

State of Delaware
Department of Transportation

STEEL POLES

Invitation to Bid
Contract No. DOT1206-STEEL_POLES

June 11, 2012

- *Deadline to Respond* -
July 10, 2012
2:00 P.M. local time

STATE OF DELAWARE
Department of Transportation
Contract Administration

CONTRACT NO. DOT1206-STEEL_POLES

ALL BIDDERS:

The enclosed packet contains an "INVITATION TO BID" for **STEEL POLES**. The invitation consists of the following documents:

INVITATION TO BID - CONTRACT NO. DOT1206-STEEL_POLES

- 1 DEFINITIONS and GENERAL PROVISIONS
- 2 SPECIAL PROVISIONS
- 3 TECHNICAL SPECIFICATIONS
- 4 BID QUOTATION REPLY SECTION
 - a. Attachment 1 - No Bid Reply Form
 - b. Attachment 2 - Non-Collusion Statement
 - c. Attachment 3 - Sample Monthly Usage Report
 - d. Attachment 4 - Bid Forms
 - e. Attachment 5 - Office of Minority and Women Business Enterprise Information
 - f. Attachment 6 - Detail sheets

In order for your bid to be considered, the bid quotation reply section shall be executed completely and correctly and returned in a sealed envelope clearly displaying the contract number, by July 10, 2012, 2:00 p.m. local time

Bids shall be submitted to:

**STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
CONTRACT ADMINISTRATION
800 BAY ROAD
DOVER, DE 19901**

Please review and follow the information and instructions contained in the general and special provisions section of the invitation. Should you need additional information, please contact Contract Administration via e-mail at dot-ask@state.de.us or call 302-760-2031.

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CONTRACT ADMINISTRATION

DEFINITIONS
AND
GENERAL PROVISIONS

The attached Definitions and General Provisions apply to all contracts and are part of each invitation to bid. The requirement to furnish a bid bond and performance bond is applicable unless waived in the Special Provisions. Should the General Provisions conflict with the Special Provisions, the Special Provisions shall prevail. Bidders or their authorized representatives are required to fully acquaint themselves as to State procurement laws and regulations prior to submitting bid.

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DEFINITIONS

Whenever the following terms are used, their intent and meaning shall be interpreted as follows:

STATE: The State of Delaware

AGENCY: Delaware Department of Transportation.

DESIGNATED OFFICIAL: The agent authorized to act for the Agency.

BID INVITATION: The "bid invitation" or "invitation to bid" is a packet of material sent to vendors and consists of General Provisions, Special Provisions, specifications, and enclosures.

GENERAL PROVISIONS: General Provisions are instructions pertaining to contracts in general. They contain, in summary, requirements of laws of the State, policies of the Agency, and instructions to vendors.

SPECIAL PROVISIONS: Special Provisions are specific conditions or requirements peculiar to the contract under consideration and are supplemental to the General Provisions. Should the Special Provisions conflict with the General Provisions, the Special Provisions shall prevail.

BIDDER OR VENDOR: Any individual, firm, or corporation formally submitting a proposal for the material or work contemplated, acting directly or through a duly authorized representative.

PROPOSAL: The offer of the bidder submitted on the approved form and setting forth the bidder's prices for performing the work or supplying the material or equipment described in the specifications.

SURETY: The corporate body which is bound with and for the contract, or which is liable, and which engages to be responsible for the contractor's payments of all debts pertaining to and for its acceptable performance of the work for which it has contracted.

BIDDER'S DEPOSIT: The security designated in the proposal to be furnished by the bidder as a guaranty of good faith to enter into a contract with the Agency if the work to be performed or the material or equipment to be furnished is awarded to the bidder.

CONTRACT: The written agreement covering the furnishing and delivery of material or work to be performed.

CONTRACTOR: Any individual, firm, or corporation with whom a contract is made by the Agency.

CONTRACT BOND: The approved form of security furnished by the contractors and its surety as a guaranty of good faith on the part of the contractor to execute the work in accordance with the terms of the contract.

SECTION A - GENERAL PROVISIONS

1. **BID INVITATION:**

See "Definitions".

2. **PROPOSAL FORMS:**

The invitation to bid shall contain pre-printed forms for use by the vendor in submitting its bid. The forms shall contain basic information such as description of the item and the estimated quantities and shall have blank spaces for use by the vendor for entering information such as unit bid price, total bid price, etc.

