection.

## 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.



## Energy Savings Calculations

Configuration	Daily Hours of Operation	Control Event	Annual Load (kWh)
14 Sensor Integrated Luminaires 35' on Mounting Height, Centered at 120' x 160'			
Bill-of-Material (BOM)			
(1) PFC-DM1, (1) PFC-DM2, (1) PFC-DM3 (1) GLEON-AE10-LED-E1-T2-B2-DIMRF-LN (815W)	11	100% On	28,948
Control Schedule			
7:30 PM-11:30 AM	4	100% On	10,528
11:30 PM-6:30 AM	7	40% On, On Occupancy 70%	7,200
Total Controlled Load	11	2 Events	17,895
Energy Saving			38%

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

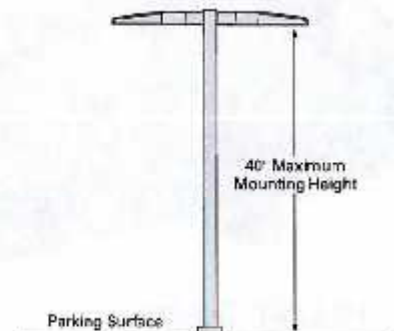
### Parking Lot Design Guide

Illuminance	Minimum Horizontal Illuminance <sup>1</sup>	Uniformity Ratio Max. / Min.	Minimum Vertical Illuminance <sup>2</sup>
	lux/ftc		
Basic	2.0 / 0.2	20:1	1.0 / 0.1
Basic Enhanced Security	5.0 / 0.5	15:1	2.5 / 0.25
Security	10.0 / 1.0	16:1	5.8-8.0 / 0.6-0.6
High Security	30.0-60.0 / 3.0-6.0	4:1	12-60 / 1.2-6.0

#### NOTES:

1 Measured on parking surface without shadowing from any object

2 For facial recognition measured at 5' above the parking surface at the point of lowest horizontal illuminance



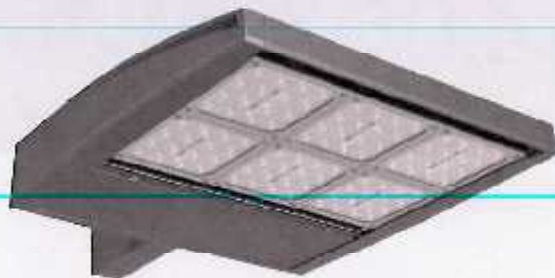
# Configuration Flexibility

## A New Level of Scalable Solutions

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



1 - 4 Light Squares



5 - 6 Light Squares



7 - 8 Light Squares



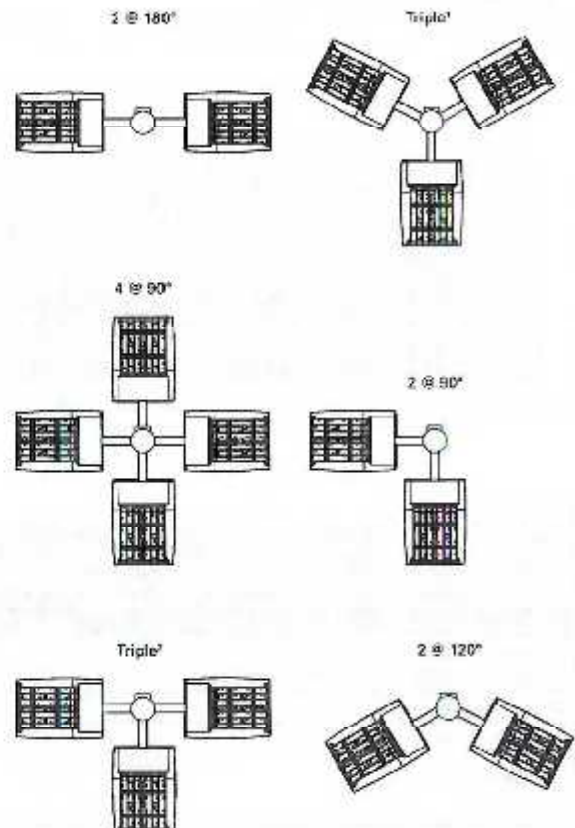
9 - 10 Light Squares

## Pole Mounting Configurations

The standard Galleon 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 reference the table below to determine when the Extended Arm is required and designate "EA" in the catalog logic.

Arm Mounting Requirements

Configuration	90° Apart	120° Apart
GLEON-AE-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AE-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AE-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AE-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AE-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AE-10	16" Extended Arm (Required)	16" Extended Arm (Required)



NOTES: 1. Round pole max 3.6" (93mm). Square pole max 3.6" (93mm). 2. Round pole max 3.6" (93mm).



