

INVITATION FOR BIDS

SOLICITATION INFORMATION AND SCHEDULE

Solicitation Number:	EN19-086
Solicitation Title:	Streetlight Equipment and Supplies
Release Date:	July 26, 2019
Prospective Bidders' Conference:	Not Applicable
Final Date for Inquiries:	July 8, 2019
Bid Deadline:	July 22, 2019 5:00 p.m. (local-time, Phoenix, Arizona)
Bid Opening:	July 22, 2019 5:00 p.m. (local-time, Phoenix, Arizona)

Procurement Administrator:	Tiffany Copp	tcopp@avondaleaz.gov 623-333-4213
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In accordance with the City of Avondale Procurement Code, competitive sealed Bids for the Materials specified herein will be received by the City Clerk at the City Clerk's Office at the above-referenced location until the date and time referenced above (the "Bid Deadline"). Bids received by the Bid Deadline shall be publicly opened and the Bid Price read. Bids must be in the actual possession of the City Clerk on, or prior to, the Bid Deadline. Late Bids shall not be considered except as provided in the City Procurement Code. Each Bid shall be submitted in a sealed envelope with the Solicitation Number and the Bidder's name and address clearly indicated on the front of the envelope.

*** The City of Avondale reserves the right to amend the solicitation schedule as necessary.**

CITY OF AVONDALE
DEVELOPMENT AND ENGINEERING DEPARTMENT
EN19-086

OFFER

The undersigned (the "Bidder") hereby offers this Bid as an offer to contract with the City under the terms and conditions set forth below and certifies that Bidder has read, understands and agrees to fully comply with, and be contractually bound by, all terms and conditions as set forth in this Invitation For Bids ("IFB"), the Contract formed hereby (as defined below) and any amendments thereto, together with all Exhibits, Specifications, Plans and other documents included as part of this Contract (the "Contract Documents").

Pursuant to section 2.16 below Bidder is submitting this Bid for award of (check one): Entire Bid Only: ☐* or Line Item Award: ☐

*Bidder agrees and understands that, in the event the City determines it will award by line item, a selection of "entire bid only" will result in the City not considering any portion of the Bid for award.

<div style="border-bottom: 1px solid black; margin-bottom: 5px;">Arizona Transaction (Sales) Privilege Tax License Number: _____</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Federal Employer Identification Number: _____</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; text-align: center;">Vendor Name</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; text-align: center;">Address</div> <div style="display: flex; justify-content: space-between; border-bottom: 1px solid black; margin-bottom: 5px;">CityStateZip Code</div>	<div style="border-bottom: 1px solid black; margin-bottom: 5px;">For Clarification of this Bid contact:</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Name: _____</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Telephone: _____</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Facsimile: _____</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Email: _____</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; text-align: center;">Authorized Signature for Vendor</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; text-align: center;">Printed Name</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px; text-align: center;">Title</div>
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ACCEPTANCE OF OFFER (FOR CITY OF AVONDALE USE ONLY)

Effective Date: _____ Contract No. _____ Official File: _____

CITY OF AVONDALE, an Arizona municipal corporation

Charles A. Montoya, City Manager

ATTEST:

Marcella Carrillo, City Clerk

APPROVED AS TO FORM:

Michael Wawro, City Attorney

ARTICLE I - DEFINITIONS

For purposes of this Invitation for Bids, the following definitions shall apply:

1.1 “Bid” or “Offer” means a responsive bid or quotation submitted by a Bidder in response to this Invitation for Bids.

1.2 “Bid Deadline” means the date and time set forth on the cover of this IFB for the City Clerk to be in actual possession of the sealed Bids.

1.3 “Bid Opening” means the date and time set forth on the cover of this Invitation for Bids for opening of sealed Bids.

1.4 “Bidder” means any person or firm submitting a competitive Bid in response to this IFB.

1.5 “City” means the City of Avondale, an Arizona municipal corporation.

1.6 “City Representative” means the City employee who has specifically been designated to act as a contact person to the City’s Procurement Administrator, and who is responsible for monitoring and overseeing the Vendor’s performance under the Contract and for providing information regarding details pertaining to the Contract.

1.7 “Confidential Information” means that portion of a Bid, Proposal, Offer, Specification or protest that contains information that the person submitting the information believes should be withheld, provided (i) such person submits a written statement advising the City of this fact at the time of the submission and (ii) the information is so identified wherever it appears.

1.8 “Contract” means, collectively, (i) the executed Offer/Bid, (ii) this IFB, including all completed exhibits, (iii) the Notice of Award, (iv) the Notice to Proceed or Purchase Order(s), (v) any approved Addendum, Change Order or Amendment, (vi) the Vendor’s Certificates of Insurance and a copy of the Declarations Page(s) of the insurance policies and (vii) any Plans, Specifications or other documents attached, appended or incorporated herein by reference. Alternate or optional bid items will become part of the Contract only if they are accepted by the City in writing on the Price Sheet.

1.9 “Day(s)” means calendar day(s) unless otherwise specified.

1.10 “Invitation for Bids” or “IFB” means this request by the City for participation in the competitive bidding process according to all documents, including those attached or incorporated herein by reference, utilized for soliciting Bids for the Materials and/or Services in compliance with the City’s Procurement Code.

1.11 “Materials” means any personal property, including equipment, materials, replacements and supplies provided by the Vendor in conjunction with the Contract.

1.12 “Multiple Award” means an award of an indefinite quantity contract for one or more similar products, commodities or Services to more than one Bidder.

1.13 “Price” means the total expenditure for a defined quantity of a commodity or service.

1.14 “Procurement Administrator” means a City employee, as designated on the cover of this IFB, who has specifically been designated to act as a contact person to the Bidders and/or Vendors relating to their Invitation for Bids.

1.15 “Procurement Agent” means the City Manager or authorized designee.

1.16 “Procurement Code” means the City Procurement Code, as amended from time to time.

1.17 “Services” means the furnishing of labor, time or effort by a Vendor, not involving the delivery of a specific end product other than reports which are merely incidental to the required performance and as further defined in the Contract. This term does not include “professional and technical services” as defined in the Procurement Code.

1.18 “Specification” means any description of the physical characteristics, functional characteristics, or the nature of a commodity, product, supply or Services. The term may include a description of any requirements for inspecting, testing or preparing a supply or service item for delivery.

1.19 “Subcontractor” means those persons or groups of persons having a direct contract with the Vendor to perform a portion of the Contract and those who furnish Materials according to the plans and/or Specifications required by this Contract.

1.20 “Substitutions” means Contractor’s proposed changes in products, materials, equipment and methods of construction from those required by the Contract Documents.

1.21 “Substitutions for Cause” means changes proposed by Contractor that are required due to changed product conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.

1.22 “Substitutions for Convenience” means changes proposed by Contractor or City that are not required in order to meet other Project requirements, but which may offer advantage to Contractor or City.

1.23 “Vendor” means the individual, partnership, corporation or limited liability company who has submitted a Bid in response to this IFB and who, as a result of the competitive bidding process, is awarded a contract for Materials or Services by the City.

ARTICLE II – BID PROCESS; BID AWARD

2.1 Purpose/Scope of Work. The purpose of this IFB is to secure a qualified Vendor(s) to provide the City with streetlight equipment and supplies that are compliant with the City’s existing streetlight configurations and design (the “Materials”) as more particularly described in the Specifications/Price Sheet, attached hereto as Exhibit A and incorporated herein by reference. For the purpose of this solicitation, the Materials required under this IFB shall be provided at the Price(s) specified in Exhibit A, Specifications/Price Sheet.

A. Requirements Contract. The resulting Contract(s) is/are intended to be an indefinite quantity and indefinite delivery Contract(s) for the Materials based on the City’s needs. The City does not guarantee any minimum or maximum amount of purchases will be requested by the City pursuant to a Contract. Purchases will only be made when the City identifies a need and proper authorization and documentation have been approved. For purchase(s) determined by the City to be appropriate for this Agreement, the Vendor shall provide the specific Materials to the City in such quantities and configurations as may be agreed upon between the parties, in the form of a written invoice, quote, materials order or other form of written agreement describing the Materials to be delivered (each, a “Materials Order”). Each Materials Order shall (i) contain a reference to this Agreement and (ii) be attached hereto as Exhibit F and incorporated herein by reference. A Materials Order submitted without referencing this Agreement will be subject to rejection.

B. Unauthorized Provisions. Vendor acknowledges and agrees that a Materials Order containing unauthorized exceptions, conditions, limitations, or provisions in conflict with the terms of the Contract, other than City’s project-specific requirements, is hereby expressly declared void and shall be of no force and effect.

2.2 Amendment of IFB. No alteration may be made to this IFB or the resultant Contract without the express, written approval of the City in the form of an official IFB addendum or Contract amendment. Any attempt to alter this IFB/Contract without such approval is a violation of this IFB/Contract and the City Procurement Code. Any such action is subject to the legal and contractual remedies available to the City including, but not limited to, Contract cancellation and suspension and/or debarment of the Bidder or Vendor.

2.3 Preparation/Submission of Bid. Bidders are invited to participate in the competitive bidding process for the Materials specified in this IFB. Bidders shall review their Bid submissions to ensure the following requirements are met.

A. Irregular or Non-responsive Bids. The City will consider as “irregular” or “non-responsive” and shall reject any Bid not prepared and submitted in accordance with the IFB and Specifications, or any Bid lacking sufficient information to enable the City to make a reasonable determination of compliance with the Specifications. Unauthorized or unreasonable exceptions, conditions, limitations, or provisions shall be cause for rejection. Bids may be deemed non-responsive at any time during the evaluation process if, in the sole opinion of the City, any of the following are true:

1. Bidder does not meet the minimum required skill, experience or requirements to perform the Services or provide the Materials.
2. Bidder has a past record of failing to fully perform or fulfill contractual obligations, particularly obligations similar to those included in this IFB.
3. Bidder cannot demonstrate financial stability.
4. The Bid submission contains false, inaccurate or misleading statements that, in the opinion of the City Manager or authorized designee, are intended to mislead the City in its evaluation of the Bid.

B. Specification Minimums. Bidders are reminded that the Specifications stated in this IFB are the minimum levels required and that Bids submitted must be for products that meet or exceed the minimum level of all features specifically listed in this IFB. Bids offering less than the minimums specified will be deemed not responsive. Any catalog, brand name or manufacturer’s reference used is considered descriptive and not restrictive and is indicative of the type and quality of Materials the City desires to purchase. It shall be the Bidder’s responsibility to carefully examine each item listed in the Specifications. Bidders shall provide complete manufacturers’ descriptive literature regarding the Materials. Literature shall be sufficient in detail in order to allow full and fair evaluation of the Offer.

C. Required Submittal. Bidders shall provide the entire IFB document (all pages) that contains the following completed pages/documents to be considered a responsive Bid:

1. Offer, signed in ink by a person authorized to bind the Bidder (Page i).
2. Price Sheet (Exhibit A or as subsequently replaced by Addendum).
3. Licenses; DBE/WBE Status (Exhibit C).
4. References (Exhibit D).
5. Acknowledgment page, signed in ink, for each Addendum received, if any (Exhibit E).

D. Bidder Responsibilities. All Bidders shall (1) examine the entire Bid package, (2) seek clarification of any item or requirement that may not be clear, (3) check all responses for accuracy before

submitting a Bid and (4) submit the entire completed Bid package in accordance with Subsection 2.3(C) above, by the official Bid Deadline. Late Bids shall not be considered. Bids not submitted with an **original, signed** Offer page by a person authorized to bind the Bidder shall be considered non-responsive. Negligence in preparing a Bid shall not be good cause for withdrawal after the Bid Deadline.

E. **Sealed Bids.** All Bids shall be sealed and clearly marked with the IFB title and number on the lower left-hand corner of the mailing envelope. A return address must also appear on the outside of the sealed Bid.

F. **Address.** All Bids shall be directed to the following address: City Clerk, 11465 West Civic Center Drive, Suite 200, Avondale, Arizona 85323, or hand delivered to the City Clerk's office.

G. **Bid Forms.** All Bids shall be on the forms provided in this IFB. It is permissible to copy these forms if required. Telegraphic (facsimile), electronic (email) or mailgram Bids will not be considered.

H. **Modifications.** Erasures, interlineations, or other modifications in the Bid shall be initialed in original ink by the authorized person signing the Bid.

I. **Withdrawal.** At any time prior to the specified Bid Opening, a Bidder (or designated representative) may amend or withdraw its Bid. Facsimile, electronic (email) or mailgram Bid amendments or withdrawals will not be considered. No Bid shall be altered, amended or withdrawn after the specified Bid Deadline unless otherwise permitted pursuant to the City Procurement Code.

2.4 **Inquiries; Interpretation of Specifications; Scope of Work.**

A. **Inquiries.** Any question related to the IFB, including any part of the Specifications, Scope of Work or other Contract Documents, shall be directed to the Procurement Administrator whose name appears on the cover page of this IFB. Verbal or telephone inquiries directed to City staff **will not be answered**. Within two business days following the Final Date for Inquiries listed on the cover page of this IFB, answers to all questions received in writing or via e-mail will be mailed, sent via facsimile and/or e-mailed to all parties who obtained an IFB package from the City and who legibly provided a mailing address, facsimile and/or e-mail address to the City. Questions shall be submitted in writing by the date indicated on the cover page of this IFB; the City will not respond to any inquiries submitted later than the Final Date for Inquiries. The Vendor submitting such inquiry will be responsible for its prompt delivery to the City. Any correspondence related to the IFB shall refer to the title and number, page and paragraph. However, the Bidder shall not place the IFB number and title on the outside of any envelope containing questions, because such an envelope may be identified as a sealed Bid and may not be opened until the Bid Opening. Any interpretations or corrections of the proposed Contract Documents will be made only by addenda duly approved and issued by the City. The City will not be responsible for any other explanations or interpretations of the Contract Documents.

B. **Addenda.** It shall be the Bidder's responsibility to check for addenda issued to this IFB. Any addendum issued by the City with respect to this IFB will be available at:

City's procurement website at www.avondaleaz.gov/procurement.

C. **Approval of Substitutions.** The Materials, products, and equipment described in this IFB establish a standard or required function, dimension, appearance and quality to be met by any proposed substitution. No substitute will be considered unless written Substitution/Equal Request in the form attached hereto as **Exhibit B**, has been received by the City Representative at least 10 Days prior to the Bid Deadline. Each such request shall include the name of the Material or equipment for which it is to be substituted and a complete description of the proposed substitute, including any drawings, performance and test data and any

other information necessary for evaluation of the substitute. If a substitute is approved, the approval shall be by written addendum to the IFB. Bidder shall not rely upon approvals made in any other manner.

D. Use of Equals. When the Scope of Work or Specifications for Materials, articles, products and equipment include the phrase “*or equal*,” Bidder may bid upon and use Materials, articles, products and equipment that will perform equally the requirements imposed by the general design. The City Representative will have the final approval of all Materials, articles, products and equipment proposed to be used as an “equal.” No such “equal” shall be purchased or installed without prior written approval from the City Representative. Approvals for “equals” before Bid Opening may be requested in writing to the City Representative for approval. Requests must be received at least 10 Days prior to the Bid Deadline. The request shall include the name of the Material, article, product or equipment for which the item is sought to be considered an equal and a complete description of the proposed equal including any drawings, performance and test data and any other information necessary for evaluation of the proposed equal. All approval of equals shall be issued in the form of written addendum or amendment, as applicable, to this IFB or the Contract.

E. Bid Quantities. It is expressly understood and agreed by the parties hereto that the quantities of the various classes of Materials to be furnished under this Contract, which have been estimated as stated in the Bidders’ Offer, are only approximate and are to be used solely for the purpose of comparing, on a consistent basis, the Bidders’ Offers presented for the Materials under this Contract. The selected Vendor agrees that the City shall not be held responsible if any of the quantities shall be found to be incorrect and the Vendor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of Material as estimated and the Materials actually provided. If any error, omission or misstatement is found to occur in the estimated quantities, the same shall not (1) invalidate the Contract or the whole or any part of the Specifications, (2) excuse Vendor from any of the obligations or liabilities hereunder or (3) entitle Vendor to any damage or compensation except as may be provided in this Contract.

2.5 Prospective Bidders’ Conference. A Prospective Bidders’ Conference may be held. If scheduled, the date and time of the Prospective Bidders’ Conference will be indicated on the cover page of this IFB. The Prospective Bidders’ Conference may be designated as mandatory or non-mandatory on the cover of this IFB. Bids shall not be accepted from Bidders who do not attend a mandatory Prospective Bidders’ Conference. Bidders are strongly encouraged to attend those Prospective Bidder’s Conferences designated as non-mandatory. The purpose of the Prospective Bidders’ Conference will be to clarify the contents of the IFB in order to prevent any misunderstanding of the City’s requirements. Any doubt as to the requirements of this IFB or any apparent omission or discrepancy should be presented to the City at the Prospective Bidders’ Conference. The City will then determine if any action is necessary and may issue a written amendment or addendum to the IFB. Oral statements or instructions will not constitute an amendment or addendum to the IFB.

2.6 New Materials. All Materials to be provided by the Vendor and included in the Bid shall be new, unless otherwise stated in the Specifications.

2.7 Prices. Materials shall be provided at the unit prices as set forth in the Specifications/Price Sheet attached hereto as Exhibit A and incorporated herein by reference. Bid Prices shall be submitted on a per unit basis by line item, when applicable and include all applicable transaction privilege, sales or use tax. In the event of a disparity between the unit price and extended price, the unit price shall prevail. **NOTE: All pricing blanks must be filled in. Empty or unfilled spaces in the Price Sheet shall be deemed as a NO BID entry for that item.**

2.8 Payment; Discounts. Any Bid that requires payment in less than 30 Days shall not be considered. Payment discounts of 30 Days or less will not be deducted from the Bid Price in determining the low Bid. The City shall be entitled to take advantage of any payment discount offered, provided payment is made within the discount period. Payment discounts shall be indicated on Price Sheet.

2.9 Taxes. The City is exempt from Federal Excise Tax, including the Federal Transportation Tax. Transaction privilege tax, sales tax and use tax, if any, shall be included in the unit price for each line item. It shall not be considered a lump sum payment item. Bidder should not include tax on any allowances. It is the sole responsibility of the Bidder to determine any applicable tax rates and calculate the tax accordingly. Failure to accurately tabulate any applicable taxes may result in a determination that a Bid is non-responsive. The Bidder shall not rely on, and shall independently verify, any tax information provided by the City.

2.10 Federal Funding. It is the responsibility of the Bidder to verify and comply with federal requirements that may apply to the Materials (the "Federal Requirements"). It is also the responsibility of the Bidder to incorporate any necessary amounts in the Bid to accommodate for required federal record keeping, necessary pay structures or other matters related to the Federal Requirements, if any.

2.11 Cost of Bid/Proposal Preparation. Bids submitted for consideration should be prepared simply and economically, providing adequate information in a straightforward and concise manner. The City does not reimburse the cost of developing, presenting or providing any response to this solicitation; the Bidder is responsible for all costs incurred in responding to this IFB. All materials and documents submitted in response to this IFB become the property of the City and will not be returned.

2.12 Public Record. All Bids shall become the property of the City. After Contract award, Bids shall become public records and shall be available for public inspection in accordance with the City's Procurement Code, except that any portion of a Bid that was designated as confidential pursuant to Section 2.13 below shall remain confidential from and after the time of Bid opening to the extent permitted by Arizona law.

2.13 Confidential Information. If a Vendor/Bidder believes that a Bid, Specification, or protest contains information that should be withheld from the public record, a statement advising the Procurement Agent of this fact shall accompany the submission and the information shall be clearly identified. The information identified by the Vendor or Bidder as confidential shall not be disclosed until the Procurement Agent makes a written determination. The Procurement Agent shall review the statement and information with the City Attorney and shall determine, in writing, whether the information shall be withheld. If the City Attorney determines that it is proper to disclose the information, the Procurement Agent shall inform the Vendor or Bidder, in writing, of such determination.

2.14 Vendor Licensing and Registration. Prior to the award of the Contract, the successful Bidder shall (A) be registered with the Arizona Corporation Commission and authorized to do business in Arizona and (B) have a completed Vendor Registration Packet on file with the City Finance and Budget Department. Bidders shall provide license information with the Bid, attached as Exhibit C and incorporated herein by reference. Upon the City's request, corporations and limited liability companies shall provide Certificates of Good Standing from the Arizona Corporation Commission.

2.15 Certification. By submitting a Bid, the Bidder certifies:

A. No Collusion. The submission of the Bid did not involve collusion or other anti-competitive practices.

B. No Discrimination. It shall not discriminate against any employee or applicant for employment in violation of Federal Executive Order 11246.

C. No Gratuity. It has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip favor or service to a City employee, officer, agent or elected official in connection with the submitted Bid or a resultant Contract. In the event that the resultant Contract is canceled pursuant to subsection 3.27(D) below, the City shall be entitled,

in addition to any other rights and remedies, to recover and withhold from the Vendor an amount equal to 150% of the gratuity.

D. Financial Stability. It is financially stable, solvent and has adequate cash reserves to meet all financial obligations including any potential costs resulting from an award of the Contract.

E. No Signature/False Statement. The signature on the Bid and the Vendor Information Form is genuine. Failure to sign the Bid and the Vendor Information Form, or signing either with a false statement, shall void the submitted Bid and any resulting Contract, and the Bidder may be debarred from further bidding in the City.

2.16 Award of Contract.

A. Multiple Award. The City may, at its sole discretion, accept Bidder's Offer as part of a Multiple Award.

B. Line Item Option. Unless the Bidder's Offer indicates otherwise, or unless specifically provided within the Contract, the City reserves the right to award by individual line item, by group of line items, or as a total, whichever is deemed most advantageous to the City. The City's flexibility with respect to the method of award also includes any items bid as alternates, which may be accepted or rejected, in whole or in part, at the City's sole discretion.

C. Evaluation. The evaluation of this Bid will be based on, but not limited to, the following: (1) compliance with Specifications, (2) tax-inclusive Price, including alternates selected by the City, if any, and taxes, but excluding "as-needed" services requested by the City and (3) Bidder qualifications to provide the Materials.

D. Waiver; Rejection; Reissuance. Notwithstanding any other provision of this IFB, the City expressly reserves the right to: (1) waive any immaterial defect or informality, (2) reject any or all Bids or portions thereof and (3) cancel or reissue an IFB.

E. Offer. A Bid is a binding offer to contract with the City based upon the terms, conditions and Specifications contained in this IFB and the Bidder's responsive Bid, unless any of the terms, conditions, or Specifications are modified by a written addendum or contract amendment. Bids become binding Contracts when the Acceptance of Offer and Notice of Award is executed in writing by the City. Bidder Offers shall be valid and irrevocable for **90** Days after the Bid Opening.

F. Protests. Any Bidder may protest this IFB, the proposed award of a Contract, or the actual award of a Contract. All protests will be considered in accordance with the City Procurement Code.

ARTICLE III – GENERAL TERMS AND CONDITIONS

3.1 Term.

A. Initial Term. This Contract shall be effective from the date it is fully executed by the City and remain in full force and effect for one year thereafter (the "Initial Term"), unless terminated as otherwise provided herein.

B. Renewal Terms. After the expiration of the Initial Term, this Contract may be renewed for up to four successive one-year terms (each a "Renewal Term") if (A) it is deemed in the best interests of the City, subject to availability and appropriation of funds for renewal in each subsequent year, (B) at least 30 Days prior to the end of the then-current term of the Contract, the Vendor requests, in writing, to extend the Contract for an additional one-year term and (C) the City approves the additional one-year term in writing (including any

price adjustments), as evidenced by the City Manager's signature thereon, which approval may be withheld by the City for any reason. The Vendor's failure to seek a renewal of this Contract shall cause the Contract to terminate at the end of the then-current term of this Contract; provided, however, that the City may, at its discretion and with the agreement of the awarded Vendor, elect to waive this requirement and renew this Contract. The Initial Term and any Renewal Term(s) are collectively referred to herein as the "Term." Upon renewal, the terms and conditions of this Contract shall remain in full force and effect.

C. Non-Default. By requesting extension for a Renewal Term as set forth above, or by consenting to a Renewal Term in any manner, Vendor shall be deemed to affirmatively assert that (i) the City is not currently in default, nor has been in default at any time prior to the Renewal Term, under any of the terms or conditions of the Agreement and (ii) any and all Vendor claims, known and unknown, relating to the Agreement and existing on or before the commencement date of the Renewal Term are forever waived.

3.2 Compensation. The City shall pay the Vendor for Materials delivered and accepted by the City at the rates set forth in the Price Sheet. The Vendor shall not commence any billable work or provide any Materials under this Contract until the Vendor receives an executed purchase order from the City.

3.3 Payments. The Vendor will be paid on the basis of invoices submitted following acceptance of the Materials. All invoices shall document and itemize all Materials delivered in sufficient detail to justify payment and shall include the Purchase Order number authorizing the transaction and shall be delivered to the City Accounts Payable address indicated on the face of the Purchase Order, unless otherwise specified. All transportation charges must be prepaid by the Vendor. If invoice is subject to a cash discount, the discount period will be calculated from the date of receipt of the claim or the Materials, whichever is later.

3.4 Documents. All documents prepared and submitted to the City pursuant to this Contract shall be the property of the City.

3.5 Deliveries. Time is of the essence for all orders placed under this Contract. Deliveries shall be made within 30 Days of Order placement to:

Avondale Traffic Engineering
399 East Lower Buckeye
Avondale, AZ 85323

Product documentation required by Section 3.14 shall be delivered to the City upon delivery of the Materials. Delivery shall not be considered complete until the City is in receipt of the manuals. Vendor shall retain title and control of all Materials until they are delivered and the City has accepted delivery. All risk of transportation and all related charges shall be the responsibility of the Vendor. All claims for visible or concealed damage shall be filed by the Vendor. The City will notify the Vendor promptly of any damaged Materials and shall assist the Vendor in arranging for inspection. The City reserves the right to cancel and reject the Materials upon default by Vendor in time, rate or manner of delivery. The City also reserves the right to refuse shipments made in advance of any scheduled delivery date appearing on the Purchase Order.

3.6 Quantity. The quantity of Materials ordered must not be exceeded or reduced without the City's permission, in writing, except in conformity with acknowledged industry tolerances.

3.7 Changes; Cancellation. The City reserves the right to cancel or make changes in the Materials to be furnished by the Vendor within a reasonable period of time after issuance of Purchase Orders. If such changes cause an increase or decrease in the amount due under the Purchase Order, or in the time required for Vendor's performance, an acceptable adjustment shall be made and the Purchase Order shall be modified in writing accordingly. Any agreement for adjustment must be asserted in writing within 10 Days from when the change is ordered. Should a Purchase Order be canceled, the City agrees to reimburse the Vendor but only for

actual and documentable costs incurred by the Vendor due to and after issuance of the Purchase Order. The City will not reimburse the Vendor for any costs incurred after receipt of a notice of cancellation from the City, or for lost profits, shipment of product or costs incurred prior to issuance of a Purchase Order.

3.8 F.O.B. Unless otherwise agreed to in writing, signed by the City Manager or authorized designee, all delivery terms are “F.O.B. Destination” and are to be prepaid. All other freight charges are to be prepaid and charged on the invoice. If a cash discount is not permitted on freight charges, then specific notation of this must be shown on the invoice.

3.9 Packing. No extra charges shall be made for packaging or packing material unless authority is expressly incorporated in this Contract. Vendor shall be responsible for safe packing which must conform to the requirement of the selected carrier’s tariffs. All shipments must carry the correct quantity, product identification, Purchase Order number, receiving address and product department plainly marked on all packages. Cars or trucks must be loaded to minimum weight requirements to ensure lowest rate, unless otherwise specified. Vendor will be charged with excess freight costs that the City is required to pay.

3.10 Product Warranty. All Materials supplied pursuant to this Contract shall be fully guaranteed by the Vendor for a minimum period of one year from the date of acceptance by the City (or such longer period as may be provided under warranties for street sign supplies or hardware). Any defects in design, workmanship or Materials that would result in non-compliance with Contract Specifications shall be fully corrected by the Vendor (including parts and labor) without cost to the City. Vendor further agrees to execute any special guarantees as provided by the Contract or by law. Vendor shall require similar guarantees from all of its vendors or its Subcontractors. Vendor shall include a complete and exclusive statement of the product warranty.

3.11 Price Warranty. Vendor shall give the City the benefit of any price reductions before actual time of shipment. If the City permits shipment to be made prior to specified shipping date, the City shall have advantage of any price reductions that occur before the originally scheduled shipping date.

3.12 Inspection; Acceptance. All Materials are subject to final inspection and acceptance by the City. Materials failing to conform to the Specifications of this Contract will be held at Vendor’s risk and may be returned to the Vendor. If so returned, all costs are the responsibility of the Vendor. Upon discovery of a non-conforming Material, the City may elect to do any or all of the following by written notice to the Vendor: (A) waive the non-conformance; (B) stop the use of the non-conforming Material immediately; or (C) bring Material into compliance and withhold the cost of same from any payments due to the Vendor.

3.13 Waiver. Waiver by the City of a condition in any shipment shall not be considered a waiver of (A) any other terms of this Contract or (B) that condition for subsequent shipments.

3.14 Product Documentation. Books, manuals or CD’s when possible, shall accompany each unit and provide complete and comprehensive information on all Materials, components and accessories, as supplied to comply with the Specifications. If changes, modifications, additions or alterations of any kind are made on the Materials, the Vendor shall provide blueprints, line drawings and descriptive text sufficient to allow a person of average skill in general mechanics to diagnose, repair and maintain the Materials and all components. On Materials assembled from manufactured components, parts manuals shall show the manufacturer of each part and all cross-referencing between the Vendor and the manufacturers. The City shall have the right to reproduce any equipment/product documentation for City maintenance and educational purposes only.