3. **INTERPRETATION OF ESTIMATES:**

- a. The attention of bidders is called to the fact that, unless stated otherwise, the quantities given in the proposal form are to be considered to be approximate only and are given as a basis for the comparison of bids. The Agency may increase or decrease the amount of any item as may be deemed necessary or expedient, during the period of the contract.
- b. An increase or decrease in the quantity for any item is not sufficient ground for an increase or decrease in the unit price.

4. **SILENCE OF SPECIFICATIONS:**

The apparent silence of the specifications as to any detail, or the apparent omission from it of detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and only material and workmanship of the first quality are to be used. Proof of specifications compliance will be the responsibility of the vendor.

5. **EXAMINATION OF SPECIFICATIONS AND PROVISIONS:**

The bidder shall examine carefully the proposal and the contract forms for the material contemplated. The bidder shall investigate and satisfy itself as to the conditions to be encountered, quality and quantities of the material to be furnished, and the requirements of the Special Provisions and the contract. The submission of a proposal shall be conclusive evidence that the bidder has made examination of the aforementioned conditions.

6. **PREPARATION OF PROPOSAL:**

The bidder's prices **should be typewritten** on the bid pages provided.

7. **PRICES QUOTED:**

The prices quoted are those for which the material will be furnished F.O.B. Ordering Agency and include all charges that may be imposed during the period of the contract.

8. **DISCOUNT:**

No qualifying letter or statements in or attached to the proposal, or separate discounts will be considered in determining the low bid except as may be otherwise herein noted. Cash or separate discounts should be computed and incorporated into unit bid price(s).

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9. **SAMPLES OR BROCHURES:**

Samples or brochures may be required by the agency for evaluation purposes. They shall be such as to permit the Agency to compare and determine if the item offered complies with the intent of the specifications.

10. **PROPOSAL GUARANTY; BID BOND:**

Waived

11. **DELIVERY OF PROPOSALS:**

Proposals shall be delivered in sealed envelopes, and shall bear on the outside the name and address of the bidder as well as the designation of the contract. Proposals forwarded by U.S. Mail shall be sent first class to the address listed below. Proposals forwarded by delivery service other than the U.S. Mail or hand delivered must be delivered to the address listed below. All bids must clearly display the bid number on the envelope.

Delivery Service:
STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
CONTRACT ADMINISTRATION
800 BAY ROAD
DOVER, DE 19901

U.S. Mail:
STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
CONTRACT ADMINISTRATION
PO Box 778
DOVER, DE 19903

All proposals will be accepted at the time and place set in the advertisement. Bidder bears the risk of delays in delivery. Proposals received after the time set for public opening will be returned unopened.

12. **WITHDRAWAL OF PROPOSALS:**

A bidder may withdraw its proposal unopened after it has been deposited, if such a request is made prior to the time set for the opening of the proposal.

13. **PUBLIC OPENING OF PROPOSALS:**

The bids shall be publicly opened at the time and place specified by the Agency. Bidders or their authorized representatives are invited to be present.

14. **PUBLIC INSPECTION OF PROPOSALS:**

If the bidder designates a portion of its bid as confidential, it shall isolate and identify in writing the confidential portions. The bidder shall include with this designation a statement that explains and supports the firm's claim that the bid items identified as confidential contain trade secrets or other proprietary data.

15. **DISQUALIFICATION OF BIDDERS:**

Any one or more of the following causes may be considered as sufficient for the disqualification of a bidder and the rejection of its proposal or proposals:

- a. More than one proposal for the same contract from an individual, firm, or corporation under the same or different names.

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- b. Evidence of collusion among bidders.
- c. Unsatisfactory performance record as evidenced by past experience.
- d. If the unit prices are obviously unbalanced either in excess or below reasonable cost analysis values.
- e. If there are any unauthorized additions, interlineation, conditional or alternate bids or irregularities of any kind which may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning.
- f. Non-attendance of mandatory pre-bid meetings may be cause of disqualification.

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SECTION B - AWARD AND EXECUTION OF CONTRACT

1. **CONSIDERATION OF BIDS:**

- a. After the proposals have been opened, the bids will be tabulated and the results will be made available to the public. Tabulations of the bids will be based on the correct summation of items at the unit price bid.
- b. The right is reserved to waive technicalities, to reject any or all bids, or any portion thereof, to advertise for new proposals, to proceed to do the work otherwise, or to abandon the work, if in the judgment of the Agency or its agent, the best interest of the State will be promoted thereby.

