

**ARKANSAS STATE HIGHWAY COMMISSION
AHTD - EQUIPMENT AND PROCUREMENT DIVISION
BID INVITATION**

Bid Number: M-18-001P

BID OPENING LOCATION:
AHTD Equipment and
Procurement Division
11302 West Baseline Road
Little Rock, AR 72209

MAIL TO:
AHTD Equipment and
Procurement Division
P.O. Box 2261
Little Rock, AR 72203

DELIVER TO:
AHTD Equipment and
Procurement Division
11302 West Baseline Road
Little Rock, AR 72209

Bid Opening Date: June 27, 2017 Time: 11:00 a.m.

Sealed bids for furnishing the commodities and/or services described below, subject to the Standard Bid Conditions of this Bid Invitation will be received at the above-noted mail and delivery locations until the above-noted bid opening date and time, and then publicly opened at the above-noted bid opening location. **Bids must be submitted on this form, with attachments when appropriate, or bids will be rejected. Late bids and unsigned bids will not be considered.**

In compliance with this Bid Invitation and subject to all the Conditions thereof, the undersigned offers and agrees to furnish any and all items upon which prices are quoted, at the price set opposite each item.

Company Name: _____

Name (Type or Print): _____

Address: _____

Title: _____

Phone: _____ Fax: _____

City: _____ State: _____ Zip: _____

E-mail Address: _____

Federal Tax ID or Social Security No.: _____

Signature: _____

Signature must be legible, original (not photocopied) and in ink.
Unsigned bids will be rejected.

Item No.	Description	Quantity	Unit	Unit Price	Amount
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Furnish and Install Arkansas Highway Police East Parking Lot and Pulaski West Equipment Yard Exterior Lighting as per complete listing on Page 2 of this Bid Invitation and Specifications.

(Job #42-21) LUMP SUM _____

FOB: AHTD – Central Office Complex (Surrounding Areas), 10324 Interstate 30, Little Rock, AR 72209

Contact for Technical Information: Cameron Parsons, Project Coordinator
(Office – 501-569-2624 or Cell – 501-574-8705 or E-mail: Cameron.Parsons@ahtd.ar.gov)

Contacts for Bidding Information: Danny Keene (501-569-2674) or Chicita Pate (501-569-2675)

All bidders should complete and return the Eligible Bidder Certification (Attachment A) and Disclosure Form (see Page 2 of Standard Bid Conditions – Item 18) issued with this bid. A current copy of the DFA Illegal Immigrant Contractor Disclosure Certification (see Page 2 of Standard Bid Conditions – Item 17) should also be submitted with bid.

To meet the requirements of Arkansas State Highway and Transportation Department Specifications and Drawings attached to and made a part of this bid.

Bid price shall include all labor, materials, and equipment necessary to perform the work as specified, and shall further include all licenses, fees, permits, royalties, and all taxes. Bid price shall represent full compensation for completion of the work. This provision supersedes Condition 5 on page 1 of Standard Bid Conditions. Payment will be made in accordance with Arkansas State Highway & Transportation Department Standard Specifications and Applicable Special Provisions.

Bid Bond in the amount of 5% of total bid price required of all bidders at time of bid opening or bid will be rejected. **Personal and company checks are not acceptable as Bid Bonds.** See Condition 4 on page 1 of Standard Bid Conditions. **Performance Bond** only (no checks of any kind allowed) in the amount of 100% of total bid price will be required of successful bidder prior to providing goods/services. See Condition 4 on page 1 of Standard Bid Conditions.

The successful bidder will be required to complete job within 60 calendar days after award.

Bids and Specifications are available on-line by going to the AHTD Web Site – www.arkansashighways.com and clicking on “Commodities and Services Bids/Contracts Information”. Tabulations will also be available at this site after award of bid/contract. If you have any questions, call this office at 501-569-2667.

(42-505) 58-01 & 58-04			TOTAL BID	
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ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS
AHTD - EQUIPMENT & PROCUREMENT DIVISION

Bid No. M-18-001P

BIDDER: _____

ITEM NO.	DESCRIPTION
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PAY ITEMS (IF NEEDED)

1. Materials \$ _____

2. Trenching \$ _____ per _____ linear feet

3. Horizontal Boring \$ _____ per _____ linear feet

Items must be priced individually but bid will be awarded by the Lump Sum shown on Page 1.

STANDARD BID CONDITIONS

1. **GENERAL:** Any special terms and conditions included in the invitation for bid override these standard terms and conditions. The standard terms and conditions and any special terms and conditions become part of any contract entered into if any or all parts of the bid are accepted by the Arkansas State Highway Commission (AHTD).
2. **ACCEPTANCE AND REJECTION:** AHTD reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the State.
3. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
4. **BID BONDS AND PERFORMANCE BONDS:** If required, a **Bid Bond** in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. **Personal and company checks are not acceptable as Bid Bonds.** Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by AHTD or fails to honor their bid. When a bidder claims and can show clear and convincing evidence that a material mistake was made in the bid and was not the bid intended, the bidder may be permitted to withdraw their bid prior to award without forfeiture of bid bond. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a **Performance Bond** in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** In some cases, a cashier's check or certified check submitted as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company authorized to do business in Arkansas, and must be signed by a Resident Local Agent licensed by the Arkansas State Insurance Commissioner to represent that surety company. Resident Agent's Power-of-Attorney must accompany the surety bond. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). These bonds shall not only serve to guarantee the completion of the work, but also to guarantee the excellence of both workmanship and material until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions fulfilled. In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U. S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company. Annual Bid and Performance Bonds on file with E & P Division must have sufficient unencumbered funds to meet current bonding requirements, or the bid will be rejected, unless the balance is submitted as set forth above, prior to bid opening.
5. **TAXES:** The AHTD is not exempt from Arkansas State Sales and Use Taxes, or local option city/county sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by the AHTD as an addition thereto, and should be added to the billing to the AHTD. The AHTD is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by the AHTD.
6. **"ALL OR NONE" BIDS:** Bidders who wish to bid "All or None" on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
7. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
8. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
9. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
10. **FREIGHT:** All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.

11. **SAMPLES, LITERATURE, DEMONSTRATIONS:** Samples and technical literature must be provided free of any charge within 14 days of AHTD request, and free demonstrations within 30 days, unless AHTD extends time. Failure to provide as requested within this period may cause bid to be rejected. Samples, literature and demonstrations must be substantially the same as the item(s) being bid, unless otherwise agreed to by AHTD. Samples that are not destroyed will be returned upon request at bidders expense. Samples from successful bidders may be retained for comparison with items actually furnished.
12. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
13. **BACKORDERS OR DELAY IN DELIVERY:** Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to the AHTD, as soon as possible, of the reason for any delay and the expected delivery date. The AHTD has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
14. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by AHTD after delivery. Default in promised delivery or failure to meet specifications authorizes the AHTD to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
15. **ETHICS:** *"It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business."* (Arkansas Code, Annotated, Section 19-11-708).
16. **NOTICE OF NONDISCRIMINATION:** The Arkansas State Highway Commission, through the AHTD, complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore, the AHTD does not discriminate on the basis of race, sex, color, age, national origin, religion (not applicable as a protected group under the Federal Motor Carrier Safety Administration Title VI Program), disability, Limited English Proficiency (LEP), or low-income status in the admission, access to and treatment in the AHTD's programs and activities, as well as the AHTD's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the AHTD nondiscrimination policies may be directed to Joanna P. McFadden Section Head – EEO/DBE (ADA/504/Title VI Coordinator), P. O. Box 2261, Little Rock, AR 72203, (501)569-2298, (Voice/TTY 711), or the following email address: joanna.mcfadden@ahtd.ar.gov. Free language assistance for Limited English Proficient individuals is available upon request. This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.
17. **PROHIBITION OF EMPLOYMENT OF ILLEGAL IMMIGRANTS:** Pursuant to Arkansas Code Annotated 19-11-105, all bidders must certify prior to award of a contract that they **do not** employ or contract with any illegal immigrant(s) in its contract with the state. Bidders shall certify online at <https://www.ark.org/dfa/immigrant/index.php>.
18. **DISCLOSURE:** Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that order, **shall** be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy **shall** be subject to all legal remedies available to the agency.

ATTACHMENT A

ELIGIBLE BIDDER CERTIFICATION

The Bidder represents and warrants for itself, its employees and its subcontractors and certifies they:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding thus Bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph two (2) of this Certification;
4. Have not within a one-year period preceding this application/Bid had one or more public transactions (Federal, State, or local) terminated for cause or default; and

The Bidder represents, warrants and acknowledges the understanding that restrictions placed on the employment of labor or on the scale of pay for the work on a contract will be the requirements of the Fair Labor Standards Act (Federal Wage-Hour Law) of 1938, 28 USC §201 et seq., and other applicable labor laws.

The person executing this Certification further represents, warrants and affirms the truthfulness and accuracy of the contents of the statements submitted on or with this Certification and understands that the provisions of 31 USC §3801 et seq. are applicable thereto.

BIDDER NAME

BY: _____
Signature

TITLE: _____

CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM

Failure to complete all of the following information may result in a delay in obtaining a contract, lease, purchase agreement, or grant award with any Arkansas State Agency.

SUBCONTRACTOR: _____ SUBCONTRACTOR NAME: _____
 Yes No

IS THIS FOR:

TAXPAYER ID NAME: _____ Goods? Services? Both?

YOUR LAST NAME: _____ FIRST NAME: _____ M.I.: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____ COUNTY: _____

AS A CONDITION OF OBTAINING, EXTENDING, AMENDING, OR RENEWING A CONTRACT, LEASE, PURCHASE AGREEMENT, OR GRANT AWARD WITH ANY ARKANSAS STATE AGENCY, THE FOLLOWING INFORMATION MUST BE DISCLOSED:

FOR INDIVIDUALS*

Indicate below if: you, your spouse or the brother, sister, parent, or child of you or your spouse is a current or former: member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee:

Position Held	Mark (✓)		Name of Position of Job Held <small>(senator, representative, name of board/ commission, data entry, etc.)</small>	For How Long?		What is the person(s) name and how are they related to you? <small>(i.e., Jane Q. Public, spouse, John Q. Public, Jr., child, etc.)</small>	
	Current	Former		From MM/YY	To MM/YY	Person's Name(s)	Relation
General Assembly							
Constitutional Officer							
State Board or Commission Member							
State Employee							

None of the above applies

FOR AN ENTITY (BUSINESS)*

Indicate below If any of the following persons, current or former, hold any position of control or hold any ownership interest of 10% or greater in the entity: member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee. Position of control means the power to direct the purchasing policies or influence the management of the entity.

Position Held	Mark (✓)		Name of Position of Job Held <small>(senator, representative, name of board/ commission, data entry, etc.)</small>	For How Long?		What is the person(s) name and what is his/her % of ownership interest and/or what is his/her position of control?		
	Current	Former		From MM/YY	To MM/YY	Person's Name(s)	Ownership Interest (%)	Position of Control
General Assembly								
Constitutional Officer								
State Board or Commission Member								
State Employee								

None of the above applies

Contract and Grant Disclosure and Certification Form

Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the agency.

As an additional condition of obtaining, extending, amending, or renewing a contract with a state agency I agree as follows:

1. Prior to entering into any agreement with any subcontractor, prior or subsequent to the contract date, I will require the subcontractor to complete a **CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM**. Subcontractor shall mean any person or entity with whom I enter an agreement whereby I assign or otherwise delegate to the person or entity, for consideration, all, or any part, of the performance required of me under the terms of my contract with the state agency.

2. I will include the following language as a part of any agreement with a subcontractor:

Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this subcontract. The party who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the contractor.

3. No later than ten (10) days after entering into any agreement with a subcontractor, whether prior or subsequent to the contract date, I will mail a copy of the **CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM** completed by the subcontractor and a statement containing the dollar amount of the subcontract to the state agency.

Signature _____	Title _____	Date _____
Vendor Contact Person _____	Title _____	Phone No. _____

Agency Use Only				
Agency Number _____	Agency Name _____	Agency Contact Person _____	Contact Phone No. _____	Contract or Grant No. _____

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
SPECIAL PROVISION
JOB 42-21
Highway Police East Parking & Pulaski West Equipment Yard Exterior Lighting
Project**

PROJECT MANUAL

DESCRIPTION

Retrofit existing light poles with LED fixtures. Retrofit existing soffit lights with LED fixtures. Retrofit existing wall packs LED fixtures. Installation of additional light poles utilizing LED fixtures. The project located at the Arkansas Highway Police East parking area and the Pulaski West Equipment Yard (at or around) – 10324 Interstate 30 – Little Rock, AR, 72209, is to be completed as indicated on the Plans, as called for in these Specifications, or as directed by the Engineer. These Specifications and the Plans cover the furnishing of all materials, labor, tools, equipment, machinery drayage, rigging, fees, permits and any and all incidental items required to provide a complete, in place and operating Facility (exterior lighting system).

EXPECTATION

All materials and workmanship are expected to meet local code as well as the minimum specification concerning quantity, color, placement and performance as provided in the attached layout/design and details and as communicated during the pre-bid meeting. (Call Cameron Parsons – Project Coordinator – 501-569-2624 to schedule a pre-bid meeting) Minimum average illumination will be no less than 2.5 foot candles. Luminaries, when possible, will be compatible with web based controls for future utilization. Initial installation will ensure that all poles, circuits or individual fixtures are controlled individually with photo cells. All light poles will be fitted with a fuse link at the base of each pole.

GENERAL CONDITIONS

The applicable portions of the General Provisions of the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, Edition of 2014, as amended by Supplemental Specifications, together with applicable Special Provisions, shall govern where appropriate.

DEFINITIONS

- A. Wherever the term "Department" is used in these Specifications, it shall refer to the Arkansas State Highway and Transportation Department. All papers required for delivery to the Department shall be delivered to the attention of the Facilities Management Project Coordinator, Arkansas State Highway and Transportation Department Building, 10324 Interstate 30, Little Rock, Arkansas 72209. Other than

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SPECIAL PROVISION
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Highway Police East Parking & Pulaski West Equipment Yard Exterior Lighting
Project**

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bid, submittal data and other documents and correspondence should be submitted to the Facilities Management Project Coordinator. The Arkansas State Highway and Transportation Department and the Contractor are treated throughout the Contract Documents as if each were of the singular number and masculine gender.

- B. The term "Project" includes the building structure, adjacent structures, together with all related appurtenances such as excavations, utilities, etc.
- C. The term "Subcontractor", as employed herein, includes only those having a direct contract with the Contractor and it includes one who furnished material worked to a special design according to the Plans or Specifications of this work.
- D. Written notice shall be deemed to have been duly served if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered mail to the last business address known to him who gives the notice.
- E. The laws of the place of building shall govern the construction of this Contract.

LOCAL CONDITIONS

Bidders are required to visit the site prior to submission of proposal to familiarize themselves with local conditions, including general characteristics of the site and accessibility of the work.