3.15 Product Discontinuance. In the event that a product or model is discontinued by the manufacturer, the City, at its sole discretion, may allow the Vendor to provide a substitute for the discontinued item. The Vendor shall request permission to substitute a new product or model and provide the following: (A) a formal announcement from the manufacturer that the product or model has been discontinued, (B) documentation from the manufacturer that names the replacement product or model, (C) documentation that

provides clear and convincing evidence that the replacement meets or exceeds all Specifications required by the original solicitation, (D) documentation that provides clear and convincing evidence that the replacement will be compatible with all the functions or uses of the discontinued product or model and (E) documentation confirming that the price for the replacement is equal to or less than the discontinued product or model.

3.16 No Replacement of Defective Tender. Every tender of Materials shall fully comply with all provisions of the Contract. If a tender is made which does not fully conform, this shall constitute a breach of the Contract as a whole.

3.17 Shipment Under Reservation Prohibited. Vendor is not authorized to ship Materials under reservation and no tender of a bill of lading will operate as a tender of the Materials.

3.18 Liens. All Materials shall be free of all liens and, if the City requests, a formal release of all liens shall be delivered to the City.

3.19 Right to Assurance. Whenever one party to this Contract in good faith has reason to question the other party's intent to perform it may demand that the other party give a written assurance of its intent to perform. In the event that a demand is made and no written assurance is given within five Days, the demanding party may treat this failure as an anticipatory repudiation of the Contract.

3.20 Right to Inspect Plant. The City may, at reasonable times, inspect the part of the plant or place of business of the Vendor or any Subcontractor that is related to the performance of this Contract.

3.21 Patents and Copyrights. All services, information, computer program elements, reports and other deliverables, which may be patented or copyrighted and created under this Contract are the property of the City and shall not be used or released by the Vendor or any other person except with the prior written permission of the City.

3.22 Advertising. Vendor shall not advertise or publish information concerning this Contract without prior, written consent of the City.

3.23 Licenses; Materials. Vendor shall maintain in current status all federal, state and local licenses and permits required for the operation of the business conducted by the Vendor. The City has no obligation to provide Vendor, its employees or Subcontractors any business registrations or licenses required to perform the specific Services set forth in this Contract. The City has no obligation to provide tools, equipment or material to Vendor.

3.24 Indemnification. To the fullest extent permitted by law, the Vendor shall indemnify, defend and hold harmless the City and each council member, officer, employee or agent thereof (the City and any such person being herein called an "Indemnified Party"), for, from and against any and all losses, claims, damages, liabilities, costs and expenses (including, but not limited to, reasonable attorneys' fees, court costs and the costs of appellate proceedings) to which any such Indemnified Party may become subject, under any theory of liability whatsoever ("Claims"), insofar as such Claims (or actions in respect thereof) relate to, arise out of, or are caused by or based upon the negligent acts, intentional misconduct, errors, mistakes or omissions, in connection with the performance of the Vendor, its officers, employees, agents, or any tier of Subcontractor in the performance of this Contract. The amount and type of insurance coverage requirements set forth below will in no way be construed as limiting the scope of the indemnity in this Section.

3.25 Insurance.

A. General.

1. Insurer Qualifications. Without limiting any obligations or liabilities of Vendor, Vendor shall purchase and maintain, at its own expense, hereinafter stipulated minimum insurance with insurance companies authorized to do business in the State of Arizona pursuant to ARIZ. REV. STAT. § 20-206, as amended, with an AM Best, Inc. rating of A- or above with policies and forms satisfactory to the City. Failure to maintain insurance as specified herein may result in termination of this Contract at the City's option.

2. No Representation of Coverage Adequacy. By requiring insurance herein, the City does not represent that coverage and limits will be adequate to protect Vendor. The City reserves the right to review any and all of the insurance policies and/or endorsements cited in this Contract but has no obligation to do so. Failure to demand such evidence of full compliance with the insurance requirements set forth in this Contract or failure to identify any insurance deficiency shall not relieve Vendor from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this Contract.

3. Additional Insured. [INTENTIONALLY OMITTED]

4. Coverage Term. All insurance required herein shall be maintained in full force and effect until the terms of this Contract are satisfactorily performed, completed and formally accepted by the City, unless specified otherwise in this Contract.

5. Primary Insurance. Vendor's insurance shall be primary insurance with respect to performance of this Contract and in the protection of the City as an Additional Insured.

6. Claims Made. In the event any insurance policies required by this Agreement are written on a "claims made" basis, coverage shall extend, either by keeping coverage in force or purchasing an extended reporting option, for three years past completion and acceptance of the services. Such continuing coverage shall be evidenced by submission of annual Certificates of Insurance and necessary endorsements citing applicable coverage is in force and contains the provisions as required herein for the three-year period.

7. Waiver. All policies, except for Professional Liability, including Workers' Compensation insurance, shall contain a waiver of rights of recovery (subrogation) against the City, its agents, representatives, officials, officers and employees for any claims arising out of the Work or Services of Vendor. Vendor shall arrange to have such subrogation waivers incorporated into each policy via formal written endorsement thereto.

8. Policy Deductibles and/or Self-Insured Retentions. The policies set forth in these requirements may provide coverage that contains deductibles or self-insured retention amounts. Such deductibles or self-insured retention shall not be applicable with respect to the policy limits provided to the City. Vendor shall be solely responsible for any such deductible or self-insured retention amount.

9. Use of Subcontractors. If any portion of this Contract is subcontracted in any way, Vendor shall execute written agreement(s) with its Subcontractors containing the indemnification provisions set forth above and insurance requirements set forth herein protecting the City and Vendor. Vendor shall be responsible for executing any agreements with its Subcontractor and obtaining certificates of insurance verifying the insurance requirements.

10. Evidence of Insurance. Prior to commencing any Work or Services under this Contract, Vendor will provide the City with suitable evidence of insurance in the form of certificates of insurance and a copy of the declaration page(s) of the insurance policies as required by this Contract, issued by Vendor's insurance insurer(s) as evidence that policies are placed with acceptable insurers as specified herein and provide the required coverages, conditions and limits of coverage specified in this Contract and that such coverage and provisions are in full force and effect. Confidential information such as the policy premium may be redacted from the declaration page(s) of each insurance policy, provided that such redactions do not alter any of the information required by this Contract. The City shall reasonably rely upon the certificates of insurance and declaration page(s) of the insurance policies as evidence of coverage but such acceptance and reliance shall not waive or alter in any way the insurance requirements or obligations of this Contract. If any of the policies required by this Contract expire during the life of this Contract, it shall be Vendor's responsibility to forward renewal certificates and declaration page(s) to the City 30 Days prior to the expiration date. All certificates of insurance and declarations required by this Contract shall be identified by referencing this Contract. A \$25.00 administrative fee shall be assessed for all certificates or declarations received without a reference to this Contract. Additionally, certificates of insurance and declaration page(s) of the insurance policies submitted without referencing this Contract will be subject to rejection and may be returned or discarded. Certificates of insurance and declaration page(s) shall specifically include the following provisions:

a. The City, its agents, representatives, officers, directors, officials and employees are Additional Insureds as follows:

(i) Commercial General Liability - Under Insurance Services Office, Inc., ("ISO") Form CG 20 10 03 97 or equivalent.

(ii) Auto Liability - Under ISO Form CA 20 48 or equivalent.

(iii) Excess Liability - Follow Form to underlying insurance.

b. Vendor's insurance shall be primary insurance with respect to performance of the Contract.

c. All policies, except for Professional Liability, including Workers' Compensation, waive rights of recovery (subrogation) against City, its agents, representatives, officers, officials and employees for any claims arising out of Vendor's performance under this Contract.

d. ACORD certificate of insurance form 25 (2014/01) is preferred. If ACORD certificate of insurance form 25 (2001/08) is used, the phrases in the cancellation provision "endeavor to" and "but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives" shall be deleted. Certificate forms other than ACORD form shall have similar restrictive language deleted.

11. Endorsements. Vendor shall provide the City with the necessary endorsements to ensure City is provided the insurance coverage set forth in this Subsection.

B. Required Insurance Coverage.

1. Commercial General Liability. Vendor shall maintain "occurrence" form Commercial General Liability insurance with an unimpaired limit of not less than \$1,000,000 for each occurrence, \$2,000,000 Products and Completed Operations Annual Aggregate and a \$2,000,000 General Aggregate Limit. The policy shall cover liability arising from premises, operations,

independent contractors, products-completed operations, personal injury and advertising injury. Coverage under the policy will be at least as broad as ISO policy form CG 00 010 93 or equivalent thereof, including but not limited to, separation of insured's clause. To the fullest extent allowed by law, for claims arising out of the performance of this Contract, the City, its agents, representatives, officers, officials and employees shall be cited as an Additional Insured under ISO, Commercial General Liability Additional Insured Endorsement form CG 20 10 03 97, or equivalent, which shall read "Who is an Insured (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you." If any Excess insurance is utilized to fulfill the requirements of this subsection, such Excess insurance shall be "follow form" equal or broader in coverage scope than underlying insurance.

2. Vehicle Liability. Vendor shall maintain Business Automobile Liability insurance with a limit of \$1,000,000 each occurrence on Vendor's owned, hired and non-owned vehicles assigned to or used in the Vendor's performance under this Contract. Coverage will be at least as broad as ISO coverage code "1" "any auto" policy form CA 00 01 12 93 or equivalent thereof. To the fullest extent allowed by law, for claims arising out of the performance of this Contract, the City, its agents, representatives, officers, directors, officials and employees shall be cited as an Additional Insured under ISO Business Auto policy Designated Insured Endorsement form CA 20 48 or equivalent. If any Excess insurance is utilized to fulfill the requirements of this subsection, such Excess insurance shall be "follow form" equal or broader in coverage scope than underlying insurance.

3. Professional Liability. If this Contract is the subject of any professional Services or Work, or if the Vendor engages in any professional Services or Work in any way related to performing the Work under this Contract, the Vendor shall maintain Professional Liability insurance covering negligent errors and omissions arising out of the Services performed by the Vendor, or anyone employed by the Vendor, or anyone for whose negligent acts, mistakes, errors and omissions the Vendor is legally liable, with an unimpaired liability insurance limit of \$2,000,000 each claim and \$2,000,000 annual aggregate.

4. Workers' Compensation Insurance. If Vendor employs anyone who is required by law to be covered by workers' compensation insurance, Vendor shall maintain Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction over Vendor's employees engaged in performance under this Contract and shall also maintain Employers' Liability Insurance of not less than \$500,000 for each accident, \$500,000 disease for each employee and \$1,000,000 disease policy limit.

C. Cancellation and Expiration Notice. Insurance required herein shall not expire, be canceled, or be materially changed without 30 Days' prior written notice to the City.

3.26 Applicable Law; Venue. This Contract shall be governed by the laws of the State of Arizona and any suit pertaining to this Contract may be brought only in courts in Maricopa County, Arizona.

3.27 Termination; Cancellation.

A. For City's Convenience. This Contract is for the convenience of the City and, as such, may be terminated without cause after receipt by Vendor of written notice by the City. Upon termination for convenience, Vendor shall be paid for all undisputed Materials delivered prior to the termination date.

B. For Cause. If either party fails to perform any obligation pursuant to this Contract and such party fails to cure its nonperformance within 30 Days after notice of nonperformance is given by the non-defaulting party, such party will be in default. In the event of such default, the non-defaulting party may terminate this Contract immediately for cause and will have all remedies that are available to it at law or in

equity including, without limitation, the remedy of specific performance. If the nature of the defaulting party's nonperformance is such that it cannot reasonably be cured within 30 Days, then the defaulting party will have such additional periods of time as may be reasonably necessary under the circumstances, provided the defaulting party immediately (1) provides written notice to the non-defaulting party and (2) commences to cure its nonperformance and thereafter diligently continues to completion the cure of its nonperformance. In no event shall any such cure period exceed 90 Days. In the event of such termination for cause, payment shall be made by the City to the Vendor for the undisputed portion of its fee due as of the termination date.

C. Conflict of Interest. This Contract is subject to the provisions of ARIZ. REV. STAT. § 38-511. The City may cancel this Contract without penalty or further obligations by the City or any of its departments or agencies if any person significantly involved in initiating, negotiating, securing, drafting or creating this Contract on behalf of the City or any of its departments or agencies is, at any time while the Contract or any extension of the Contract is in effect, an employee of any other party to the Contract in any capacity or a Vendor to any other party of the Contract with respect to the subject matter of the Contract.

D. Gratuities. The City may, by written notice to the Vendor, cancel this Contract if it is found by the City that gratuities, in the form of economic opportunity, future employment, entertainment, gifts or otherwise, were offered or given by the Vendor or any agent or representative of the Vendor to any officer, agent or employee of the City for the purpose of securing this Contract. In the event this Contract is canceled by the City pursuant to this provision, the City shall be entitled, in addition to any other rights and remedies, to recover and withhold from the Vendor an amount equal to 150% of the gratuity.

E. Agreement Subject to Appropriation. The City is obligated only to pay its obligations set forth in this Agreement as may lawfully be made from funds appropriated and budgeted for that purpose during the City's then current fiscal year. The City's obligations under this Agreement are current expenses subject to the "budget law" and the unfettered legislative discretion of the City concerning budgeted purposes and appropriation of funds. Should the City elect not to appropriate and budget funds to pay its Agreement obligations, this Agreement shall be deemed terminated at the end of the then-current fiscal year term for which such funds were appropriated and budgeted for such purpose and the City shall be relieved of any subsequent obligation under this Agreement. The parties agree that the City has no obligation or duty of good faith to budget or appropriate the payment of the City's obligations set forth in this Agreement in any budget in any fiscal year other than the fiscal year in which this Agreement is executed and delivered. The City shall be the sole judge and authority in determining the availability of funds for its obligations under this Agreement. The City shall keep Vendor informed as to the availability of funds for this Agreement. The obligation of the City to make any payment pursuant to this Agreement is not a general obligation or indebtedness of the City. Vendor hereby waives any and all rights to bring any claim against the City from or relating in any way to the City's termination of this Agreement pursuant to this section.

3.28 Miscellaneous.

A. Independent Contractor. It is clearly understood that each party will act in its individual capacity and not as an agent, employee, partner, joint venturer, or associate of the other. An employee or agent of one party shall not be deemed or construed to be the employee or agent of the other for any purpose whatsoever. The Vendor acknowledges and agrees that all Materials provided under this Contract are being provided as an independent contractor, not as an employee or agent of the City. Vendor, its employees and Subcontractors are not entitled to workers' compensation benefits from the City. The City does not have the authority to supervise or control the actual work of Vendor, its employees or Subcontractors. Vendor is neither prohibited from entering into other contracts nor prohibited from practicing its profession elsewhere. City and Vendor do not intend to nor will they combine business operations under this Contract.

B. Laws and Regulations. The Vendor shall keep fully informed and shall at all times during the performance of its duties under this Contract ensure that it and any person for whom the Vendor is

responsible remains in compliance with all rules, regulations, ordinances, statutes or laws affecting the Materials including, but not limited to, the following: (1) existing and future City and County ordinances and regulations; (2) existing and future state and federal laws; and (3) existing and future Occupational Safety and Health Administration standards.

C. Amendments. This Contract may be modified only by a written amendment signed by persons duly authorized to enter into contracts on behalf of the City and the Vendor.

D. Provisions Required by Law. Each and every provision of law and any clause required by law to be in the Contract will be read and enforced as though it were included herein and, if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract will promptly be physically amended to make such insertion or correction.

E. Severability. The provisions of this Contract are severable to the extent that any provision or application held to be invalid by a Court of competent jurisdiction shall not affect any other provision or application of the Contract which may remain in effect without the invalid provision or application.

F. Entire Agreement; Interpretation; Parol Evidence. This Contract represents the entire agreement of the parties with respect to its subject matter, and all previous agreements, whether oral or written, entered into prior to this Contract are hereby revoked and superseded by this Contract. No representations, warranties, inducements or oral agreements have been made by any of the parties except as expressly set forth herein, or in any other contemporaneous written agreement executed for the purposes of carrying out the provisions of this Contract. This Contract shall be construed and interpreted according to its plain meaning, and no presumption shall be deemed to apply in favor of, or against the party drafting the Contract. The parties acknowledge and agree that each has had the opportunity to seek and utilize legal counsel in the drafting of, review of, and entry into this Contract.

G. Assignment; Delegation. No right or interest in this Contract shall be assigned or delegated by Vendor without prior, written permission of the City, signed by the City Manager. Any attempted assignment or delegation by Vendor in violation of this provision shall be a breach of this Contract by Vendor.

H. Subcontracts. No subcontract shall be entered into by the Vendor with any other party to furnish any of the Materials or Services specified herein without the prior, written approval of the City. The Vendor is responsible for performance under this Contract whether or not Subcontractors are used.

I. Rights and Remedies. No provision in this Contract shall be construed, expressly or by implication, as waiver by the City of any existing or future right and/or remedy available by law in the event of any claim of default or breach of this Contract. The failure of the City to insist upon the strict performance of any term or condition of this Contract or to exercise or delay the exercise of any right or remedy provided in this Contract, or by law, or the City's acceptance of and payment for Materials, shall not release the Vendor from any responsibilities or obligations imposed by this Contract or by law, and shall not be deemed a waiver of any right of the City to insist upon the strict performance of this Contract.

J. Attorneys' Fees. In the event either party brings any action for any relief, declaratory or otherwise, arising out of this Contract or on account of any breach or default hereof, the prevailing party shall be entitled to receive from the other party reasonable attorneys' fees and reasonable costs and expenses, determined by the court sitting without a jury, which shall be deemed to have accrued on the commencement of such action and shall be enforced whether or not such action is prosecuted through judgment.

K. Offset.

1. Offset for Damages. In addition to all other remedies at law or equity, the City may offset from any money due to the Vendor any amounts Vendor owes to the City for damages resulting from breach or deficiencies in performance or breach of any obligation under this Contract.

2. Offset for Delinquent Fees or Taxes. The City may offset from any money due to the Vendor any amounts Vendor owes to the City for delinquent fees, transaction privilege use taxes and property taxes, including any interest or penalties.

L. Notices and Requests. Any notice or other communication required or permitted to be given under this Contract shall be in writing and shall be deemed to have been duly given if (1) delivered to the party at the address set forth below, (2) deposited in the U.S. Mail, registered or certified, return receipt requested, to the address set forth below or (3) given to a recognized and reputable overnight delivery service, to the address set forth below:

If to the City: City of Avondale
 11465 West Civic Center Drive
 Avondale, Arizona 85323
 Attn: Charles A. Montoya, City Manager

With copies to: City of Avondale
 11465 West Civic Center Drive
 Avondale, Arizona 85323
 Attn: Procurement Officer

 City of Avondale
 11465 West Civic Center Drive
 Avondale, Arizona 85323
 Attn: City Attorney

If to Vendor: _____

 Attn: _____

or at such other address, and to the attention of such other person or officer, as any party may designate in writing by notice duly given pursuant to this subsection. Notices shall be deemed received (1) when delivered to the party, (2) three business days after being placed in the U.S. Mail, properly addressed, with sufficient postage or (3) the following business day after being given to a recognized overnight delivery service, with the person giving the notice paying all required charges and instructing the delivery service to deliver on the following business day. If a copy of a notice is also given to a party's counsel or other recipient, the provisions above governing the date on which a notice is deemed to have been received by a party shall mean and refer to the date on which the party, and not its counsel or other recipient to which a copy of the notice may be sent, is deemed to have received the notice.

M. Confidentiality of Records. The Vendor shall establish and maintain procedures and controls that are acceptable to the City for the purpose of ensuring that information contained in its records or obtained from the City or from others in carrying out its obligations under this Contract shall not be used or disclosed by it, its agents, officers, or employees, except as required to perform Vendor's duties under this Contract. Persons requesting such information should be referred to the City. Vendor also agrees that any

information pertaining to individual persons shall not be divulged other than to employees or officers of Vendor as needed for the performance of duties under this Contract.

N. Israel. Vendor certifies that it is not currently engaged in, and agrees for the duration of this Agreement that it will not engage in a “boycott,” as that term is defined in ARIZ. REV. STAT. § 35-393, of Israel.

O. Conflicting Terms. In the event of any inconsistency, conflict or ambiguity among the terms of this Contract, the IFB, the Specifications/Price Sheet, any City-approved Purchase Orders, invoices and the Vendor’s response to the IFB, the documents shall govern in the order listed herein. Notwithstanding the foregoing, and in conformity with Section 2.1 above, unauthorized exceptions, conditions, limitations or provisions in conflict with the terms of this Contract (collectively, the “Unauthorized Conditions”), other than the City’s project-specific quantities, configurations or delivery dates, are expressly declared void and shall be of no force and effect. Acceptance by the City of any Purchase Order or invoice containing any such Unauthorized Conditions or failure to demand full compliance with the terms and conditions set forth in this Contract shall not alter or relieve Vendor from, nor be construed or deemed a waiver of, its requirements and obligations in the performance of this Contract. If the Agreement is renewed pursuant to Subsection 3.1(B) above and such renewal includes any conflicting terms, other than price, those terms will be null and void.

P. Non-Exclusive Contract. This Contract is entered into with the understanding and agreement that it is for the sole convenience of the City of Avondale. The City reserves the right to obtain like goods and Services from another source when necessary.

Q. Cooperative Purchasing. Specific eligible political subdivisions and nonprofit educational or public health institutions (“Eligible Procurement Unit(s)”) are permitted to utilize procurement agreements developed by the City, at their discretion and with the agreement of the awarded Vendor. Vendor may, at its sole discretion, accept orders from Eligible Procurement Unit(s) for the purchase of the Materials at the prices and under the terms and conditions of this Contract in such quantities and configurations as may be agreed upon between the parties. All cooperative procurements under this Contract shall be transacted solely between the requesting Eligible Procurement Unit and Vendor. Payment for such purchases will be the sole responsibility of the Eligible Procurement Unit. The exercise of any rights, responsibilities or remedies by the Eligible Procurement Unit shall be the exclusive obligation of such unit. The City assumes no responsibility for payment, performance or any liability or obligation associated with any cooperative procurement under this Contract. The City shall not be responsible for any disputes arising out of transactions made by others.

EXHIBIT A
TO
INVITATION FOR BIDS NO. EN19-086

[Specifications/Price Sheet]

See following pages.

SPECIFICATIONS/PRICE SHEET

Streetlight Equipment and Supplies
EN 19-086

NOTE: All pricing blanks must be filled in. Incomplete or unfilled spaces in the Specifications/Price Sheet shall be deemed as a NO BID entry for that item.

Item No.	Description of Material	Quantity (Each)	Unit Price	Extended Price
1	LED Fixture A1 - ATBS E MVOLT R2 MP NL P7 JP	10		
2	LED Fixture A2 - ATBS E MVOLT R2 BZ MP NL P7 JP	5		
3	LED Fixture B1 - ATBS E MVOLT R2 3K MP NL P7 JP	10		
4	LED Fixture B2 - ATBS E MVOLT R2 3K BZ MP NL P7 JP	5		
5	LED Fixture C - ATBS G MVOLT R3 3K MP NL P7 JP	5		
6	LED Fixture F - ATBM P10 MVOLT R3 BZ MP P7 JP	5		
7	LED Fixture G1 - ATBM P30 MVOLT R3 MP NL P7 JP	10		
8	LED Fixture G2 - ATBM P30 MVOLT R3 BZ MP NL P7 JP	16		
9	LED Fixture E - ATBM P05 MVOLT R2 3K NL P7 JP	5		
10	Luminaire 67 Watt LED RWGR (APN# 128330) GE – ERS10CXB5402GRAY	5		
11	Luminaire 130 Watt LED RWGR (APN# 128332) GE – ERS20HXEX5402GRAY	5		
12	Luminaire 258 Watt LED RWGR (APN# 128364) GE – ERS40TXX5402GRAY	5		
13	Luminaire 258 Watt LED RWDB (APN# 128365) GE – ERS40TXX5402DKBZ	5		
14	Hubbel Compact Decrative LED Flood (FML-14L4K,53w LED, 120v-277v) 4285 Lum, 53w delivers 81 per watt	5		
15	GE Evolve LED 108 Watt- RS1011D1X20ADKBZ	5		
16	GE LED 120Watt -ERL2016A340ADKBZRL, 16,000 Lum	5		
17	GE Evolve LED 157 Watt- ERM0A360AZDKBZ	5		
18	CREE Edge Series LED ARE-EDR-2M-R3-04-D-UL-SV-525-40K-HL	5		

Item No.	Description of Material	Quantity (Each)	Unit Price	Extended Price
19	CREE Edge Series LED ARE-EDR-3M-R3-12-C-UL-SV-43K	5		
20	Phillips Advance LED Electronic Driver - XA-9033	5		
21	Phillips Advance LED Electronic Driver - XA-9363	5		
22	30' Pole, foundation with Anchor bolt system (per attached detail 22)	2		
23	15' Pole foundation with Anchor bolt system (per attached detail 22)	2		
24	Pedestrian Push Button Post "TYPE PB POLE" (per ADOT T.S 4-22 detail)	10		
25	KTK-R-10 Midget Fuse	30		
26	KTK-R-15 Midget Fuse	100		
27	HEB-AA Fuse Holder	40		
28	Bussman #2A0660 Rubber Boot Insulator	80		
29	FP7772-EPS-TD (200-305V, 50-60HZ) Photo, cell-failed on	100		
30	Photocontrol, ES124-WPJ-2.5 – TBK (Fail-On)	300		
31	Intermatic Locking Type K4500 Photo Control Short cap 105-480	10		
32	LTG HATCH ESB-0432-14-UV Fluorescent Ballast	10		
33	ISNS Ballast Kit Candela Model # EESB104014L	10		
34	Phillips F48T12 Fluorescent Lamp	15		
35	Phillips F72T12 Fluorescent Lamp	15		
36	Phillips F84T12 Fluorescent Lamp	15		
37	GEL F96T12/CW/HO/EW/ALTO Fluorescent Lamp	90		
38	Phillips F108T12 Fluorescent Lamp	15		
39	V-T F120T12/CW/HO Fluorescent Lamp 10'	90		
40	#12 Solid Wire, Copper, THHN, Black, 500' Roll	3		

Item No.	Description of Material	Quantity (Each)	Unit Price	Extended Price
41	#12 Solid Wire, Copper, THHN, White, 500' Roll	3		
42	#12 Solid Wire, Copper, THHN, Green, 500' Roll	3		
43	#12 Solid Wire, Copper, THHN, Red, 500' Roll	3		
43	Solid Nonmetallic Building Code Cable Conductors, 2 with ground, AWG wire size gray, 250-foot roll	2		
44	1" Careflex conduit, 50-foot roll	2		
45	SRP Pull Box; SRP Stock 5034692 (Per attached detail 45)	10		
46	APS Pull Box; T&D Construction Standards 8663 thru 8665 (Per attached detail 46)	10		
47	26' 6" Pole (SRP Style) (Per attached detail A1786-3)	5		
48	3' Radius Mast Arm (SRP Style) (Per attached detail A1786-4)	5		
49	30' 6" Pole (APS Style) (Per attached detail 49)	5		
50	31' Pole (SRP Style) (Per attached detail A1786-1)	10		
51	6' Radius Mast Arm (SRP Style) (Per attached detail A1786-2)	10		
52	38' Square Direct Bury Pole Per APS Specs 8027 and 8030, 31'-6" Above Ground, Code 1940.38, Bronze Powder Coat Paint (Per attached detail 52)	3		
53	32' x 5" Square Architectural Pole (Foundation), Bronze Powder Coat Paint (Per attached detail A1784-2)	12		
54	Square Architectural Pole Mast Arm (Single), Bronze Powder Coat Paint (Per attached detail A1784-3)	8		
55	Square Architectural Pole Mast Arm (Dual), Bronze Powder Coat Paint (Per attached detail A1784-3)	7		
56	38' 6" Round Pole (APS Style) (Per attached detail A1785-1)	5		
57	8' Mast Arm (APS Style) (Per attached detail A1785-2)	5		
58	Anchor Bolts (1" x 36" x 4")	12		
59	25' Square pole (CSB88507-25) Foundation, Bronze Powder Coat Paint (Per attached detail 59)	2		

Item No.	Description of Material	Quantity (Each)	Unit Price	Extended Price
60	Anchor Bolts (1" x 24" x 4") (Per attached detail 59) (CSB88507-25)	2		
61	Sternburg #1A-1940LED-4ARC45T3-MDL03-FG-HSHS-R5/CA4/7716FP5.188/SCC-COVER/VG, with spike center cap on pole and spike on hangstraight, with Anchor Bolt System	3		
62	Sternburg Access door # 7702/VG Door for 7700 Pole w/mtg HW Verde Green	5		
63	North Yorkshire Fluted POST Holophane # NY15/17-C1/DB with Anchor bolt system.	2		
64	Luminaire ARM Holophane # RLP30/B0-CA/DB	4		
65	Pedestrian LUMINAIRE Memphis Holophane # MSP-070HP-24-Z-5	6		
66	Illuminated Street Name Sign (LED per details A1746-1, A1747) 10' $\frac{3}{4}$ (120 $\frac{3}{4}$)	4		
67	Illuminated Street Name Sign (LED per details A1746-1, A1749) 8' $\frac{1}{4}$ (96.75)	4		
68	Illuminated Street Name Sign (LED RETROFIT per details A1746-1, A1747) 10' $\frac{3}{4}$ (120 $\frac{3}{4}$)	4		
69	Illuminated Street Name Sign (LED RETROFIT per details A1746-1, A1749) 8' $\frac{1}{4}$ (96.75)	4		
70	Illuminated Street Name Sign (LED RETROFIT per for F48T12 Florescent Lamp)	4		
71	Illuminated Street Name Sign (LED RETROFIT per for F72T12 Florescent Lamp)	4		
72	Illuminated Street Name Sign (LED RETROFIT per for F84T12 Florescent Lamp)	4		
73	Illuminated Street Name Sign (LED RETROFIT per for F108T12 Florescent Lamp)	4		
74	IMSA - CLFF 14/20C 19-1 SOLID 1420C191 - 1000' FOOT SPOOL	8		
75	WIRE IMSA -14 / 4 - 19-1	1		
76	WIRE IMSA -14 / 5 - 19-1	1		
77	WIRE IMSA -14 / 7 - 19-1	1		
78	NO. #7- Fiberlyte-Traffic Signal Junction Box (Per Detail A1710)	10		
79	NO. #7- Fiberlyte-COA Fiber Optic Junction Box (Per Detail A1717)	10		
80	NO. #7 LID-Fiberlyte-traffic Signal Junction Box (Per Detail A1710 & A1717)	20		

Item No.	Description of Material	Quantity (Each)	Unit Price	Extended Price
TOTAL*				

Brand names are to maintain the city's existing inventory.