2. **MATERIAL GUARANTY:**

Before any contract is awarded, the successful bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all of the material to be used in the contract together with such samples as may be requested for the purpose of testing.

3. **CONTRACT AWARD:**

Within thirty days from the date of opening proposals, the contract will be awarded or the proposals rejected.

4. **EXECUTION OF CONTRACT:**

- a. The bidder to whom the award is made shall execute a formal contract and bond within twenty days after date of official notice of the award of the contract.
- b. If the successful bidder fails to execute the required contract and bond, as aforesaid, within twenty days after the date of official notice of the award of the contract, its proposal guaranty shall immediately become forfeited as liquidated damages. Award will then be made to the next lowest qualified bidder of the work or re-advertised, as the Agency may decide.

5. **REQUIREMENT OF CONTRACT BOND:**

Waived

6. **WARRANTY:**

The successful bidder(s) shall be required to extend any policy guarantee usually offered to the general public, FEDERAL, STATE, COUNTY, or MUNICIPAL governments, on material in this contract against defective material, workmanship, and performance.

7. **THE CONTRACT(S):**

The contract(s) with the successful bidder(s) will be executed with the Department of Transportation, Contract Administration section.

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8. **INFORMATION REQUIREMENT:**

The successful bidder's shall be required to advise the Department of Transportation, Contract Administration of the gross amount of purchases made as a result of the contract.

9. **CONTRACT EXTENSION:**

The State reserves the right to extend this contract on a month-to-month basis for a period of up to three months.

10. **TERMINATION FOR CONVENIENCE:**

Contracts shall remain in effect for the time period and quantity specified unless the contract is terminated by the State. The State may terminate the contract at any time by giving written notice of such termination and specifying the effective date thereof, at least sixty (60) days before the effective date of termination.

11. **TERMINATION FOR CAUSE:**

If, for any reasons, or through any cause, the Contractor fails to fulfill in timely and proper manner its obligations under this Contract, or if the Contractor violates any of the covenants, agreements, or stipulations of this Contract, the State shall thereupon have the right to terminate this contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least 5 days before the effective date of such termination. In that event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports or other material prepared by the Contractor under this Contract shall, at the option of the State, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials which is usable to the State.

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SECTION C - GENERAL

1. **AUTHORITY OF AGENCY:**

On all questions concerning the interpretation of specifications, the acceptability and quality of material furnished and/or work performed, the classification of material, the execution of the work, and the determination of payment due or to become due, the decision of the Agency shall be final and binding.

2. **LAWS TO BE OBSERVED:**

The contractor is presumed to know and shall strictly comply with all National, State, or County laws, and City or Town ordinances and regulations in any manner affecting the conduct of the work. The contractor shall indemnify and save harmless the State of Delaware, the Agency, and all Officers, Agency and Servants thereof against any claim or liability arising from or based upon the violation of any such laws, ordinances, regulations, orders, or decrees whether by itself or by its employees.

3. **PERMITS AND LICENSES:**

All necessary permits, licenses, insurance policies, etc. required by local, State or Federal laws, shall be provided by the contractor at its own expense.

4. **PATENTED DEVICES, MATERIAL AND PROCESSES:**

- a. The contractor shall provide for the use of any patented design, device, material, or process to be used or furnished under this contract by suitable legal agreement with the patentee or owner, and shall file a copy of this agreement with the Agency.
- b. The contractor and the surety shall hold and save harmless the State of Delaware, the Agency, the Director, their Officers or Agents from any and all claims because of the use of such patented design, device, material, or process in connection with the work agreed to be performed under this contract.

5. **EMERGENCY TERMINATION OF CONTRACT:**

- a. Due to restrictions which may be established by the United States Government on material, or work, a contract may be terminated by the cancellation of all or portions of the contract.
- b. In the event the contractor is unable to obtain the material required to complete the items of work included in the contract because of restrictions established by the United States Government and if, in the opinion of the Agency, it is impractical to substitute other available material, or the work cannot be completed within a reasonable time, the incomplete portions of the work may be cancelled, or the contract may be terminated.