PRE-BID MEETING

Pre-bid meetings will be available by appointment by calling Cameron Parsons – Project Coordinator at 501-569-2624 or by emailing him at Cameron.parsons@ahtd.ar.gov.

PROGRESS SCHEDULE

Immediately after being awarded the Contract, the Contractor shall prepare an estimated Progress Schedule and submit same to the Department. It shall indicate the dates for the starting and completion of the various stages of construction.

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SHOP DRAWINGS AND SAMPLES

The Contractor shall submit to the Department such shop and setting drawings and schedules as are required by the Specifications or that are requested by the Department. Shop Drawings submitted by the Contractor shall be prepared by a person thoroughly competent and qualified to prepare such Shop Drawings. Incomplete or poorly prepared Shop Drawings will be returned to the Contractor to be redrawn.

By submitting a Shop Drawing or Drawings, the Contractor represents and certifies that the above requirements have been complied with and that, in the review of the drawing or drawings by the Department, the Contractor will hold the Department harmless against claims for losses or injury caused by errors or omissions on the Shop Drawings made by the person, persons or company preparing these particular Shop Drawings.

The Contractor shall furnish for review, within two weeks, all submittals/samples required. The Department shall review such submittals/samples, with reasonable promptness, only for conformance with the design concept of the Project. The work shall be in accordance with selected submittals/samples.

The following schedule is to be used as a guide only and in no way limits the data that may be requested where there is question concerning the quality or proper function of a particular product or piece of equipment:

SHOP AND/OR LAYOUT DRAWINGS:

- (1) Reinforcing Steel for light pole bases
- (2) Concrete mix design for light pole bases
- (3) Pole light fixtures
- (4) Soffit light fixtures
- (5) Light poles (all types)
- (6) Boring / trenching layout

SAMPLES:

- (1) All light fixtures
- (2) Paint and/or Other Finish for light poles and fixtures
- (3) Finishes where selection is necessary

MATERIALS, APPLIANCES, EMPLOYEES

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Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, tools, equipment, transportation, sanitary and other facilities necessary for the execution and completion of the work.

Unless otherwise specified, all materials shall be new and both the result of the Contractor's workmanship and materials used shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Department harmless from loss of account thereof, including costs and attorney's fees.

PERMITS, INSPECTIONS, AND TAXES

The Contractor shall give all necessary notices; obtain and pay for all permits, licenses, certificates, inspection and other legal fees required and other costs in connection with his work, both permanent and temporary, including utility taps and/or connections; file all necessary plans; prepare all documents and obtain all necessary approvals of all governmental departments having jurisdiction; and obtain required certificates of inspection for his work and deliver same to the Department.

The Contractor shall include in the work, without extra cost to the Department, all labor, materials, services, apparatus, drawings, and related items in order to comply with all laws, ordinances, rules and regulations, whether or not shown on the Plans and/or in these Specifications.

The Contractor shall include in his bid all State Sales Tax, Social Security Taxes, State Unemployment Compensation Insurance, and all other such items of like nature. It is the intent that the bid shall represent the total cost to the Department of all work included in this Contract.

INDEMNIFICATION

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The Contractor shall indemnify and hold harmless the Department and his agents and employees from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and (b) is caused in whole or in part by a negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified thereunder.

The obligations of the Contractor shall not extend to the liability of the Department, his agents or employees arising out of (a) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or Specifications, or (b) the giving of or the failure to give directions or instructions by the Department, his agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

ACCIDENT PREVENTION

Precaution shall be exercised at all times for the protection of persons and property. The safety provisions of applicable laws and building and construction codes shall be observed. Machinery, equipment and other hazards shall be guarded in accordance with safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable laws. The Contractor shall be responsible for any damage which may be caused by workers during the performance of the work.

SUPERINTENDENT: SUPERVISION

The Contractor shall furnish during progress of the work, a competent Superintendent acceptable to the Department and any necessary assistants. The Superintendent shall not be changed except with the consent of the Department, unless the Superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The Superintendent shall represent the Contractor in his absence and all directions given to

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him shall be as binding as if given to the Contractor. The Department shall not be responsible for the acts or omissions of the Superintendent or his assistants.

ACCESS TO THE WORK

The Engineer or his representatives shall have access to the work at all times, shall be permitted to approach, enter or examine all stages or phases of the work as it progresses and shall have the authority to reject work which is defective in workmanship or material.

CHANGES IN THE WORK

The Department, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the work, the Contract Sum being adjusted accordingly. All such work shall be executed under the Conditions of the original Contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change.

Except in an emergency endangering life or property, no extra work or change shall be made by the Contractor unless in pursuance of a written order from the Department and no claim for an addition to the Contract Sum shall be valid unless so ordered.

The value of any such extra work or change shall be determined in one (1) or more of the following ways:

- A. By estimate and acceptance in a lump sum. The Contractor shall be required, if called upon, to furnish the original bills and payrolls and support the statement with proper affidavits. The burden of proof of the costs rests upon the Contractor.
- B. By unit prices named in the Contract or subsequently agreed upon.
- C. By cost and percentage or by cost and a fixed fee, to be computed according to above formula.

DEDUCTIONS FOR UNCORRECTED WORK

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If the Department deems it inexpedient to correct work injured or done not in accordance with the Contract, an equitable deduction from the Contract price shall be made therefore.

CORRECTION OF WORK BEFORE FINAL PAYMENT

The Contractor shall remove from the premises all work condemned by the Department as failing to conform to the Contract, whether incorporated or not, and the Contractor shall replace and re-execute his own work in accordance with the Contract and without expense to the Department and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

WARRANTY

All materials and workmanship shall be guaranteed for a period of one (1) year from the date of the semi-final inspection by the Department. Final acceptance and processing of the final estimate will be made after the one (1) year Warranty period is complete. The Contractor's Performance Bond will be held until the Warranty period is complete.

The Contractor may provide a Maintenance Bond for 50% of the full amount of the Contract in order to release the Performance Bond during the Warranty period. The Maintenance Bond must be furnished prior to the semi-final inspection and extend to the termination of the Warranty period.

THE DEPARTMENT'S RIGHT TO DO WORK

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the Department, after seven (7) days written notice to the Contractor, may without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

PAYMENTS WITHHELD

In addition to other appropriate justification therefore as authorized by law, the Department may withhold, or on account of subsequently discovered evidence, nullify

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the whole or a part of any certificate to such extent as may be necessary in his reasonable opinion to protect himself from loss on account of:

- A. Defective work not remedied.
- B. Claims filed or reasonable evidence indicating probable filing of claims.
- C. Failure of the Contractor to make payments properly to subcontractors or for material or labor.
- D. A reasonable doubt that the Contract can be completed for the balance then unpaid.
- E. Damage to another contractor.

DAMAGES

Should either party to this Contract suffer Damages because of any wrongful act or neglect of the other party or of anyone employed by him, claim shall be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the final payment, except as expressly stipulated otherwise in the case of faulty work or materials, and shall be adjusted by agreement or arbitration.

LIENS

The satisfaction of all Liens (including but not limited to labor, material, worker's compensation and otherwise) arising out of this Contract and incurred by the Contractor or his Subcontractor shall be exclusive responsibility of the Contractor and/or the Contractor's bonding company and the Department shall have the right to withhold payment to the Contractor or recover from the Contractor and/or the Contractor's bonding company all damages, including costs and attorney's fees, as a result of liens being filed or asserted as a result of the performance of this Contract.

ASSIGNMENT

Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him thereunder, without the previous written consent of the Department.

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SEPARATE CONTRACTS

The Department reserves the right to let other contracts in connection with this work under similar General Conditions. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

If any part of the Contractor's work depends for proper execution or results upon the work of any other contractor, the Contractor shall inspect and determine any defects in such work that render it unsuitable for such proper execution and results. His failure to so inspect and determine shall constitute an acceptance of the other contractor's work as fit and proper for the reception of this work, except as to defects which may develop in the other contractor's work after the execution of this work.

SUBCONTRACTS

The Contractor agrees that he is as fully responsible to the Department for the acts and omissions of his Subcontractors and suppliers and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by himself.

Nothing contained in the Contract Documents shall create any contractual relation between any Subcontractor and the Department.

USE OF PREMISES

The Contractor shall confine his apparatus, the storage of materials and the operations of his workers to limits indicated by the Engineer, and shall not unreasonably encumber the premises with his materials.

CUTTING, PATCHING

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The Contractor shall do all cutting, fitting or patching of his work that may be required to make its several parts come together properly and fit it to receive or be received by work of other contractors shown upon, or reasonably implied by, the Plans and Specifications for the completed structure.

QUALITY OF MATERIAL

All material, appliances or appurtenances furnished under these Specifications shall be new and unused and shall be free from defects and imperfections. Any material, appliance or appurtenance thereto found to be defective shall be replaced by the Contractor at no cost to the Arkansas Highway and Transportation Department. All material shall comply with the requirements and applicable provisions of the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, Edition of 2014, as amended by Supplemental Specifications, and these Specifications. Any material not covered in the Specifications above shall be approved by the Engineer.

SUBSTITUTION OF MATERIAL

Where a definite material is specified, it is not the intent to discriminate against any equal product of another manufacturer. It is the intent to set a definite standard. Open competition is expected, but in all cases, complete data must be submitted on all proposed substitutions and samples shall be submitted for comparison and testing when requested.

No substitution shall be made unless authorized in writing by the Department. If the Contractor intends to substitute an equal product, he shall make this fact known, in writing, to the Department within thirty (30) days after the award of the Contract. Otherwise, the Contractor will be required to furnish materials and specialties of the brands named in the Specifications. Should a substitution be accepted and should the substituted material prove defective or otherwise unsatisfactory for the service intended and within the guaranty period, the Contractor shall replace this material or equipment with the material or equipment specified by name at no cost to the Department.

PLANS AND SPECIFICATIONS

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Titles to Sections and Paragraphs in these Contract Documents are introduced merely for convenience and shall not be taken as a correct or complete segregation of the several units of materials and labor. No responsibility, either direct or implied, is assumed by the Department for omissions or duplications by the Contractor, or his Subcontractor, due to real or alleged error in arrangement or matter in these Contract Documents.

The Contractor is cautioned to examine the Plans before submitting his bid, and in all cases large scale details shall take precedence over small scale general drawings. In cases where floor elevations are shown, they are to be checked back carefully against detailed sections, and the Contractor will be responsible for all heights shown or marked on small scale drawings.

PROPOSALS

All Bids shall be based upon the conditions at the site, the Specifications and the Plans for the Department's Job No. 42-21, and entitled "Highway Police East Parking & Pulaski West Equipment Yard Exterior Lighting Project". All bids shall include all general construction, plumbing and site improvement work required to remodel the existing and additional exterior lighting as per plan or specified by AHTD project management. The unit bids shall include all work shown on the Plans and called for in the Specifications. All bids shall be required to show separate line items – as follows.

- 1) Labor
- 2) Materials
- 3) Trenching quantity (lineal feet)
- 4) Horizontal boring quantity (lineal feet)
- 5) Permits and fees
- 6) Overhead and Profit
- 7) Tax
- 8) Lump Sum Price

Additional NOTE: All bids are required to show quantity (lineal feet) of trenching and quantity (lineal feet) of horizontal boring as well as the cost associated for the use of this equipment.

MEASUREMENTS

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Before ordering any material or doing any work, the Contractor shall verify all Measurements at the building and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of differences between architectural dimensions and the Measurements indicated on the drawings; any difference which may be found shall be submitted to the Department for consideration before proceeding with the work.

COLD WEATHER

All concrete masonry, painting, or other work subject to damage by cold weather shall not be executed when the temperature falls below forty (40) degrees F., except upon permission of the Department and their approval of measures taken to protect the work from freezing; said permission of the Department is not to relieve the Contractor his responsibility for damage which may occur to the work from cold weather.

CLEANING UP

The Contractor shall at the completion of the work, remove all his rubbish from and about the building and all his tools, scaffolding and surplus materials and shall leave his work "broom-clean" or its equivalent.

CONDITION OF BIDDING

The Contractor represents, as a Condition of Bidding and Contracting for the Project, that he is thoroughly familiar with all of the processes and methods necessary to safely construct and complete the Project according to the Plans and Specifications, including all necessary safety measures to protect property and persons from injury and loss. Such representation includes, but is not limited to, the use of and methods required for all materials specified, soil test information, scaffolding, bracing, shoring, etc.

SANITARY ARRANGEMENTS

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The Contractor, at the beginning of the work, shall provide on the premises a suitable temporary convenience and enclosure for the use of all workmen on the job, shall maintain same in sanitary condition and remove same and all its contents at the completion of the Project and when directed by the Department.

CONSTRUCTION PLANS

The Department will furnish five (5) sets of Contract Plans and Specifications, without cost, to the General Contractor for his use in constructing the work.

The General Contractor is to supply all Contract Plans and Specifications to his Subcontractors or material suppliers.

Additional sets or portions of Contract Plans and Specifications, beyond the five (5) sets furnished by the Department, that are requested by the General Contractor, will be furnished for the actual cost of printing at the General Contractor's expense.

FILE DRAWINGS

At the completion of this project, the General Contractor shall furnish to the Department a complete file of the final copies of all shop drawings used in the construction of this project.

COORDINATION OF WORK

As the work under this Contract includes the usual mechanical piping, ducts and grilles and electrical fixtures, the General Contractor shall give special attention to Coordination of Work by the various trades to provide uniform and symmetrical layout and spacing of the exposed components which will affect the finished architectural design and appearance. Where spacing and related locations are not specifically shown on the Plans, or where in doubt, the Contractor's Superintendent shall consult the Department's representative prior to installation of that part of the work. The location of electrical, telephone and radio control wiring outlets shall be verified with the Department prior to installation.

AS-BUILT DRAWINGS

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The Contractor shall, during the progress of the work, keep an accurate record of all changes and corrections from the layouts shown on the Plans. Record of changes may be kept by accurately making all changes on a set of prints during the progress of the job. Exact location of all underground utility service entrances and their connections to utility mains as well as valves, etc., which will be concealed in the finished work, shall be accurately indicated on the Plans by measured distances. Upon completion of the work and prior to final payment, the Contractor shall furnish to the Department two (2) set of "As-Built" prints legibly and accurately marked to indicate all changes, additions, deletions, etc., from the Contract Plans.

SECTION A - CARPENTRY AND MILLWORK

SCOPE

- A. CARPENTRY - Carpentry work includes the furnishing, framing, cutting and fitting for other trades and other carpentry work and materials necessary to complete the project as shown. Carpentry work shall include work forms for concrete work, all wood flooring, framing, bucks, plates, blocking, furring, stairs and gypsum board.
- F. MILLWORK - The Millwork, generally, consists of all wood finishing materials required to complete the building and includes cabinets, counters, shelving, trim and other Millwork. Interior or exterior.