*All bids are presumed to include all applicable taxes.

Company Name: _____ Date: _____

AVONDALE CITY CENTER PHASE III

STREET LIGHTING AND OPEN SPACE ELECTRICAL PLANS

GENERAL ELECTRICAL NOTES

- ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (LATEST EDITION), FEDERAL, STATE AND LOCAL JURISDICTION CODES.
- ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION.
- VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL EXISTING UTILITIES AND AVOIDING DAMAGE TO SAME. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UTILITIES CAUSED AS A RESULT OF HIS WORK. CALL (602) 263-1100 FOR BLUE STAKES. IRRIGATION LINES LESS THAN 2" WILL NOT BE MARKED AND SHALL BE REPAIRED IN KIND BY THE CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING WALKS, WALLS, DRIVES, CURBS, ETC. DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
- PROPER PROTECTION OF THE CONSTRUCTION AREA FOR SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COVER ALL TRENCHES AT THE END OF EACH WORK DAY. BARRICADES SHALL BE INSTALLED AS DIRECTED BY THE OWNER OR THE PROJECT INSPECTOR. THE SITE AND ALL WORK SHALL CONFORM TO OSHA REQUIREMENTS.
- ALL EXISTING LANDSCAPE, HARDSCAPE AND SPRINKLER SYSTEMS DAMAGED OR DISTURBED DURING THE CONSTRUCTION OF THIS PROJECT BY THE CONTRACTOR SHALL BE REPLACED IN KIND.
- CONTRACTOR SHALL PAY FOR PERMITS AND INSPECTIONS AS MAY BE REQUIRED AND PROVIDE A CERTIFICATE OF INSPECTION TO THE OWNER.
- PROTECT ALL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, AND LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
- LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION.
- IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND/OR CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED AND SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND ALL O & M MANUALS.
- ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, BURIED 24" MINIMUM BELOW FINISHED GRADE, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS.
- PROVIDE EMT INDOOR AND GRS OUTDOOR FOR ABOVE GROUND CONDUIT. WHERE METALLIC CONDUITS COME IN CONTACT WITH DIRT, THEY SHALL BE HALF LAP WRAPPED WITH SECTION 50 TAP 1/2" AFG. FITTINGS SHALL BE STEEL, THREADED TYPE WITH INSULATED THROATS. SECURELY ATTACH ALL SURFACE MOUNTED CONDUIT EVERY 10 FEET AND WITHIN 3 FEET OF EACH JUNCTION BOX, PER NEC ARTICLE 344.30.
- MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS.
- ALL FEEDERS AND BRANCH CIRCUIT WIRE SHALL BE COPPER TYPE XHHW (75 DEGREE C) FOR BELOW GRADE INSTALLATIONS (AND CONDUIT RISERS) AND THHN/THWN (75 DEGREE C) FOR ABOVE GRADE INSTALLATIONS. MINIMUM SIZE SHALL BE #12 AWG, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS. ALL WIRING SHALL BE IN CONDUIT. PER MARICOPA COUNTY AMENDMENT TO NEC ARTICLE 334.10 AND 334.12, MARICOPA COUNTY DOES NOT PERMIT TYPES NM, NMC, NMS (ROMEX) CABLES IN COMMERCIAL APPLICATIONS.
- A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR (BOND) SHALL BE INSTALLED WITHIN EACH RACEWAY PER NEC CODE.
- WHEN A PANEL IS SUPPLIED BY A FEEDER OR BRANCH CIRCUIT, ANY INSTALLED GROUNDED CONDUCTOR SHALL NOT BE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR (GEC) OR TO THE GROUNDING ELECTRODE(S) PER NEC ARTICLE 250.32(B).
- BOND ALL ENCLOSURES PER NEC ARTICLE 250.96.
- CONTRACTOR SHALL PLAN AND INSTALL WORK IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.
- CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, ETC. NECESSARY FOR A COMPLETE AND WORKABLE ELECTRICAL SYSTEM WHETHER OR NOT THESE ITEMS ARE SPECIFICALLY NOTED ON THESE DRAWINGS. INCIDENTAL ITEMS NOT INDICATED ON THE DRAWINGS, NOR MENTIONED IN SPECIFICATIONS THAT CAN BE LEGITIMATELY AND REASONABLY INFERRED TO BELONG TO THE WORK DESCRIBED OR BE NECESSARY IN GOOD PRACTICE TO PROVIDE A COMPLETE SYSTEM, SHALL BE FURNISHED AND INSTALLED AS THOUGH ITEMIZED HERE IN EVERY DETAIL.
- CONTRACTOR IS RESPONSIBLE FOR AND SHALL PROVIDE ALL LABOR, MATERIAL, TRENCHING, CONDUIT, TRANSFORMER PAD AND OTHER REQUIRED EQUIPMENT PER UTILITY COMPANY PLANS AND SPECIFICATIONS NECESSARY FOR A COMPLETE UNDERGROUND CONDUIT SYSTEM FROM THE UTILITY POINT OF SERVICE TO THE UTILITY CO. TRANSFORMER AND FROM THE UTILITY CO. TRANSFORMER TO THE ELECTRICAL SERVICE ENTRANCE SECTION.
- ALL TRENCHING, CONDUITS, ETC. SHALL BE ROUTED AND INSTALLED IN SUCH A MANNER THAT WILL NOT DAMAGE EXISTING FACILITIES. SHOULD DAMAGE OCCUR, IT WILL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR DAMAGE TO THE SATISFACTION OF THE OWNER OR INSPECTOR.
- ALL CONDUIT RUNS SHOWN ON THIS PLAN ARE SCHEMATIC IN NATURE. THE CONTRACTOR SHALL MAKE SURE THAT ALL CONDUIT, ETC. FALLS WITHIN THE CONSTRUCTION AREA/RIGHT OF WAY. (THIS INCLUDES MAINTAINING ALL REQUIRED CLEARANCES.)
- WHEN CROSSING PATHWAYS OR SIDEWALKS, CONTRACTOR SHALL BORE UNDER EXISTING CONCRETE WALKS AND SAWCUT ASPHALT WALKS. ASPHALT WALKS SHALL BE REPLACED IN KIND.
- CONTRACTOR SHALL GUARANTEE WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS, USUAL WEAR EXPECTED, AND SHOULD ANY SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR ACCEPTANCE OF THE PROJECT BY THE OWNER, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DEFECTIVE ITEMS AND DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO THE OWNER.
- CONTRACTOR SHALL IDENTIFY SERVICE ENTRANCE SECTION MAIN SERVICE DISCONNECT(S) WITH 3/32-INCH THICK LAMINATED PHENOLIC TYPE NAMEPLATES WITH 1/4-INCH MINIMUM HEIGHT LETTERS. NAMEPLATE TO BE BLACK MATTE FINISH SURFACE WITH WHITE LETTER ENGRAVING. ATTACH NAMEPLATE TO THE OUTSIDE PANEL FACE WITH TWO STAINLESS STEEL SELF-TAPPING SCREWS. NAMEPLATE SHALL READ "SERVICE DISCONNECT" PER NEC ARTICLE 230.70(B).
- ALL CIRCUITS SHALL BE LEGIBLY IDENTIFIED AT THE PANEL, JUNCTION BOXES AND AT ALL EQUIPMENT IN A PERMANENT MANNER (I.E. ETCHED PLATES, CONDUCTOR TAG, PERMANENT MARKER, ETC.). THE LABELING SHALL INCLUDE PANEL CIRCUIT NUMBER, "TO" AND "FROM" IDENTIFICATION, AND MARKED "SPARE" WHERE APPLICABLE.

- CONTRACTOR SHALL TEST ELECTRICAL SYSTEM FOR SHORT CIRCUITS AND MEGGER TEST FEEDERS AND BRANCH CIRCUIT WIRING. INSURE LOW IMPEDANCE GROUND PATH SYSTEM. PERFORM HIPOT TESTING WHEN REQUIRED BY LOCAL JURISDICTION.
- ALL CONDUIT AND J-BOXES SHOWN SHALL BE CONCEALED WHEN POSSIBLE. WHEN NOT POSSIBLE, CONDUIT AND J-BOXES MAY BE SURFACE MOUNTED WITH PERMISSION OF THE OWNER OR OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL COORDINATE ALL EQUIPMENT CONNECTIONS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. PROVIDE ADDITIONAL FUSED DISCONNECT SWITCHES AND CONTROLS IF OVERCURRENT PROTECTION OR CONTROLS IS NOT INTEGRAL WITH UNITS.
- ALL EQUIPMENT SHALL BE FUSE SIZED PER MANUFACTURES RECOMMENDATIONS AND U.L. APPROVAL.
- ELECTRICAL DEVICES, DISCONNECT SWITCHES, ETC., SHALL BE SUPPORTED INDEPENDENT OF AND ISOLATED FROM EQUIPMENT VIBRATIONS.
- FULL LOAD AMPS (FLA) SIZES, AS NOTED IN THESE DRAWINGS, ARE BASED ON SPECIFIED EQUIPMENT DATA. CONTRACTOR SHALL VERIFY NAMEPLATE FLA OF EQUIPMENT SUPPLIED AND COORDINATE ACCORDINGLY PER EQUIPMENT SUPPLIERS RECOMMENDATIONS.
- ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE NEMA-3R OR NEMA-4 ENCLOSURES.
- CONDUITS OR RACEWAYS ROUTED FROM INDOORS TO OUTDOORS OR AS DESCRIBED IN NEC 300.7(A), SHALL BE SEALED WITH A PLIABLE SEALING COMPOUND AT A CONDUIT BODY OR AT A JUNCTION BOX BEFORE THE CONDUIT ENTERS THE COLDER ENVIRONMENT.
- CONDUITS OR RACEWAYS INSTALLED IN AREAS WHERE ELEVATION CHANGES MAY CAUSE WATER OR MOISTURE TO ENTER THE ELECTRICAL EQUIPMENT THROUGH THE CONDUIT SHALL BE SEALED WITH A HERMETIC CONDUIT SEAL AT BOTH ENDS OF THE CONDUIT OR RACEWAY.
- ALL POLE LIGHTS SHALL BE PROVIDED WITH A TWO POLE FUSE HOLDER BUSSMANN #HEX OR A SINGLE POLE FUSE HOLDER BUSSMANN #HEB OR EQUAL FOR INLINE FUSING, PROVIDE SA FUSING IN FUSEHOLDER.
- PRIOR TO POURING THE POLE BASES OR COVERING ANY ELECTRICAL CONDUITS, CONTACT THE INSPECTION DEPARTMENT 24 HOURS IN ADVANCE FOR APPROVAL.
- MATERIALS SHALL BE NEW AND OF THE BEST QUALITY WITH MANUFACTURER'S NAME PRINTED THEREON. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, UNDERWRITER'S LABORATORY OR OTHER APPLICABLE STANDARDS AND RATED FOR HEAVY DUTY SERVICE.
- ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE. ALL 15 AND 20 AMP, 125 AND 250 VOLT, NONLOCKING RECEPTACLES INSTALLED OUTDOORS SHALL BE LISTED WEATHER-RESISTANT TYPE. ALL WEATHERPROOF WHILE IN-USE RECEPTACLE COVERS SHALL BE METAL.
- SELECTION OF MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE DRAWINGS AND/OR SPECIFICATIONS. THE USE OF MANUFACTURER'S NAME, MODEL, AND NUMBER IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. CONTRACTOR SHALL SUBMIT TO THE OWNER OR OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL (PRIOR TO ORDERING MATERIALS) COPIES OF EQUIPMENT SHOP DRAWINGS AS FOLLOWS: 1) LIGHT FIXTURES, 2) POLES, 3) POLE BASES, 4) SERVICE ENTRANCE SECTION, 5) ELECTRICAL EQUIPMENT, 6) DISCONNECT SWITCHES, 7) TIME CLOCKS AND OTHER CONTROLS, 8) LIGHTING CONTRACTORS AND 9) PULL BOXES. AT THE TIME OF EACH SUBMITTAL, THE CONTRACTOR SHALL DEFINE AND DELINEATE IN WRITING ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS. THE REVIEW WILL BE ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE WORK AND FOR COMPLIANCE WITH THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE REVIEW OF A SPECIFIED ITEM, AS SUCH, WILL NOT INDICATE REVIEW OF THE ASSEMBLY IN WHICH THE ITEM FUNCTIONS. REVIEW BY THE OWNER OR OWNER'S REPRESENTATIVE WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN THE SUBMITTALS NOR FROM HIS RESPONSIBILITY FOR COMPLYING WITH THE CONTRACT DOCUMENTS.
- THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.

CONSTRUCTION NOTES:

- CONTRACTOR SHALL PROVIDE AND INSTALL NEW 200A 120/240V, 1Ø, 3W ELECTRICAL SERVICE ENTRANCE SECTION PEDESTAL. INSTALL PER DETAILS ON SHEET SE-7 AND SE-8. MAINTAIN 3'-0" CLEAR ZONE IN FRONT OF EACH DOOR ON SES; AND MAINTAIN ALL OTHER CLEARANCES FROM OBSTRUCTIONS PER NEC AND UTILITY SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL 40LED, IES DISTRIBUTION TYPE II, POLE MOUNTED AREA LIGHT WITH A MOUNTING HEIGHT OF 15'-0" PER DETAIL 1 ON SHEET SE-6. LIGHT FIXTURE TO BE WIRED WITH A HIGH-LOW SWITCHING OPTION PER MANUFACTURER RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL 100LED, IES DISTRIBUTION TYPE III, POLE MOUNTED AREA LIGHT WITH A MOUNTING HEIGHT OF 30'-0" PER DETAIL 2 ON SHEET SE-6. LIGHT FIXTURE TO BE WIRED WITH A HIGH-LOW SWITCHING OPTION PER MANUFACTURER RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL CONCRETE PULL BOX. SIZE PULL BOX PER NEC TO ACCOMMODATE NUMBER OF CONDUITS PRESENT. SEE INSTALLATION DETAIL 7 ON SHEET SE-7.
- CONTRACTOR SHALL PROVIDE AND INSTALL 20A, 120V HOLIDAY LIGHTING RECEPTACLE. SEE DETAIL 4 ON SHEET SE-6.
- CONTRACTOR TO STUB OUT AND CAP CONDUIT AT THIS LOCATION FOR FUTURE USE. MARK LOCATION ON AS-BUILT DRAWINGS.
- SRP PRIMARY CONDUIT TO SRP POINT OF CONNECTION. CONDUIT AND TRENCH PER SRP DRAWINGS AND SPECIFICATIONS.
- PROPOSED SINGLE PHASE TRANSFORMER LOCATION, COORDINATE WITH POWER CO. PLANS. LOCATION SHOWN FOR CONTRACTOR CONVENIENCE ONLY. POWER CO. PLANS WILL DETERMINE EXACT LOCATION OF TRANSFORMER AND TAKE PRECEDENCE OVER THESE DRAWINGS.
- RELOCATE EXISTING LIGHT POLE AND FIXTURE TO NEW LOCATION SHOWN ON PLANS. CONCRETE FOUNDATIONS TO BE JACKHAMMERED TO A POINT 24" BELOW FINISHED GRADE. CONDUCTORS TO BE REMOVED FROM EXISTING CONDUIT RUN FROM EXISTING PULL BOX TO POLE FOUNDATION. EXISTING CONDUIT RUNS TO HAVE SWEEPS REMOVED; LATERAL RUNS TO BE ABANDONED IN PLACE.
- RELOCATED LIGHT POLE AND FIXTURE FROM LOCATION SHOWN ON PLANS PER DETAIL 2 ON SHEET SE-7.
- SWEEP CONDUIT INTO EXISTING PULL BOX AND TIE CONDUCTORS INTO EXISTING STREET LIGHTING CIRCUIT.



3838 N. CENTRAL AVE. SUITE 1250
PHOENIX, AZ 85012 (602) 263-1177



LEGEND

- UNDERGROUND CONDUIT
- EXISTING UNDERGROUND CONDUIT
- 200A 120/240V 1Ø 3W SERVICE ENTRANCE SECTION
- PROPOSED SINGLE PHASE TRANSFORMER
- 20 AMP, 120V HOLIDAY LIGHTING RECEPTACLE
- PEDESTRIAN AREA LIGHT - 15'-0" MOUNTING HEIGHT, TYPE II IES DISTRIBUTION
- STREET AREA LIGHT - 30'-0" MOUNTING HEIGHT, TYPE III IES DISTRIBUTION
- EXISTING STREET AREA LIGHT
- CONCRETE PULL BOX



CITY OF AVONDALE, ARIZONA
ENGINEERING DEPARTMENT

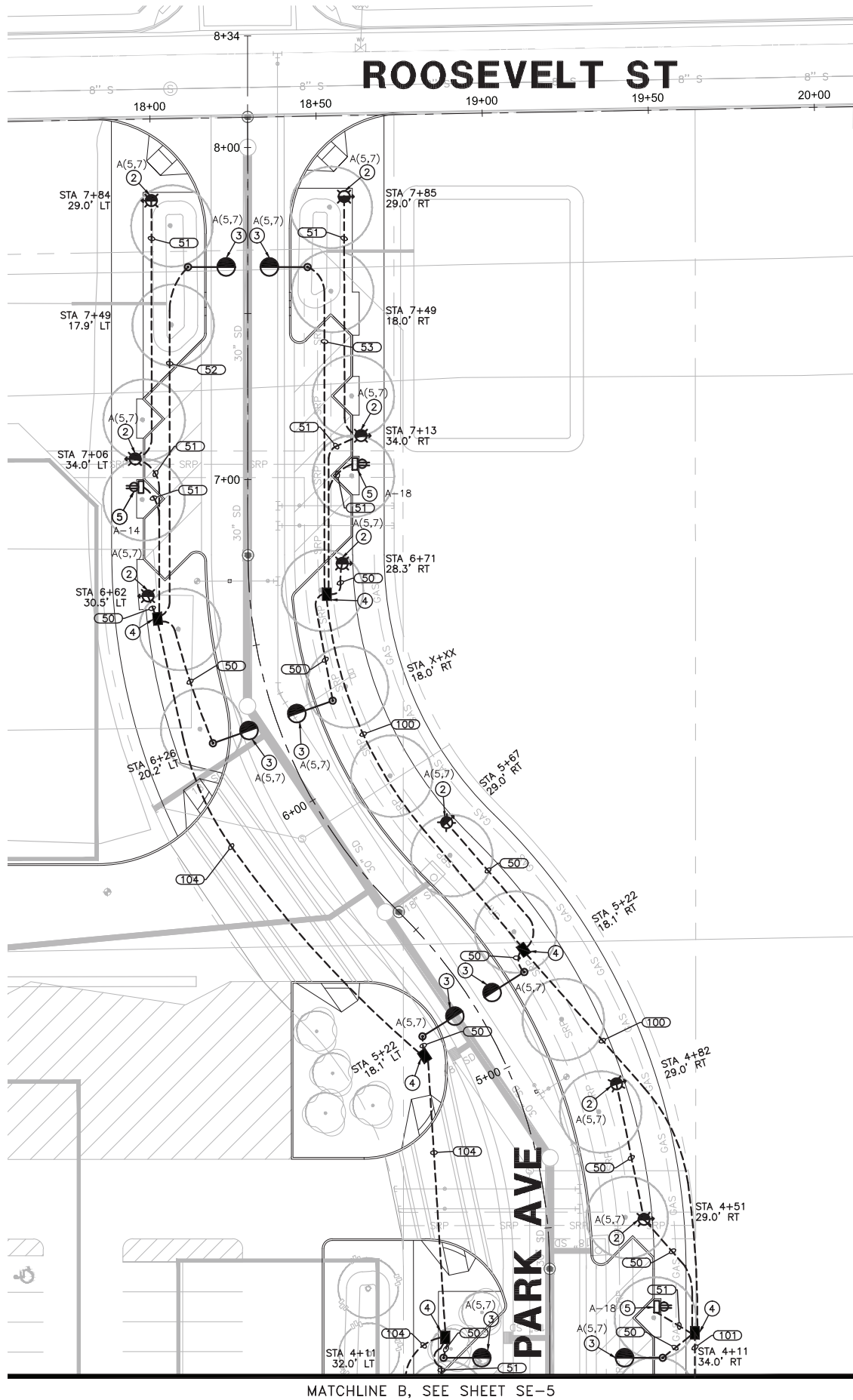
ELECTRICAL COVER SHEET

CITY CENTER PHASE III OFFSITE IMPROVEMENT PLANS					
DR: KDM	DES: CMT	CHK: RSW	SHEET		TOTAL
DATE: 4/13	DATE: 4/13	DATE: 4/13	NO:		SHEETS
SE-1			57		68

NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

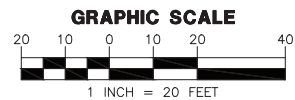


MATCHLINE B, SEE SHEET SE-5

CONSTRUCTION NOTES:

- CONTRACTOR SHALL PROVIDE AND INSTALL NEW 200A 120/240V, 1Ø, 3W ELECTRICAL SERVICE ENTRANCE SECTION PEDESTAL. INSTALL PER DETAILS ON SHEET SE-7 AND SE-8. MAINTAIN 3'-0" CLEAR ZONE IN FRONT OF EACH DOOR ON SES, AND MAINTAIN ALL OTHER CLEARANCES FROM OBSTRUCTIONS PER NEC AND UTILITY SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL 40LED, IES DISTRIBUTION TYPE II, POLE MOUNTED AREA LIGHT WITH A MOUNTING HEIGHT OF 15'-0" PER DETAIL 1 ON SHEET SE-6. LIGHT FIXTURE TO BE WIRED WITH A HIGH-LOW SWITCHING OPTION PER MANUFACTURER RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL 100LED, IES DISTRIBUTION TYPE III, POLE MOUNTED AREA LIGHT WITH A MOUNTING HEIGHT OF 30'-0" PER DETAIL 2 ON SHEET SE-6. LIGHT FIXTURE TO BE WIRED WITH A HIGH-LOW SWITCHING OPTION PER MANUFACTURER RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL CONCRETE PULL BOX. SIZE PULL BOX PER NEC TO ACCOMMODATE NUMBER OF CONDUITS PRESENT. SEE INSTALLATION DETAIL 7 ON SHEET SE-7.
- CONTRACTOR SHALL PROVIDE AND INSTALL 20A, 120V HOLIDAY LIGHTING RECEPTACLE. SEE DETAIL 4 ON SHEET SE-6.
- CONTRACTOR TO STUB OUT AND CAP CONDUIT AT THIS LOCATION FOR FUTURE USE. MARK LOCATION ON AS-BUILT DRAWINGS.
- SRP PRIMARY CONDUIT TO SRP POINT OF CONNECTION. CONDUIT AND TRENCH PER SRP DRAWINGS AND SPECIFICATIONS.
- PROPOSED SINGLE PHASE TRANSFORMER LOCATION, COORDINATE WITH POWER CO. PLANS. LOCATION SHOWN FOR CONTRACTOR CONVENIENCE ONLY. POWER CO. PLANS WILL DETERMINE EXACT LOCATION OF TRANSFORMER AND TAKE PRECEDENCE OVER THESE DRAWINGS.
- RELOCATE EXISTING LIGHT POLE AND FIXTURE TO NEW LOCATION SHOWN ON PLANS. CONCRETE FOUNDATIONS TO BE JACKHAMMERED TO A POINT 24" BELOW FINISHED GRADE. CONDUCTORS TO BE REMOVED FROM EXISTING CONDUIT RUN FROM EXISTING PULL BOX TO POLE FOUNDATION. EXISTING CONDUIT RUNS TO HAVE SWEEPS REMOVED; LATERAL RUNS TO BE ABANDONED IN PLACE.
- RELOCATED LIGHT POLE AND FIXTURE FROM LOCATION SHOWN ON PLANS PER DETAIL 2 ON SHEET SE-7.
- SWEEP CONDUIT INTO EXISTING PULL BOX AND TIE CONDUCTORS INTO EXISTING STREET LIGHTING CIRCUIT.

FOR WIRE AND CONDUIT TABLE
SEE SHEET SE-8.



**RITTOCH-POWELL
& ASSOCIATES**

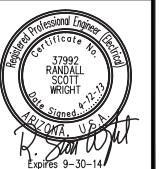
Civil Engineering and Survey Consultants

3838 N. CENTRAL AVE., SUITE 1250
PHOENIX, AZ 85012 (602) 263-1177



LEGEND

- UNDERGROUND CONDUIT
- EXISTING UNDERGROUND CONDUIT
- 200A 120/240V 1Ø 3W SERVICE ENTRANCE SECTION
- PROPOSED SINGLE PHASE TRANSFORMER
- 20 AMP, 120V HOLIDAY LIGHTING RECEPTACLE
- PEDESTRIAN AREA LIGHT - 15'-0" MOUNTING HEIGHT, TYPE II IES DISTRIBUTION
- STREET AREA LIGHT - 30'-0" MOUNTING HEIGHT, TYPE III IES DISTRIBUTION
- EXISTING STREET AREA LIGHT
- CONCRETE PULL BOX



CITY OF AVONDALE, ARIZONA
ENGINEERING DEPARTMENT

ELECTRICAL SITE PLAN

CITY CENTER PHASE III
OFFSITE IMPROVEMENT PLANS

DR:	DES:	CK:	RSW	SHEET	TOTAL
DATE: 4/13	DATE: 4/13	DATE: 4/13	NO:	68	68
SE-3				59	

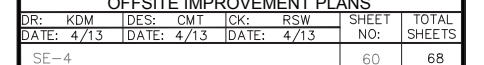
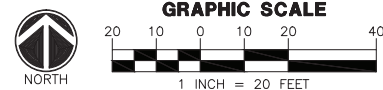
N.O.	DESCRIPTION	REV BY	CKD BY	DATE

Apr 11, 2013



- ① CONTRACTOR SHALL PROVIDE AND INSTALL NEW 200A 120/240V, 1ϕ, 3W ELECTRICAL SERVICE ENTRANCE SECTION PEDESTAL. INSTALL PER DETAILS ON SHEET SE-7 AND SE-8. MAINTAIN 3'-0" CLEAR ZONE IN FRONT OF EACH DOOR ON SES, AND MAINTAIN ALL OTHER CLEARANCES FROM OBSTRUCTIONS PER NEC AND UTILITY SPECIFICATIONS.
- ② CONTRACTOR SHALL PROVIDE AND INSTALL 40LED, IES DISTRIBUTION TYPE II, POLE MOUNTED AREA LIGHT WITH A MOUNTING HEIGHT OF 15'-0" PER DETAIL 1 ON SHEET SE-6. LIGHT FIXTURE TO BE WIRED WITH A HIGH-LOW SWITCHING OPTION PER MANUFACTURER RECOMMENDATIONS.
- ③ CONTRACTOR SHALL PROVIDE AND INSTALL 100LED, IES DISTRIBUTION TYPE II, POLE MOUNTED AREA LIGHT WITH A MOUNTING HEIGHT OF 30'-0" PER DETAIL 2 ON SHEET SE-6. LIGHT FIXTURE TO BE WIRED WITH A HIGH-LOW SWITCHING OPTION PER MANUFACTURER RECOMMENDATIONS.
- ④ CONTRACTOR SHALL PROVIDE AND INSTALL CONCRETE PULL BOX. SIZE PULL BOX PER NEC TO ACCOMMODATE NUMBER OF CONDUITS PRESENT. SEE INSTALLATION DETAIL 7 ON SHEET SE-7.
- ⑤ CONTRACTOR SHALL PROVIDE AND INSTALL 20A, 120V HOLIDAY LIGHTING RECEPTACLE. SEE DETAIL 4 ON SHEET SE-6.
- ⑥ CONTRACTOR TO STUB OUT AND CAP CONDUIT AT THIS LOCATION FOR FUTURE USE. MARK LOCATION ON AS-BUILT DRAWINGS.
- ⑦ SRP PRIMARY CONDUIT TO SRP POINT OF CONNECTION. CONDUIT AND TRENCH PER SRP DRAWINGS AND SPECIFICATIONS.
- ⑧ PROPOSED SINGLE PHASE TRANSFORMER LOCATION, COORDINATE WITH POWER CO. PLANS. LOCATION SHOWN FOR CONTRACTOR CONVENIENCE ONLY. POWER CO. PLANS WILL DETERMINE EXACT LOCATION OF TRANSFORMER AND TAKE PRECEDENCE OVER THESE DRAWINGS.
- ⑨ RELOCATE EXISTING LIGHT POLE AND FIXTURE TO NEW LOCATION SHOWN ON PLANS. CONCRETE FOUNDATIONS TO BE JACKHAMMERED TO A POINT 24" BELOW FINISHED GRADE. CONDUCTORS TO BE REMOVED FROM EXISTING CONDUIT RUN FROM EXISTING PULL BOX TO POLE FOUNDATION. EXISTING CONDUIT RUNS TO HAVE SWEEPS REMOVED; LATERAL RUNS TO BE ABANDONED IN PLACE.
- ⑩ RELOCATED LIGHT POLE AND FIXTURE FROM LOCATION SHOWN ON PLANS PER DETAIL 2 ON SHEET SE-7.
- ⑪ SWEEP CONDUIT INTO EXISTING PULL BOX AND TIE CONDUCTORS INTO EXISTING STREET LIGHTING CIRCUIT.

FOR WIRE AND CONDUIT TABLE
SEE SHEET SE-8.