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6. **TAX EXEMPTION:**

- a. Material covered by this proposal is exempt from all FEDERAL and STATE TAXES. Such taxes shall not be included in prices quoted.
- b. Any material which is to be incorporated in the work or any equipment required for the work contemplated in the proposal may be consigned to the Agency. If the shipping papers show clearly that any such material is so consigned, the shipment will be exempt from the tax on the transportation of property under provisions of Section 3475 (b) of the Internal Revenue Code, as amended by Public Law 180 (78th Congress). All transportation charges shall be paid by the contractor. Each bidder shall take its exemption into account in calculating its bid for its work.

7. **OR EQUAL (PRODUCTS BY NAME):**

Specifications of products by name are intended to be descriptive of quality or workmanship, finish and performance. Desirable characteristics are not intended to be restrictive. Substitutions of products for those named will be considered provided the vendor certifies that the function, characteristics, performance and endurance qualities of the material offered is equal or superior to that specified.

8. **BID EVALUATION AND AWARD:**

The Department of Transportation, Contract Administration will award this contract to the lowest responsible bidder(s) which in their judgment best serves the interest of the State of Delaware in accordance with Delaware Code Title 29, Section 6923(k). Personnel with experience and technical background may be utilized by the Department of Transportation in making judgment. In case of error in price extension, the unit price(s) shall prevail.

9. **INVOICING:**

After the awards are made, the agencies participating in the bid may forward their purchase orders to the successful bidder(s) in accordance with State Purchasing Procedures. The State will generate a payment voucher upon receipt of an invoice from the vendor.

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SECTION D - EQUAL OPPORTUNITY

1. **EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS:**

During the performance of any contract for public works financed in whole or in part by appropriation of the State of Delaware, the contractor agrees as follows:

- a. The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, age, or national origin. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated equally during employment without regard to their race, creed, color, sex, age, or national origin. Such action shall include, but not be limited to the following: advertising, lay-off or termination, rates of pay or other forms of compensation, and selection for training including apprenticeships. The contractor agrees to post in conspicuous places, notices to be provided by the contracting agency setting forth the provisions of this non-discrimination clause.
- b. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, age, or national origin.
- c. The term "contractor for public works" means construction, reconstruction, demolition, alteration, and/or repair work, maintenance work, and paid for in whole or in part out of the funds of a public body except work performed under a vocational rehabilitation program. The manufacture or furnishing of materials, articles, supplies or equipment is not a public work within the meaning of this subsection unless conducted in connection with and at the site of the public work.

Revised 7/1/2009

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CONTRACT NO DOT1206-STEEL_POLES
STEEL POLES

SPECIAL PROVISIONS

1. **CONTRACT REQUIREMENTS:**

This contract will be issued to cover the **DOT1206-STEEL_POLES** requirements.

2. **CONTRACT PERIOD:**

Each vendor's contract shall be valid upon contract execution through June 30, 2013. Each contract may be renewed if agreeable to both parties for up to two (2) additional one year terms through price negotiation between the contractor and the Department of Transportation, Contract Administration. Negotiation should be initiated no later than ninety (90) days prior to the termination of the agreement to allow the Department time to re-advertise this contract if not renewed.

3. **PRICES:**

Prices shall remain firm for each term of the contract.

4. **PRICE ADJUSTMENT:**

For each succeeding term, the Department of Transportation, Contract Administration shall have the option of accepting new pricing offered by the contractor, or allowing the contract to expire.

5. **SHIPPING TERMS:**

F.O.B. destination freight pre-paid, unless otherwise ordered.

6. **FUNDING OUT:**

The continuation of this contract is contingent upon funding appropriated by the legislature and funds being made available to the Division of Maintenance and Operations for the indicated fiscal year. The purchase order(s) will not be issued prior to the beginning of that fiscal year.

7. **PERFORMANCE BOND REQUIREMENT:**

Performance Bond Waived

8. **MANDATORY INSURANCE REQUIREMENTS:**

Certificate of Insurance and/or copies of insurance policies for the following:

1. As a part of the contract requirements, the contractor must obtain at its own cost and expense and keep in force and effect during the term of this contract, including all extensions, the minimum coverage limits specified below with a carrier satisfactory to the State. All contractors must carry Comprehensive General Liability and at least one of the other coverages depending on the type of service or product being delivered.