LUMBER

- A. Lumber for structural carpentry items shall be Southern Pine, Spruce or Fir, graded and grade marked in compliance with standard grading rules, kiln dried to a moisture content of 15% or less.
- B. Framing material and boards not otherwise specified shall be No. 2, straight, full and square to the dimensions indicated and shall be free of shakes or waness.
- C. Framing for concrete forms may be No. 2 Common or better, except exposed concrete surfaces shall be formed as specified in "Concrete" Section.

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GENERAL CARPENTRY

Wood framing, furring, stripping and blocking shall be laid out, installed and fitted as required by conditions encountered. All work shall be plumbed, leveled and braced with sufficient nails, spikes, bolts, etc., to ensure secure attachment and rigidity. Any piece of work or Carpentry material with a defect or defects that prevent it from serving its intended purpose satisfactorily, including crooked, warped, bowed or otherwise defective material, even if within the limits of grade specified, will be rejected and shall be replaced with an acceptable piece.

FINISH CARPENTRY

All interior finish to be smooth, properly membered or mitered. All lengths of lumber to be without joints on a straight run where possible, and where joints are necessary, they are to be made on an angle of 45 degrees against the light, accurately and neatly. Moldings shall be true to details, cleanly cut and sharp. Exposed surfaces shall be sanded to an even, smooth surface, ready for finish. Mill assemblies shall be joined with concealed nails or screws, mortise and tenons, dowels or glued blocks, in accordance with best mill practice and workmanship. Intersection molds shall be neatly coped. Flat members of wood trim shall be backed out or saw kerfed to prevent warping. Finish to be properly protected from dampness at all times until painted or varnished. Finish to be applied in accordance with the very best practice so that completed results will show as little of the joints as possible and no tool or machine marks or nail holes or nails.

PLYWOOD

- A. Plywood shall be of thickness noted on the Plans. Panels 1/4" thick shall be three (3) ply; panels 1/2" or thicker shall be five (5) or more plies.
- B. Plywood not otherwise noted on the Plans shall be Fir panels, with A grade faces for all visible sides.
- C. Plywood core to receive Formica surfacing shall have close grain veneer face, such as Birch or Gum.

WOODWORK

- A. All lumber used for Millwork items shall be kiln dried to a range of 8% to 12% moisture content.

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- B. Interior woodwork, not otherwise noted or specified, shall be B or better grade Pine.
- A. Use clear Philippine Mahogany for all trim in connection with Mahogany doors, wall paneling and cabinet work as shown.

HARDWARE

Rough hardware including nails, screws, anchor bolts, wall plugs, etc., shall be installed in such types, sizes and quantities as indicated on Plans or as required for the secure anchorage of carpentry work. The millwork subcontractor shall install the cabinet hardware, the K&V standards, brackets and K&V clips.

Finish hardware scheduled in "Door Hardware Items" Section, shall be installed on wood and metal doors as listed under each Heading.

SECTION B- CAULKING AND WATERPROOFING

WORK REQUIRED

The work required under this Section includes all labor, materials, equipment and services necessary for and reasonably incidental to the providing of all caulking and waterproofing as herein specified. All work shall be done by parties expert in this line of work.

PREPARATION OF SURFACES

Before applying Caulking materials, the installer shall clean off all surfaces, removing all foreign matter such as dust, oil, grease, water or frost and leave the surfaces clean before the installation of his work. Where concrete surfaces occur, he shall make sure that the concrete is dry before the installation of his work.

CAULKING

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Door, louver, fixed glass and window frames and other openings and joints in exterior walls shall be caulked with a polysulfide base sealant, Class B, non-sag Type I, based on liquid polysulfide polymer and licensed and approved by the Thiokol Chemical Corporation, or with one (1) part polyurethane sealant similar and equal to No. 230 gun grade "Vulkem" as manufactured by the Master Mechanics Company. Polyurethane sealant shall be of the non-sag type designed for use in both vertical and horizontal joints and meeting requirements of Federal Specification TT-S-230. Sealant shall be delivered to the job site in sealed containers, each of which shall bear manufacturer's name and product designation. Caulking shall be furnished in colors as selected to match adjacent materials. Primer, where required, shall be used as recommended by the manufacturer of the sealant used. Backing materials and preformed joint fillers shall be non-staining, compatible with sealant and primer and of a resilient nature, such as closed cell resilient foam, sponge rubber; or of a supporting type, such as closed cell rigid foam, cork or non-impregnated fiberboard. Materials impregnated with oil, bitumen materials shall not be used with polysulfide base sealant. Size and shape shall be as indicated by joint details on Plans. Install backing material or joint filler, at proper depth in joint to provide sealant dimensions as detailed. Backing material shall be of suitable size and shape so that, when compressed (25 to 50 percent), it will fit in joints as required. Sealant shall not be applied without backing material and, if necessary, bond-breaker strip. When using backing of hose or rod stock, roll the material into the joint to avoid length wide stretching. Hose or rod stock shall not be twisted or braided. Use bond-breaker strip between sealant and supporting type backing material. Bond-breaker strip shall be used in all joints where sufficient room for backing does not exist. Follow sealant manufacturer's instructions regarding mixing, surface preparation, priming and sealant application procedures. Clean adjacent surfaces free of sealant or soiling resulting from this work as work progresses. Use solvent or cleaning agent as recommended by sealant manufacturer. All finished work shall be left in a neat, clean condition. Interior Caulking shall be done at all places where unlike materials meet and joints do not close tight, using an oil base caulking compound meeting or exceeding all requirements of Federal Specification TT-C-598b, gun consistency, neutral color. Finish interior joints smooth with adjacent surfaces.

GUARANTEE

The Contractor shall guarantee Caulking materials and workmanship, in writing, against leakage for a period of two (2) years after acceptance and shall make good at his own expense any such leakage which may develop within the period stated above.

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joints tight and in true alignment. All tiles shall be laid with ¼ turn pattern. The tile and the areas that are to receive flooring shall have a 70 degree F. minimum temperature maintained for 24 hours before and during the time of laying tile. Concrete floors shall be thoroughly dry before any flooring is laid. The floor tile shall be installed continuous and uninterrupted with a uniform pattern.

SECTION C - BUILDING SPECIALTIES

FINALLY

It is the intention that this Section shall provide a complete installation except as hereinbefore specifically excepted. All accessory construction and apparatus necessary or advantageous in the operation and testing of the work shall be included. The omission of specific reference to any part of the work necessary for such complete installation shall not be interpreted as relieving this Contractor from furnishing and installing such parts.

GENERAL

All materials and workmanship, which are a part of this Contract, shall be warranted against defects and imperfections for a period of one (1) year from date of acceptance by the Arkansas State Highway and Transportation Department.

METHOD OF MEASUREMENT

AHP, District 6, Pulaski West Equipment Yard and Facilities Management Exterior Lighting complete and in place, as indicated on the Plans, as called for in these Specifications, or as directed by the Engineer and accepted, will be measured for payment by the "Lump Sum".

BASIS OF PAYMENT

Work completed and accepted and measured as provided above, will be paid for at the lump sum price bid for " Highway Police East Parking & Pulaski West Equipment Yard

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Exterior Lighting Project”, which, shall be full compensation for all materials, labor, tools, equipment, machinery, drayage, rigging, fees, permits, clean-up, guarantees and any and all incidental items required to complete the work. NOTE: Any and all material rebates or utility provider incentive payouts applicable to this project will be signed over to the general contractor by AHTD. These moneys/payouts should be reflected and shown in the bid as an individual line item and shown as a deduction or reduction in the lump sum bid price.

PAY ITEM

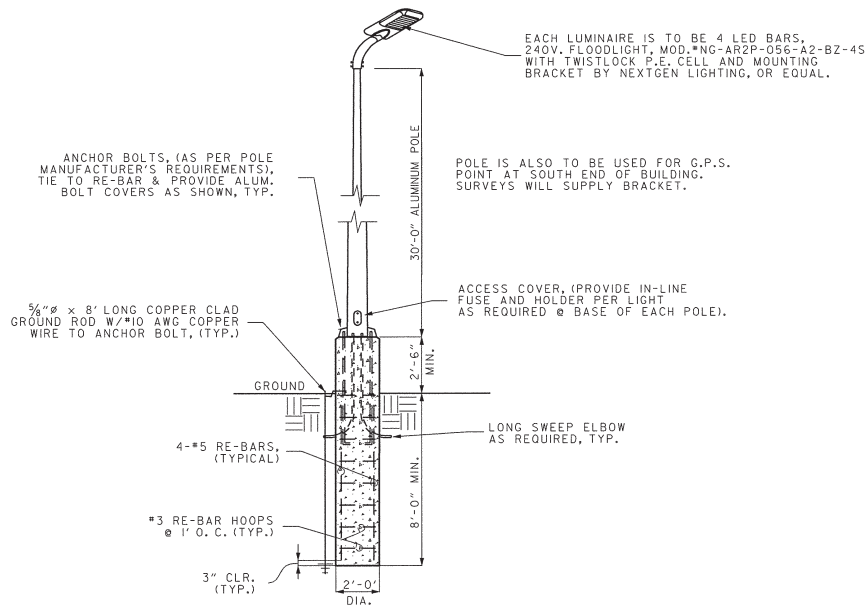
PAY UNIT

Highway Police East Parking & Pulaski West Equipment Yard
Exterior Lighting Project.

Lump Sum

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	020512	18	24	

4 LIGHTING SCHEDULE, LEGEND & DETAILS



30' POLE FOUNDATION DETAIL

N.T.S.

POLE FOUNDATION NOTES

1. CONCRETE TO BE CLASS "S".
2. SEE PLOT PLAN FOR APPROXIMATE LOCATIONS.
3. FOUNDATIONS SUBJECT TO POLE MANUFACTURER'S REQUIREMENTS.
4. ALL WORK REQUIRED TO INSTALL FLAG POLE AND AREA LIGHTING AS DETAILED OR DIRECTED, TO BE SUBSIDIARY TO THE LUMP SUM BID.

LIGHTING FIXTURE SCHEDULE			
MARK	MFGR. & MODEL (OR EQ.)	BULBS	REMARKS
Ⓐ	DAY-BRITE *AVW217-PMW-120-1/2EB	2-F24T5/CW	WALL MOUNTED
Ⓑ	BROAN *OTXE080 FAN W/BACKRAFT DAMPERS	N/A	CEILING MTD. (RECESSED) PROVIDE WALL DUCTING KIT FOR THROUGH WALL INSTALLATION
Ⓒ	LITHONIA *TFL150STA2-120-PER/PEI-FSAB-LPI	1-I50W M.H.	WALL MTD. WEATHERPROOF FLOODLIGHT
Ⓓ	DUAL-LITE EMERGENCY EXIT *LXRWE	N/A	WALL MOUNTED
Ⓔ	DAY-BRITE INDUSTRIAL *FD259-PP-120-1/2EB	2-F96T8/CW	SUSP. FROM CEILING OR AS DIRECTED.
Ⓕ	DAY-BRITE STATIC *25P0328-FSI2W-120-1/3EB	3-F46T5/SPX35	RECESSED
Ⓖ	G.E. *P17M55IA2LMN3GRU W/PE CELL & LAMP	1-I50W M.H.	POLE MTD. W/ARTSI4355, IIGV 14' STL. POLE
Ⓗ	NEXTGEN *NG-AR2P-056-A2-BZ-4S W/PE CELL & LAMP	4-LED BARS	POLE MTD. W/RTA-30-10G-T20-BA 30' POLE & FOUNDATION FOR SINGLE FIXTURE POLES.
Ⓘ	BROAN *053-30-SS-120	HALOGEN F.L.	SURFACE MTD., NON DUCTED
Ⓚ	NEXTGEN *NG-AR2P-056-A2-BZ-SM	4-LED BARS	SURFACE MTD. @ CEILING
Ⓛ	HARBOR BREEZE 42" 5 BLADE CEILING FAN- NO LIGHT	N/A	SURFACE MTD. @ CEILING

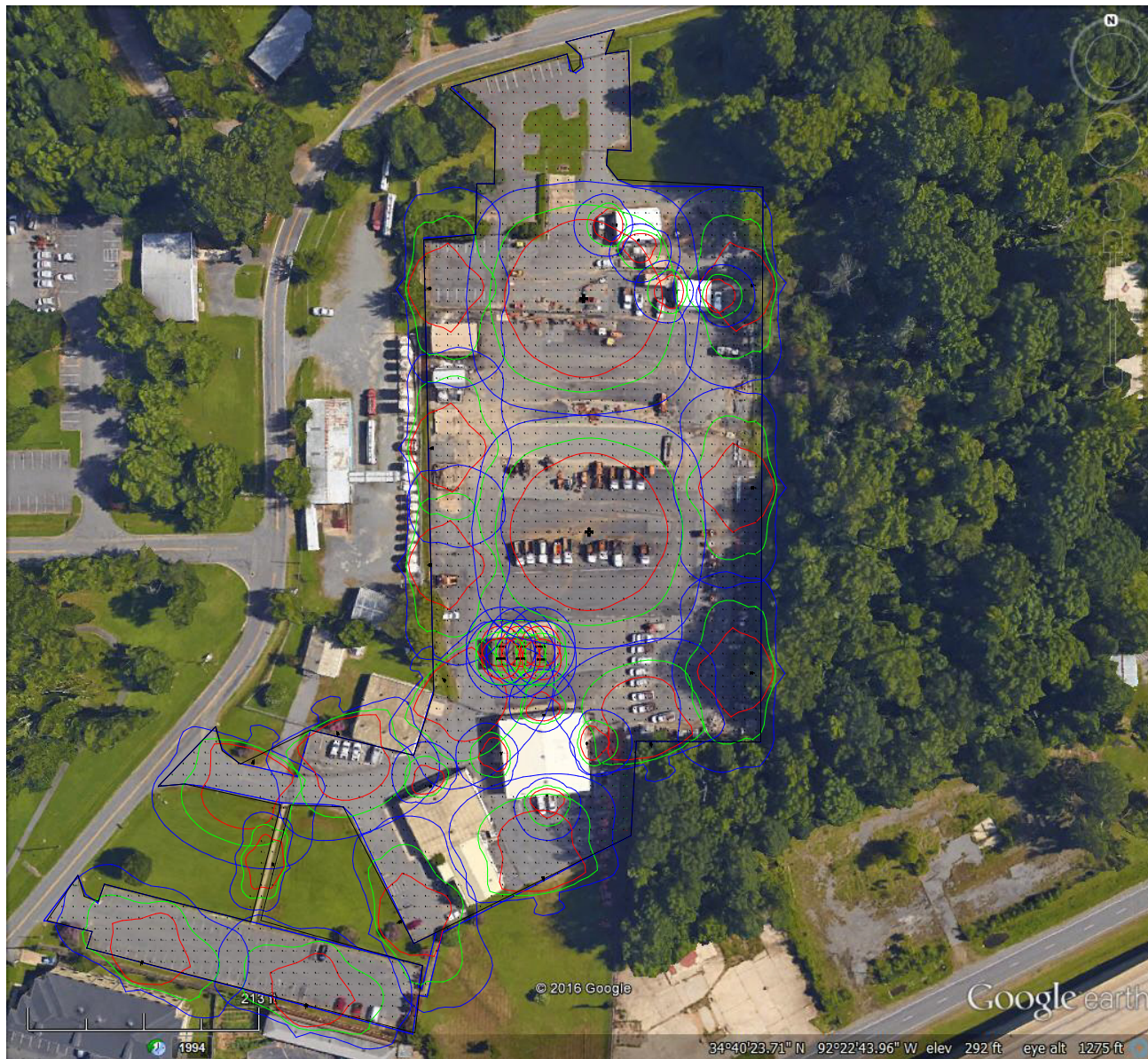
- NOTES: 1. ALL ELECTRICAL WORK IS TO BE IN ACCORDANCE W/"THE NATIONAL ELECTRIC CODE", LATEST EDITION.
 2. ELECTRICAL SERVICE IS TO CONFORM W/ALL LOCAL UTILITY REQUIREMENTS.
 3. ALL EXTERIOR LIGHTS MUST BE PROJECTED BELOW A HORIZONTAL PLANE RUNNING THROUGH THE LOWEST POINT ON THE FIXTURE WHERE THE LIGHT IS EMITTED. REFER TO THE NIGHT SKY PROTECTION ACT. (HOUSE BILL 1282)