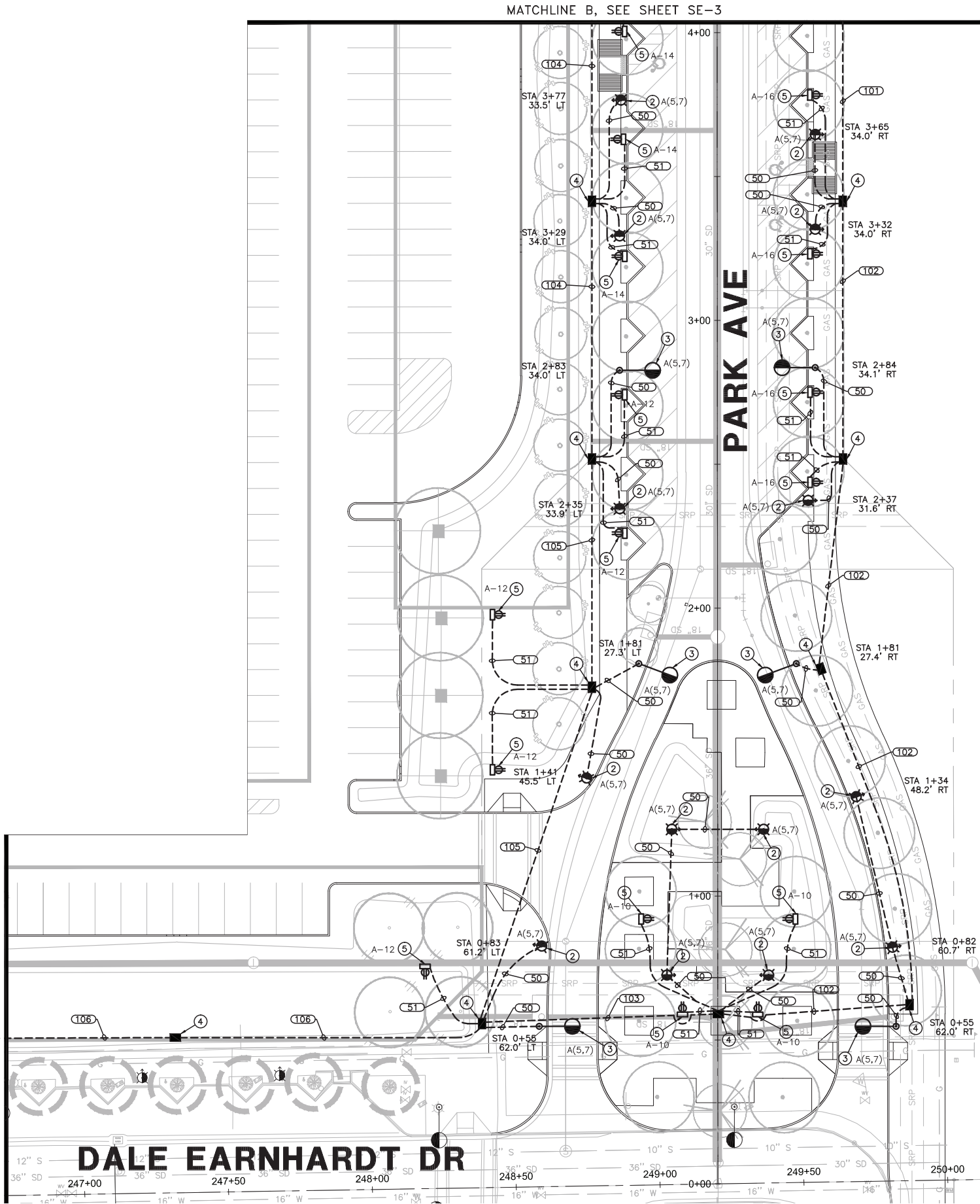


NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

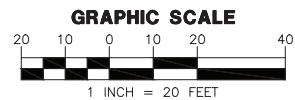
MATCHLINE C, SEE SHEET SE-4



CONSTRUCTION NOTES:

- CONTRACTOR SHALL PROVIDE AND INSTALL NEW 200A 120/240V, 1Ø, 3W ELECTRICAL SERVICE ENTRANCE SECTION PEDESTAL. INSTALL PER DETAILS ON SHEET SE-7 AND SE-8. MAINTAIN 3'-0" CLEAR ZONE IN FRONT OF EACH DOOR ON SES, AND MAINTAIN ALL OTHER CLEARANCES FROM OBSTRUCTIONS PER NEC AND UTILITY SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL 40LED, IES DISTRIBUTION TYPE II, POLE MOUNTED AREA LIGHT WITH A MOUNTING HEIGHT OF 15'-0" PER DETAIL 1 ON SHEET SE-6. LIGHT FIXTURE TO BE WIRED WITH A HIGH-LOW SWITCHING OPTION PER MANUFACTURER RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL 100LED, IES DISTRIBUTION TYPE III, POLE MOUNTED AREA LIGHT WITH A MOUNTING HEIGHT OF 30'-0" PER DETAIL 2 ON SHEET SE-6. LIGHT FIXTURE TO BE WIRED WITH A HIGH-LOW SWITCHING OPTION PER MANUFACTURER RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL CONCRETE PULL BOX. SIZE PULL BOX PER NEC TO ACCOMMODATE NUMBER OF CONDUITS PRESENT. SEE INSTALLATION DETAIL 7 ON SHEET SE-7.
- CONTRACTOR SHALL PROVIDE AND INSTALL 20A, 120V HOLIDAY LIGHTING RECEPTACLE. SEE DETAIL 4 ON SHEET SE-6.
- CONTRACTOR TO STUB OUT AND CAP CONDUIT AT THIS LOCATION FOR FUTURE USE. MARK LOCATION ON AS-BUILT DRAWINGS.
- SRP PRIMARY CONDUIT TO SRP POINT OF CONNECTION. CONDUIT AND TRENCH PER SRP DRAWINGS AND SPECIFICATIONS.
- PROPOSED SINGLE PHASE TRANSFORMER LOCATION, COORDINATE WITH POWER CO. PLANS. LOCATION SHOWN FOR CONTRACTOR CONVENIENCE ONLY. POWER CO. PLANS WILL DETERMINE EXACT LOCATION OF TRANSFORMER AND TAKE PRECEDENCE OVER THESE DRAWINGS.
- RELOCATE EXISTING LIGHT POLE AND FIXTURE TO NEW LOCATION SHOWN ON PLANS. CONCRETE FOUNDATIONS TO BE JACKHAMMERED TO A POINT 24" BELOW FINISHED GRADE. CONDUCTORS TO BE REMOVED FROM EXISTING CONDUIT RUN FROM EXISTING PULL BOX TO POLE FOUNDATION. EXISTING CONDUIT RUNS TO HAVE SWEEPS REMOVED; LATERAL RUNS TO BE ABANDONED IN PLACE.
- RELOCATED LIGHT POLE AND FIXTURE FROM LOCATION SHOWN ON PLANS PER DETAIL 2 ON SHEET SE-7.
- SWEEP CONDUIT INTO EXISTING PULL BOX AND TIE CONDUCTORS INTO EXISTING STREET LIGHTING CIRCUIT.

FOR WIRE AND CONDUIT TABLE
SEE SHEET SE-8.



**RITCOH-POWELL
& ASSOCIATES**

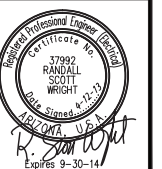
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PHOENIX, AZ 85012 (602) 263-1177



LEGEND

- UNDERGROUND CONDUIT
- EXISTING UNDERGROUND CONDUIT
- 200A 120/240V 1Ø 3W SERVICE ENTRANCE SECTION
- PROPOSED SINGLE PHASE TRANSFORMER
- 20 AMP, 120V HOLIDAY LIGHTING RECEPTACLE
- PEDESTRIAN AREA LIGHT - 15'-0" MOUNTING HEIGHT, TYPE II IES DISTRIBUTION
- STREET AREA LIGHT - 30'-0" MOUNTING HEIGHT, TYPE III IES DISTRIBUTION
- EXISTING STREET AREA LIGHT
- CONCRETE PULL BOX



CITY OF AVONDALE, ARIZONA
ENGINEERING DEPARTMENT

ELECTRICAL SITE PLAN

CITY CENTER PHASE III
OFFSITE IMPROVEMENT PLANS

DR: KDM	DES: CMT	CHK: RSW	SHEET NO:	TOTAL SHEETS
DATE: 4/13	DATE: 4/13	DATE: 4/13	NO:	SHEETS
SE-5			61	68

NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

POLE MOUNTED AREA LIGHT MANUFACTURED BY BETA LED, EDGE ROUND MODEL WITH TYPE V IES DISTRIBUTION. CATALOG NUMBER ARE/EDR/2M/R3/04/D/UL/SV/525/43K. COLOR TEMPERATURE OF LED'S TO BE 4300K.

ROUND TAPERED ALUMINUM DIRECT BURIED POLE. POLE TO HAVE 2-3/8" TENON FOR POST TOP FIXTURE MOUNTING. VALMONT CATALOG NUMBER 1308-30-50-4-T-E-P2-*,

*POLE FINISH TO MATCH FIXTURE. CONTRACTOR TO PROVIDE COLOR SAMPLES OF POLE FINISH AND FIXTURE FINISH TO ENGINEER WITH SUBMITTALS.

POLE TO HAVE BANNER ARM INSERTS PROVIDED BY THE MANUFACTURER. COORDINATE LOCATION WITH CITY DURING SUBMITTAL PROCESS.

HAND HOLE W/ TORX HEAD SECURITY SCREW RUN 2#12 STRANDED CONDUCTORS & 1#12 BOND FROM HAND HOLE TO LIGHT FIXTURE

SINGLE POLE FUSE HOLDER BUSSMAN #HET OR EQUAL FOR INLINE FUSING

GROUND LUG

FINISH GRADE SHALL BE 2" BELOW TOP OF POLE FOUNDATION

OPENING IN POLE BASE FOR CONDUIT ENTRY - TYPICAL OF TWO AT 180 DEGREES FROM EACH OTHER AND 90 DEGREES FROM HANDHOLE. TAPE OPENINGS PRIOR TO BACKFILLING THE DRILLED HOLE.

SET A TWELVE (12) INCH ROUND SONOTUBE AUGURED 6'-0" DEEP IN UNDISTURBED EARTH.

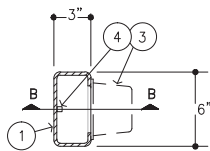
ABC BACKFILL IN SONOTUBE AROUND POLE, HAND TAMPING AND COMPACT WITH PNEUMATIC OR VIBRATING EQUIPMENT. BACKFILL SHALL BE COMPACTED TO NINETY (90) PERCENT OF MAXIMUM DENSITY AS DEFINED BY ASTM D-2922 AND D-3017.

MIN. 8" X 8" CONCRETE BLOCK

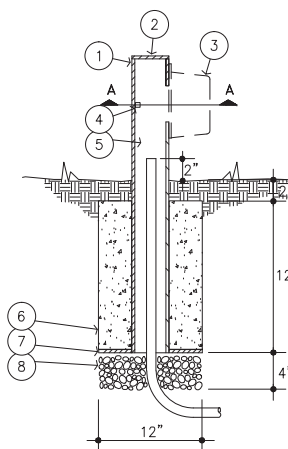
COIL 20' OF #4 BARE COPPER WIRE IN BOTTOM OF AUGURED HOLE AND RUN INSIDE OF POLE TO GROUND LUG.

1 PEDESTRIAN LIGHT DETAIL 15'-0" MOUNTING HEIGHT

NO SCALE

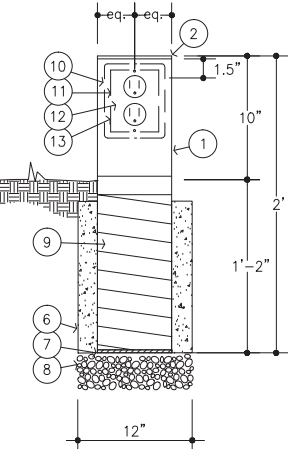


SECTION A



SECTION B

FRONT ELEVATION
(WEATHERPROOF COVER INSTALLED)



FRONT ELEVATION
(WEATHERPROOF COVER OFF)

4 EVENT RECEPTACLE DETAIL

NO SCALE

POLE MOUNTED AREA LIGHT MANUFACTURED BY BETA LED, EDGE ROUND MODEL WITH TYPE V IES DISTRIBUTION. CATALOG NUMBER ARE/EDR/3M/R3/10/D/UL/SV/350/43K. COLOR TEMPERATURE OF LED'S TO BE 4300K.

ROUND TAPERED ALUMINUM DIRECT BURIED POLE. POLE TO HAVE 2-3/8" TENON FOR POST TOP FIXTURE MOUNTING. VALMONT CATALOG NUMBER 2908-45-80-5-T-E-P2-*,

*POLE FINISH TO MATCH FIXTURE. CONTRACTOR TO PROVIDE COLOR SAMPLES OF POLE FINISH AND FIXTURE FINISH TO ENGINEER WITH SUBMITTALS.

POLE TO HAVE BANNER ARM INSERTS PROVIDED BY THE MANUFACTURER. COORDINATE LOCATION WITH CITY DURING SUBMITTAL PROCESS.

HAND HOLE W/ TORX HEAD SECURITY SCREW RUN 2#12 STRANDED CONDUCTORS & 1#12 BOND FROM HAND HOLE TO LIGHT FIXTURE

SINGLE POLE FUSE HOLDER BUSSMAN #HET OR EQUAL FOR INLINE FUSING

GROUND LUG

FINISH GRADE SHALL BE 2" BELOW TOP OF POLE FOUNDATION

OPENING IN POLE BASE FOR CONDUIT ENTRY - TYPICAL OF TWO AT 180 DEGREES FROM EACH OTHER AND 90 DEGREES FROM HANDHOLE. TAPE OPENINGS PRIOR TO BACKFILLING THE DRILLED HOLE.

SET A TWELVE (12) INCH ROUND SONOTUBE AUGURED 7'-0" DEEP IN UNDISTURBED EARTH.

ABC BACKFILL IN SONOTUBE AROUND POLE, HAND TAMPING AND COMPACT WITH PNEUMATIC OR VIBRATING EQUIPMENT. BACKFILL SHALL BE COMPACTED TO NINETY (90) PERCENT OF MAXIMUM DENSITY AS DEFINED BY ASTM D-2922 AND D-3017.

MIN. 8" X 8" CONCRETE BLOCK

COIL 20' OF #4 BARE COPPER WIRE IN BOTTOM OF AUGURED HOLE AND RUN INSIDE OF POLE TO GROUND LUG.

2 STREET LIGHT DETAIL 30'-0" MOUNTING HEIGHT

NO SCALE

KEYED NOTES

- RECTANGULAR STRAIGHT STEEL TUBE, 3"x6"x24" LONG, 3/16" THICK. PRIME AND PAINT LIGHT TAN.
- 1/8" THICK STEEL TOP. PROVIDE CONTINUOUS WELD ALONG PERIMETER OF CAP. PRIME AND PAINT LIGHT BRONZE.
- 20A GFCI RECEPTACLE WITH METAL WEATHERPROOF WHILE IN USE. LOCKABLE OUTLET COVER PAINTED TO MATCH STEEL TUBE (INTERMATIC CAT # WP1030MC).
- WELD A 1/4" STEEL NUT ONTO THE INSIDE FACE OF THE STEEL TUBE OPPOSITE THE CONVENIENCE RECEPTACLES FOR ATTACHING SYSTEM GROUND WIRING.
- STUB UNDERGROUND CONDUITS 2" ABOVE FINISHED GRADE INSIDE STEEL TUBE.
- CLASS A CONCRETE.
- TWO 3"x6"x3/16" STEEL PLATES (ONE EACH SIDE) WELDED TO THE BASE OF THE STEEL TUBE.
- 1" WASHED RIVER ROCK.
- PROVIDE 1/8" THICK BITUMINOUS COATING ON THE INSIDE AND OUTSIDE OF THE STEEL TUBE AS INDICATED. WRAP THE OUTSIDE OF THE TUBE WITH 10 MIL PLASTIC TAPE, HALF LAPPED.
- OUTLINE OF METAL WEATHERPROOF WHILE IN USE COVER.
- OUTLINE OF RECTANGULAR HOLE IN STEEL TUBE FOR DUPLEX RECEPTACLE.
- OUTLINE OF DUPLEX CONVENIENCE RECEPTACLE FORM.
- DRILL AND TAP HOLES IN STEEL TUBE FOR MOUNTING RECEPTACLE AND WEATHERPROOF COVER.
- LOCKABLE HASP PROVIDED BY MANUFACTURER OF COVER.



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CITY OF AVONDALE, ARIZONA
ENGINEERING DEPARTMENT

ELECTRICAL DETAILS

CITY CENTER PHASE III
OFFSITE IMPROVEMENT PLANS

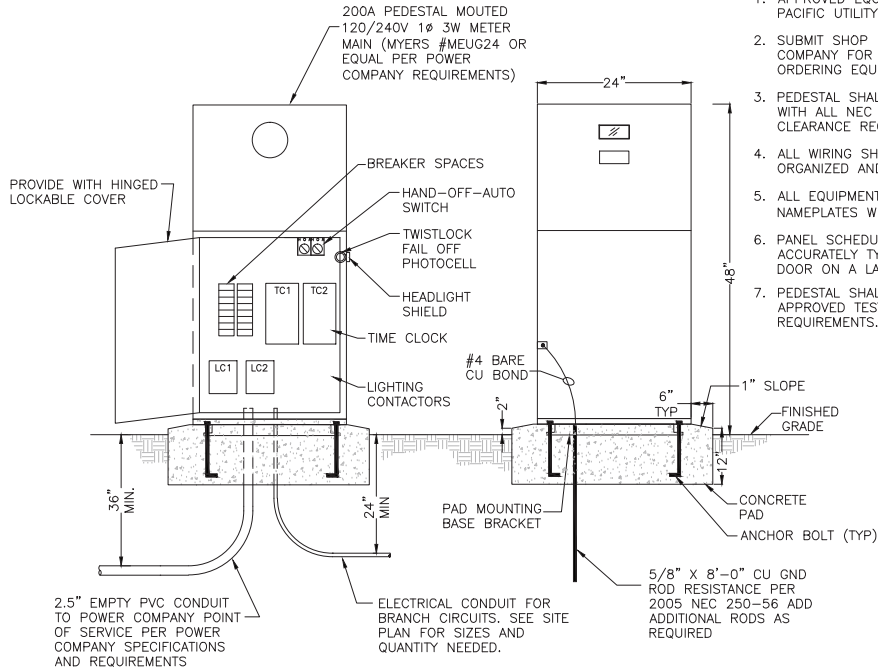
DR: KDM	DES: CMT	CHK: RSW	SHEET NO:	TOTAL SHEETS
DATE: 4/13	DATE: 4/13	DATE: 4/13	62	68

SE-6

NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE



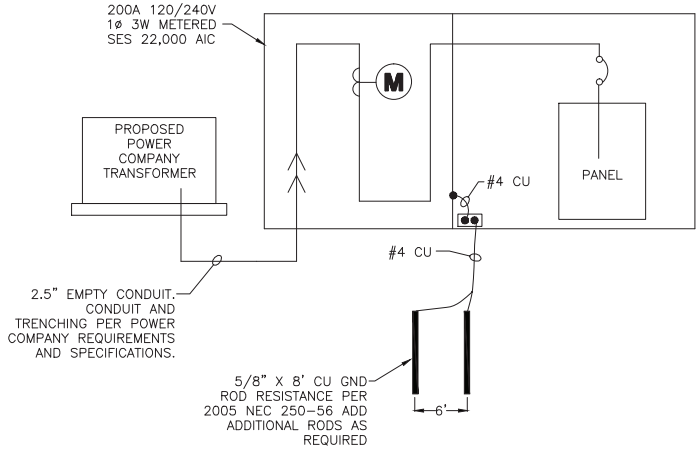
PEDESTAL NOTES

1. APPROVED EQUAL MANUFACTURERS: MILBANK, PACIFIC UTILITY PRODUCTS
2. SUBMIT SHOP DRAWINGS TO POWER COMPANY FOR APPROVAL PRIOR TO ORDERING EQUIPMENT.
3. PEDESTAL SHALL BE INSTALLED IN ACCORDANCE WITH ALL NEC CODE AND POWER COMPANY CLEARANCE REQUIREMENTS.
4. ALL WIRING SHALL BE INSTALLED IN AN ORGANIZED AND NEAT MANNER.
5. ALL EQUIPMENT SHALL HAVE LAMICOID NAMEPLATES WITH 1/4" LETTERING.
6. PANEL SCHEDULE SHALL BE NEATLY & ACCURATELY TYPED AND PLACED ON THE INSIDE DOOR ON A LAMINATED SHEET.
7. PEDESTAL SHALL BE COMMERCIAL RATED WITH APPROVED TEST BLOCKS PER POWER COMPANY REQUIREMENTS.

5 PEDESTAL MOUNTED SERVICE DETAIL

NO SCALE

120/240V 1Ø 3W

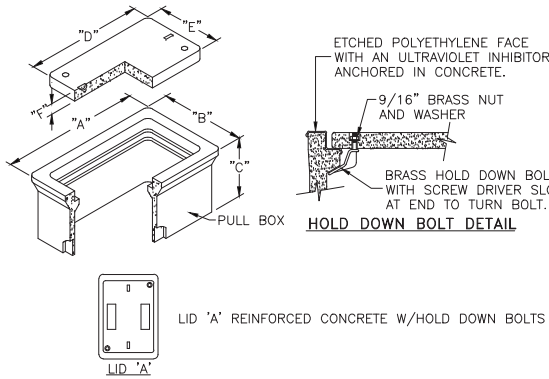


6 SINGLE LINE DIAGRAM

NO SCALE

120/240V 1Ø 3W

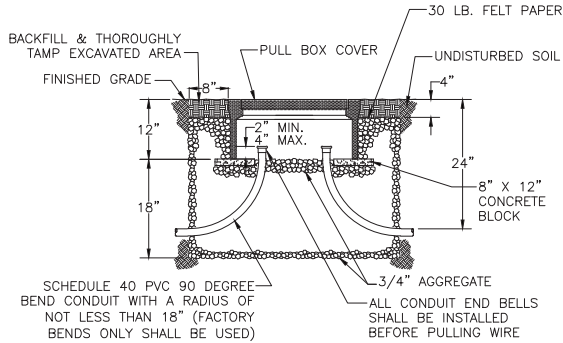
PANEL NAME: A			120/240V, 1Ø, 3W			200A MAIN BKR		
LOCATION: SES ON 114TH AVE			TYPE: PLUG IN			PEDESTAL MTD., NEMA 3R		
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	AØ	BØ	LOAD	DESCRIPTION	BKR SIZE
1	20/	STREET/PEDESTRIAN LIGHTING - 114TH AVE*	1577	3017		1440	RECEPT. 114TH AVE - EAST	20/1
3	/2		1577		3017	1440	RECEPT. 114TH AVE - EAST	20/1
5	20/	STREET/PEDESTRIAN LIGHTING - PARK AVE*	1890	3690		1800	RECEPT. 114TH AVE - WEST	20/1
7	/2		1890		3690	1800	RECEPT. 114TH AVE - WEST	20/1
9	20/		743	2183		1440	RECEPT. OPEN SPACE	20/1
11	/2	PARKING LOT LIGHTING*	743		2543	1800	RECEPT. PARK AVE - WEST	20/1
13	20/1	SPARE	0	1440		1440	RECEPT. PARK AVE - WEST	20/1
15	20/1	SPARE	0		1440	1440	RECEPT. PARK AVE - EAST	20/1
17		BUSSED SPACE	0	720		720	RECEPT. PARK AVE - EAST	20/1
19		BUSSED SPACE	0		0	0	BUSSED SPACE	20
21		BUSSED SPACE	0	0		0	BUSSED SPACE	22
23		BUSSED SPACE	0		0	0	BUSSED SPACE	24
25		BUSSED SPACE	0	0		0	BUSSED SPACE	26
27		BUSSED SPACE	0		600	600	LOW VOLTAGE XFMR	20/1
29		BUSSED SPACE	0	200		200	LIGHTING CONTROL	20/1
CODE TOTAL VA/Ø			11250	11290	*INDICATES LOAD @ 125%			
CODE TOTAL AMPS/Ø			93.8	94.1	22,000 AIC BREAKERS			



DATA TABLE						
PULLBOX TYPE	PULLBOX LENGTH	PULLBOX WIDTH	PULLBOX HEIGHT	LID LENGTH	LID WIDTH	LID HEIGHT
#3 1/2	19-3/4"	14-1/4"	12"	15-1/4"	10"	1-3/4"
#5	25-1/4"	15-3/4"	12"	20-5/8"	10-1/2"	2"
#7	34-3/4"	21-3/4"	12"	30-1/8"	17-5/8"	2"

7 PULL BOX INSTALLATION

NO SCALE



GENERAL NOTES:

1. THE PULL BOX SHALL BE MADE OF A HIGH DENSITY REINFORCED CONCRETE MATERIAL WITH END AND SIDE KNOCKOUTS, AND NONSETTLING SHOULDERS TO MAINTAIN GRADE, MANUFACTURED WITH APPROXIMATE DIMENSIONS AS SHOWN.
2. STEEL REINFORCEMENT SHALL BE AS REGULARLY USED IN STANDARD PRODUCTS OF THE RESPECTIVE MANUFACTURER.
3. COVER LETTERING SHALL BE 1" LETTERS CAST IN STANDARD MARKINGS: "ELECTRIC" OR "HIGH VOLTAGE", AS REQUIRED.
4. THE PULL BOX SHALL HAVE AN ETCHED POLYETHYLENE FACE WITH AN ULTRAVIOLET INHIBITOR ANCHORED IN CONCRETE.
5. ALL CABLE AND CONDUCTOR SPLICES SHALL BE CONNECTED AND INSULATED WITH A TYCO ELECTRONICS GELCAP-SL OR CONNECTED WITH COPPER COMPRESSION H-TAP CONDUCTOR OR APPROVED EQUAL AND INSULATED WITH A 3M SCOTCHCAST SPLICE KIT 85 SERIES OR TYCO ELECTRONICS GELCAP OR APPROVED EQUAL.



**RITTOCH-POWELL
& ASSOCIATES**

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CITY OF AVONDALE, ARIZONA
ENGINEERING DEPARTMENT

ELECTRICAL DETAILS

CITY CENTER PHASE III
OFFSITE IMPROVEMENT PLANS

DR: KDM	DES: CMT	CHK: RSW	SHEET NO:	TOTAL SHEETS
DATE: 4/13	DATE: 4/13	DATE: 4/13	63	68

SE-7

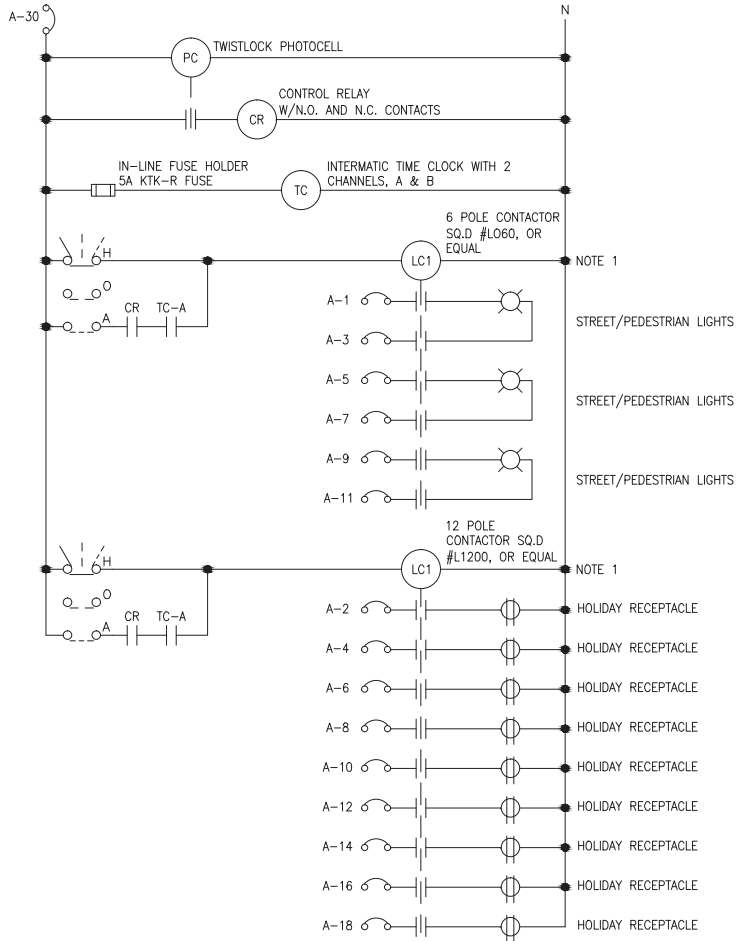
NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

NO.	DESCRIPTION	REV BY	CHK BY	DATE

WIRE & CONDUIT TABLE

NO.	CONDUIT	SIZE	POWER	WIRE	GROUND	REMARKS
50	1"	2-#12	1-#12	TYP.		
51	1"	2-#10	1-#10	TYP.		
52	1"	2-#8	1-#8	TYP.		
53	1"	2-#6	1-#6	TYP.		
100	1.5"	2-#6	1-#2	A(5,7)		
		2-#2		A-18		
101	1.5"	2-#4	1-#2	A(5,7)		
		2-#2		A-18		
102	2"	2-#4	1-#1	A(5,7)		
		2-#2		A-18		
		2-#1		A-16		
103	1"	2-#4	1-#4	A(5,7)		
		2-#2	1-#1	A-18		
		2-#1		A-16		
		2-#1		A-10		
104	1.5"	2-#8	1-#1	A(5,7)		
		2-#1		A-14		
105	2"	2-#8	1-#1	A(5,7)		
		2-#1		A-14		
		2-#1		A-12		
106	1"	2-#4	1-#4	A(5,7)		
		2-#1	1-#1	A-18		
		2-#1		A-10		
	2.5"	2-#1/0	1-#1/0	A-16		
		2-#1/0		A-14		
		2-#1/0		A-12		
107	1.5"	2-#8	1-#1	A(1,3)		
		2-#1		A-8		
108	2"	2-#8	1-#1	A(1,3)		
		2-#1		A-8		
		2-#2		A-6		
109	1.25"	2-#4	1-#4	A(5,7)		
		2-#8		A(1,3)		
	2.5"	2-#1	1-#1	A-18		
		2-#1		A-10		
		2-#1		A-8		
		2-#2		A-6		
	2.5"	2-#1/0	1-#1/0	A-16		
		2-#1/0		A-14		
		2-#1/0		A-12		
110	1.25"	2-#2	1-#2	A(5,7)		
		2-#8		A(1,3)		
		2-#6		A-4		
	2.5"	2-#1	1-#1	A-18		
		2-#1		A-10		
		2-#1		A-8		
		2-#2		A-6		
	2.5"	2-#1/0	1-#1/0	A-16		
		2-#1/0		A-14		
		2-#1/0		A-12		
111	1.5"	2-#2	1-#2	A(5,7)		
		2-#8		A(1,3)		
		2-#6		A-4		
		2-#10		A-2		
	2.5"	2-#1	1-#1	A-18		
		2-#1		A-10		
		2-#1		A-8		
		2-#2		A-6		
	2.5"	2-#1/0	1-#1/0	A-16		
		2-#1/0		A-14		
		2-#1/0		A-12		
112	1"	2-#8	1-#8	A(1,3)		
		2-#10		A-2		



CONTROL SCHEMATIC LEGEND

- HAND-OFF-AUTO SWITCH
- PHOTOCELL RELAY
- CONTROL RELAY
- TIME CLOCK
- LIGHTING CONTACTOR
- TIME DELAY RELAY
- N.O. NORMALLY OPEN CONTACT
- N.C. NORMALLY CLOSED CONTACT
- CIRCUIT BREAKER
- REMOTE CONNECTION POINT

CONTROLLER NOTES

- THIS CIRCUIT TO BE ACTIVATED FROM DUSK TO DAWN.
- THIS CIRCUIT TO BE ACTIVATED AT DUSK AND SHUT OFF AT 10:30 PM.
- THIS CIRCUIT TO BE ACTIVATED AT DAWN AND SHUT OFF AT 10:30 PM.
- THIS CIRCUIT TO BE ACTIVATED VIA POLE MOUNTED PUSH BUTTON. CIRCUIT WILL BE AVAILABLE FOR USE FROM DUSK TO 10:30 PM.