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- a. Comprehensive General Liability - \$1,000,000.00 per person/\$3,000,000 per occurrence.
and
 - b. Medical/Professional Liability - \$1,000,000.00 per person/\$3,000,000 per occurrence.
or
 - c. Miscellaneous Errors and Omissions - \$1,000,000.00 per person/\$3,000,000 per occurrence.
or
 - d. Product Liability - \$1,000,000.00 per person/\$3,000,000 per occurrence.
2. Automotive Liability Insurance covering all automotive units used in the work with limits of not less than \$100,000 each person and \$300,000 each accident as to bodily injury and \$25,000 as to property damage to others.
3. Forty-five (45) days written notice of cancellation or material change of any policies is required.

Contract Administrator, dot-ask@state.de.us
Contract No. DOT1206-STEEL_POLES
State of Delaware
Department Of Transportation
PO Box 778
DOVER, DE 19903
FAX: 302-739-2254

Note: The State of Delaware shall not be named as an additional insured

9. **BASIS OF AWARD:**

The Department of Transportation, Contract Administration shall award this contract to the lowest responsible and responsive bidder(s) of the contract who best meets the terms and conditions of the bid. The award will be made on basis of price, and prior history of service and capability.

The Department of Transportation, Contract Administration reserves the right to reject any or all bids in whole or in part, to make multiple awards, partial awards, award by types, item by item, or lump sum total, whichever may be most advantageous to the State of Delaware.

10. **STATE OF DELAWARE BUSINESS LICENSE:**

Prior to receiving an award, the successful vendor shall either furnish the Department of Transportation, Contract Administration with proof of State of Delaware Business Licensure or initiate the process of application where required. An application may be requested in writing to: Division of Revenue, Carvel State Building, P.O. Box 8750, 820 N. French Street, Wilmington, DE 19899 or by telephone to one of the following numbers: (302) 577-8201 - Public Service, (302) 577-8205 - Licensing Department.

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Information regarding the award of this contract will be given to the Division of Revenue. Failure to comply with the State of Delaware licensing requirements may subject your organization to applicable fines and/or interest penalties.

11. **HOLD HARMLESS:**

The successful bidder agrees that it shall indemnify and hold the State of Delaware and all its agencies harmless from and against any and all claims for injury, loss of life, or damage to or loss of use of property caused or alleged to be caused, by acts or omissions of the successful bidder, its employees, and invitees on or about the premises and which arise out of the successful bidder's performance, or failure to perform as specified in the Agreement.

12. **OWNERSHIP OF INTELLECTUAL PROPERTY:**

All copyright and patent rights to all papers, reports, forms, materials, creations, or inventions created or developed in the performance of this contract shall become the sole property of the State of Delaware. On request, the contractor shall promptly provide an acknowledgment or assignment in a tangible form satisfactory to the State to evidence the State's sole ownership of specifically identified intellectual property created or developed in the performance of the contract.

13. **NON-PERFORMANCE:**

In the event the vendor does not fulfill its obligations under the terms and conditions of this contract, the ordering agency may purchase equivalent product on the open market. Any difference in cost between the contract prices herein and the price of open market product shall be the responsibility of the vendor. Under no circumstances shall monies be due the vendor in the event open market products can be obtained below contract cost. Any monies charged to the vendor may be deducted from an open invoice.

14. **FORCE MAJEURE:**

Neither the vendor nor the ordering agency shall be held liable for non-performance under the terms and conditions of this contract due, but not limited to, government restriction, strike, flood, fire, or unforeseen catastrophe beyond either party's control. Each party shall notify the other in writing of any situation that may prevent performance under the terms and conditions of this contract.

15. **CONTRACTOR NON-ENTITLEMENT:**

State of Delaware Contractors for Materiel and for Services shall not have legal entitlement to, nor seek business from another Contractors' Central Contract. Additionally, they shall not utilize other Central Contracts to fulfill the requirements of their respective contract as they are not a "Covered Agency" as defined by Title 29 Chapter 69 of the State Procurement Code.

16. **MANDATORY USAGE REPORT:**

One of the primary goals in administering this contract is to keep accurate records regarding its actual value. This information is essential in order to update the contents of the contract and to establish proper bonding levels if they are required. The integrity of future contracts revolves around our ability to convey accurate and realistic information to all interested bidders.