LIGHTING LEGEND

- S - SWITCH, SPST
- S₂ - SWITCH, 2-POLE
- S₃ - SWITCH, 3-POLE
- HOME RUN TO PANEL
- Ⓚ - EXIT LIGHTING
- PANEL
- ⊗ - CEILING FAN
- Ⓛ - 110V DUPLEX OUTLET
- Ⓛ - 110V QUADRUPEX OUTLET
- Ⓛ - SPECIAL PURPOSE OUTLET (AS NOTED)
- Ⓛ - THERMOSTAT
- Ⓛ - PUSH BUTTON CONTROL (LOCATE AS DIRECTED)
- Ⓛ - MOTOR
- Ⓛ - INCADESCENT LIGHTING FIXTURE
- Ⓛ - FLOOD LIGHTING FIXTURE, H.P.S.
- Ⓛ - EXHAUST FAN
- Ⓛ - POLE MOUNTED LIGHT FIXTURE
- Ⓛ - FLUORESCENT LIGHTING FIXTURE
- Ⓛ - RECESSED FLUORESCENT FIXTURE
- DISCONNECT, UNFUSED
- Ⓛ - AUTOMATIC TRANSFER SWITCH
- W.P. - WEATHER-PROOF
- G.F.C.I. - GROUND FAULT CIRCUIT INTERRUPTER
- Ⓛ - MOTOR CONTROL BOX
- Ⓛ - TELEPHONE JACK/DATA JACK (LOCATE AS DIRECTED)
- Ⓛ - RADIO OUTLET (LOCATE AS DIRECTED)
- Ⓛ - SPECIAL JUNCTION BOX (DUPLEX OUTLET BOX) FOR RADIO/TELEPHONE
- Ⓛ - METER
- Ⓛ - STARTER

PROPOSED PLANS FOR A. H. T. D.	
ARKANSAS COUNTY #1	
AREA HEADQUARTERS	
STUTTART, ARKANSAS	
ARKANSAS COUNTY, DISTRICT #2	DRAWING NO.
LIGHTING SCHEDULE, LEGEND & DETAILS	L-3
DATE: _____	

EQUIPMENT



Luminaire Schedule						
Symbol	Qty	Label	Arrangement	LLF	Description	Arr. Watts
	2	L5-Q90	4 # 90 DEGREES	0.950	XLCL-5-LED-SS-NW	1737.6
	5	LFT-S	SINGLE	0.950	XLCL-PT-LED-SS-NW	437.3
	9	L3-S	SINGLE	0.950	XLCL-3-LED-SS-NW	428.3
	9	WALL MOD	SINGLE	0.950	ATLAS WLD86LED	86
	6	CANOPY	SINGLE	0.950	LSI RS3-8-S-LED-HO-CW	121
	1	WALL WAY	SINGLE	0.950	XLCS-3-LED-HO-CW	143.3

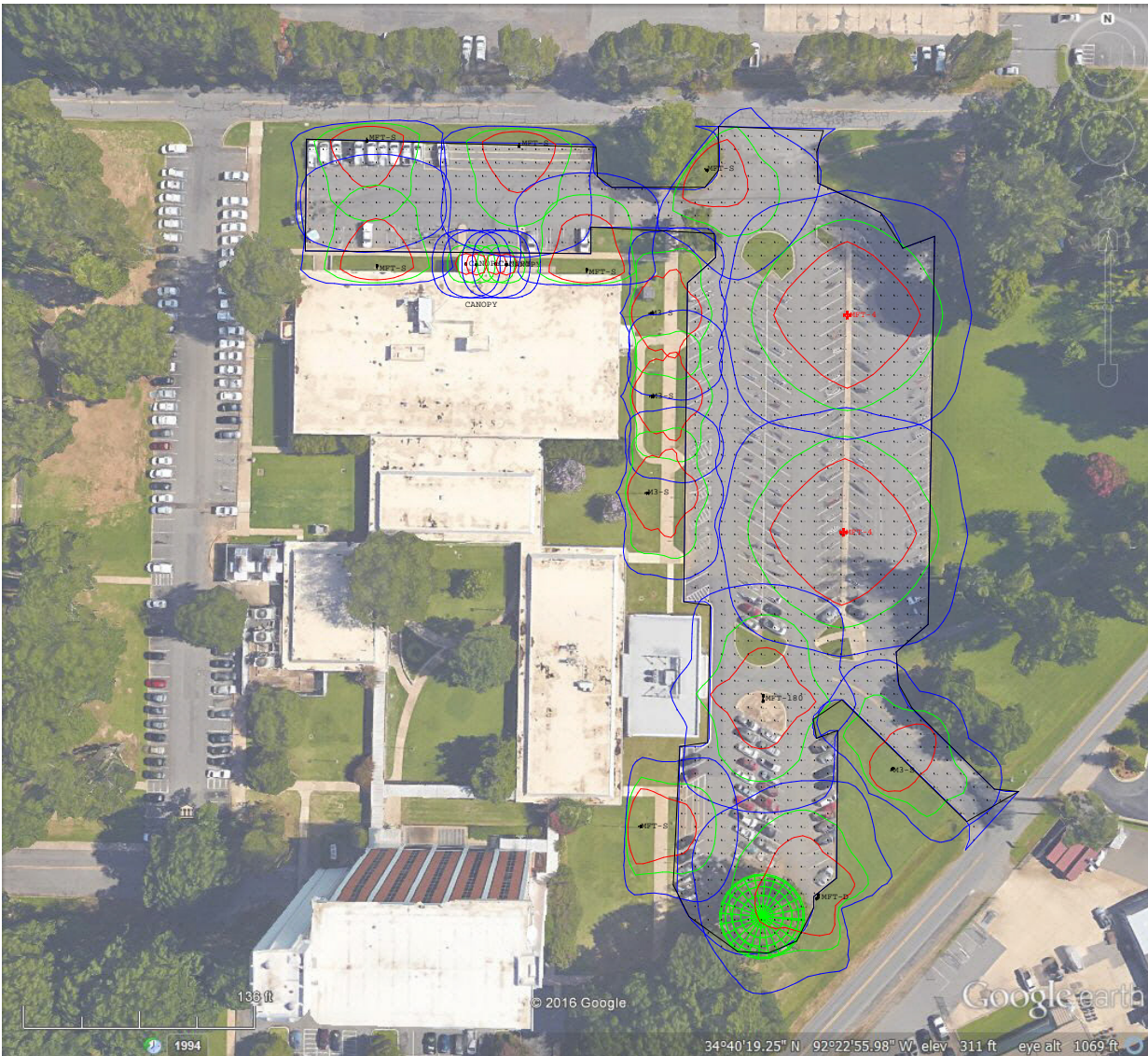
Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Fc	5.48	22.9	1.0	5.48	22.90
Object_1_Top	Illuminance	Fc	4.50	55.7	0.0	N.A.	N.A.

LPDArea_1

Area = 228443 Sq.ft
Total Watts = 9000.198
LPD = 0.039 Watts/Sq.Ft

15' MOUNTING FOR WALL PACKS
33' MOUNTING FOR POLES

AHPD



Luminaire Schedule						
Symbol	Qty	Label	Arrangement	LLF	Description	Arr. Watts
	4	M3-S	SINGLE	0.950	XLCM-3-LED-HO-NW	269.6
	1	MFT-D	2 @ 90 DEGREES	0.950	XLCM-FT-LED-HO-NW-IL	540.8
	2	MFT-4	4 @ 90 DEGREES	0.950	XLCM-FT-LED-HO-NW-IL	1081.6
	1	MFT-180	BACK-BACK	0.950	XLCM-FT-LED-HO-NW-IL	540.8
	6	MFT-S	SINGLE	0.950	XLCM-FT-LED-HO-NW-IL	270.4
	4	CANOPY	SINGLE	0.950	ATLAS VN1256LED	54.8

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Object_1_Planar	Illuminance	Fc	3.22	30.8	0.1	32.20	308.00

LPD Area Summary			
Label	Area	Total Watts	LPD
LPDArea_2	113674	2974.4	0.026

25' EXISTING MOUNTING 32' NEW POLE MOUNTING
 LPDArea_2

Area = 113674 Sq.ft
 Total Watts = 2974.4
 LPD = 0.026 Watts/Sq.ft

LED AREA LIGHTS - LSI SLICE SMALL (XLCS)



DOE LIGHTING FACTS

Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit www.lightingfacts.com for specific catalog strings.

LIGHT OUTPUT - XLCS							
		Lumens (Nominal)					Watts (Nominal)
		Type 3	Type FT	Type 5	Type5E	TypeFTE	
Cool White	SS	10100	11400	11400	8200	7800	97
	HO	14000	15500	15700	11600	10600	140
Neutral White	SS	9700	10400	10800	7900	7500	97
	HO	13400	14700	15200	11000	10500	140

LED Chips are frequently updated therefore values may increase.

US & Int'l. patents pending

SMARTTEC™ - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.

ENERGY SAVING CONTROL OPTION - DIM - 0-10 volt dimming enabled with controls by others. Available with High Output (HO) drive current only.

EXPECTED LIFE - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

LEDS - Select high-brightness LEDs in Cool White (5000K), or Neutral White (4000K) color temperature, 70 CRI.

DISTRIBUTION/PERFORMANCE - Types 3, FT, 5 and extended 5E and FTE. Exceptional uniformity creates bright environment at lower light levels. Internal Louver (IL) option available for improved backlight control without sacrificing street side performance for FT distribution.

HOUSING - One-piece, die-formed aluminum housing contains factory prewired driver. Wiring access door (with safety lanyard) located underneath.

OPTICAL UNIT - Clear tempered flat glass lens permanently sealed to weather-tight aluminum optic frame creates an IP65 rated optical unit (includes pressure-stabilizing breather).

MOUNTING - Tapered rear design allows fixtures to be mounted in 90° and 120° configurations without the need for extension arms. Use with 3" reduced drilling pattern. A round pole plate is required for mounting to round poles. Wall mount available by ordering wall mounting bracket (BKS-XBO-WM-* -CLR). Proprietary pole quick mount accessories available with horizontal mounting or fixed 15° angled mounting (PQMH-KIT-CLR and PQM15-KIT-CLR) for mounting to square poles. See Accessory Ordering Information chart for all brackets.

ELECTRICAL - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277 VAC (50/60Hz input), and 347-480 VAC. Optional button-type photocells (PCI) are available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

DRIVER - Available in SS (Super Saver) and HO (High Output) drive currents. Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F)

FINISH - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Available in black, bronze and white. Other standard LSI finishes available. Consult factory.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

SHIPPING WEIGHT (in carton) - One fixture: 17.5 lbs. (7.9 kg). Packed two per carton: 30 lbs. (13.6 kg).

LISTING - UL listed to U.S. and international safety standards. Suitable for wet locations. For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at www.designlights.org.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



Fixtures comply with ANSI C136.31-2010 American National Standard for Roadway Lighting Equipment - Luminaire Vibration 1.5G requirements.



Project Name _____ Fixture Type _____
 Catalog # _____

10/21/15
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LED AREA LIGHTS - LSI SLICE SMALL (XLCS)

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XLCS 5 LED SS CW UE BLK PCI120**

Prefix	Distribution	Light Source	Drive Current	Color Temperature	Input Voltage	Finish	Options
XLCS	3 - Type III 5 - Type V FT - Forward Throw 5E - Type V Extended FTE - Forward Throw Extended	LED	SS - Super Saver HO - High Output	CW - Cool White (5000K) NW - Neutral White (4000K)	UE - Universal Voltage (120-277V) 347-480 Universal Voltage (347-480V)	BLK - Black BRZ - Bronze WHT - White	DIM - 0-10V Dimming (from external signal) available with High Output (HO) drive current only Button Type Photocells PCI120 - 120V PCI208-277V - 208-277V PCI347 - 347V IL - Internal Louver (available with FT distribution only)

LUMINAIRE EPA CHART - XLCS

	Single	0.4
	D180°	0.8
	D90°	0.6
	T90°	1.4
	TN120°	1.4
	Q90°	1.6

Note: House Side Shield adds to fixture EPA. Consult Factory.

ACCESSORY ORDERING INFORMATION

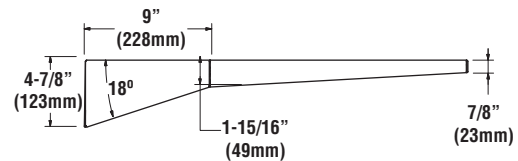
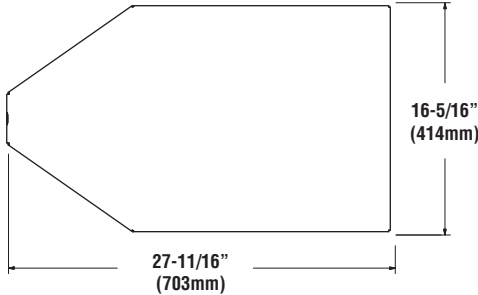
(Accessories are field installed)

Description	Order Number	Description	Order Number
BKS-XB0-WM-* -CLR Wall Mount Bracket	382132CLR	DFK208, 240 Double Fusing (208V, 240V)	DFK208, 240 ²
XLCS-3/FT-HSS House Side Shield (Black only)	603162BLK ¹	DFK480 Double Fusing (480V)	DFK480 ²
X4RPP Round Pole Plate for 4 Poles	379967CLR	FK347 Single Fusing (347V)	FK347 ²
X5RPP Round Pole Plate for 5 Poles	379968CLR	PQMH-KIT-CLR Square Pole Quick Mount Horizontal Bracket	582328CLR
FK120 Single Fusing (120V)	FK120 ²	PQM15-KIT-CLR Square Pole Quick Mount Bracket w/fixed 15° Angle	582329CLR
FK277 Single Fusing (277V)	FK277 ²		

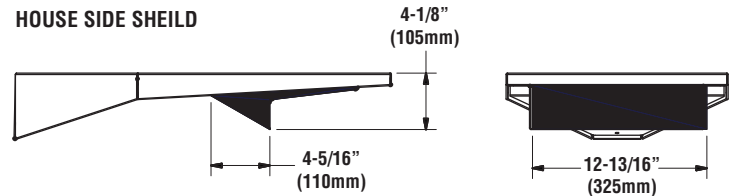
FOOTNOTES:

- 1 - House Side Shields add to fixture EPA. Consult factory.
- 2 - Fusing must be located in the hand hole of pole.