8 LIGHTING CONTROL SCHEMATIC

NO SCALE

120V



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CITY OF AVONDALE, ARIZONA
ENGINEERING DEPARTMENT

ELECTRICAL DETAILS

CITY CENTER PHASE III

OFFSITE IMPROVEMENT PLANS

DR: KDM	DES: CMT	CK: RSW	SHEET NO:	TOTAL SHEETS
DATE: 4/13	DATE: 4/13	DATE: 4/13	64	68

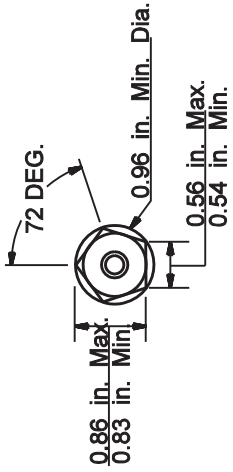
SE-8

68

SRP Stock No.
5034692

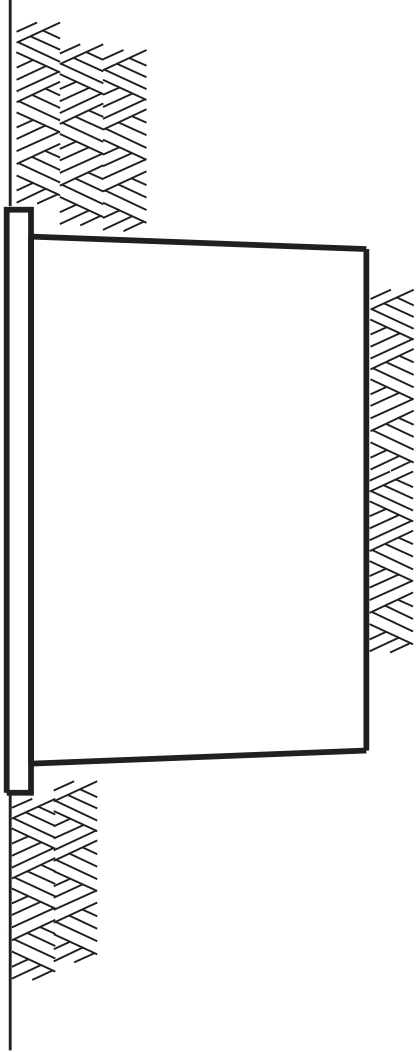
Description

Noun BOX
Adjective JUNCTION
Size 15 X 21 X 12" , WITH LARGE HEAD PENTA BOLTS
Style WORD "ELECTRIC" ON COVER
Special Ref. BOX TO BE POLYMER CONCRETE MATERIAL WITH
POLYMER CONCRETE BOLT DOWN
(NON-CONDUCTIVE COVER).



Penta Head Bolt Detail

FINAL GRADE



FLUSH MOUNTED, BOLT-ON
COMPOSOLITE LID

Approved Suppliers

HUBBEL-LENOIR

ARMORCAST PRODUCTS

CDR SYSTEMS

CARSON & ASSOCIATES

NEWBASIS

Part Number

PC1118B513 BOX, PC1118C504-17/UH0390AA COVER
WITH ELECTRIC

A6001429A

PA40-1015-12

HLW1118-12 BOX, HLW1118-PO LID

PCA111812-00043

REV: CHANGED STOCK CODES.

Electric Service
Specifications

PROPRIETARY MATERIAL

CONTRACTOR-SUPPLIED MATERIAL
JUNCTION BOX 15 X 21 X 12"
SRP STOCK NO. 5034692

11-4

8513E543.DGN

ISSUE DATE: 06/02/04
REV. DATE: 10/22/13
APPROVAL: WEL

CODE	JUNCTION BARS
A	THREE-POSITION MOLDS
B	FIVE-POSITION MOLDS
C	EIGHT-POSITION MOLDS
D	TWO-POSITION GEL PACKS
N	NO CONNECTORS

8663. _ _ _ _

SEE NOTE 9 AND 11
SMALL BOX

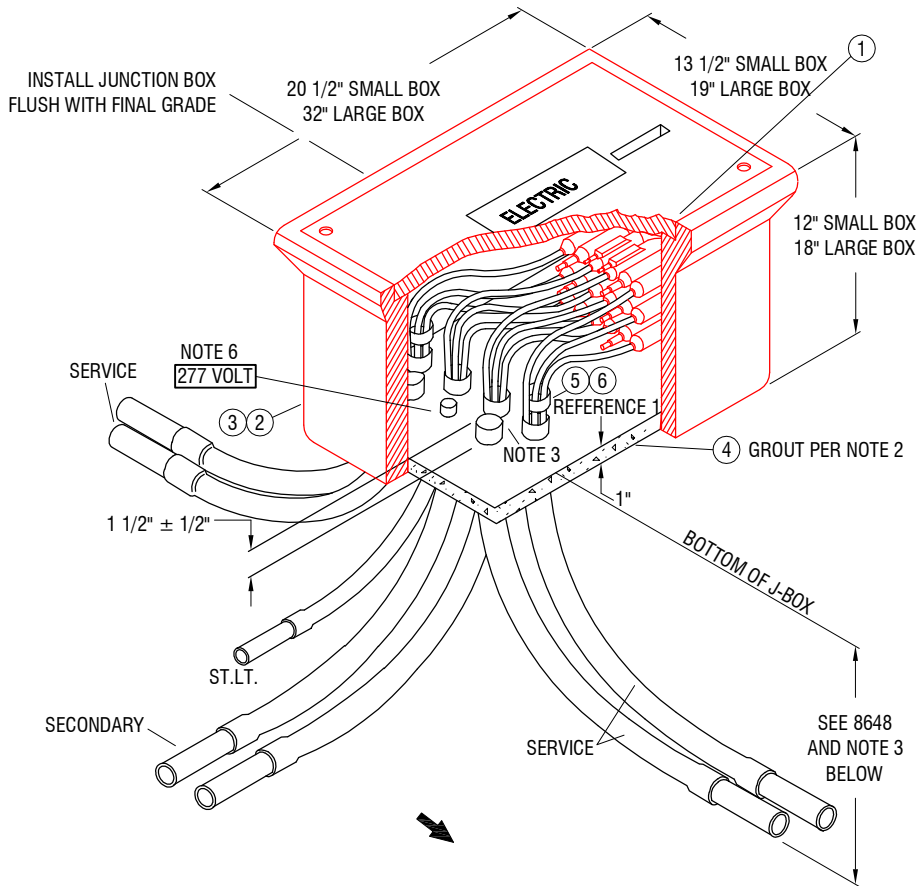
8665. _ _ _ _

SEE NOTE 12
LARGE BOX

IF APPLICABLE
G = APS GROUT PROVIDED

IF APPLICABLE
L = LIGHTS
D = DUSK-TO-DAWN

SECONDARY WIRE CODES
JUNCTION BARS



NOTES:

1. PENTA-HEAD BOLTS SHALL BE INSTALLED PRIOR TO ENERGIZING NEW UNDERGROUND SYSTEMS. LOST OR MISPLACED PENTA-HEAD BOLTS SHALL BE REPLACED WITH APN 71402628.
2. CONCRETE GROUT SHALL BE PREMIX APN 71301280 OR EQUIVALENT.
3. BRING ALL CABLE.CONDUITS AND GROUND RODS INTO THE SAME END OF THE BOX TO ENABLE CABLES TO BE RAISE AND LOWERED EASILY. CONDUIT SWEEPS SHALL BE POSITIONED AND ALIGNED SO THAT WHEN TWO AND FOUR POSITION JUNCTION BARS ARE SPECIFIED, THE ST. LT., SECONDARY AND SERVICE CONDUITS SHALL BE INSTALLED AS SHOWN IN DETAIL "A". WHEN SIX POSITION JUNCTION BARS ARE SPECIFIED, THE ST. LT., SECONDARY AND SERVICE CONDUITS SHALL BE INSTALLED AS SHOWN IN DETAIL "B".
4. COMPACTION AROUND JUNCTION BOX SHALL BE A MINIMUM OF 90 PERCENT.
5. ADDITIONAL TRENCH DEPTH IS USUALLY REQUIRED AT ALL EQUIPMENT LOCATIONS. SEE 8648 FOR THE MINIMUM TRENCH DEPTHS AND THE DEGREE OF SLOPE ALLOWED AS THE TRENCH DEPTH CHANGES.
6. ON 277 VOLT STREET LIGHT CIRCUITS, INSTALL "277 VOLT" RED MICARTA TAG (APN 80796) PROVIDED BY SPEC 8129.
7. TORQUE PENTAHEAD BOLTS PER THE FOLLOWING:
3/8 - 16 UNC 15FT - LBS
1/2 - 13 UNC 40FT - LBS



ARIZONA PUBLIC SERVICE COMPANY
T&D CONSTRUCTION STANDARDS

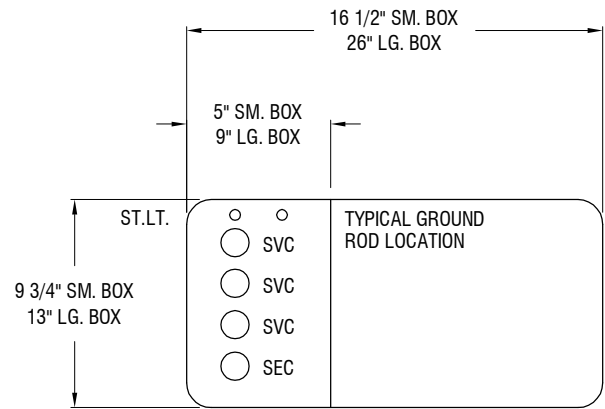
BY	LDR.	MGR.	DATE	REV.
LMO	B. BOOKER	R. CANDRA	12/2015	8

SUBSTRUCTURES
JUNCTION BOX
HEAVY DUTY POLYMER
FOR SECONDARY AND SERVICE

SH 1 OF 2

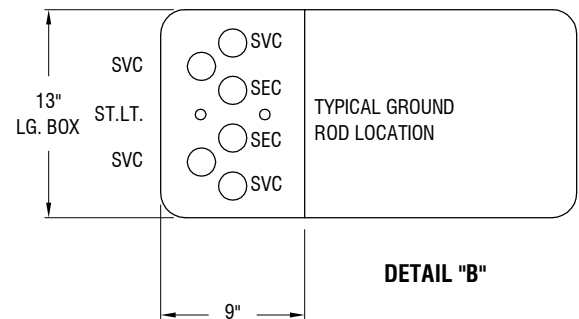
8663
THRU
8665

8. CONDUIT SWEEPS SHALL BE 90 DEGREES.
9. GEL PACK CONNECTORS ARE PREFERRED FOR ALL TWO POSITION APPLICATIONS FOR CABLE SIZES #1/0 AND SMALLER.
10. INSTALLATION OF THIS HEAVY DUTY JUNCTION BOX IS LIMITED TO AREAS SUBJECT TO OCCASIONAL LOAD SUCH AS IN SIDEWALKS ADJACENT TO STREETS AND RAISED ISLANDS IN THE CENTER OF STREETS. THIS JUNCTION BOX SHALL NOT BE INSTALLED IN VEHICULAR TRAFFIC AREAS.
11. THE SMALL JUNCTION BOX IS SUITABLE FOR USE WITH THREE (INCLUDES ST LT CONDUIT) POSITION JUNCTION BOX. CONDUIT POSITIONS ENTERING THE JUNCTION BOX SHALL BE LIMITED TO THREE OR LESS. THIS BOX IS RECOMMENDED FOR SECONDARY/SERVICE CABLE #1/0 AND SLAMMER. USE THE LARGER JUNCTION BOX FOR #4/0 AND LARGER CABLE.
12. THE LARGE JUNCTION BOX IS SUITABLE FOR USE WITH THE THREE-FIVE-OR EITHER POSITION JUNCTION BARS. WHEN FIVE (INCLUDES ST LT CONDUIT) OR MORE CONDUIT POSITIONS WILL BE ENTERING THE J-BOX, THE LARGE JUNCTION BOX IS PREFERABLE. THIS BOX IS RECOMMENDED FOR SECONDARY/SERVICE CABLE 500 KCMIL AL AND SMALLER.
13. AN ELECTRONIC MARKER IS PROVIDED WITH THE J-BOX. THE MARKER IS SCREWED INTO THE J-BOX LID.
14. THIS SPEC WILL NOT AUTOMATICALLY SUPPLY GROUT FROM APS. THE LETTER "G" MUST BE PLACED AT THE END OF THE CODE FOR THE GROUT TO BE SUPPLIED BY APS AND TO BE ORDERED ON THE BILL OF MATERIALS.
15. FOR 277 VOLT STREET LIGHT CIRCUITS, THE "277 VOLT" RED MICARTA TAGS (APN 00080796) ARE PROVIDED BY SPEC 8129.
16. SEE 1226 FOR CABLE MARKER IDENTIFICATION REQUIREMENTS.



DETAIL "A"

SPACE ALLOTMENT FOR
CONDUITS AND GROUND ROD
NOTE 3

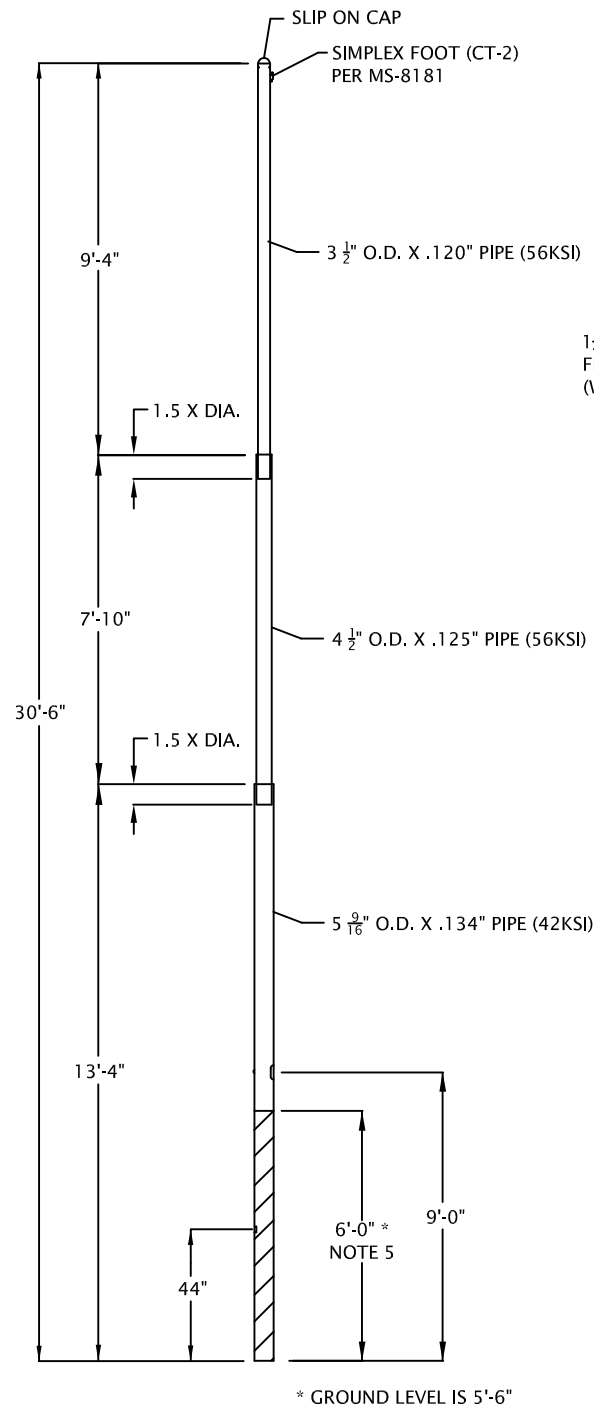


DETAIL "B"

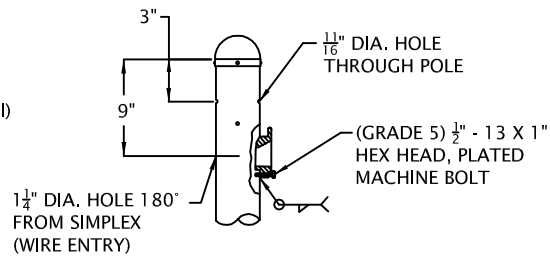
SPACE ALLOTMENT FOR
CONDUITS AND GROUND ROD
NOTE 3

CODE	8663	8665	MATERIAL LIST	
ITEM	QTY	QTY	DESCRIPTION	APN
1	VAR	VAR	BAR INSUL - SEE 2508 AND 2725-29	
2	1	-	BOX JUNCTION 11"X18"X12"	33100965
3	-	1	BOX JUNCTION 17"X30"X18"	33100976
4	VAR	VAR	CONCRETE PRE-MIX 25#	71301280
5	VAR	VAR	RING PVC SEC SERVICE ID	72202162
6	VAR	VAR	TIE CABLE MAX 2 IN OD	00103864

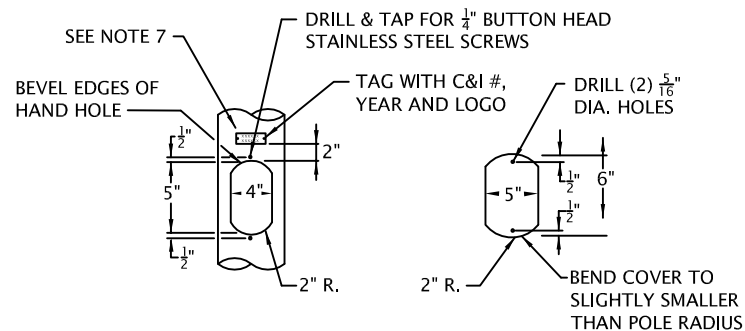




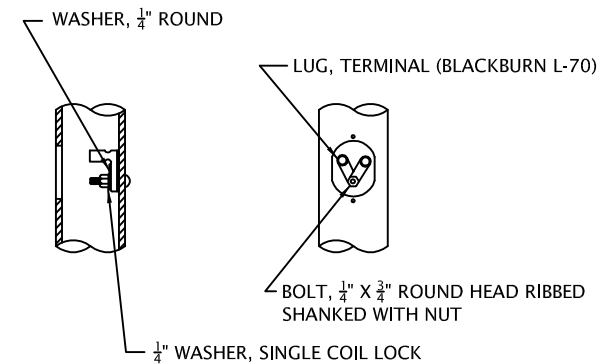
* GROUND LEVEL IS 5'-6"



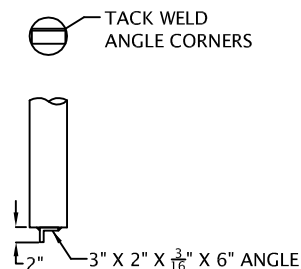
POLE TOP DETAIL



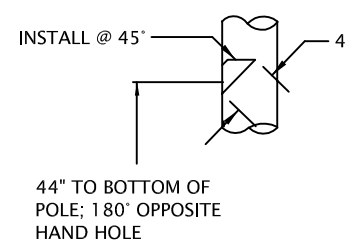
HAND HOLE DETAIL



GROUNDING DETAIL



POLE BOTTOM DETAIL



CONDUIT ENTRANCE DETAIL

NOTE 1

NOTES:

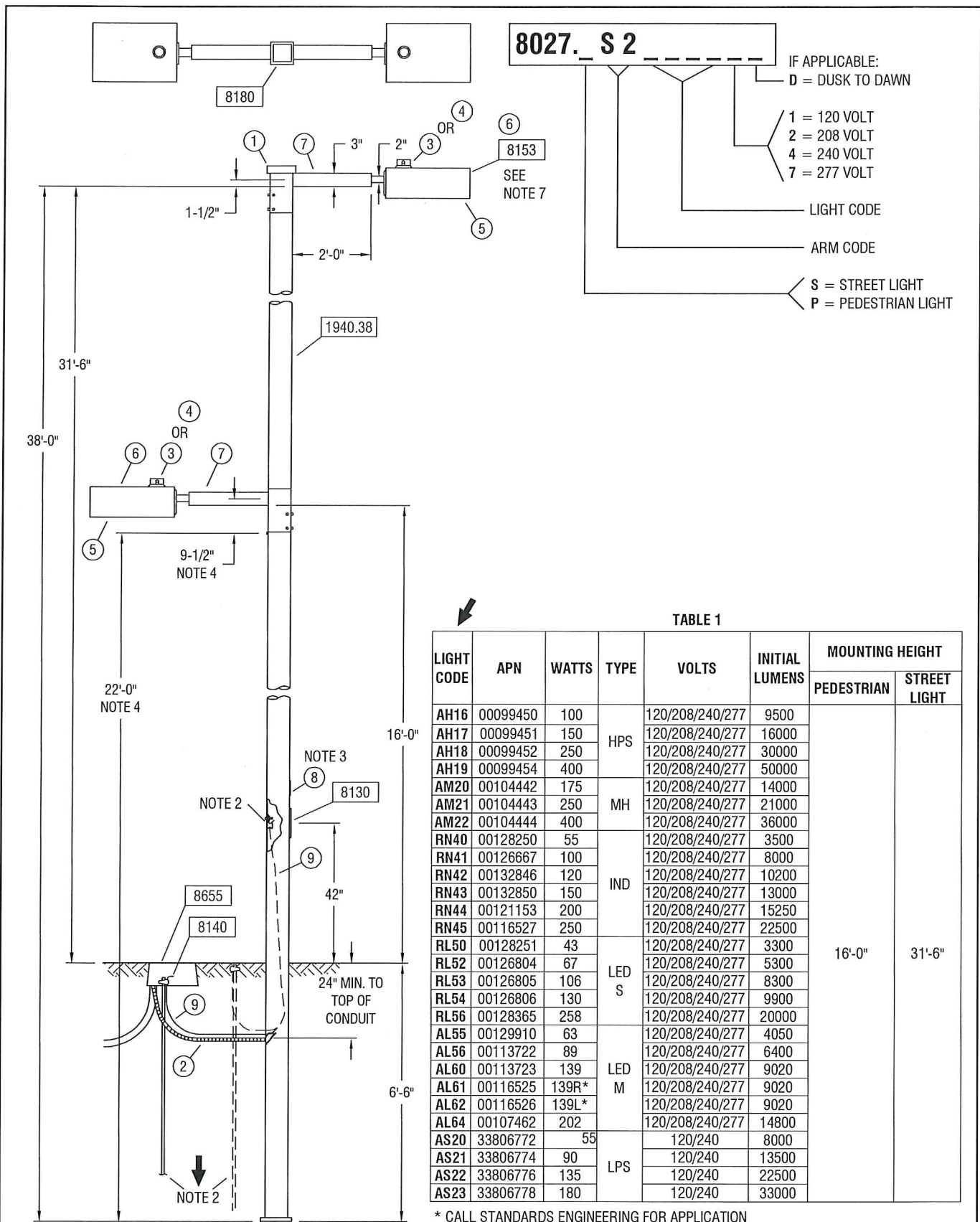
1. CONDUIT ENTRANCE TO BE MADE OF 1 1/2" MIN. I.D. PIPE. IT SHALL BE FLUSH WITH THE FACE OF THE POLE AND WELDED AT A 45° ANGLE. REMOVE ALL BURRS.
2. THE HAND HOLE TO BE 3" X 5" WITH 1 1/2" RADII. THE HAND HOLE COVER PLATE TO BE 4" X 6" 16 GAUGE WITH 2" RADII AND BEND TO SLIGHTLY SMALLER RADIUS THAN THE POLE. THE COVER IS TO BE SECURED WITH (2) 1/4" STAINLESS STEEL BUTTON HEAD SCREWS, SUPPLIED BY MANUFACTURER.
3. AFTER FABRICATION THE POLE SHALL BE SANDBLASTED TO REMOVE ALL LOOSE SCALE, RUST, CORROSION PRODUCTS, GREASE, DIRT AND OTHER FOREIGN PRODUCTS. CLEAN POLE TO A MINIMUM OF "COMMERCIAL GRADE" SSPC SP-6.
4. AFTER SANDBLASTING, THE POLE SHALL BE GALVANIZED. THE GALVANIZING SHALL CONFORM WITH ASTM A123, LATEST EDITION, ZINC (HOT GALVANIZED) COATING IN PRODUCTS FABRICATED FROM ROLLED, PRESSED, AND FORGED STEELS, PLATES, BARS, AND STRIPS AND APS "GUIDELINES FOR THE GALVANIZING OF TUBULAR TRANSMISSION POLES."
5. BOTTOM 6' SHALL BE COATED WITH VEPOK 355 (28 MILS WET, 20 MILS DRY) APPLIED PER MANUFACTURERS RECOMMENDATIONS. AFTER EPOXY HAD DRIED, CONFORMALLY HALF LAP TAPE POLE WITH CORROSION RESISTANT 10 MIL TAPE. THIS TAPE SHALL BE UNIFORM AND WITHOUT FOLDS, WRINKLES OR GAPS.
6. POLE CONFORMS TO STRUCTURAL REQUIREMENTS PER NOTE 6 OF APS EM-339 SPECIFICATION (REV. 4).
7. TAG WITH C & I #337-1415, YEAR MANUFACTURED & MANUFACTURES LOGO.

JOB NAME:

30' 6" ORNAMENTAL STEEL POLE
MS - 1936

DRAWING NAME:
MS-1936.DWG

DATE:
03/12/2008



* CALL STANDARDS ENGINEERING FOR APPLICATION

NOTES:

1. ADJUST PHOTO EYE TO FACE NORTH.
2. A GROUND ROD IS PROVIDED WITH THE J-BOX. WHERE A GROUND ROD CAN NOT BE DRIVEN ALTERNATE GROUND SHALL BE USED. SEE 2449 THRU 2460 FOR APPROVED ALTERNATES. CUSTOMER OWNED EQUIPMENT MAY REQUIRE THE GROUND ROD INSTALLED NEXT TO THE POLE.
3. SIGN, "NOTICE THIS POLE IS OWNED AND MAINTAINED BY APS. DISCONNECT INSIDE", IS REQUIRED ON ALL DUSK-TO-DAWN AND AREA LIGHTING APPLICATIONS.
4. DRILL A 1" HOLE, 9-1/2" UP FROM THE CAP SCREW FOR PEDESTRIAN LIGHT WIRE ENTRANCE. THE CAP SCREW INSTALLED BY THE MANUFACTURER SHOULD BE AT 22'-0" FROM THE BUT OR 14'-4" FROM CENTER OF HANDHOLE.
5. POLES THAT HAVE MORE THAN ONE LUMINAIRE REQUIRE A SEPARATE CIRCUIT WITH FUSING FROM THE J-BOX TO EACH LUMINAIRE.
6. THE BROWN PHOTO CONTROL IS A FAIL OFF CONTROL AND SHALL BE USED WITH ALL INDUCTION AND LED LUMINAIRES.
7. THE LUMINAIRE SHOWN IS RECOMMENDED FOR THIS MOUNTING HEIGHT. SEE 8153 FOR ADDITIONAL BROWN ARCHITECTURAL LUMINAIRES.
8. TO ACCOMMODATE LESS THAN THE SPECIFIED LUMINAIRE MOUNTING HEIGHT, A SHOP ORDER IS REQUIRED TO HAVE A PORTION FROM THE TOP OF THE POLE CUT OFF. THE TENON ARM BRACKET SLIDES OVER AND COVERS THE CUT PORTION OF THE POLE.
9. IN-LINE FUSE FOR UNDERGROUND FEEDS, SEE 8130 - 8140.
10. FOR PEDESTRIAN ONLY APPLICATIONS SEE 8030.
11. ON 277 VOLT STREET LIGHT CIRCUITS, INSTALL A "277 VOLT" MICARTA TAG ON CABLE IN J-BOX. TAG PROVIDED BY SPEC 8129.