# Ordering Information

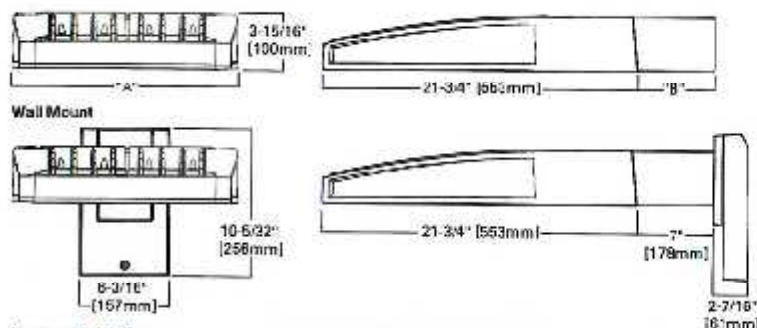
Sample Number: GLEON-AE-04-LFD-F1-T3-GM-700

Product Family	Light Engine	Number of Light Squares*	Lamp Type	Voltage	Distribution	Color	Mounting	
GLEON-Galeon	AE=1A Drive Current	01=1 02=2 03=3 04=4 05=5 06=6 07=7 08=8 09=9 10=10	LED-Solid State Light Emitting Diodes	E1=120-277V S47=347V <sup>2</sup> 480=480V <sup>2</sup>	T2=Type I T2R=Type II Roadway T3=Type II T3R=Type III Roadway T4FT=Type IV Forward Throw T4W=Type IV Wide SNO=Type V Square Narrow SMD=Type V Square Medium SWQ=Type V Square Wide	SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SL5=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	[Blank]=Arm for Round or Square Pole EA=Extended Arm <sup>9</sup> MA= Mast Arm Adapter <sup>9</sup> WM=Wall Mount
Options (Add as Suffix)								
2L=Two Circuits <sup>1,2</sup> 7030=70 CRI 3000K <sup>7</sup> 7080=70 CRI 6000K <sup>7</sup> 630=Drive Current Factory Set to 630mA <sup>8</sup> 700=Drive Current Factory Set to 700mA <sup>8</sup> P=Ballast Type/Photocontrol (120, 230, 240 or 277V) R=NEMA Twistlock Photocontrol Receptacle HA=50°C High Ambient <sup>8</sup>			MS/UIM-L08=Motion Sensor for Dimming Operation, Maximum 8" Mounting Height <sup>5, 10, 11, 12</sup> MS/DIM-L20=Motion Sensor for Dimming Operation, 9" - 20" Mounting Height <sup>5, 11, 12</sup> MS/DIM-L40=Motion Sensor for Dimming Operation, 21" - 40" Mounting Height <sup>5, 11, 12</sup> MS/X-L08=Hi-Level Motion Sensor, Maximum 8" Mounting Height <sup>10, 11, 12</sup> MS/X-L20=Hi-Level Motion Sensor, 9" - 20" Mounting Height <sup>10, 11, 12</sup> MS/X-L40=Hi-Level Motion Sensor, 21" - 40" Mounting Height <sup>10, 11, 12</sup> DIMRF-LW=LumaVatt Wireless Sensor, Wide Lens for 8" - 16" Mounting Height <sup>13</sup> DIMRF-LN=LumaVatt Wireless Sensor, Narrow Lens for 18" - 40" Mounting Height <sup>13</sup>			L50=Optics Rotated 90° Left H90=Optics Rotated 90° Right MT=Factory Installed Mesh Top TH=Tool-less Door Hardware LCF=Light Square Trim Plate Painted to Match Housing HSS=Factory Installed House Side Shield <sup>14</sup>		
Accessories (Order Separately)								
OAVRA1016=NEMA Photocontrol Multi-Tap - 105-285V OAVRA1027=NEMA Photocontrol - 480V OAVRA1201=NEMA Photocontrol - 347V OAVRA1013=Photocontrol Shorting Cap OAVRA1014=120V Photocontrol MA1262=10kV Surge Module Replacement MA1036=XX-Single Tension Adapter for 2-3/8" O.D. Tension MA1037=XX-2 @ 182" Tension Adapter for 2-3/8" O.D. Tension MA1197=XX-3 @ 120" Tension Adapter for 2-5/8" O.D. Tension			MA1197=XX-S @ 120" Tension Adapter for 2-5/8" O.D. Tension MA1189=XX-4 @ 30" Tension Adapter for 2-3/8" O.D. Tension MA1190=XX-S @ 30" Tension Adapter for 2-3/8" O.D. Tension MA1190=XX-S @ 30" Tension Adapter for 2-3/8" O.D. Tension MA1191=XX-2 @ 120" Tension Adapter for 2-3/8" O.D. Tension MA1038=XX-Single Tension Adapter for 3-1/2" O.D. Tension MA1039=XX-2 @ 182" Tension Adapter for 3-1/2" O.D. Tension MA1192=XX-S @ 120" Tension Adapter for 3-1/2" O.D. Tension MA1194=XX-4 @ 90" Tension Adapter for 3-1/2" O.D. Tension			MA1194=XX-2 @ 90" Tension Adapter for 3-1/2" O.D. Tension MA1195=XX-S @ 90" Tension Adapter for 3-1/2" O.D. Tension FSM-100=Wireless Configuration Tool for Occupancy Sensor <sup>15</sup> GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares GLEON-MT2=Field Installed Mesh Top for 5-8 Light Squares GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares LS/HSS=Field Installed House Side Shield <sup>14, 16</sup>		