DIMENSIONS



HOUSE SIDE SHIELD



Project Name _____ Fixture Type _____
Catalog # _____

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LED AREA LIGHTS - LSI SLICE MEDIUM (XLCM)



DOE LIGHTING FACTS

Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit www.lightingfacts.com for specific catalog strings.

LIGHT OUTPUT - XLCM							
		Lumens (Nominal)					Watts (Nominal)
		Type 3	Type FT	Type 5	Type5E	TypeFTE	
Cool White	SS	19900	22800	22900	15500	15800	193
	HO	27500	30900	31100	21200	21100	278
Neutral White	SS	19300	20000	20600	15000	15000	193
	HO	26700	27800	28500	20100	20400	278

LED Chips are frequently updated therefore values may increase.

US & Int'l. patents pending

SMARTTEC™ - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.

ENERGY SAVING CONTROL OPTION - DIM - 0-10 volt dimming enabled with controls by others. .

EXPECTED LIFE - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

LEDS - Select high-brightness LEDs in Cool White (5000K), or Neutral White (4000K) color temperature, 70 CRI.

DISTRIBUTION/PERFORMANCE - Types 3, FT, FT-L, FT-R, 5, and enhanced 5E and FTE. FT-L and FT-R allow for D180 mounting configurations with factory set optics for applications such as automotive front row. Exceptional uniformity creates bright environment at lower light levels. Internal Louver (IL) option available for improved backlight control without sacrificing street side performance for FT distribution. Consult factory for internal louver for FT-L and FT-R applications.

HOUSING - One-piece, die-formed aluminum housing contains factory prewired driver. Wiring access door (with safety lanyard) located underneath.

OPTICAL UNIT - Clear tempered flat glass lens permanently sealed to weather-tight aluminum optic frame creates an IP65 rated optical unit (includes pressure-stabilizing breather).

MOUNTING - Tapered rear design allows fixtures to be mounted in 90° and 120° configurations without the need for extension arms. Use with 3" reduced drilling pattern. A round pole plate is required for mounting to round poles. Wall mount available by ordering wall mounting bracket (BKS-XBO-WM-* -CLR). Proprietary pole quick mount accessories available with horizontal mounting or fixed 15° angled mounting (PQM-H-KIT-CLR and PQM-15-KIT-CLR) for mounting to square poles. See Accessory Ordering Information chart for all brackets.

ELECTRICAL - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277 VAC (50/60Hz input), and 347-480 VAC. Optional button-type photocells (PCI) are available in 120, 208, 240, 277 or 347 volt (supply voltage must be specified).

DRIVER - Available in SS (Super Saver) and HO (High Output) drive currents. Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F)

FINISH - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Available in black, bronze and white. Other standard LSI finishes available. Consult factory.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

SHIPPING WEIGHT (in carton) - One fixture: 25.25 lbs. (11.5 kg). Packed two per carton: 43.5 lbs. (19.7 kg).

LISTING - UL listed to U.S. and international safety standards. Suitable for wet locations. For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at www.designlights.org.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



Fixtures comply with ANSI C136.31-2010 American National Standard for Roadway Lighting Equipment - Luminaire Vibration 1.5G requirements.



Project Name _____ Fixture Type _____

Catalog # _____

05/04/16

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LSI INDUSTRIES INC.

LED AREA LIGHTS - LSI SLICE MEDIUM (XLCM)

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XLCM 5 LED SS CW UE BLK PCI120**

Prefix	Distribution	Light Source	Drive Current	Color Temperature	Input Voltage	Finish	Options
XLCM	3 - Type III 5 - Type V FT - Forward Throw FT-L - Forward Optic Rotated for D180 Mount (Left Side) FT-R - Forward Optic Rotated for D180 Mount (Right Side) 5E - Type V Enhanced FTE - Forward Throw Enhanced	LED	SS - Super Saver HO - High Output	CW - Cool White (5000K) NW - Neutral White (4000K)	UE - Universal Voltage (120-277V) 347-480 Universal Voltage (347-480V)	BLK - Black BRZ - Bronze WHT - White	DIM - 0-10V Dimming (from external signal) Button Type Photocells PCI120 - 120V PCI208-277V - 208-277V PCI347 - 347V IL - Internal Louver (available with FT distribution only)

LUMINAIRE EPA CHART - XLCM

	Single	0.5
	D180°	1.0
	D90°	0.8
	T90°	1.7
	TN120°	1.7
	Q90°	1.9

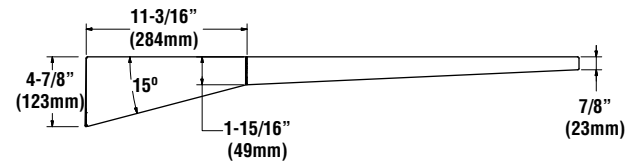
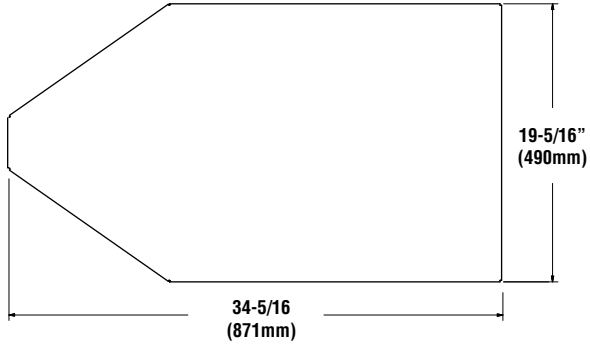
Note: House Side Shield adds to fixture EPA. Consult Factory.

ACCESSORY ORDERING INFORMATION (Accessories are field installed)

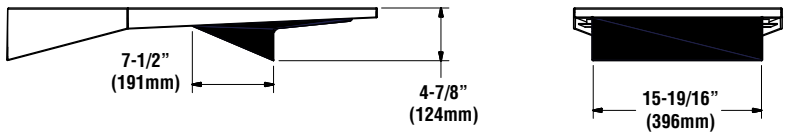
Description	Order Number	Description	Order Number
BKS-XBO-WM-* - CLR Wall Mount Bracket	382132CLR	FK120 Single Fusing (120V)	FK120 ²
XLCM-3/FT-HSS RM External House Side Shield (Black only - rear mounted)	603159BLK ¹	FK277 Single Fusing (277V)	FK277 ²
XLCM-FT-L/FT-R-HSS SM External House Side Shield (Black only - side mounted)	603161BLK ¹	DFK208, 240 Double Fusing (208V, 240V)	DFK208, 240 ²
X4RPP Round Pole Plate for 4" Poles	379967CLR	DFK480 Double Fusing (480V)	DFK480 ²
X5RPP Round Pole Plate for 5" Poles	379968CLR	FK347 Single Fusing (347V)	FK347 ²
		PQMH-KIT-CLR Square Pole Quick Mount Horizontal Bracket	582328CLR
		PQM15-KIT-CLR Square Pole Quick Mount Bracket w/fixed 15° Angle	582329CLR

- FOOTNOTES:**
- 1 - House Side Shields add to fixture EPA. Consult factory.
 - 2 - Fusing must be located in the hand hole of pole.

DIMENSIONS



HOUSE SIDE SHEILD (rear mount)



LEFT AND RIGHT VERSIONS OF TYPE FT REFLECTORS (TOP VIEW)

Note: Optics are not field-rotatable. For D180 Forward Throw installations specify left (FT-L) and/or right (FT-R) side mounting. Orientation is based on standing at the pole and looking out at the area to be lit.



LED AREA LIGHTS - LSI SLICE LARGE (XLCL)



US patent D726,947 7,828,456 8,002,428 8,177,386 8,434,893 8,567,983 and US & Int'l. patents pending

SMARTTEC™ - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.

ENERGY SAVING CONTROL OPTION - DIM - 0-10 volt dimming enabled with controls by others.

EXPECTED LIFE - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

LEDS - Select high-brightness LEDs in Cool White (5000K), or Neutral White (4000K) color temperature, 70 CRI.

DISTRIBUTION/PERFORMANCE - Types 3, 5, FT, FT-L and FT-R. FT-L and FT-R allow for D180 mounting configurations with factory set optics for applications such as automotive front row. Exceptional uniformity creates bright environment at lower light levels.

HOUSING - One-piece, die-formed aluminum housing contains factory prewired driver in a gasketed, weather-resistant wiring compartment. Hinged wiring access door (with safety lanyard) located underneath. Fixture is IP65 rated.

OPTICAL UNIT - Clear tempered optical-grade flat glass lens permanently sealed to weather-tight aluminum optic frame (includes pressure-stabilizing breather).

MOUNTING - Tapered rear design allows fixtures to be mounted in 90° and 120° configurations. Use with 5" traditional drilling pattern. A round pole plate (RPP2) is required for mounting to round poles. Wall mount available by ordering wall mounting bracket (BKS-BO-WM-* -CLR).

ELECTRICAL - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) and 347-480 VAC. Optional twistlock photocell receptacle is available. Photocell must be ordered separately.

DRIVER - Available in SS (Super Saver) and HO (High Output) drive currents. Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can be easily accessed.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F)

FINISH - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Available in black, bronze and white. Other standard LSI finishes available. Consult factory.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

SHIPPING WEIGHT (in carton) - 55 lbs./24.9Kg

LISTING - UL listed to US and international safety standards. Suitable for wet locations.

LIGHT OUTPUT - XLCL					
		Lumens (Nominal)			Watts (Nominal)
		Type 3	Type FT	Type 5	
Cool White	SS	45800	49500	50700	435
	HO	53400	57300	59100	545
Neutral White	SS	45600	48600	49600	435
	HO	52800	56300	57600	545

LED Chips are frequently updated therefore values may increase.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



Fixtures comply with ANSI C136.31-2010 American National Standard for Roadway Lighting Equipment - Luminaire Vibration 1.5G requirements.



Project Name _____ Fixture Type _____

Catalog # _____

12/01/15

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LED AREA LIGHTS - LSI SLICE LARGE (XLCL)

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XLCL FT LED HO CW UE WHT PCR**

Prefix	Distribution	Light Source	Drive Current	Color Temperature	Input Voltage	Finish	Options
XLCL	3 - Type III 5 - Type V FT - Forward Throw FT-L - Forward Optic Rotated for D180 Mount (Left Side) FT-R - Forward Optic Rotated for D180 Mount (Right Side)	LED	SS - Super Saver HO -High Output	CW - Cool White (5000K) NW - Neutral White (4000K)	UE - Universal Voltage (120-277V) 347-480 Universal Voltage (347-480V)	BLK - Black BRZ - Bronze WHT - White	DIM - 0-10V Dimming (from External Signal) PCR - Photoelectric Control Receptacle ¹

LUMINAIRE EPA CHART - XLCL

Single	EPA
Single	.7
D180°	1.4
D90°	1.1
T90°	2.3
TN120°	2.3
Q90°	2.6

Note: House Side Shield adds to fixture EPA. Consult Factory.

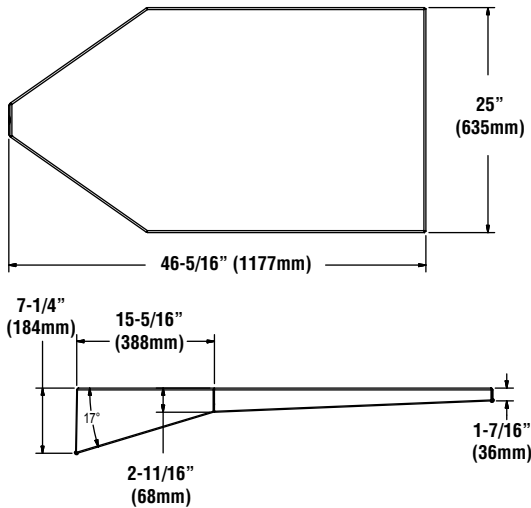
ACCESSORY ORDERING INFORMATION (Accessories are field installed)

Description	Order Number	Description	Order Number
BKS-BO-WM-* -CLR Wall Mount Plate	123111CLR	PC347 Photocell for use with PCR option (347V)	159516 ³
XLCL-3/FT-HSS RM - External House Side Shield (Black only - rear mounted)	610098BLK ²	PC480 Photocell for use with PCR option (480V)	225180 ³
XLCL-FT-L/FT-R-HSS SM - External House Side Shield (Black only - side mounted)	610100BLK ²	FK120 - Single Fusing (120V)	FK120 ⁴
RPP2 - Round Pole Plate	162914CLR	FK277 - Single Fusing (277V)	FK277 ⁴
PC120 Photocell for use with PCR option (120V)	122514 ³	DFK208,240 - Double Fusing (208V, 240V)	DFK208,240 ⁴
PC208-277 Photocell for use with PCR option (208V, 240V, 277V)	122515 ³	DFK480 Double Fusing (480V)	DFK480 ⁴
		FK347 Single Fusing (347V)	FK347 ⁴

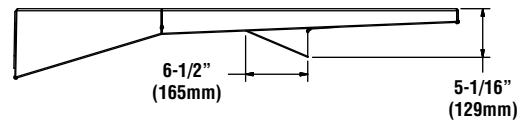
FOOTNOTES:

- 1- Photocell must be ordered separately. See Accessories.
- 2- House Side Shields add to fixture EPA. Consult factory.
- 3- Factory installed PCR option required. See Options.
- 4- Fusing must be located in hand hole of pole.

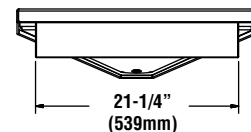
DIMENSIONS



House Side Shields

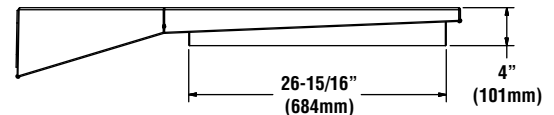


Side View



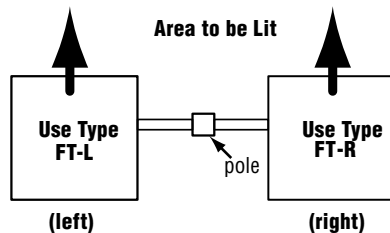
Front View

Rear Mount (610098BLK)



Side Mount (610100BLK)

LEFT AND RIGHT VERSIONS OF TYPE FT REFLECTORS (TOP VIEW)



Note: Optics are not field-rotatable. For D180 Forward Throw installations specify left (FT-L) and/or right (FT-R) side mounting. Orientation is based on standing at the pole and looking out at the area to be lit.