CODE	8027.S	8027.P	MATERIAL LIST	
ITEM	QTY	QTY	DESCRIPTION	APN
1	1	1	CAP STLT SQ-P 5.5" ARM	00100036
2	10	-	CONDUIT 1" PVC FLEX CORR	32900891
3	1	1	CONTROL PHOTO MULTI BLACK	00063965
4	VAR	VAR	CONTROL PHOTO MULTI BR-20	00073241
5	1	1	LAMP - SEE 8146 - 8171	
6	1	1	LUMINAIRE - SEE TABLE 1	
7	1	1	MAST ARM STLT 3" SQX 2" SGL	33701116
8	1	-	SIGN POLE OWNED BY APS	00050092
9	10	-	WIRE BARE #6 SOLID CU	33007580



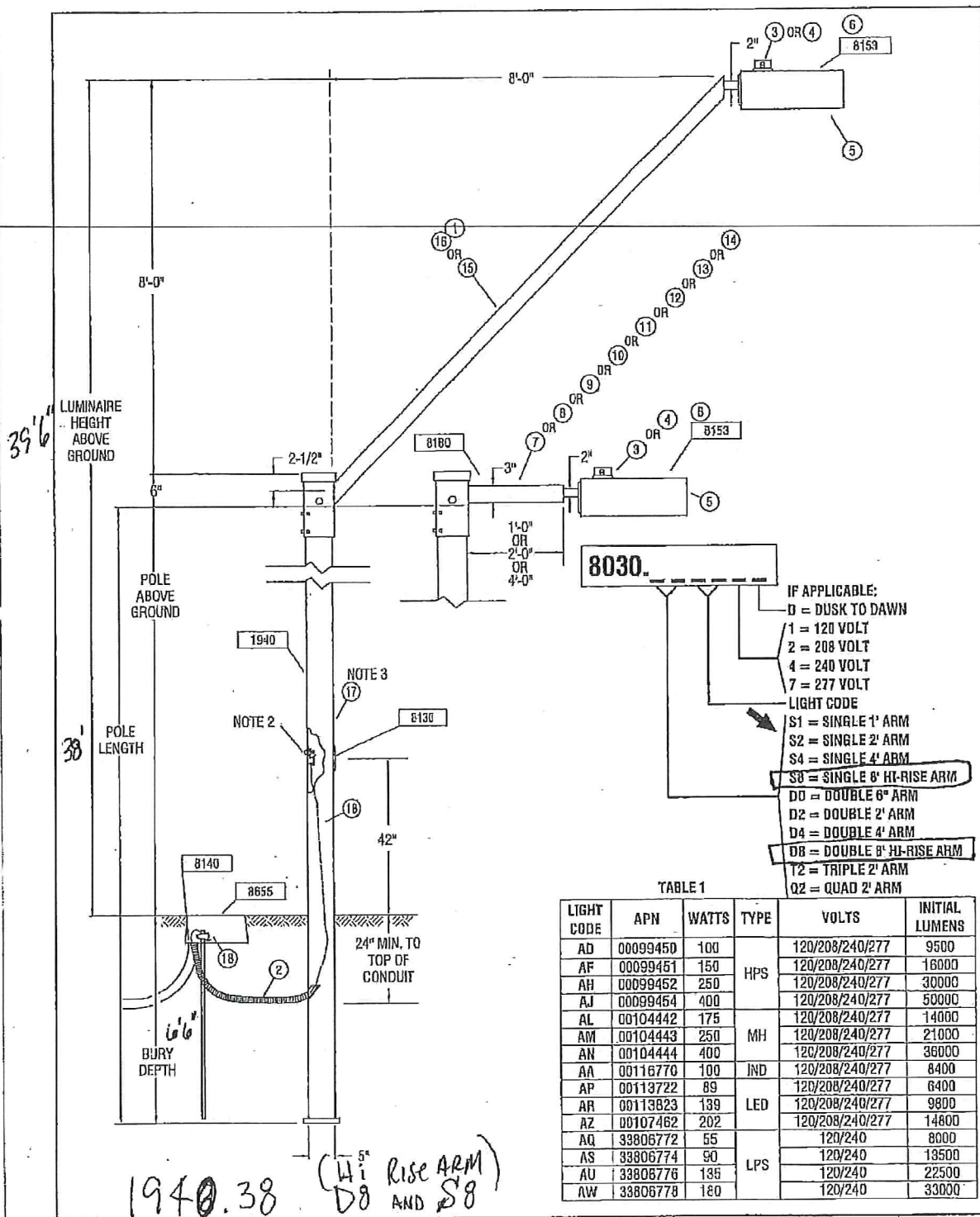
ARIZONA PUBLIC SERVICE COMPANY
T&D CONSTRUCTION STANDARDS

BY	LDR.	MGR.	DATE	REV.
KLS	B. BOOKER	D. LAMONTAGNE	07/2013	8

LIGHTS
ARCHITECTURAL ON
38'-0" SQUARE BROWN PAINTED STEEL POLE
WITH 2'-0" ARM WITH PEDESTRIAN

SH 2 OF 2

8027



aps ARIZONA PUBLIC SERVICE COMPANY
T&D CONSTRUCTION STANDARDS

BY	LDR.	MGR.	DATE	REV.
KLS	B. BOOKER	D. LAMONTAGNE	10/2011	10

LIGHTS
ARCHITECTURAL ON
5" SQUARE BROWN PAINTED STEEL POLE
DIRECT BURY

SH 1 OF 2

8030

POLE TOP OPTIONS:
 OPEN TOP
 SIDE DRILL
 TENON
 TENON @ 90°
 OTHER

REPLACE CHART TO RIGHT
 WITH COMPLETE CHART
 FROM 8'-40' AS SHOWN ON
 ATTACHED SQUARE POLE
 EPA CHART

SEE POLE SHAFT
 INFORMATION

REINFORCED
 HANDHOLE
 WITH COVER

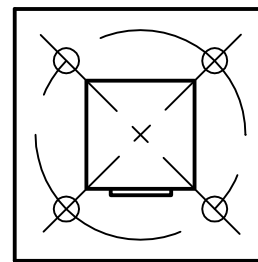
FULL 2 PIECE BASE COVER

4 - SEE ANCHOR BOLTS
 INFORMATION

BASE DETAIL

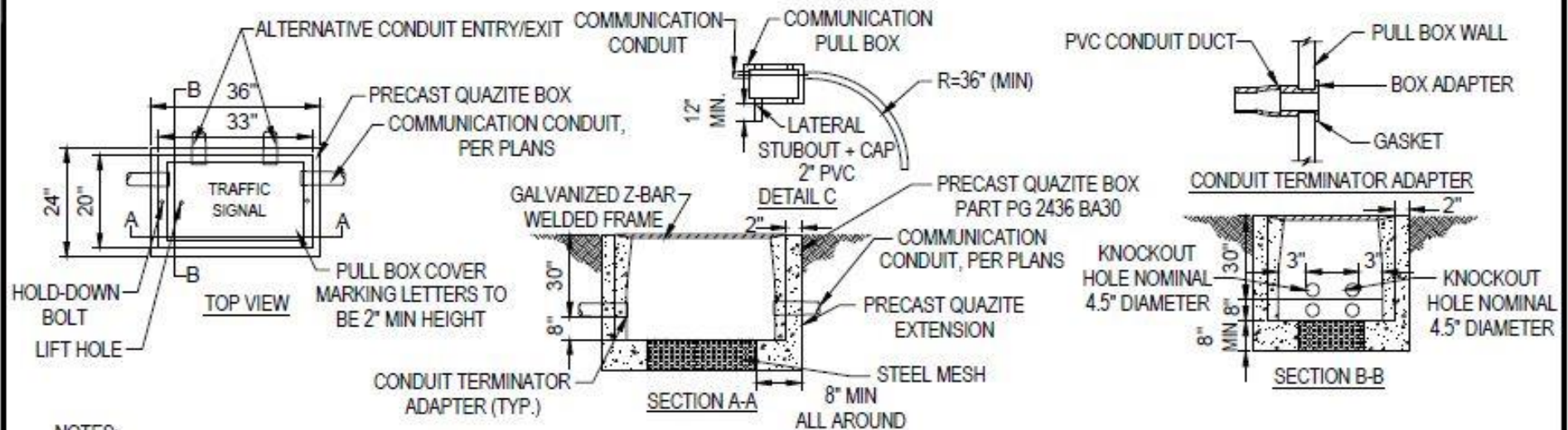
Square Non-Tapered Steel

Nominal Mtg. Height (ft)	Pole Shaft Information			Pole Base Plate			Anchor Bolts	80 MPH with	90 MPH with	100 MPH with 1.3
	Pole Specification Number	Pole O.D. (in)	Wall Thk. (in)	Thk. (in)	Sq. (in)	Bolt Circle Dia. (in)	Dia. X Lgth. X Hook (in)	Max. EPA (ft ²)	Max. EPA (ft ²)	Max. EPA (ft ²)
25	CSB88411-25	4	0.120	0.75	8	8	.75 X 18 X 3	5.4	2.8	-
	CSB88407-25	4	0.188	0.75	8	8	.75 X 18 X 3	5.9	3.4	-
	CSB88407-25A	4	0.188	1	8	8	1 X 24 X 4	11.1	7.5	5
	CSB88511-25	5	0.120	0.75	10	10.5	.75 X 18 X 3	8.1	4.8	2.4
	CSB88507-25	5	0.188	1	10	10.5	1 X 24 X 4	20.2	14.3	10.1
	CSB88607-25	6	0.188	1	12	12.5	1 X 24 X 4	24.3	17.3	12.3
27'6"	CSB88407-27.5	4	0.188	1	8	8	1 X 24 X 4	9	5.7	3.4
	CSB88511-27.5	5	0.120	1	10	10.5	1 X 24 X 4	8.4	5.3	2.7
	CSB88507-27.5	5	0.188	1	10	10.5	1 X 24 X 4	16.9	11.5	7.8
	CSB88607-27.5	6	0.188	1	12	12.5	1 X 24 X 4	20.4	14	9.5
30	CSB88407-30	4	0.188	1	8	8	1 X 24 X 4	7.1	4.1	2.3
	CSB88511-30	5	0.120	1	10	10.5	1 X 24 X 4	6.4	3.2	-
	CSB88507-30	5	0.188	1	10	10.5	1 X 24 X 4	14	9.1	5.6
	CSB88607-30	6	0.188	1	12	12.5	1 X 24 X 4	17	11.1	7
35	CSB88507-35	5	0.188	1	10	10.5	1 X 24 X 4	9.2	5	2
	CSB88607-35	6	0.188	1	12	12.5	1 X 24 X 4	11.2	6.2	2.6
	CSB88607A-35	6	0.188	1.25	12	12.5	1.25 X 44 X 4	14	8.5	4.5
	CSB88603-35	6	0.250	1.25	12	12.5	1.25 X 44 X 4	23.2	17.1	11.7
40	CSB88607-40	6	0.188	1	12	12.5	1 X 24 X 4	6.4	2	-
	CSB88607-40A	6	0.188	1.25	12	12.5	1.25 X 44 X 4	8.9	4	-
	CSB88603-40	6	0.250	1.25	12	12.5	1.25 X 44 X 4	12.6	7	2.9



SEE POLE BASE INFORMATION

**SQUARE POLE
 CSB SERIES**



NOTES:

- PULLBOX SHALL BE PROVIDED WITH COVER AND SPECIAL CONCRETE FOOTING. COVER SHALL BE FIBERLYTE OR SEE COA APPROVED PRODUCTS LIST AND SHALL HAVE EMBOSSED NO-SKID PATTERN AND BE LABELED "TRAFFIC SIGNAL".
- TOPS OF PULLBOXES SHALL BE FLUSH WITH SURROUNDING GRADE OR TOP OR ADJACENT CURB, EXCEPT IN UNPAVED AREAS WHERE PULLBOX IS NOT IMMEDIATELY ADJACENT TO AND PROTECTED BY A CONCRETE FOUNDATION, POLE OR OTHER PROTECTIVE CONSTRUCTION, THE BOX SHALL BE PLACED WITH ITS TOP 0.75 INCH ABOVE SURROUND GRADE. WHERE PRACTICAL, PULLBOXES SHOWN IN THE VICINITY OF CURBS SHALL BE PLACED ADJACENT TO THE BACK OF CURB, AND PULLBOXES SHOWN ADJACENT TO STANDARDS SHALL BE PLACED ON SIDE OF FOUNDATION FACING AWAY FROM TRAFFIC, UNLESS OTHERWISE NOTED.
- ALL COVERS SHALL BE INTERCHANGEABLE BETWEEN BOXES. TOP OUTSIDE EDGE OF ALL CONCRETE COVERS AND PULLBOXES SHALL HAVE A 0.25 INCH MIN. RADIUS.
- WHEN PULLBOX IS INSTALLED IN SIDEWALK AREA, THE DEPTH OF THE BOX SHALL BE ADJUSTED SO THAT THE TOP OF THE BOX IS FLUSH WITH THE TOP OF THE SIDEWALK.
- PULLBOX SHALL NOT BE WITHIN THE BOUNDARIES OF NEW OR EXISTING WHEELCHAIR RAMPS.
- ALL BENDS SHALL BE FACTORY BENDS.
- CONTRACTOR SHALL ADAPT CONDUIT STUBOUTS FOR SPECIFIC PROJECT REQUIREMENTS FOR SPECIFIC PROJECT REQUIREMENTS. AS A MINIMUM, ONE 2-INCH CONDUIT SHALL BE STUBBED OUT AND CAPPED FOR FUTURE CITY OF AVONDALE USE.
- ADDITIONAL CONDUIT ENTRANCES AS SHOWN ON PLANS.
- THERE SHALL NOT BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL) IN EITHER CONDUIT DUCT BETWEEN ENTRANCE LOCATIONS (PULLBOXES AND/OR VAULTS).
- PULLBOX SHALL BE FURNISHED WITH FOUR KNOCKOUTS PER SHORT SIDE AND SIX KNOCKOUTS PER LONG SIDE.
- ADDITIONAL CONDUIT ENTRANCES AS SHOWN ON PLANS.
- SEE SPECIAL PROVISIONS REGARDING HOLD DOWN BOLTS FOR TRAFFIC COVERS.
- TERMINATORS FOR COMMUNICATION DUCTS AND LATERAL STUBOUTS MAY BE PROVIDED INSTEAD OF KNOCKOUTS. WHEN KNOCKOUTS ARE USED, SPECIAL CONDUIT TERMINATORS SHALL BE PROVIDED PER THE SPECIAL PROVISIONS.
- ALL DIMENSIONS ARE NOMINAL AND SHALL BE CONSIDERED MINIMUM. VARIATIONS ARE ALLOWABLE.
- ALL CONDUITS SHALL BE SEALED WITH COMPATIBLE SEALANT.
- ALL GROUND CONNECTIONS SHALL BE COATED WITH OXIDATION PROHIBITING COMPOUND.
- ALL CABLE STRAPS SHALL BE DESIGNED TO WITHSTAND ULTRAVIOLET EXPOSURE.
- PULL BOXES SHALL BE SPACED EVERY 250 LINEAR FEET.

DETAIL NO.

A1710

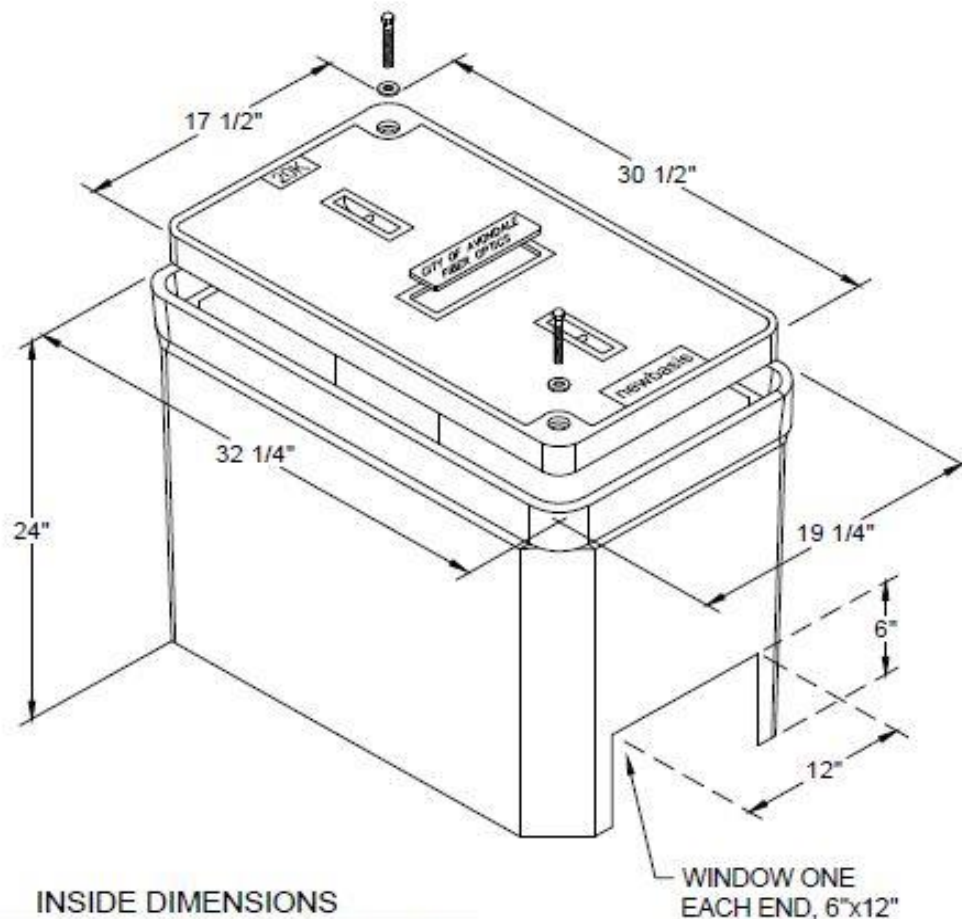
Avondale
STANDARD DETAIL

TRAFFIC SIGNAL JUNCTION BOX DETAIL

APPROVED BY:

DATE:

8-24-16



INSIDE DIMENSIONS

LENGTH	WIDTH	DEPTH
29 1/4"	16 1/4"	22"

NOTES:

1. TOPS OF PULL BOXS SHALL BE FLUSH WITH SURROUNDING GRADE OR TOP OF ADJACENT CURB, EXCEPT IN UNPAVED AREAS WHERE PULL BOX IS NOT IMMEDIATELY ADJACENT TO AND PROTECTED BY A CONCRETE FOUNDATION, POLE OR OTHER PROTECTIVE CONSTRUCTION, THE PULL BOX SHALL BE PLACED WITH ITS TOP 0.75 INCH ABOVE SURROUNDING GRADE. WHERE PRACTICAL, PULL BOXS SHOWN IN THE VICINITY OF CURBS SHALL BE PLACED ADJACENT TO THE BACK OF CURB, AND PULL BOXES SHOWN ADJACENT TO POLES SHALL BE PLACED ON SIDE OF FOUNDATION FACING AWAY FROM TRAFFIC, UNLESS OTHERWISE NOTED.
2. WHEN PULL BOX IS INSTALLED IN SIDEWALK AREA, THE DEPTH OF THE BOX SHALL BE ADJUSTED SO THAT THE TOP OF THE BOX IS FLUSH WITH THE TOP OF THE SIDEWALK.
3. PULL BOX SHALL NOT BE WITHIN THE BOUNDARIES OF NEW OR EXISTING WHEELCHAIR RAMP.
4. CONTRACTOR SHALL ADAPT CONDUIT STUBOUTS FOR SPECIFIC PROJECT REQUIREMENTS FOR SPECIFIC PROJECT REQUIREMENTS. AS A MINIMUM, ONE 2-INCH CONDUIT SHALL BE STUBBED OUT AND CAPPED FOR FUTURE CITY OF AVONDALE USE.
5. ALL DIMENSIONS ARE NOMINAL AND SHALL BE CONSIDERED MINIMUM. VARIATIONS ARE ALLOWABLE.
6. ALL CONDUITS SHALL BE SEALED WITH COMPATIBLE SEALANT.
7. ALL CABLE STRAPS SHALL BE DESIGNED TO WITHSTAND ULTRAVIOLET EXPOSURE.
8. PLUG EACH CONDUIT END WITH APPROVED WATERPROOF DUCT PLUG.
9. UNSPLICED CABLE SHALL HAVE 100 FEET OF SLACK CABLE. EXCESS CABLES ARE TO BE COILED AND PLACED INSIDE THE PULL BOX.

DETAIL NO.

A1717

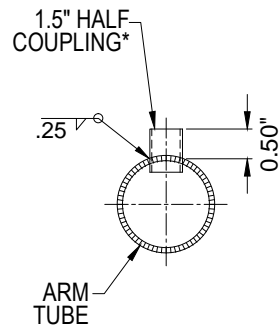
Avondale
STANDARD DETAIL

NO. 7 PULL BOX DETAIL

APPROVED BY:

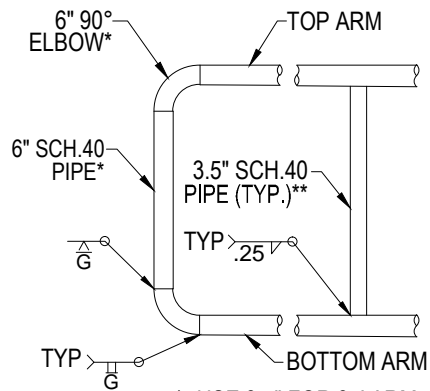
DATE:

David S. Jones
8-24-16



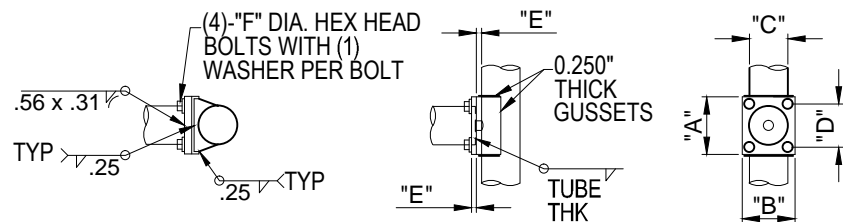
* USE 8"x1.5" ALL THREAD PIPE WITH 1.5" HEX NUT IRON ZINC TO SECURE SIGNAL HEAD.

DETAIL 1
SIGNAL ARM COUPLING



* USE 3.5" FOR 35' ARM
** USE 3" FOR 35' ARM

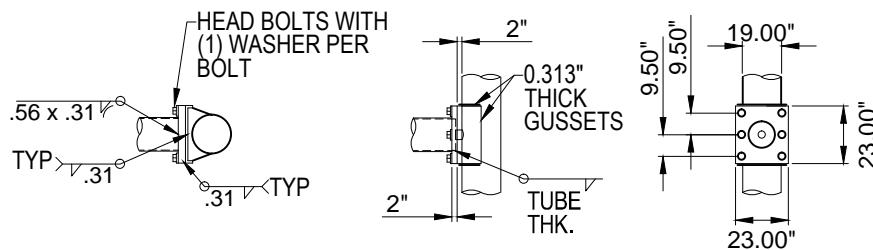
DETAIL 2
CONNECTING ELBOW & TYP. STRUT



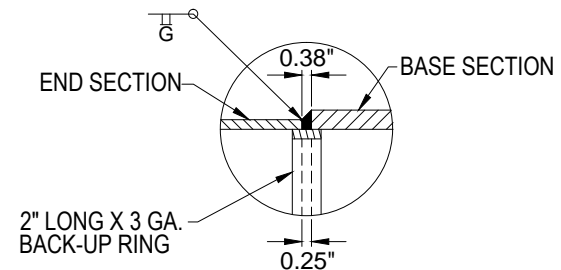
SIGNAL ARM ATTACHMENT DATA

MAST ARM LENGTH	"A"	"B"	"C"	"D"	"E"	"F"
35'-0"	16.25"	15.00"	11.00"	12.25"	1.50"	1.50" x 3.25"
40'-0"	17.25"	16.00"	12.00"	13.25"	1.75"	1.50" x 3.75"
45'-0"	17.25"	16.00"	12.00"	13.25"	1.75"	1.50" x 3.75"

DETAIL 3
SIGNAL ARM ATTACHMENT



DETAIL 4
SIGNAL ARM ATTACHMENT (50' AND 55' ARM LENGTH)



ARM SECTION DATA

ARM	BASE SECTION		END SECTION	
	LENGTH	THK.	LENGTH	GAUGE
45'-0"	5'-11"	0.250"	46'-1"	3
55'-0"	10'-11"	0.250"	46'-1"	3

WELDED SIGNAL ARM SPLICE

DETAIL NO.

A1746-1

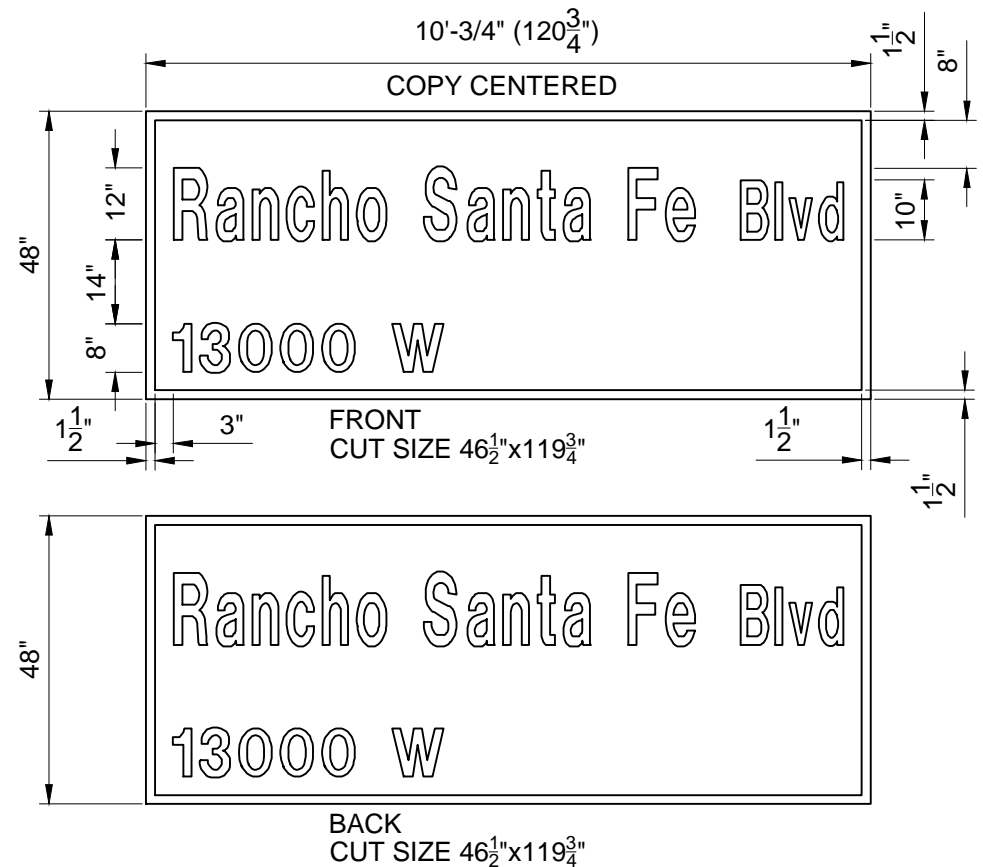
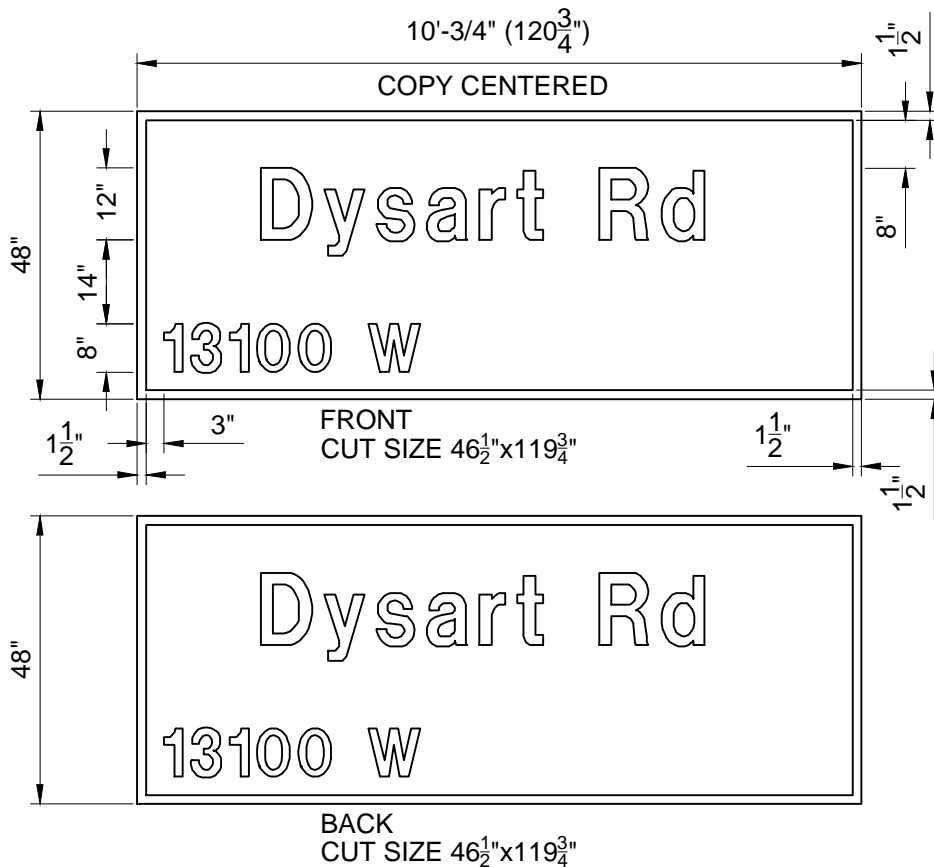
Avondale
STANDARD DETAIL

**TROMBONE STYLE SIGNAL
POLE DETAILS**

APPROVED BY:

DATE:

8.24.16



DOUBLE FACE INTERNALLY ILLUMINATED STREET NAME SIGN

FACES: WHITE POLY CARBONATE, VINYL DECORATIONS APPLIED 1ST SURFACE.

VINYL(S): 3M DIAMOND GRADE #3990 WHITE APPLIED. 3M EC FILM #1177 APPLIED (COPY & LOGO BOX REVERSED OUT). DIGITAL GRAPHIC PRINTED ON CLEAR VINYL (LOGO). GRAFFITI RESISTANT FILM #1160 APPLIED (ENTIRE FACE).