NOTES: 1 Standard 480V/60Hz and minimum 70 CRI 2 LumaVatt Wireless Sensors not currently available for 347V or 480V applications. 3 May be required when two or more luminaires are ordered on a 90° or 120° drilling pattern. Refer to [www.cul.us/gleon/elements-table-4](#) Factory-installed 5-8 Light Squares. 5 Not available with custom wire unless otherwise noted. 7 Color-coded LED lens for 3000K and 6000K when performance is required. 8 Wire size are published on the Galeon luminaire product page on the website. 9 1/2" Arm standard. Use device with 1/2" Arm when performing layout. These dimensions are published on the Galeon luminaire product page on the website. 10 Must specify drilling unit. Consult factory for more information. 11 120V or 277V units and 230V units only. Replace E1 with specific voltage. Consult factory for availability in 347V and 480V. 12 The F5M-100 accessory is required to adjust parameters. 13 Not available with HA option. 14 LumaVatt wireless sensors are factory installed with existing network components RF BATT, 12V/2000mAh and 12V/1000mAh in appropriate size. See [www.cul.us/gleon/elements-table-4](#) for more information. 15 For ON/OFF operation, replace "X" with "C". Maximum two light squares in low output mode. Not available with dimming driver. No terminal block with ballast operation. 16 Only for use with E1, S4, S4.4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected. 16 This tool enables adjustment of parameters including high and low modes, sensitivity, single duty, dusk and dawn. Consult your Culinaire Cooper Lighting business representative for additional details. 17 One required for each Light Square.

## Dimensions

### Pole Mount



### Lumen Multiplier

Ambient Temperature	Lumen Multiplier
6°C	1.02
10°C	1.01
25°C	1.00
40°C	0.95
50°C	0.97

### Lumen Maintenance

Ambient Temperature	T8-T11 Lumen Maintenance @ 60,000 Hours	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000
50°C	> 90%	> 170,000

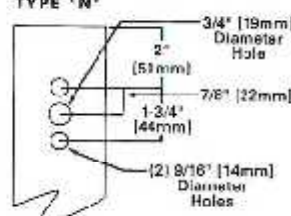
## Dimensional Data

Number of Light Squares	4" Width	8" Standard Arm Length	16" Optional Arm Length <sup>1</sup>
1-4	16-1/2" (394mm)	7" (178mm)	10" (254mm)
5-8	21-5/8" (549mm)	7" (178mm)	10" (254mm)
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)

NOTES: 1 Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2 EPA calculated with output arm length.

## Drilling Pattern

### TYPE - N\*



## Additional Information

Compliance	Technical Data (Excludes LED Driver)	Approximate Weight	EPA (Effective Projected Area - Square Feet)
UL and cUL Wet Location Listed IP66 Light Squares 83 Vibration Rated A4HA Compliant ISO 9001	+40°C (104°F) Ambient Temperature Rating -40°C (-40°F) Ambient Temperature Rating Optional 50°F (10°C) Ambient Temperature Rating >0.9 Power Factor <2.0% Total Harmonic Distortion 120V-277V/60 and 60 Hz 347V/60 Hz, 480V/60 Hz	1-4 Light Squares 33 lbs. (15.0 kgs.) 5-8 Light Squares 44 lbs. (20.0 kgs.) 7-8 Light Squares 54 lbs. (24.5 kgs.) 9-10 Light Squares 63 lbs. (28.6 kgs.)	1-4 Light Squares 0.35 5-8 Light Squares 1.10 7-8 Light Squares 1.07 9-10 Light Squares 1.12

NOTE: Specifications and dimensions subject to change without notice.



IP66  
Rated

#### **Eaton's Cooper Lighting Business**

##### **Headquarters**

1121 Highway 74 South  
Peachtree City, GA 30269  
P: 770-486-4800  
[www.cooperlighting.com](http://www.cooperlighting.com)

##### **Canada Sales**

5925 McLaughlin Road  
Mississauga, Ontario L5R 1B8  
P: 905-501-3000  
F: 905-501-3172

#### **Our Lighting Product Brands**

Halo  
Halo Commercial  
Portfolio  
IRIS  
RSA  
Metalux  
Corelite  
Neo-Ray  
Fail-Safe  
MWS  
Ametrix  
Shaper  
io  
Lumark  
McGraw-Edison  
Invue  
Lumière  
Streetworks  
AtLite  
Sure-Lites

#### **Our Controls Product Brands**

Greengate  
iLumin  
Zero 88  
Fifth Light Technology  
iLight (International Only)