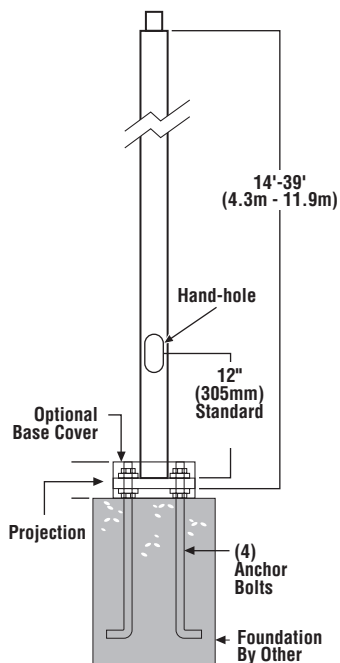


Project Name _____ Fixture Type _____
Catalog # _____

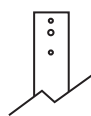
STEEL SQUARE POLES

DIMENSIONS

SQN -
N= 2-3/8" (60mm) O.D. x 4-3/4" (121mm) Tenon



SOB3, SOB5 -
Bolt-On Mount
2-Bolt Pattern



SQP -
Square Pole Top



SQI -
No Mounting Holes



SF -
Single Flood
Pole Preparation



POLE SHAFT - Pole shaft is electro-welded ASTM-A500 Grade C steel tubing with a minimum yield strength of 50,000 psi. On Tenon Mount steel poles, tenon is 2-3/8" O.D. high-strength pipe. Tenon is 4-3/4" in length. Straight poles are 4", 5", and 6" square.

HAND-HOLE - Standard hand-hole location is 12" above pole base. Poles 22' and above have a 3" x 6" reinforced hand-hole. Shorter poles have a 2" x 4" non-reinforced hand-hole.

BASE - Pole base is ASTM-A36 hot-rolled steel plate with a minimum yield strength of 36,000 psi. Two-piece square base cover is optional.

ANCHOR BOLTS - Poles are furnished with anchor bolts featuring zinc-plated double nuts and washers. Galvanized anchor bolts are optional. Anchor bolts conform to ASTM F 1554-07a Grade 55 with a minimum yield strength of 55,000 psi.

GROUND LUG - Ground lug is standard.

DUPLEX RECEPTACLE - Weatherproof duplex receptacle is optional.

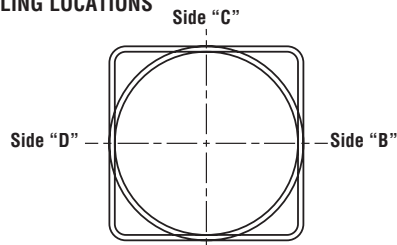
GROUND FAULT CIRCUIT INTERRUPTER - Ground fault circuit interrupter is optional.

FINISHES - Each pole is finished with DuraGrip®, LSI's baked-on polyester-powder finishing process which electrostatically applies and fuses a polyester powder to the pole. Provides an extremely smooth and uniform finish to withstand extreme weather changes without cracking or peeling, and features a five-year limited warranty. Optional DuraGrip® Plus features the added protection of a 3.0 to 5.0 mil thickness of polyester-powder finish plus an inner coating, as well as a seven-year limited warranty.

DETERMINING THE LUMINAIRE/POLE COMBINATION FOR YOUR APPLICATION:

- Select luminaire from luminaire ordering information
- Select bracket configuration if required
- Determine EPA value from luminaire/bracket EPA chart
- Select pole height
- Select MPH to match wind speed in the application area (See windspeed map).
- Confirm pole EPA equal to or exceeding value from note above
- Consult factory for special wind load requirements and banner brackets

DRILLING LOCATIONS



Sides	A	B	C	D
Hand-hole	X			
Single	X			
D180°		X		
D90°	X			X
T90°	X	X		X
TN120°*	X			
Q90°	X	X	X	X
Single FBO	X			
Double FBO		X		X

* Other two locations will be 120° to the left and right of Side A.

Note: Standard SF and DF pole preparations are located 3/4 of the height of the pole from the base, unless otherwise specified.

SHIPPING WEIGHTS - Steel Square Poles

4" (102mm) sq. 11 Ga. is approximately	7.50 lbs./ft.
4" (102mm) sq. 07 Ga. is approximately	10.00 lbs./ft.
5" (127mm) sq. 11 Ga. is approximately	9.00 lbs./ft.
5" (127mm) sq. 07 Ga. is approximately	12.50 lbs./ft.
6" (152mm) sq. 07 Ga. is approximately	15.40 lbs./ft.
Anchor Bolts (3/4" x 30") (19mm x 762mm)	15 lbs. (7kg)/set
Anchor Bolts (1" x 36") (25mm x 914mm)	30 lbs. (14kg)/set

POLE SELECTION CHART: 4" (102mm), 5" (127mm) and 6" (152mm) steel square poles

Height	EPA ¹				Outside Dimensions	Material	Bolt Circle
	70 MPH	80 MPH	90 MPH	100 MPH			
14' (4.3m)	23.3	16.7	12.2	9.0	4" (102mm)	S11G	B
16' (4.9m)	18.6	13.1	9.3	6.5	4" (102mm)	S11G	B
16' (4.9m)	34.6	25.0	18.5	13.8	5" (127mm)	S11G	C
18' (5.5m)	14.4	9.7	6.5	4.2	4" (102mm)	S11G	B
18' (5.5m)	27.9	19.7	14.1	10.1	5" (127mm)	S11G	C
20' (6.1m)	11.0	7.0	4.2	2.2	4" (102mm)	S11G	B
20' (6.1m)	18.7	12.8	8.8	5.9	4" (102mm)	S07G	B
20' (6.1m)	22.5	15.4	10.5	7.0	5" (127mm)	S11G	C
20' (6.1m)	35.5	25.4	18.4	13.4	5" (127mm)	S07G	D
22' (6.7m)	10.4	6.3	3.4	1.4	4" (102mm)	S11G	B
22' (6.7m)	18.7	12.6	8.4	5.4	4" (102mm)	S07G	B
22' (6.7m)	20.8	13.8	8.9	5.5	5" (127mm)	S11G	C
22' (6.7m)	34.0	23.9	17.0	12.0	5" (127mm)	S07G	D
24' (7.3m)	7.7	4.0	1.5	—	4" (102mm)	S11G	B
24' (7.3m)	15.1	9.7	6.0	3.3	4" (102mm)	S07G	B
24' (7.3m)	16.7	10.5	6.2	3.1	5" (127mm)	S11G	C
24' (7.3m)	28.6	19.6	13.4	8.9	5" (127mm)	S07G	D
24' (7.3m)	46.2	32.6	23.2	16.6	6" (152mm)	S07G	J
26' (7.9m)	5.3	2.1	—	—	4" (102mm)	S11G	B
26' (7.9m)	12.0	7.2	3.9	1.5	4" (102mm)	S07G	B
26' (7.9m)	13.2	7.6	3.8	1.0	5" (127mm)	S11G	C
26' (7.9m)	24.0	15.8	10.3	6.3	5" (127mm)	S07G	D
26' (7.9m)	39.6	27.3	18.9	12.9	6" (152mm)	S07G	J
28' (8.5m)	19.9	12.5	7.5	3.9	5" (127mm)	S07G	D
28' (8.5m)	33.9	22.7	15.1	9.6	6" (152mm)	S07G	J
30' (9.1m)	16.3	9.6	5.0	1.7	5" (127mm)	S07G	D
30' (9.1m)	28.8	18.6	11.6	6.6	6" (152mm)	S07G	J
35' (10.7m)	18.3	10.0	4.3	—	6" (152mm)	S07G	J
39' (11.9m)	11.5	4.3	—	—	6" (152mm)	S07G	J

¹ EPA based on ANSI/ASCE 7-93. Refer to EPA information on next page. For applications in Canada and areas using code requirements other than ANSI/ASCE 7-93, consult factory. If luminaire weight exceeds 250 lbs. (113.4 kg), consult factory.

ARRA
Funding Compliant



Project Name _____ Fixture Type _____
Catalog # _____

01/23/15

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STEEL SQUARE POLES

POLE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **5SQB5 S07G 24 S PLP SF DGP**

Pole Series	Material	Height ²	Mounting Configuration	Pole Finish	Options
Bolt-on Arm Mount - See pole selection guide for patterns and fixture matches. 4SQB3 - 3" Reduced drilling pattern 5SQB3 - 3" Reduced drilling pattern 4SQB5 - 5" Traditional drilling pattern 5SQB5 - 5" Traditional drilling pattern 6SQB5 - 5" Traditional drilling pattern	S11G - 11 Ga. Steel S07G - 07 Ga. Steel <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Consult Pole Selection Chart on opposite page </div>	14' 16' 18' 20' 22' 24' 26' 28' 30' 35' 39'	S - Single/Parallel D180° - Double D90° - Double DN90° - Double T90° - Triple TN120° - Triple Q90° - Quad QN90° - Quad	BRZ - Bronze BLK - Black PLP - Platinum Plus WHT - White SVG - Satin Verde Green GPT - Graphite MSV - Metallic Silver	GA - Galvanized Anchor Bolts SF - Single Flood ³ DF - Double Flood ³ DGP - DuraGrip [®] Plus LAB - Less Anchor Bolts OSXX - Pole preparation for PMOS Occupancy Sensor ⁴
Pole Top Mount - Use with: • Greenbriar Pole Top • Hilton Pole Top 4SQP 5SQP 6SQP		PT - Pole Top Mount			
Tenon Mount - See pole selection guide for tenon and fixture/bracket matches. 4SQN 5SQN 6SQN		N - Tenon Mount (Standard tenon size is 2-3/8" O.D.)			
No Mounting Holes or Pole Caps - Use with: • BKA 4ISF & BKA 5ISF • BKA X4ISF & BKA X5ISF		*			
Internal Slip-fitter¹ 4SQI 5SQI					

Standard SF and DF pole preparations are located 3/4 of the height of the pole from the base, unless otherwise specified.

ACCESSORY ORDERING INFORMATION		(Accessories are field installed)	
Description	Order Number		Order Number
4BC - 4" Square Base Cover	122559CLR	Vibration Damper - 4" Square Pole (bolt-on mount only)	172539
5BC - 5" Square Base Cover	122561CLR	Vibration Damper - 5" Square Pole (bolt-on mount only)	172538
6BC - 6" Square Base Cover	122563CLR	Vibration Damper - 6" Square Pole (bolt-on mount only)	178361
ER2 - Weatherproof Duplex Receptacle	122566CLR	PMOS120 - 120V Occupancy Sensor	518030CLR ⁵
GFI - Ground Fault Circuit Interrupter	122567CLR	PMOS208/240 - 208, 240V Occupancy Sensor	C/F ⁵
MHP - Mounting Hole Plugs (3 plugs)-for use with 5" traditional drill pattern	132336	PMOS277 - 277V Occupancy Sensor	518029CLR ⁵
MHD - Mounting Hole Weatherproof Decal-for use with 3" reduced drill pattern	340120		

FOOTNOTES:

- See Area Lighting Brackets - Bolt-on and XAS3/XAM3 Area Lighting Brackets pages for Internal Slip-fitter brackets.
- Pole heights will have +/- 1/2" tolerance.
- See Flood Lighting Brackets section for choice of FBO brackets.
- Order PMOS separately. Change "XX" to indicate height and side of pole location for pole preparation. EX: 01S8A indicates preparation is to be 18ft. up from pole base on side A. Optimal distance from ground to sensor is 20ft.
- OSXX option required. Not for use with Metal Halide fixtures

BOLT CIRCLE

	4" (102mm) square 10-1/8" (257mm) sq.	5" (127mm) square 10-1/8" (257mm) sq.	5" (127mm) square 10-1/8" (257mm) sq.	6" (152mm) square 12" (305mm) sq.
	11" (279mm) Dia. Bolt Circle	11" (279mm) Dia. Bolt Circle	11" (279mm) Dia. Bolt Circle	12" (305mm) Dia. Bolt Circle
	B	C	D	J
Bolt Circle	Slotted 8"-11" (203mm-279mm)	Slotted 9"-11" (229mm-279mm)	Slotted 9"-11" (229mm-279mm)	Slotted 12" (305mm)
Anchor Bolt Size	3/4" x 30" (19mm x 762mm)	3/4" x 30" (19mm x 762mm)	1" x 36" (25mm x 914mm)	1" x 36" (25mm x 914mm)
Anchor Bolt Projection	3-1/4" (83mm)	3-1/4" (83mm)	4" (102mm)	4" (102mm)
Base Plate Opening for Wireway Entry	3-5/8" (92mm)	4-3/4" (121mm)	4-5/8" (117mm)	5-5/8" (143mm)
Base Plate Dimensions	10-1/8" sq. x 3/4" thk. (257mm x 19mm)	10-1/8" sq. x 3/4" thk. (257mm x 19mm)	10-1/8" sq. x 1" thk. (257mm x 25mm)	12" sq. x 1-1/8" thk. (305mm x 29mm)

Note: Base plate illustrations may change without notice. Do not use for setting anchor bolts. Consult factory for the base plate templates.

EPA INFORMATION

All LSI Industries' poles are guaranteed to meet the EPA requirements listed. LSI Industries is not responsible if a pole order has a lower EPA rating than the indicated wind-loading zone where the pole will be located.
CAUTION: This guarantee does not apply if the pole/bracket/fixture combination is used to support any other items such as flags, pennants, or signs, which would add stress to the pole. LSI Industries cannot accept responsibility for harm or damage caused in these situations.

NOTE: Pole calculations include a 1.3 gust factor over steady wind velocity. Example: poles designed to withstand 80 MPH steady wind will withstand gusts to 104 MPH. EPAs are for locations 100 miles away from hurricane ocean lines. Consult LSI for other areas. Note: Hurricane ocean lines are the Atlantic and Gulf of Mexico coastal areas. For applications in Florida or Canada, consult factory.



Project Name _____ Fixture Type _____
 Catalog # _____

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Wall Light

WLD86LED 86 Watt LED Wall Light



SPECIFICATIONS:

Lumens: 9173
Watts: 85.62
Lumens/Watt: 107.1
CRI: 83.1
CCT: 4685
Lifespan: 200,000+ hrs.¹



Construction:

Rugged Traditional aluminum die cast housing provides proven environmental protection for LED modules. Traditional fixture designs provide a familiar look and standard installation requirements. Retaining this look allows the ability to upgrade fixtures gradually, while retaining the same overall fixture appearance throughout a facility.

Glare Free:

Positioning of the LED modules within the housing result in light directed to desired locations and eliminates offensive light.

Lens:

Lens assembly is designed to provide high efficiency and to target the light where needed to satisfy outdoor lighting requirements.

Positioning of the LEDs (along with Patent Pending thermal management system) results in the light being directed to desired locations eliminating glare and offensive light.