FONT(S): CLEARVIEWONE CD-45 STANDARD SPACING (PREFERRED FONT). CLEARVIEWONE UC-35 STANDARD OR MODIFIED SPACING (USE THIS FONT WHEN A CONDENSED VERSION IS NECESSARY).

CABINET: ALUMINUM MMG12, 12" DEEP RETURNS, PRIME AND PAINT CHOCOLATE BROWN TO MATCH SIGNAL POLE AND MAST ARM.

RETAINERS: 1¹/₂" ALUMINUM, HINGED @ TOP WITH PROP ROD, SECURED @ BOTTOM. PAINT TO MATCH CABINET.

ILLUMINATION: GE TUBULAR L.E.D.

ELECTRICAL: 2.4 AMPS @ 120 VOLTS.

INSTALLATION: USE WITH DETAIL A1746-1

DETAIL NO.

A1747

Avondale
STANDARD DETAIL

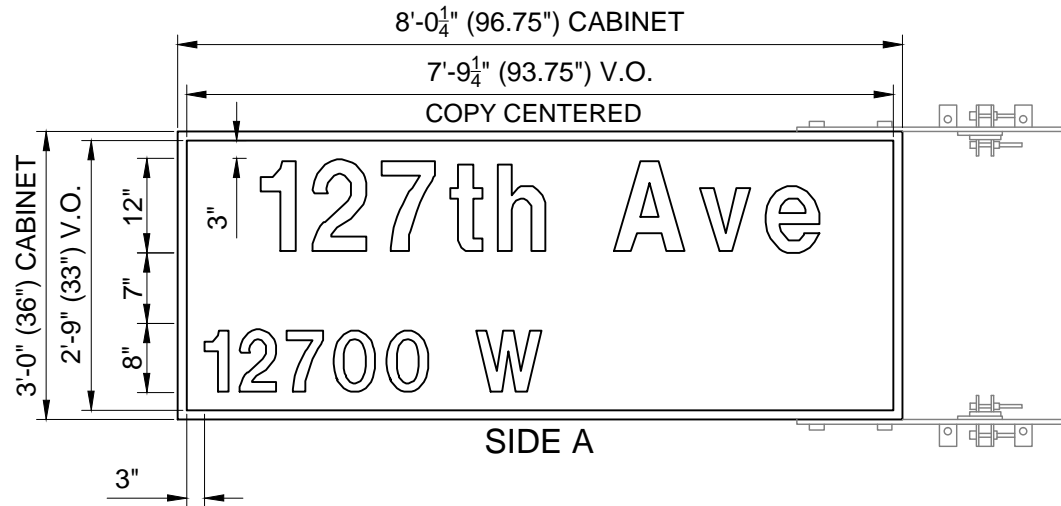
**ILLUMINATED STREET NAME SIGNS
FOR TROMBONE STYLE SIGNAL POLE**

APPROVED BY:

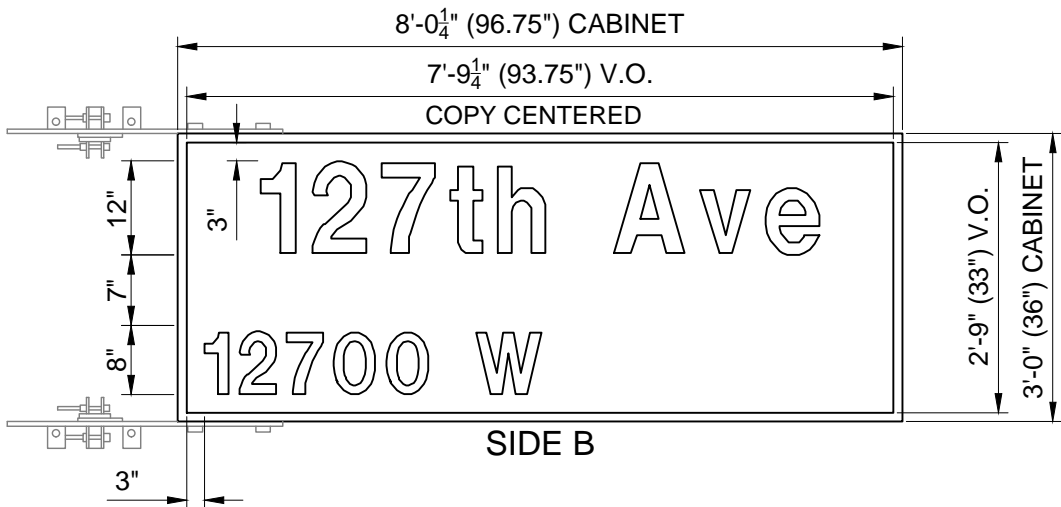
David S. Jones

DATE:

8.24.16



SIDE A



SIDE B

DOUBLE FACE INTERNALLY ILLUMINATED STREET NAME SIGN

FACES: WHITE POLY CARBONATE, VINYL DECORATIONS APPLIED
1ST SURFACE.

VINYL(S): 3M DIAMOND GRADE #3990 WHITE APPLIED. 3M EC FILM
#1177 APPLIED (COPY & LOGO BOX REVERSED OUT).
DIGITAL GRAPHIC PRINTED ON CLEAR VINYL (LOGO).
GRAFFITI RESISTANT FILM #1160 APPLIED (ENTIRE FACE).

FONT(S): CLEARVIEWONE CD-45 STANDARD SPACING (PREFERRED
FONT). CLEARVIEWONE UC-35 STANDARD OR MODIFIED
SPACING (USE THIS FONT WHEN A CONDENSED VERSION
IS NECESSARY).

CABINET: ALUMINUM MMG12, 12" DEEP RETURNS, PRIME AND PAINT
CHOCOLATE BROWN TO MATCH SIGNAL POLE AND MAST
ARM.

RETAINERS: 1 1/2" ALUMINUM, HINGED @ TOP WITH PROP ROD,
SECURED @ BOTTOM. PAINT TO MATCH CABINET.

ILLUMINATION: GE TUBULAR L.E.D.

ELECTRICAL: 2.4 AMPS @ 120 VOLTS.

MOUNTING: (2) FLAGMOUNT CLAMPS, PAINTED TO MATCH CABINET.

DETAIL NO.

A1749

Avondale
STANDARD DETAIL

**ILLUMINATED STREET NAME SIGNS
FOR ADOT STYLE SIGNAL POLE**

APPROVED BY:

DATE:

David S. Gower
8.24.16

SPECIFICATIONS:

DESIGN CRITERIA: POLE SHALL BE DESIGNED FOR 100 MPH STEADY WINDS

POLE SHAFT: THE POLE SHAFT IS FABRICATED FROM A WELDABLE GRADE HOT-ROLLED SQUARE TUBING THAT MEETS OR EXCEEDS THE REQUIREMENTS OF ASTM A500B. IT HAS A MINIMUM YIELD STRENGTH OF 46,000 PSI.

ANCHOR BASE: THE BASE PLATE IS FABRICATED FROM A STRUCTURAL QUALITY HOT-ROLLED CARBON PLATE THAT MEETS OR EXCEEDS THE REQUIREMENTS OF ASTM A36. IT HAS A MINIMUM YIELD STRENGTH OF 36,000 PSI.

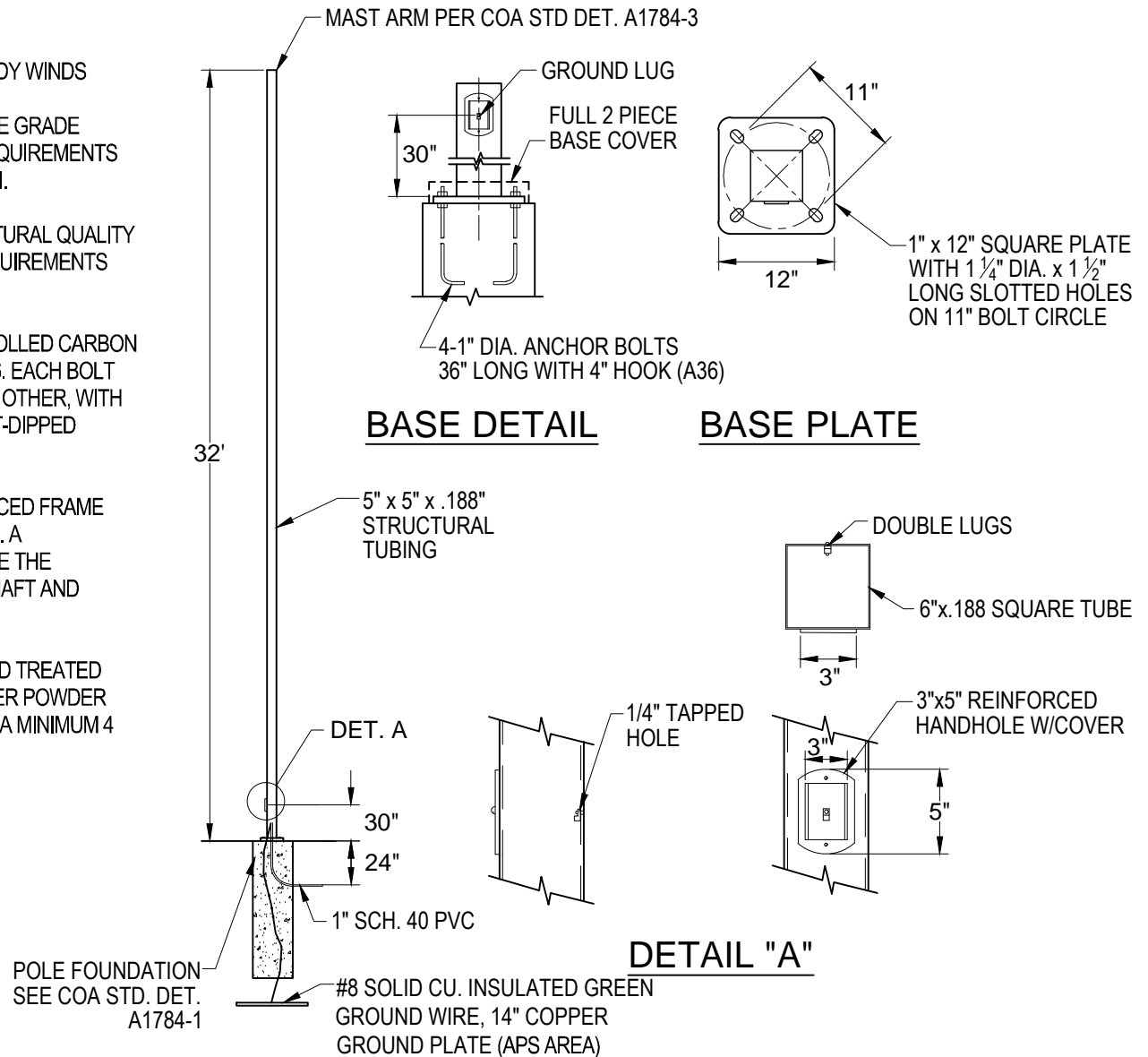
ANCHOR BOLTS: ANCHOR BOLTS ARE FABRICATED FROM HOT-ROLLED CARBON STEEL BAR THAT MEET OR EXCEED REQUIREMENTS OF ASTM A36. EACH BOLT HAS AN "L" BEND ON ONE END AND A MINIMUM 4" THREAD ON THE OTHER, WITH 2 NUTS AND 2 WASHERS (ASSEMBLED). THE ANCHOR BOLT IS HOT-DIPPED GALVANIZED PER ASTM A153.

HANDHOLE: THE HANDHOLE CONSISTS OF A 3"x5" OVAL REINFORCED FRAME WITH 16 GAUGE COVER, STEEL ATTACHMENT BAR AND $\frac{1}{4}$ " SCREW. A GROUNDING LUG IS INSTALLED INSIDE THE POLE SHAFT OPPOSITE THE HANDHOLE OPENING. THE HANDHOLE IS WELDED IN THE POLE SHAFT AND LOCATED AT 30" ABOVE THE BASE.

FINISH: THE POLE IS SAND BLASTED TO A NEAR WHITE FINISH AND TREATED WITH AN IRON PHOSPHATE SOLUTION. A HIGH QUALITY POLYESTER POWDER (BRONZE) IS THEN ELECTROSTATICALLY APPLIED AND CURED TO A MINIMUM 4 MIL. THICKNESS.

NOTES:

1. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGE SHALL BE REMOVED PRIOR TO PAINTING.
2. ALL HARDWARE IS TO BE FURNISHED WITH POLE. HARDWARE SHALL BE CORROSION RESISTANT.



DETAIL NO.

A1784-2

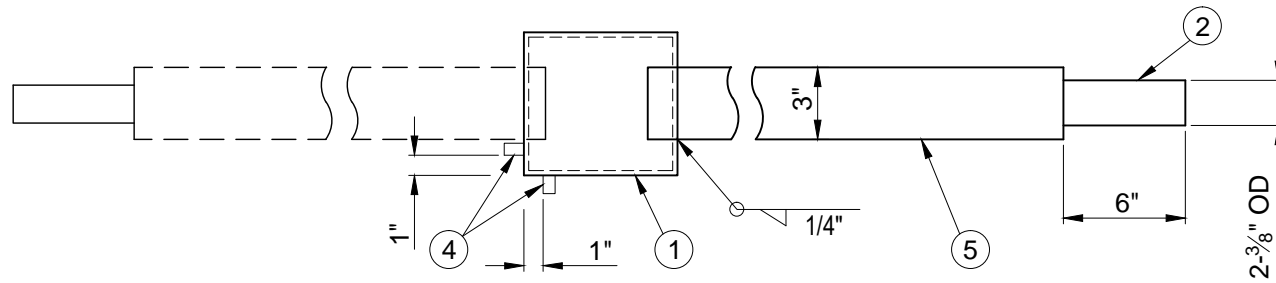
Avondale
STANDARD DETAIL

**ARCHITECTURAL (SHOE BOX)
STYLE STREET LIGHT POLE**

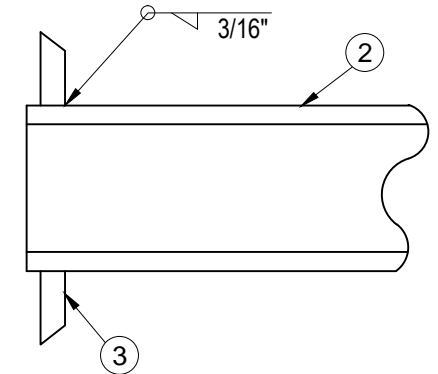
APPROVED BY:

DATE:

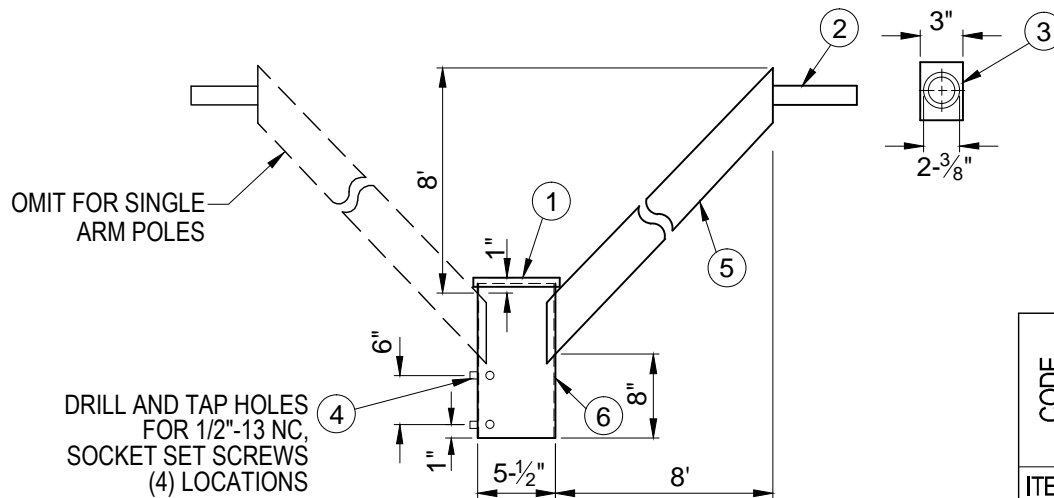
David S. Jones
8.24.16



TOP VIEW



DETAIL OF JOINT BETWEEN PIPE AND PLATE AT END OF TUBE



SIDE VIEW

NOTES:

1. ALL WIRE ENTRANCE AND EXIT HOLES SHALL BE FREE OF BURRS AND ROUGH EDGES.
2. THE MAST ARM IS SAND BLASTED TO A NEAR WHITE FINISH AND TREATED WITH AN IRON PHOSPHATE SOLUTION. A HIGH QUALITY POLYESTER POWDER (BRONZE) IS THEN ELECTROSTATICALLY APPLIED AND CURED TO A MINIMUM 4 MIL. THICKNESS.

CODE	SINGLE ARM	MATERIAL LIST
ITEM	QTY.	DESCRIPTION
①	1	CAP, METAL 5-1/2" x 5-1/2" x 3/4"
②	1	PIPE, STEEL, 2" SCHEDULE 40, 6-1/2" LONG (MAX. 2-3/8" O.D.) (42 KSI)
③	1	PLATE, 3" x 4.243" x 3/16"
④	4	SET SCREW, HEXAGON, 1/2 - 1/3 NC x 1/2", ZINC PLATED
⑤	1	TUBE, 3" x 3" x 11'-6", 0.188 WALL STEEL (ASTM A-500, GRADE B)
⑥	1	TUBE, 5-1/2" x 5-1/2" x 12", 0.188 WALL STEEL (ASTM A-500, GRADE B)

DETAIL NO.

A1784-3

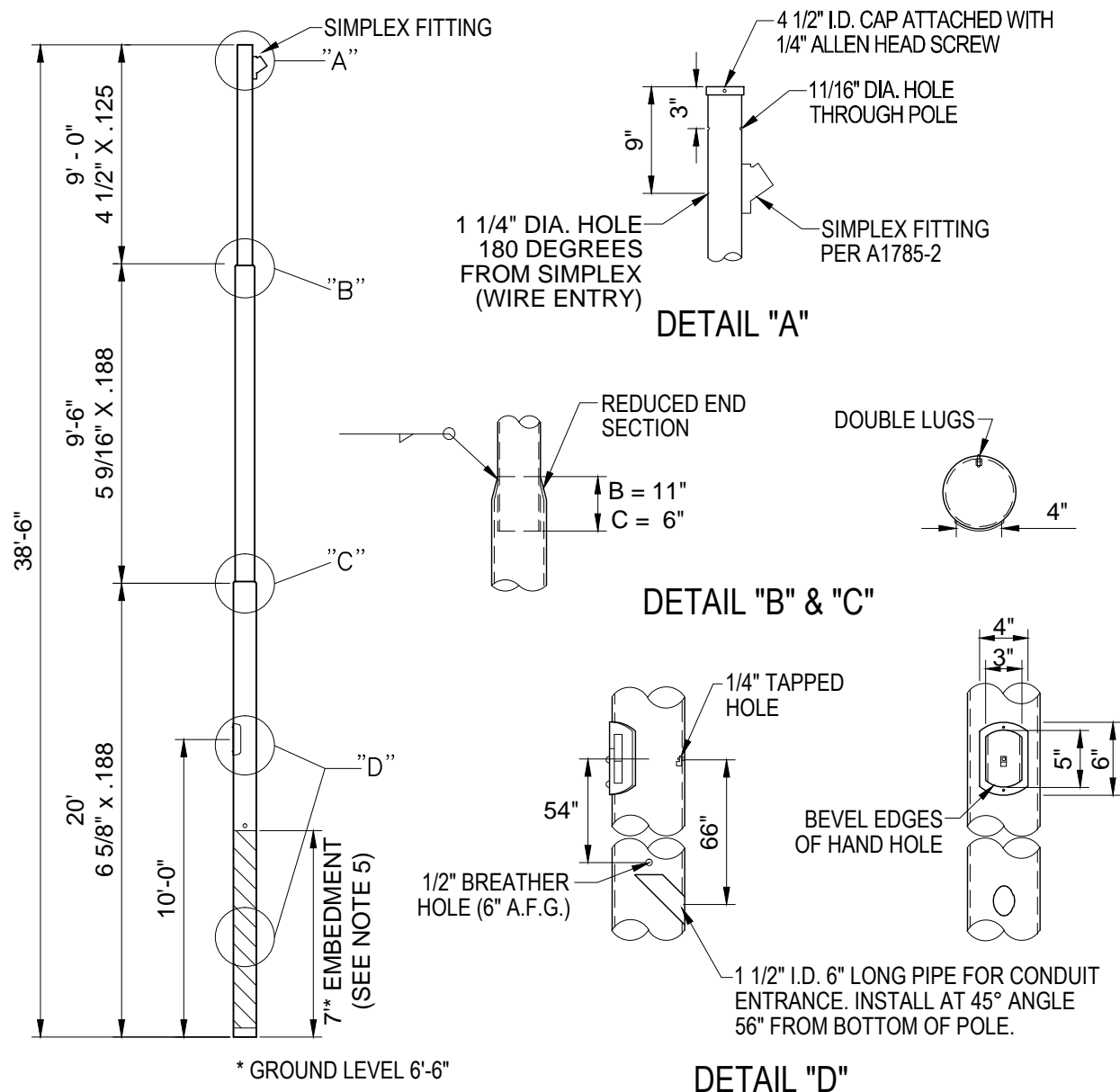
Avondale
STANDARD DETAIL

**ARCHITECTURAL (SHOE BOX)
STYLE STREET LIGHT MAST ARM**

APPROVED BY:

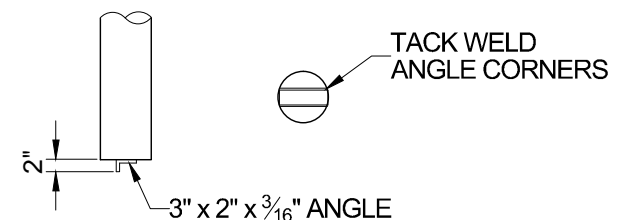
DATE:

8.24.16



NOTES:

1. CONDUIT ENTRANCE TO BE MADE OF 1 1/2" MIN. I.D. PIPE. IT SHALL BE FLUSH WITH FACE OF POLE AND WELDED AT A 45 DEGREE ANGLE. REMOVE ALL BURRS.
2. THE HAND HOLE TO BE 5" X 3" WITH 1 1/2" RADII. THE HAND HOLE COVER TO BE 4" X 6" X 16 GAUGE WITH 2" RADII AND BENT SLIGHTLY SMALLER THAN THE POLE. THE COVER IS TO BE SECURED WITH (2) 1/4" STAINLESS STEEL TAMPER PROOF SCREWS, SUPPLIED BY MANUFACTURER.
3. AFTER FABRICATION, THE POLE SHALL BE SANDBLASTED TO REMOVE ALL LOOSE SCALE, RUST, CORROSION PRODUCTS, GREASE, DIRT, AND OTHER FOREIGN PRODUCTS. CLEAN POLE TO A MINIMUM OF "COMMERCIAL GRADE" SSPC SP-6.
4. AFTER SANDBLASTING THE POLE SHALL BE GALVANIZED PER ASTM A123, LATEST EDITION, ZINC (HOT GALVANIZED) COATING ON THE PRODUCTS FABRICATED FROM ROLLED, PRESSED AND FORGED STEEL, PLATES, BARS AND STRIPS AND APS "GUIDELINES FOR THE GALVANIZING OF TUBULAR TRANSMISSION POLES".
5. AFTER GALVANIZING, THE BOTTOM 7 FEET OF POLE SHALL BE CONFORMABLY HALF LAP TAPED WITH CORROSION PROTECTION TAPE PER COA SPECIFICATIONS. THIS TAPE SHALL BE UNIFORM AND WITHOUT FOLDS, WRINKLES OR GAPS.
6. POLE CONFORMS TO STRUCTURAL REQUIREMENTS PER NOTE 6 OF APS EM-339 SPECIFICATION (REV. 4)



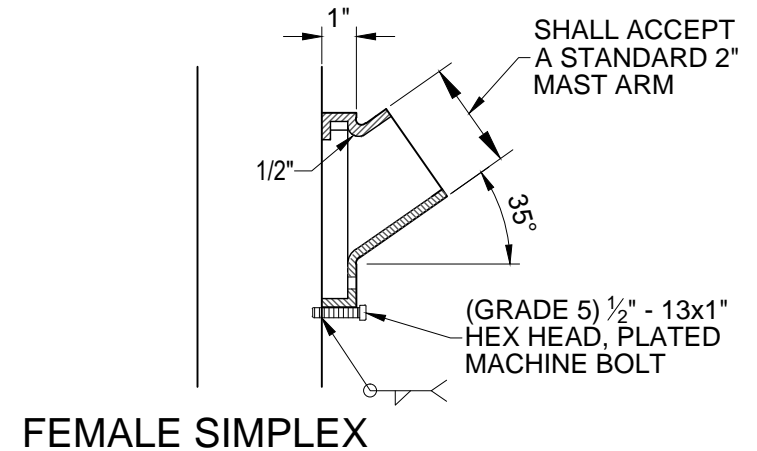
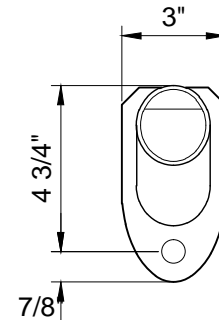
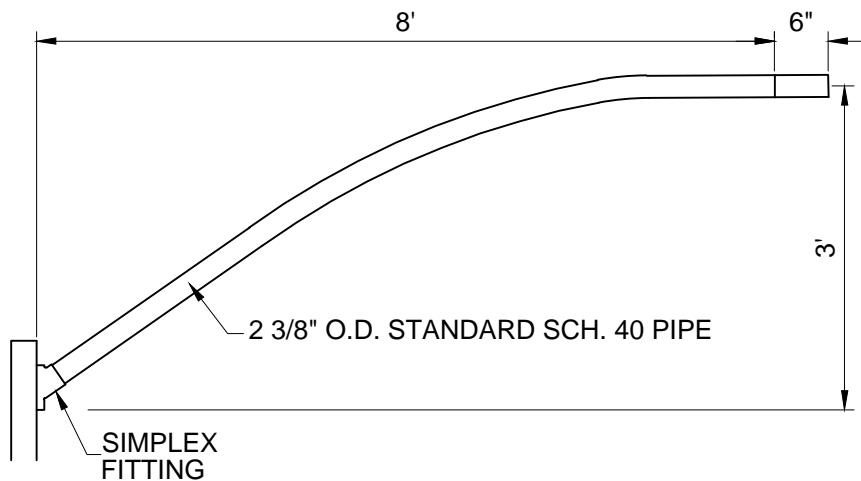
POLE BOTTOM DETAIL

DETAIL NO.
A1785-1

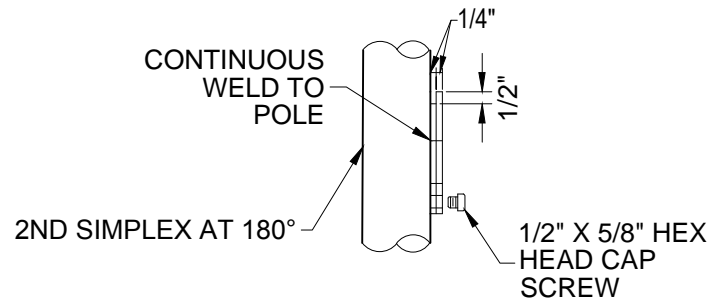
Avondale
STANDARD DETAIL

**APS STREET
LIGHT POLE**

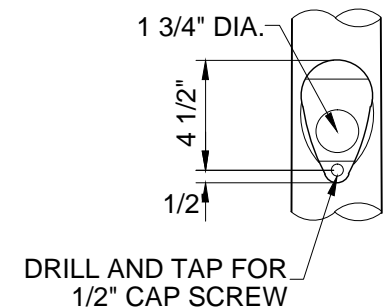
APPROVED BY: *[Signature]*
DATE: 8.24.16



FEMALE SIMPLEX



MALE SIMPLEX



NOTES:

1. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGES SHALL BE REMOVED PRIOR TO GALVANIZING.
2. SURFACES TO BE GALVANIZED SHALL BE CLEANED OF ALL RUST, SCALE, FOREIGN MATERIAL, OIL, AND GREASE.
3. FINISH COAT SHALL BE GALVANIZED PER ASTM A-123 OR SEE COA APPROVED PRODUCTS LIST.
4. USE WITH A1785-1.

DETAIL NO.