Thermal Management:

Atlas' Patent Pending exclusive Thermal Stacking Technology System™ features a unique internal design that allows for lower operating temperatures which results in a brighter, whiter light, more stable color and longer LED and driver life.

Listings:

Luminaire is certified to cUL and CSA Standards for Wet Location Lighting Facts Certified DesignLights Consortium Premium qualified luminaire, eligible for rebates from DLC member utilities.

AC Input:

120/208/240/277 V

Driver:

Constant current, Class 2, 120-277 VAC, 50-60 Hz
High Efficiency – min. 84%
0-10 V Dimming

LEDs:

4500K CCT
Epoxy Guard™ protective conformal coated boards

Atlas LEDs provide higher lumen output, greater energy efficiency and more reliable fixture performance. They are tested and binned at 700mA which is the actual operating current used in Atlas LED luminaires, giving a better representation of actual performance.

Testing:

Atlas LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 & LM-80, and have received the Department of Energy "Lighting Facts" label.

Warranty: Five-year limited warranty

Installation: Fixture retains the same knock-out sizes and positions as previous models, reducing wiring costs.

Weight: 15.0 lbs.

Photo Control: For factory installed 120V button photo control add suffix PC to part number.

Emergency Back-up²: For factory installed Emergency Back-Up add suffix EB to part number.

Project Information

Job Name

Fixture Type 86 Watt LED Die Cast Wall Light

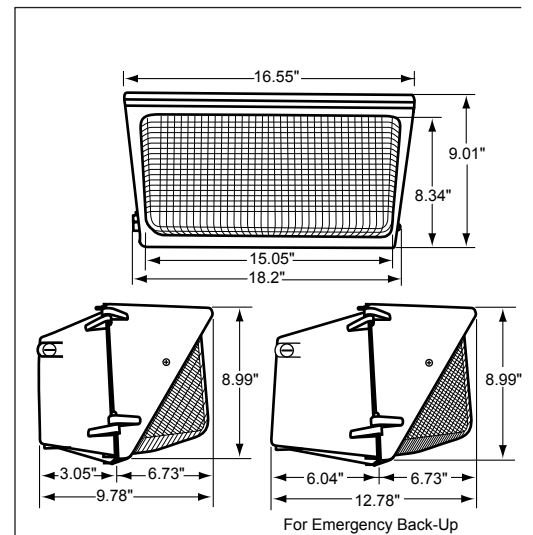
Catalog Number WLD86LED

Approved by



WLD86LED Design is Protected by U.S. Patent No. 9,482,395

DIMENSIONS:



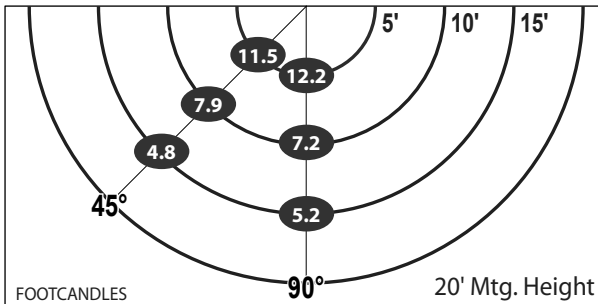
¹LED Life Span Based Upon LM-80 Test Results
²Emergency Back-Up requires larger back housing. Contact Atlas for more details.

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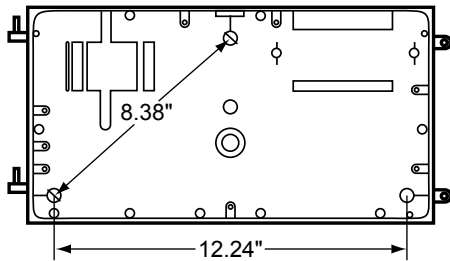
PHOTOMETRIC



ENERGY SAVINGS

LED		HID			ANNUAL SAVINGS
WATTAGE	ANNUAL COST	SOURCE WATTAGE	TOTAL WATTAGE USED	ANNUAL COST	
86	\$38	200	232	\$128	\$90
86	\$38	250	285	\$150	\$112
86	\$38	400	458	\$226	\$188

MOUNTING DETAIL



Atlas Lighting Products, Inc.

lighting facts®

A Program of the U.S. DOE

Light Output (Lumens)	9173
Watts	85.62
Lumens per Watt (Efficacy)	107.14

Color Accuracy	83
Color Rendering Index (CRI)	

Light Color
Correlated Color Temperature (CCT) **4685 (Daylight)**

Warm White
Bright White
Daylight

2700K
3000K
4500K
6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting*. The U.S. Department of Energy (DOE) verifies product test data and results.

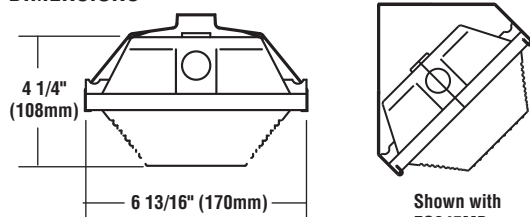
Visit www.lightingfacts.com for the *Label Reference Guide*.

Registration Number: PRB4-MEN8GG (8/1/2016)
Model Number: WLD86LED
Type: Luminaire - Area/Roadway

LED ENCLOSED & GASKETED - ANGLED LENS (EG3)

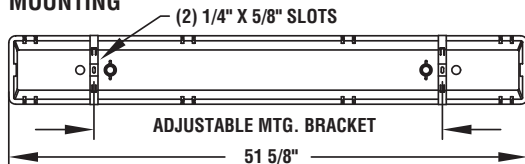


DIMENSIONS



Shown with
EG345MB
Accessory

MOUNTING



LIGHT OUTPUT - EG3 - 4 foot

	Lumens	Watts
Cool White	7146	60
Neutral White	6260	60
Warm White	6024	60

LED Chips are frequently updated therefore values may increase.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



PRODUCT HIGHLIGHTS

- Vaportight design
- High-impact resistant, reinforced fiberglass housing.
- Lens secured to housing with (8) polycarbonate latches. Optional stainless steel latches are securely spring clipped to the housing, eliminating latch fall off during servicing.
- Fixture designed to be installed without opening, saving valuable installation time.
- Gasket is a continuously poured non-toxic, fire resistant, uniform width and thickness for a tight seal

EXPECTED LIFE - Projected life of at least 60,000 hours. Contact factory for TM-21 detail.

LEDs - Use of closely-spaced medium-power, high-brightness chips minimizes pixelation and provides uniform lens luminance. Available in Cool White (5000K), Neutral White (4000K) and Warm White (3500K) color temperatures. CRI \geq 80 (CW > 70). LM-80 reports available.

DISTRIBUTION- Proprietary lens provides high lumen output with soft, reduced brightness.

CONSTRUCTION - Inner tray of .06" thick aluminum. Outer housing molded of high-impact, polyester/UL5VA fiberglass with inner lip bonded with continuous, compressible, closed-cell neoprene gasketing.

LENS - Injection molded high impact lens acrylic with lineal ribbing as standard.

MOUNTING - (2) stainless steel mounting brackets are furnished with each fixture, and can be mounted to surface where required. Housing snaps into bracket easing installation. Brackets accept V-hoKs or snap-on steel bail for cable suspension.

ELECTRICAL- Universal voltage (120-277 Vac) input, 50/60 Hz (347 Vac). Power factor > 0.9, THD < 20%, in-rush current < 15 Amps.

DRIVER - High-performance isolated driver features over-voltage, over-current and short-circuit (with auto-recovery) protection. Driver module is sealed to IP66 protection levels, with a Class A sound rating. 0-10 volt dimming standard.

OPERATING TEMPERATURE - -20°C - 35°C (-4°F - 95°F).

FINISH - All metal parts painted after fabrication following treatment with phosphate rust inhibitor. Finish coating of housing reflecting surfaces is with high-reflectance (minimum 92%) polyester powder.

WARRANTY - Limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

LIGHT OUTPUT - 7146 lumens @ 60 watts (4 foot); 14,293 lumens @118 watts (8 foot)

LISTING - Listed to UL 1598 and UL 8750. Suitable for wet locations. Certified NSF (ANSI Standard 2), IP65, IP66, IP67, NEMA 4X, High Pressure Hose Down (1500 PSI). For a list of the specific products in this series that are DLC listed, please consult the LED Lighting section of our website or the Design Lights website at www.designlights.org.

ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **EG3 4 S LED HO CW UE**

Prefix	Length	Distribution	Light Source	Lumen Output	Color Temp	Line Voltage	Options
EG3 - LED Enclosed & Gasketed	4 - 4 foot 8 - 8 foot	S - Symmetric	LED	HO - High Output	CW - Cool White (5000K) NW - Neutral White (4000K) WW - Warm White (3500K)	UE - Universal Voltage (120-277V) 347 - 347V	TP - Tamper resistant latches and screws SL - Stainless Steel latches 6CNP - 6' foot white cord, no plug EM - 1100 Lm Emergency SD50 - Step Dimming to 50%

ACCESSORY ORDERING INFORMATION

Description	Order Number
(2) snap-on bails & (2) 10' aircraft cables	EG34AC
(2) snap-on bails & (2) 3' jack chains	EGCHS
(2) snap-on bails & (2) 5' jack chains	EGCHS5
Stainless Steel 45° mounting bracket	EG45MB



Project Name _____ Fixture Type _____
Catalog # _____

10/09/15

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Power Flood Pro

PFXL190LED 190 Watt LED Power Flood



SPECIFICATIONS:

Lumens: 19,106
Watts: 183.85
Lumens/Watt: 103.9
CRI: 71.6
CCT: 4704
Lifespan: 200,000+ hrs.¹

Construction:

Designed for commercial and industrial applications, providing cooler operating temperatures, brighter light and longer LED life. Apertures for field or factory installed photocontrol. Available with heavy duty trunion or slipfitter.

Optics:

Atlas Power Flood Pro fixtures utilize individual lenses for maximum light intensity. These lenses are made of optical grade acrylic. This guarantees more footcandles, less glare and less wasted light.

Thermal Management:

Atlas Power Flood Pro fixtures are designed as a complete system to optimize LED life and light output. The Patent Pending thermal stacking heat removal technology extracts heat from within the housing moving it away from LEDs and components. The lower temperatures result in long LED life (200,000+ hrs) and component life and also allows for higher light output.

Listings:

Luminaire is certified to cUL and CSA Standards for Wet Locations
Lighting Facts Certified
DesignLights Consortium qualified luminaire, eligible for rebates from DLC member utilities.

AC Input:

120/208/240/277 V

Driver:

Constant current, Class 2, 120-277 VAC, 50-60 Hz
High Efficiency – min. 88%
Off-State Power: 0 Watts
Dimming 0-10V

LEDs:

4500K CCT
Epoxy Guard™ protective conformal coated boards

Atlas LEDs provide higher lumen output, greater energy efficiency and more reliable fixture performance. They are tested and binned at 700mA which is the actual operating current used in Atlas LED luminaires, giving a better representation of actual performance.

Reduced Glare:

Positioning of the LED modules within the housing result in light directed to desired locations and reduces offensive light.

Testing:

Atlas LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 & LM-80, and have received the Department of Energy "Lighting Facts" label.

Warranty:

Five-year limited warranty

Photo Control:

For factory installed 120V button photo control add suffix PC to part number.
480 Volt - For 480V add suffix 4 to part number.

¹LED Life Span Based Upon LM-80 Test Results

Project Information

Job Name

Fixture Type 190 Watt LED Power Flood

Catalog Number PFXL190LED

Approved by

Alpha Series LED
PROFESSIONAL GRADE



Patent Pending



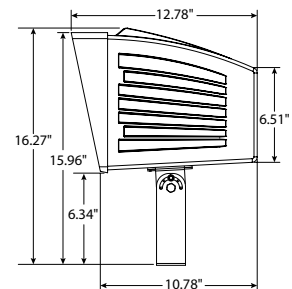
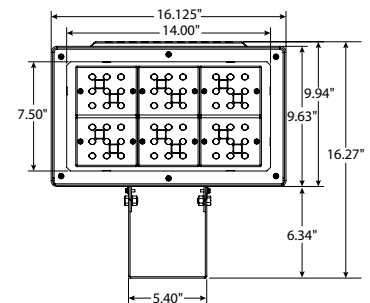
PFXL190LED Design is Protected by US Patent D740,997

Optional Factory Installed Slipfitter PFXL190LEDS

DIMENSIONS:

Weight: (with Trunion) 30 lbs.
(with Slipfitter) 31 lbs.

EPA: 1.29



Rebates and Incentives are available in many areas. Contact an Atlas Representative for more information.

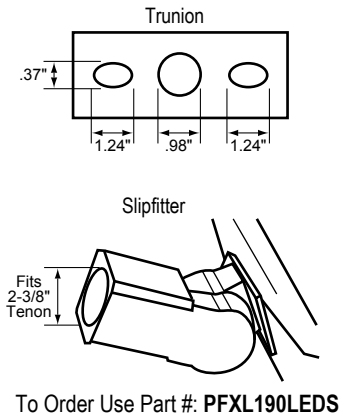
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MOUNTING DETAIL



ENERGY SAVINGS

LED		HID			ANNUAL SAVINGS
WATTAGE	ANNUAL COST	SOURCE WATTAGE	TOTAL WATTAGE USED	ANNUAL COST	
190	\$83	250	285	\$150	\$67
190	\$83	400	458	\$226	\$143
190	\$83	1000	1080	\$513	\$430

Atlas Lighting Products, Inc.

LED lighting facts[®]
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Light Output (Lumens)	19106
Watts	183.85
Lumens per Watt (Efficacy)	103.92

Color Accuracy Color Rendering Index (CRI)	71
------------------------------------------------------	-----------

Light Color Correlated Color Temperature (CCT)	4704 (Daylight)
----------------------------------------------------------	------------------------

2700K 3000K 4500K 6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting*. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: PRB4-KOK7PI (5/20/2016)
Model Number: PFXL190LED
Type: Luminaire - Area/Roadway



CATALOG NUMBER: 500-018BZ	
JOB NAME:	
CUSTOMER NAME:	
NOTES:	TYPE:
	DATE:

FEATURES AND SPECIFICATIONS

SITE LIGHTING
ACCESSORIES
SIDE MOUNT FLOOD LIGHTING BRACKET

Construction:
Die Cast

Mounting:
Wall

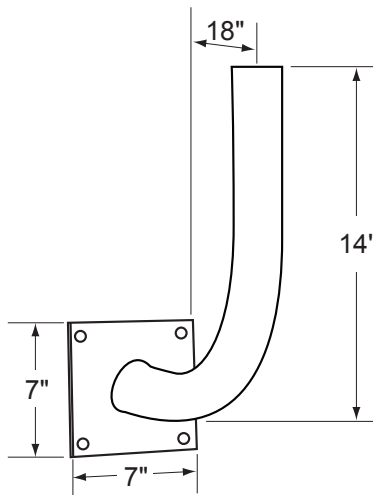
Specifications:
Overall height: 14" (35.56 cm)
Depth: 18" (45.72 cm)
Width: 7" (17.78 cm)



ORDERING INFORMATION

CATALOG #	DESCRIPTION	FINISH	STD. PKG.
500-018BZ	Right Angle Bracket (for Wall)	Bronze	1

DIMENSIONS



Actual performance can vary depending on operating conditions. Specifications are subject to change without notice.