A1785-2

Avondale
STANDARD DETAIL

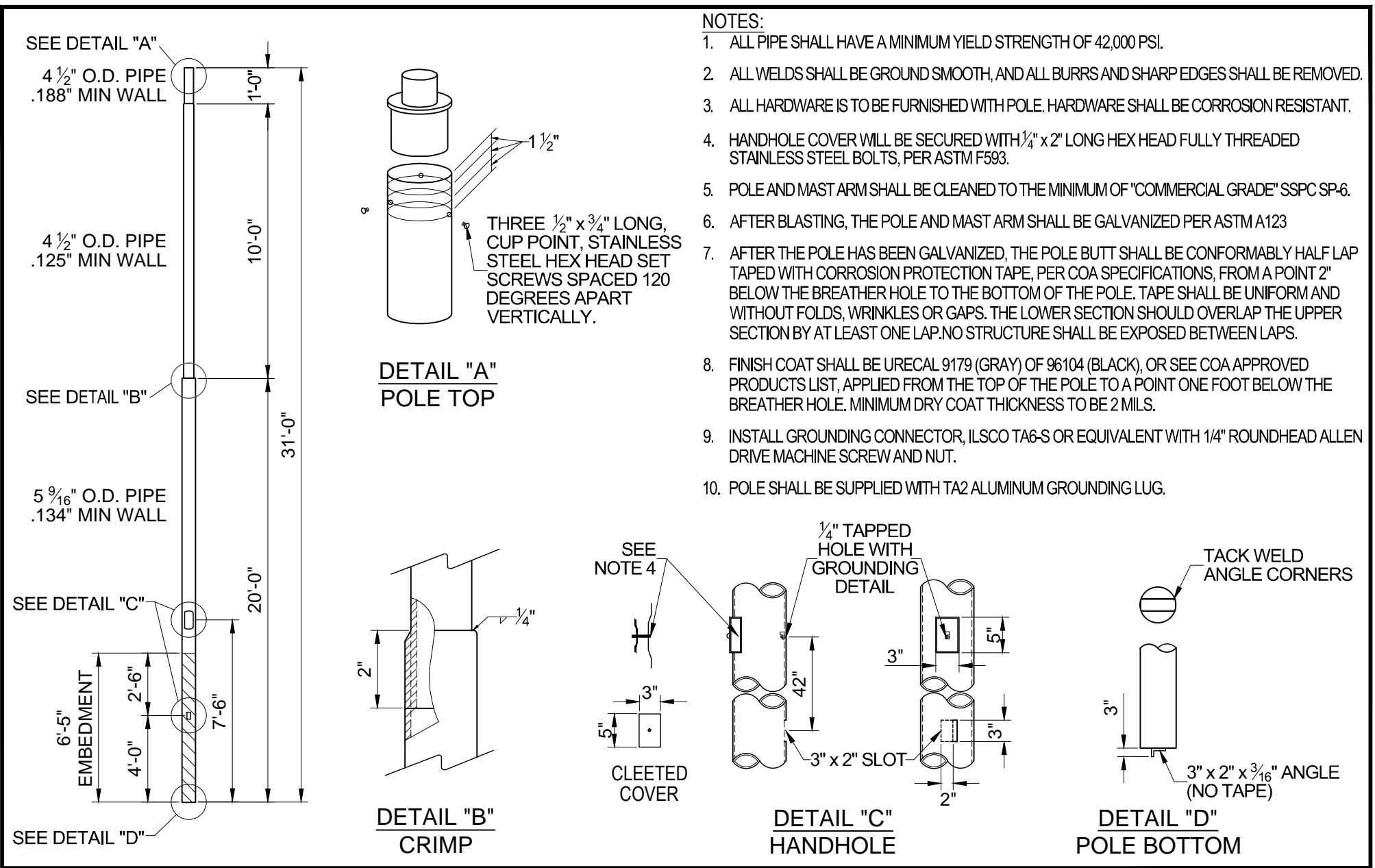
**APS STREET LIGHT
MAST ARM**

APPROVED BY:

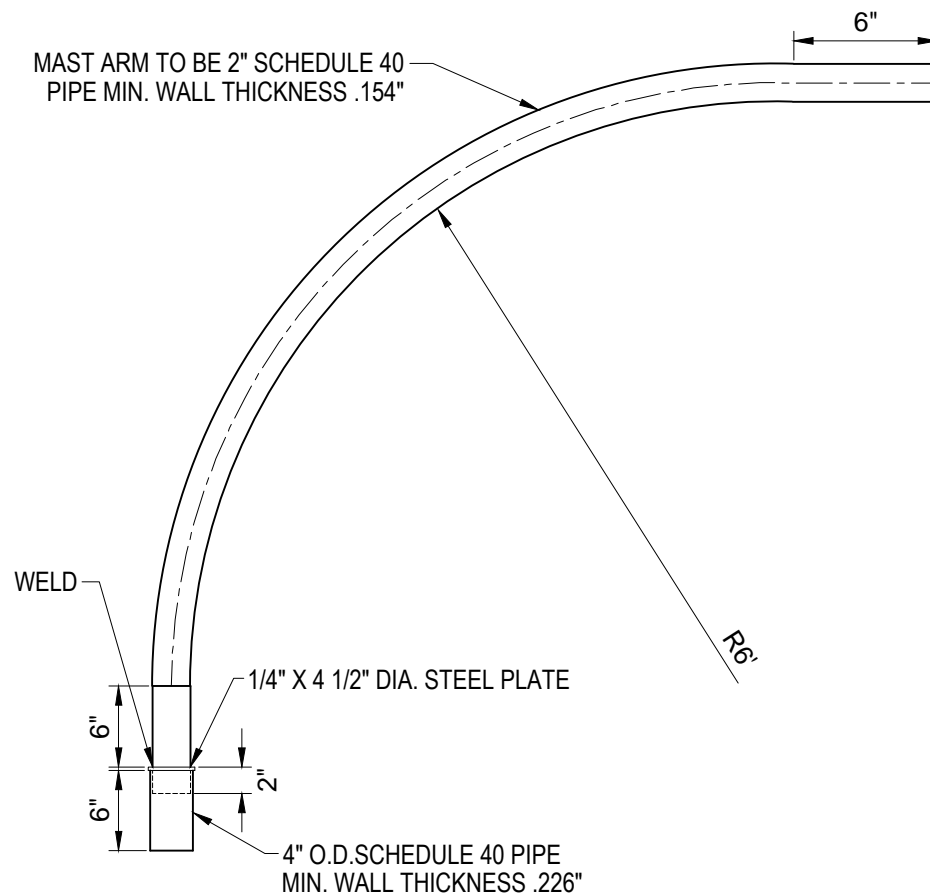
[Signature]

DATE:

8.24.16



- NOTES:
1. ALL PIPE SHALL HAVE A MINIMUM YIELD STRENGTH OF 42,000 PSI.
 2. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGES SHALL BE REMOVED.
 3. ALL HARDWARE IS TO BE FURNISHED WITH POLE. HARDWARE SHALL BE CORROSION RESISTANT.
 4. HANDHOLE COVER WILL BE SECURED WITH 1/4" x 2" LONG HEX HEAD FULLY THREADED STAINLESS STEEL BOLTS, PER ASTM F593.
 5. POLE AND MAST ARM SHALL BE CLEANED TO THE MINIMUM OF "COMMERCIAL GRADE" SSPC SP-6.
 6. AFTER BLASTING, THE POLE AND MAST ARM SHALL BE GALVANIZED PER ASTM A123
 7. AFTER THE POLE HAS BEEN GALVANIZED, THE POLE BUTT SHALL BE CONFORMABLY HALF LAP TAPED WITH CORROSION PROTECTION TAPE, PER COA SPECIFICATIONS, FROM A POINT 2" BELOW THE BREATHER HOLE TO THE BOTTOM OF THE POLE. TAPE SHALL BE UNIFORM AND WITHOUT FOLDS, WRINKLES OR GAPS. THE LOWER SECTION SHOULD OVERLAP THE UPPER SECTION BY AT LEAST ONE LAP. NO STRUCTURE SHALL BE EXPOSED BETWEEN LAPS.
 8. FINISH COAT SHALL BE URECAL 9179 (GRAY) OF 96104 (BLACK), OR SEE COA APPROVED PRODUCTS LIST, APPLIED FROM THE TOP OF THE POLE TO A POINT ONE FOOT BELOW THE BREATHER HOLE. MINIMUM DRY COAT THICKNESS TO BE 2 MILS.
 9. INSTALL GROUNDING CONNECTOR, ILSCO TA6-S OR EQUIVALENT WITH 1/4" ROUNDHEAD ALLEN DRIVE MACHINE SCREW AND NUT.
 10. POLE SHALL BE SUPPLIED WITH TA2 ALUMINUM GROUNDING LUG.



NOTES:

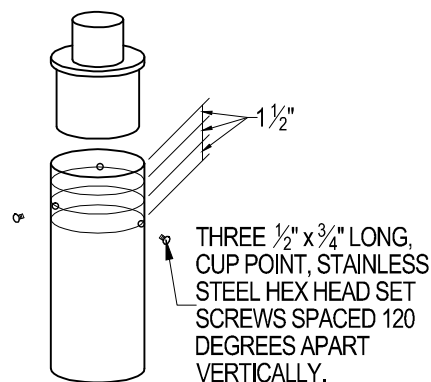
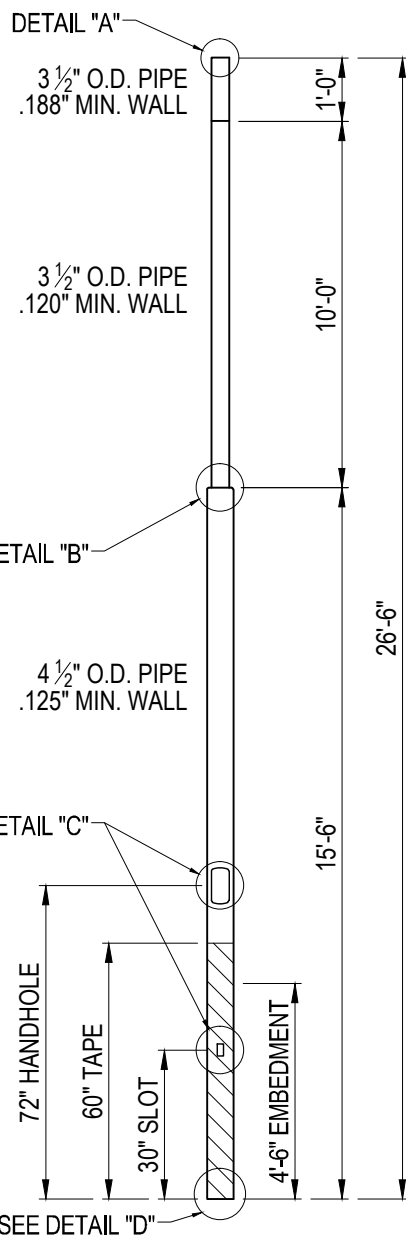
1. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGES SHALL BE REMOVED PRIOR TO GALVANIZING.
2. SURFACES TO BE GALVANIZED SHALL BE CLEANED OF ALL RUST, SCALE, FOREIGN MATERIAL, OIL, AND GREASE.
3. FINISH COAT SHALL BE GALVANIZED PER ASTM A-123.
4. USE WITH A1786-1.

DETAIL NO.
A1786-2

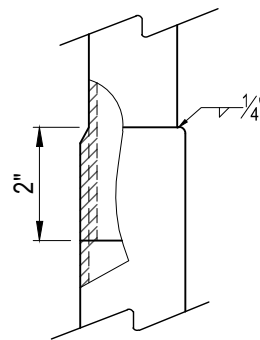
Avondale
STANDARD DETAIL

**SRP STREET LIGHT MAST
ARM FOR 31'-0" POLE**

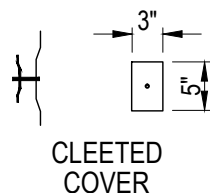
APPROVED BY: *David S. Jones*
DATE: 8.24.16



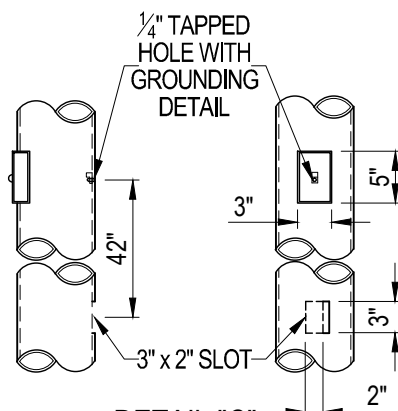
DETAIL "A"
POLE TOP



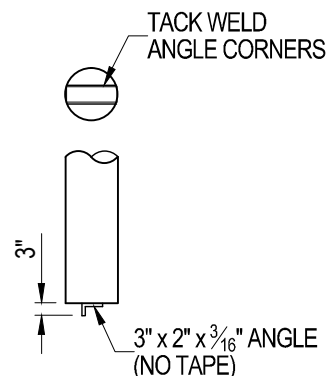
DETAIL "B"
CRIMP



CLEETED
COVER



DETAIL "C"
HANDHOLE



DETAIL "D"
POLE BOTTOM

NOTES:

1. ALL PIPE SHALL HAVE A MINIMUM YIELD STRENGTH OF 42,000 PSI.
2. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGES SHALL BE REMOVED.
3. ALL HARDWARE IS TO BE FURNISHED WITH POLE. HARDWARE SHALL BE CORROSION RESISTANT.
4. HANDHOLE COVER WILL BE SECURED WITH 1/4" x 2" LONG HEX HEAD FULLY THREADED STAINLESS STEEL BOLTS, PER ASTM F593.
5. POLE AND MAST ARM SHALL BE CLEANED TO THE MINIMUM OF "COMMERCIAL GRADE" SSPC SP-6.
6. AFTER BLASTING, THE POLE AND MAST ARM SHALL BE GALVANIZED PER ASTM A123
7. AFTER THE POLE HAS BEEN GALVANIZED, THE POLE BUTT SHALL BE CONFORMABLY HALF LAP TAPED WITH CORROSION PROTECTION TAPE, PER COA SPECIFICATIONS, FROM A POINT 2" BELOW THE BREATHER HOLE TO THE BOTTOM OF THE POLE. TAPE SHALL BE UNIFORM AND WITHOUT FOLDS, WRINKLES OR GAPS. THE LOWER SECTION SHOULD OVERLAP THE UPPER SECTION BY AT LEAST ONE LAP. NO STRUCTURE SHALL BE EXPOSED BETWEEN LAPS.
8. FINISH COAT SHALL BE URECAL 9179 (GRAY) OF 96104 (BLACK), OR SEE COA APPROVED PRODUCTS LIST, APPLIED FROM THE TOP OF THE POLE TO A POINT ONE FOOT BELOW THE BREATHER HOLE. MINIMUM DRY COAT THICKNESS TO BE 2 MILS.
9. INSTALL GROUNDING CONNECTOR, ILSCO TA6-S OR EQUIVALENT WITH 1/4" ROUNDHEAD ALLEN DRIVE MACHINE SCREW AND NUT.
10. POLE SHALL BE SUPPLIED WITH TA2 ALUMINUM GROUNDING LUG.

DETAIL NO.

A1786-3

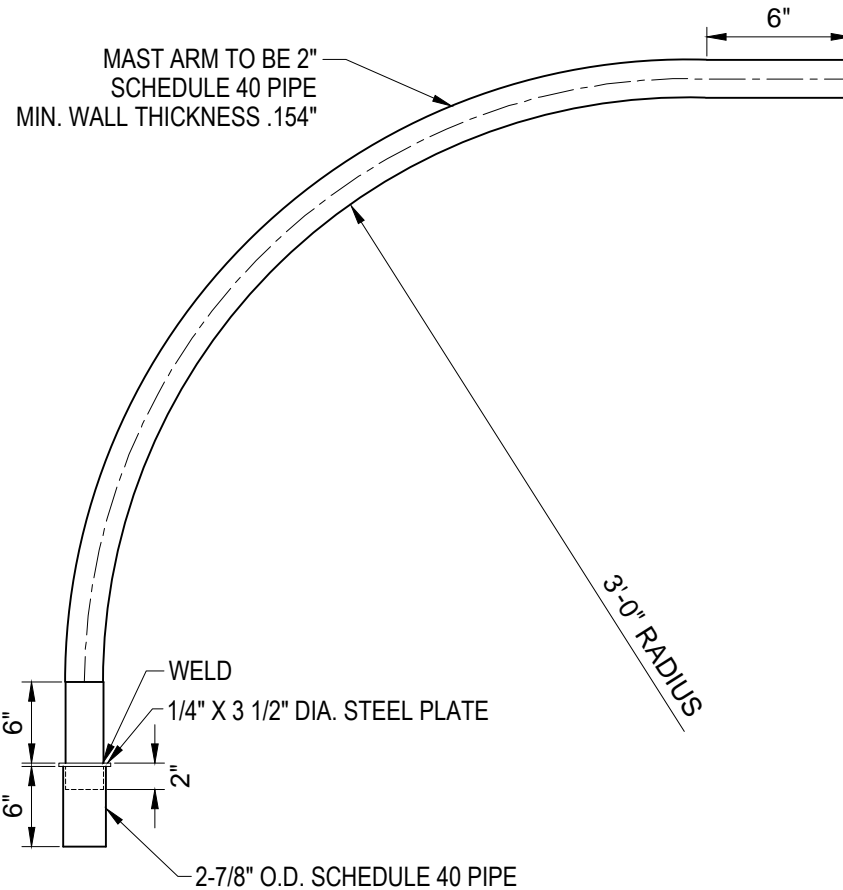
Avondale
STANDARD DETAIL

**SRP STREET LIGHT
POLE (26'-6")**

APPROVED BY:

DATE:

8.24.16



NOTES:

1. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGES SHALL BE REMOVED PRIOR TO GALVANIZING.
2. SURFACES TO BE GALVANIZED SHALL BE CLEANED OF ALL RUST, SCALE, FOREIGN MATERIAL, OIL, AND GREASE.
3. FINISH COAT SHALL BE GALVANIZED PER ASTM A-123.
4. USE WITH A1786-3.

DETAIL NO.

A1786-4

Avondale
STANDARD DETAIL

**SRP STREET LIGHT MAST
ARM FOR 26'-6" POLE**

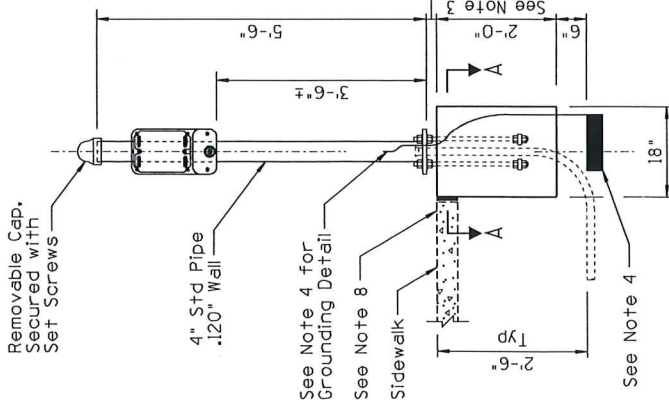
APPROVED BY:

David S. Jones

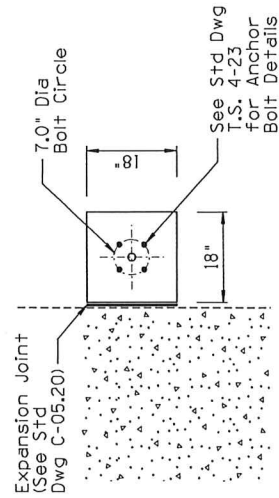
DATE:

8.24.16

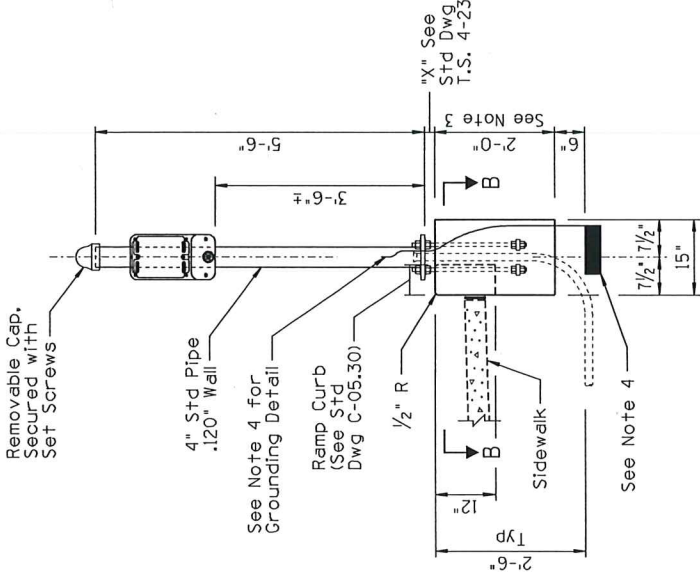
NO.	DESCRIPTION OF REVISIONS	DATE	BY
2	REVISED SECTION A-A & ADDED NOTE #10	03/10	C. COLE
1	FOUNDATION AND POLE RE-DESIGN	12/12	L. LOPEZ
	FOUNDATION RE-DESIGN FOR CURB APPLICATIONS.	03/15	L. LOPEZ
	DATE	10/13	MADE BY



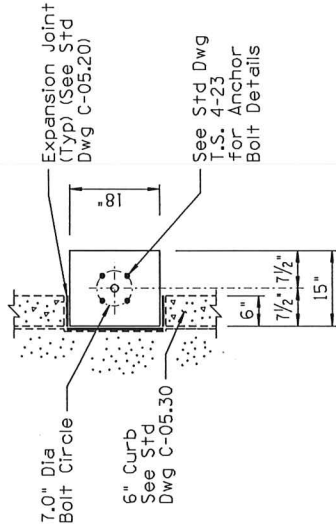
ELEVATION
(Adjacent to or in Sidewalk)



SECTION A-A



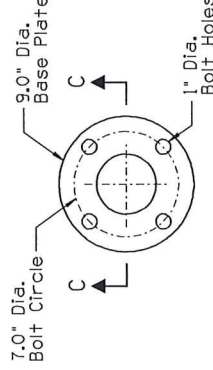
ELEVATION
(In Line with Curb)



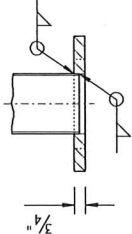
SECTION B-B

NOTES:

1. All materials and construction shall conform to the requirements of the Standard Specifications.
2. The foundation hole shall be framed and Class "S" (3000 psi) concrete poured against undisturbed compacted earth.
3. Unstable soil may require a deeper foundation. See Standard Specifications.
4. A 25 ft coil of #4 AWG bare copper conductor or a 14 inch square ground plate shall be installed before the concrete is poured and connected under one of the nuts of the connecting bolts. The ground or coil shall be covered with 6 inches of fill.
5. See Std Dwg T.S. 11 Series for push button details.
6. See Std Dwg T.S. 4-21 for push button pole drilling details.
7. Once the pole installation is completed the open space between the base plate and foundation shall be grouted.
8. The top of the foundation shall be flush with the surface of the adjacent ramp, curb or sidewalk. See Construction Standard Drawing C-05.30.
9. All dimensions are nominal.



BASE PLATE DETAIL



SECTION C-C

DESIGN APPROVED	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION TRAFFIC SIGNALS AND LIGHTING STANDARD DRAWINGS	REVISION	03/15
SIGNATURE		DRAWING NO.	T.S. 4-22
ON FILE	PEDESTRIAN PUSH BUTTON POST -TYPE PB POLE*	SHEET NO.	1 OF 1

NOT TO SCALE

SPECIFICATIONS:

DESIGN CRITERIA: CONSTRUCTION - ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2008 EDITION, AND THE ADOT 2015 TRAFFIC SIGNALS & LIGHTING STANDARD DRAWINGS. ANALYSIS AND DESIGN - AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 2013.

POLE SHAFT: THE POLE SHAFT IS FABRICATED FROM A WELDABLE GRADE HOT-ROLLED CARBON STEEL PIPE AND HAS A MINIMUM YIELD STRENGTH OF 42,000 PSI.

ANCHOR BASE: THE BASE PLATE IS FABRICATED FROM A STRUCTURAL QUALITY HOT-ROLLED CARBON PLATE THAT MEETS OR EXCEEDS THE REQUIREMENTS OF ASTM A36.

ANCHOR BOLTS: ANCHOR BOLTS ARE FABRICATED FROM HOT-ROLLED CARBON STEEL BAR THAT MEET OR EXCEED REQUIREMENTS OF ASTM F1554 GRADE 55. THE ANCHOR BOLT IS HOT-DIPPED GALVANIZED PER ASTM-A153.

OTHER STEEL: ALL OTHER STEEL SHALL CONFORM TO ASTM A36 OR 538.

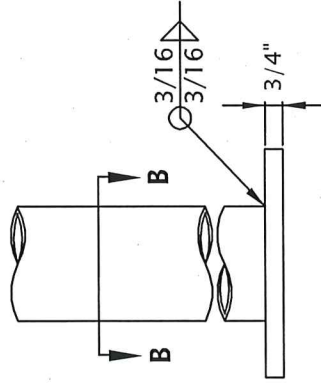
WELDING: WELDING SHALL CONFORM TO AWS D1.1 (LATEST EDITION).

FINISH: THE POLE IS SHOTBLASTED TO A NEAR WHITE FINISH AND THEN POWDER COATED OR PAINTED PER CHOCOLATE 42BR.

REMOVABLE DOME CAP W/
SET SCREW

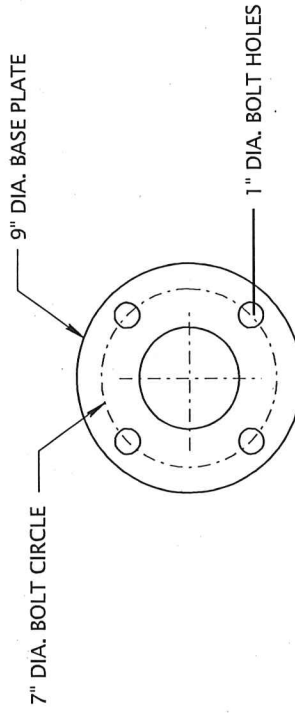
4 1/2" O.D. X .125 PIPE

5' 6"



BASE DETAIL

A



BASE PLATE DETAIL

B

CEM-TEC CORPORAT
Steel Manufacturing Light Stance
3745 South 7th Avenue
Phoenix, Arizona 85041
(602) 268-8895 (Tel)
(602) 276-7251 (Fax)
Web: <http://www.cem-tec.com>

AVONDALE PED POLES

PED POLE

11/30/17

Grounding 12" Lug 24" 18" x 24" 11/23/17

18" x 24" 11/23/17

18"

EXHIBIT B
TO
INVITATION FOR BIDS NO. EN19-086

[Substitution/Equal Request Form]

See following pages.

SUBSTITUTION/EQUAL REQUEST FORM

Streetlight Equipment and Supplies EN 19-086

Bidder _____ hereby submits for City's consideration the following product, instead of the specified item, for the above Project.

1.	<u>Section</u>	<u>Page</u>	<u>Paragraph/Line</u>	<u>Specified Item</u>
----	----------------	-------------	-----------------------	-----------------------

Proposed Substitution: _____

Statement indicating why specified product, fabrication or installation cannot be provided, if applicable:

(NOTE: See Article II – Bid Process; Bid Award, Section 2.4(C), Approval of Substitutions, or Section 2.4(D), Use of Equals, as applicable, for additional criteria concerning prior approval for substitutions or use equals of material and equipment.)

2. Attach complete product description, drawings, photographs, performance and test data, and other information necessary for evaluation, indicating by highlighting all comparable data between specified item and proposed substitution or equal. Identify specific model numbers, finishes, options, etc.

A. Will changes be required to Project design (architecturally, structurally, mechanically or electrically) in order to properly install proposed substitution? Yes _____ No _____ If Yes, explain:

B. Will the undersigned pay for changes to the Project design, including engineering and drawing costs, caused by requested substitution? Yes _____ No _____

C. List differences between proposed substitution and specified item. Include annotated copy of applicable Specification Section.

<u>Specified Item</u>	<u>Proposed Substitution</u>
_____	_____
_____	_____

D. Does substitution affect Drawing dimensions? Yes _____ No _____ If Yes, explain:

E. What effect does substitution have on other trades? _____

F. Does manufacturer's warranty of proposed substitution differ from that specified?
Yes _____ No _____ If Yes, explain: _____

G. Will substitution affect progress schedule? Yes _____ No _____ If Yes, explain:

H. Will substitution require more license fees or royalties than specified product?
Yes _____ No _____ If Yes, explain: _____

I. Will maintenance and service parts be locally available for substitution?
Yes _____ No _____ If Yes, explain: _____

J. Will substitution be compatible with all adjacent material and/or applications to or on the proposed substitution? Yes _____ No _____ If no, explain what material substitutions will be required to make your proposed substitution compatible: _____

List materials that will be required to provide compatibility: _____

3. The undersigned hereby assumes all responsibility for all provisions indicated herein and agrees that, if adequate comparable information is not provided as required by Section 2.4(C), Approval of Substitutions, or Section 2.4(D), Use of Equals, as applicable, and this Form, the proposed substitution or equal shall be subject to rejection.
4. The undersigned understands and agrees that the substitution requested, including all supporting data, will only be considered if it is submitted to the City Representative 10 full Days prior to the Bid Deadline. Telegraphic (facsimile) or electronic (email) copies will **not** be considered.

Submitted by:

For City's Use Only:

Signature

☐ Accepted

Print Name

☐ Rejected

Title

Remarks: _____

Company Name

Address

Signature

City, State, Zip Code

Print Name

Date

Telephone No.

Date

EXHIBIT C
TO
INVITATION FOR BIDS NO. EN19-086

[Licenses; DBE/WBE Status]

See following page.

LICENSE; DBE/WBE STATUS

Streetlight Equipment and Supplies
EN 19-086

- **Attach a copy of your Business License* to your bid submittal.**

* Business License must be a current Arizona Transaction Privilege (Sales) Tax License reflecting City as a reporting jurisdiction or current City Business License

Has your firm been certified by any jurisdiction in Arizona as a minority or woman owned business enterprise? Yes_____, No_____.

If yes, please provide details and documentation of the certification.

EXHIBIT D
TO
INVITATION FOR BIDS NO. EN19-086

[References]

See following page.

REFERENCES
Streetlight Equipment and Supplies
EN 19-086

Provide the following information for three clients for whom Bidder has provided Services of **similar size and scope** within the past 36 months. ***These references will be checked.*** Please ensure all information is accurate and current. Failure to provide three accurate and suitable references will result in disqualification.

1.	Company:	_____
	Address	_____
	City/State/Zip Code	_____
	Contact:	_____
	Telephone Number:	_____
	Date of Contract Initiation:	_____
	Date of Contract Expiration:	_____
	Final Contract Cost:	_____
	Material Description:	_____
2.	Company:	_____
	Address	_____
	City/State/Zip Code	_____
	Contact:	_____
	Telephone Number:	_____
	Date of Contract Initiation:	_____
	Date of Contract Expiration:	_____
	Final Contract Cost:	_____
	Material Description:	_____
3.	Company:	_____
	Address	_____
	City/State/Zip Code	_____
	Contact:	_____
	Telephone Number:	_____
	Date of Contract Initiation:	_____
	Date of Contract Expiration:	_____
	Final Contract Cost:	_____
	Material Description:	_____

EXHIBIT E
TO
INVITATION FOR BIDS NO. EN19-086

[Acknowledgment of Addenda received, if any]

See following page(s).