Vandal

VN1256LED 56 Watt LED Vandal



SPECIFICATIONS:

Lumens: 4964
Watts: 55.34
Lumens/Watt: 89.7
CRI: 75
CCT: 3992
Lifespan: 100,000+

Construction:

Rugged Traditional aluminum die cast housing provides proven environmental protection for LED modules. Traditional fixture designs provide a familiar look and standard installation requirements. Retaining this look allows the ability to upgrade fixtures gradually, while retaining the same overall fixture appearance throughout a facility. The smooth housing prevents debris build up and maximizes airflow over housing.

Glare Free:

Positioning of the LED modules within the housing result in light directed to desired locations and eliminates offensive light.

Lens:

Lens assembly is designed to provide high efficiency and to target the light where needed to satisfy outdoor lighting requirements.

Positioning of the LEDs (along with Patent Pending thermal management system) results in the light being directed to desired locations eliminating glare and offensive light.

Thermal Management:

Atlas' Patent Pending exclusive Thermal Stacking Technology System™ features a unique internal design that allows for lower operating temperatures which results in a brighter, whiter light, more stable color and longer LED and driver life.

Listings:

Luminaire is certified to cUL and CSA Standards for Wet Locations
 Lighting Facts Certified
 DesignLights Consortium qualified luminaire, eligible for rebates from DLC member utilities.

AC Input:

120/208/240/277 V

Driver:

Constant current, Class 2, 120-277 VAC, 50-60 Hz
 High Efficiency – min. 86%
 0 – 10 V dimming

LEDs:

4100K CCT
 Delivers 70% or greater of initial lumens at 100,000 hours
 Epoxy Guard™ protective conformal coated boards

Atlas LEDs provide higher lumen output, greater energy efficiency and more reliable fixture performance. They are tested and binned at 700mA which is the actual operating current used in Atlas LED luminaires, giving a better representation of actual performance.

Warranty:

Five-year limited warranty

Testing:

Atlas LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 & LM-80, and have received the Department of Energy "Lighting Facts" label.

Installation:

Fixture retains the same knock-out sizes and positions as previous models, reducing wiring costs.

Weight:

7.25 lbs.

Project Information

Job Name

Fixture Type 56 Watt LED Vandal

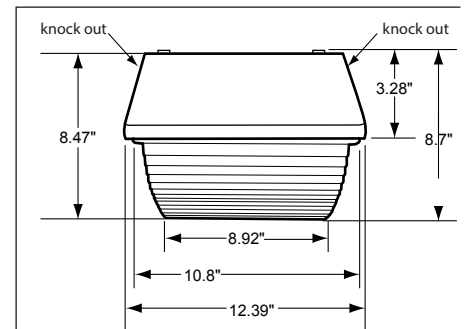
Catalog Number VN1256LED

Approved by



Patent Pending

DIMENSIONS:



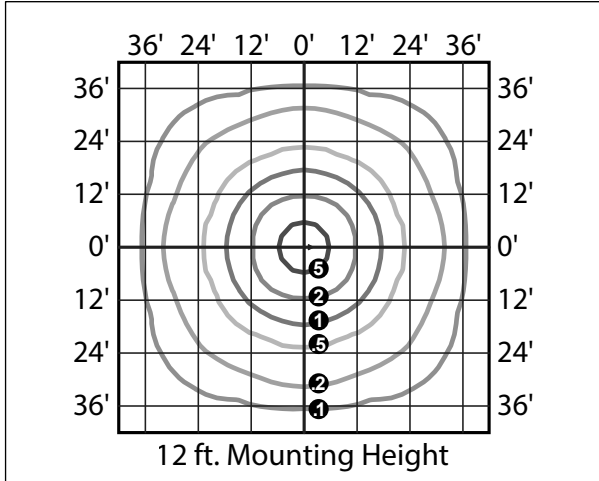
**Rebates and Incentives are available in many areas.
 Contact an Atlas Representative for more information.**

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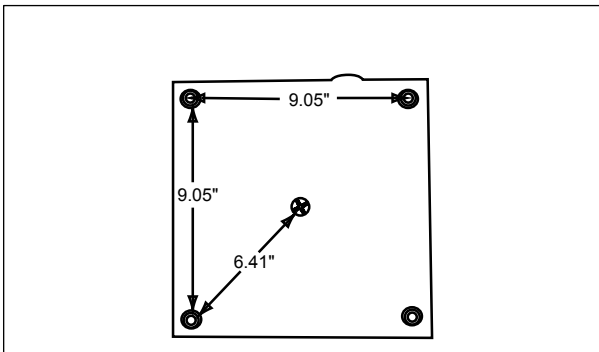
PHOTOMETRIC



ENERGY SAVINGS

LED		HID			ANNUAL SAVINGS
WATTAGE	ANNUAL COST	SOURCE WATTAGE	TOTAL WATTAGE USED	ANNUAL COST	
56	\$24	100	129	\$77	\$53
56	\$24	150	185	\$100	\$76
56	\$24	175	210	\$112	\$88

MOUNTING DETAIL



Atlas Lighting Products, Inc.

LED
lighting facts[®]

A Program of the U.S. DOE

Light Output (Lumens)	4964
Watts	55.34
Lumens per Watt (Efficacy)	89.7

Color Accuracy	75
Color Rendering Index (CRI)	

Light Color	3992 (Bright White)
Correlated Color Temperature (CCT)	

Warm White	Bright White	Daylight	
2700K	3000K	4500K	6500K

All results are according to IESNA LM-79-2008: *Approved Method for the Electrical and Photometric Testing of Solid-State Lighting*. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the *Label Reference Guide*.

Registration Number: PRB4-UN6TQ5 (8/12/2014)
Model Number: VN1256LED [Upgrade : 7/18/2014]
Type: Luminaire - Canopy

INSTALLATION & ASSEMBLY INSTRUCTIONS

XSL2 CROSSOVER® SOFFIT & CANOPY SERIES LUMINAIRE

US & Foreign Patents Pending
SMARTVISION®



Intertek

Listed to UL1598

Luminaire

Suitable for damp locations

WARNING: Before proceeding, read all instructions carefully to insure proper and safe installation.

WARNING: Risk of fire or electrical shock. Disconnect power before installing or servicing.

WARNING: All wiring to be performed per National Electrical Code and local code by a qualified electrician.

IMPORTANT: If equipped with thermal protector (TP), for soffit installations only!

PRE-INSTALLATION SET UP (BOTH MOUNTING STYLES)

1. Unpack luminaire from packaging. Luminaire consists of optic unit, driver box with hardware bag inside, and mounting ring.
2. Place optic unit glass surface down. Be sure to protect surfaces.
3. Remove cover from driver box. Remove knockout from obround form in bottom panel of driver box.
4. With ballast box in hand, feed optic unit wires from nipple thru knockout hole in driver box.
5. Remove pipe nut from optic unit and insert driver box on to pipe stem in optic unit. Aim driver box opening toward corner of optic unit and re-install nut. See Figure 1.
6. Mount and secure driver box to optic unit nipple using supplied nut. **IMPORTANT: DO NOT OVERTIGHTEN!**

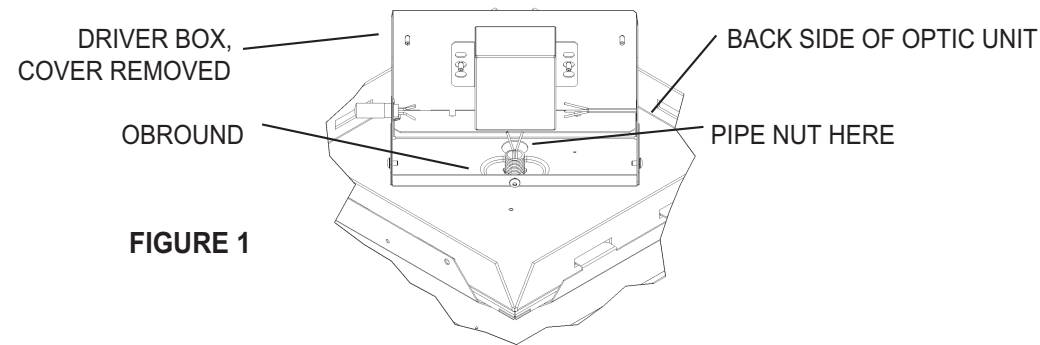


FIGURE 1

C-CHANNEL MOUNTING INSTALLATION (for DIRECT MOUNT INSTALLATION, see Page 2)

1. Attach both hinges to mounting ring using supplied #10-16 x 3/8" screws. Drive screws from the inside, through the ring, and in to the hanger. See Figure 2.
2. Prepare ceiling opening. See Figure 2 and directions below:
 - A. Locate position of ceiling opening and cut to minimum 15-1/4" maximum 15-1/2" square.
 - B. Slip C-channels thru hanger brackets. Run C-channel thru appropriate grooves, depending on depth.
 - C. Slip C-channels thru corresponding grooves on both sides for level installation. Be sure hanging bracket flanges are positioned outward to allow for luminaire entry.
 - D. Flip hangers on trim into vertical position and slip upward into horizontal grooves in hanger brackets.
 - E. Position ring flush with ceiling and secure by running self-drilling screw thru middle hole of hanger bracket and slot in middle of hanger. The slot in the hanger is provided to allow a flush mounting of the ring and ceiling.
 - F. To lock hangers, install self-drilling screws (provided) thru each hanger and hanger bracket (pilot holes already located 1/2" down and 1/2" left of center).

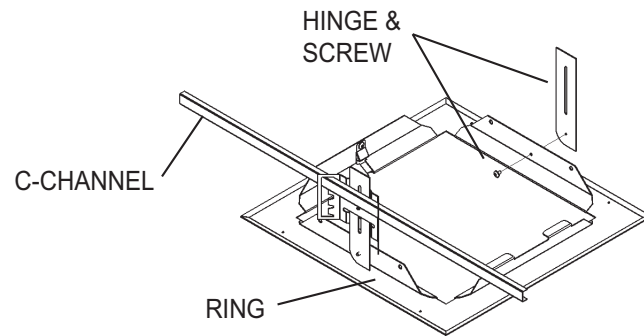


FIGURE 2
(driver box and other C-Channel not shown)

INSTALLATION & ASSEMBLY INSTRUCTIONS, cont'd.

XSL2 SERIES LUMINAIRE

C-CHANNEL MOUNTING INSTALLATION, cont'd. (for DIRECT MOUNT INSTALLATION, see below)

3. Lift optic unit/ballast box assembly up to installed ring. Position so as to access wiring connections inside ballast box.
4. Make secondary, then primary, driver wiring connections. See Figures 3, 4, and 5 below. Re-install driver box cover.

IMPORTANT: Supply wire rating must be equal to or exceed the temperature specified on the luminaire's product label.

IMPORTANT: Drivers marked "Advance" can be used on any luminaire unit. Follow wiring instructions on driver.

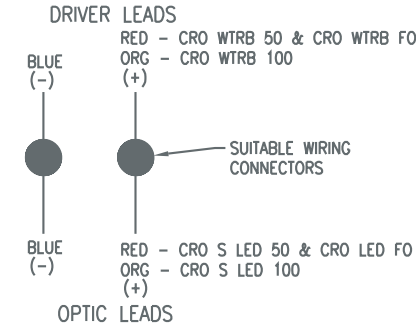


FIGURE 3
(all models)

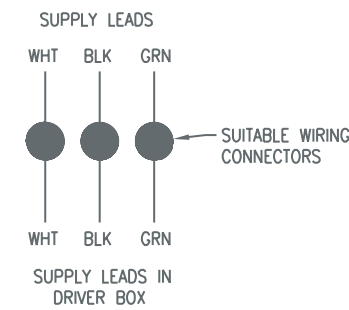


FIGURE 4
(canopy installs ONLY)

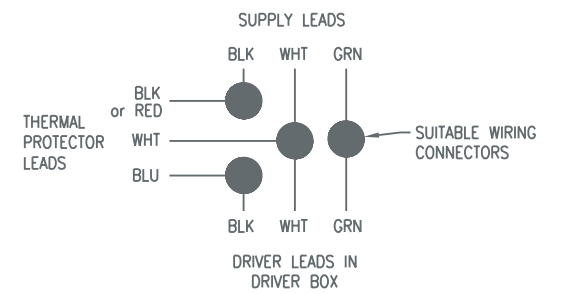


FIGURE 5
(soffit installs ONLY)

5. Insert frame tabs in slots on optic unit. Pivot optic unit down until securely latched. Optic unit should be seated squarely in frame.

DIRECT MOUNT INSTALLATION (for C-CHANNEL MOUNTING INSTALLATION, see Page 1)

1. Prepare ceiling opening. See Figure 6 and directions below:
 - A. Locate position of ceiling opening and cut to minimum 15-1/4" maximum 15-1/2" square.
 - B. Position ring flush with ceiling and secure using appropriate fasteners (not supplied). Four (4) drill points are provided on face of ring. An alternate securing method is to use cables or screws on (2) inside bent legs of ring. Neither cables nor screws provided.

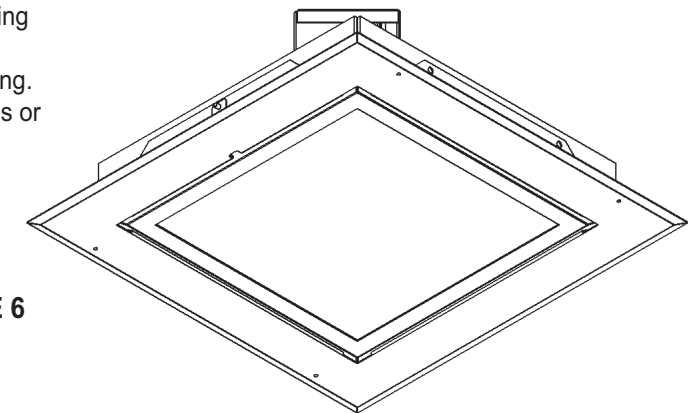


FIGURE 6

2. Lift optic unit/ballast box assembly up to installed ring. Position so as to access wiring connections inside ballast box.
3. Make secondary, then primary, driver wiring connections. See Figures 3, 4, and 5 above. Re-install cover. **IMPORTANT:** Supply wire rating must be equal to or exceed the temperature specified on the luminaire's product label. **IMPORTANT:** Drivers marked "Advance" can be used on any luminaire unit. Follow wiring instructions on driver.
4. Insert frame tabs in slots on optic unit. Pivot optic unit down until securely latched. Optic unit should be seated squarely in ring.

Installation Questions?
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