A report shall be furnished by the successful contractor **MONTHLY** Electronically in Excel format detailing the purchasing of all items on this contract. The format to be followed is described herein and

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shall be filed within fifteen (15) days after the end of each reporting period. Any exception to this mandatory requirement may result in cancellation of the award. Failure to provide the report with the minimum required information may also negate any contract extension clauses. Additionally, contractors who are determined to be in default of this mandatory report requirement may have such conduct considered against them, in assessment of responsibility, in the evaluation of future proposals. Vendors not having activity during a specific reporting period, shall reply with a "no activity" if there is no activity during the reporting period.

The report shall be submitted electronically in EXCEL and sent as an attachment to dot-ask@state.de.us. It shall contain the six-digit department and organization code.

17. **ORDERING PROCEDURE:**

Successful contractors are required to have either a local telephone number within the (302) area code, a toll free (800) number, or agree to accept collect calls. Each agency is responsible for placing their orders and may be accomplished by written purchase order, telephone, fax or computer on-line systems. The contractor or vendor must accept full payment by procurement (credit) card and/or conventional check and/or other electronic means at the State's option, without imposing any additional fees, costs or conditions.

18. **BILLING:**

The successful vendor is required to "Bill as Shipped" to the respective ordering agency(s). Ordering agencies shall provide contract number, ship to and bill to address, contact name and phone number.

19. **PAYMENT:**

The agency involved will authorize and process for payment each invoice within thirty (30) days after the date of receipt of a correct invoice. The contractor or vendor must accept full payment by procurement (credit) card and/or conventional check and/or other electronic means at the State's option, without imposing any additional fees, costs or conditions.

20. **PRODUCT SUBSTITUTION:**

All items delivered during the life of the contract shall be of the same type and manufacture as specified or accepted as part of the bid proposal unless specific approval is given by the Department of Transportation, Contract Administration to do otherwise. However, awarded vendors are highly encouraged to offer any like substitute product (s); either generic or brand name, at any time during the subsequent contract term, especially if an opportunity for cost savings to the state exists. In such cases, the state may require the submission of written specifications and/or product samples for evaluation prior to any approvals being granted.

21. **BID/CONTRACT EXECUTION:**

Both the non-collusion statement that is enclosed with this Invitation to Bid and the contract form delivered to the successful bidder for signature **shall** be executed by a representative who has the legal capacity to enter the organization into a formal contract with the State of Delaware, Department of Transportation. The awarded vendor(s) will be required to complete the new W-9 Form by visiting the Division of Accounting's Website: <http://accounting.delaware.gov> .

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22. **CONTRACTOR RESPONSIBILITY:**

The State will enter into a contract with the successful contractor(s). The successful contractor shall be responsible for all products and services as required by this ITB. Subcontractors, if any, shall be pre-approved by the agency prior to use.

23. **PERSONNEL:**

- a. The Contractor represents that they have, or will secure at their own expense, all personnel required to perform the services required under this contract.
- b. All of the services required hereunder shall be performed by the Contractor or under its direct supervision, and all personnel, including subcontractors, engaged in the work shall be fully qualified and shall be authorized under State and local law to perform such services.
- c. None of the work or services covered by this contract shall be subcontracted without the prior written approval of the State.

24. **LIFE CYCLE COSTING:**

If applicable, the specifications contained within this ITB have been developed through Life Cycle Cost Analysis that will allow the State to realize the lowest total cost of ownership and operation over the useful life of the equipment.

25. **ENERGY STAR PRODUCTS:**

The contractor **must** provide products that earn the ENERGY STAR rating and meet the ENERGY STAR specifications for energy efficiency. The offeror is encouraged to visit www.energystar.gov for complete product specifications and updated lists of qualifying products.

26. **TERMINATION FOR CONVENIENCE:**

Contracts shall remain in effect for the time period and quantity specified unless the contract is terminated by the State. The State may terminate the contract at any time by giving written notice of such termination and specifying the effective date thereof, at least sixty (60) days before the effective date of termination.

27. **TERMINATION FOR CAUSE:**

If, for any reasons, or through any cause, the Contractor fails to fulfill in timely and proper manner its obligations under this Contract, or if the Contractor violates any of the covenants, agreements, or stipulations of this Contract, the State shall thereupon have the right to terminate this contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least 5 days before the effective date of such termination. In that event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports or other material prepared by the Contractor under this Contract shall, at the option of the State, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials which is usable to the State.

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28. **VENDOR EMERGENCY RESPONSE POINT OF CONTACT:**

The awarded vendor(s) shall provide the name(s), telephone, or cell phone number(s) of those individuals who can be contacted twenty four (24) hours a day, seven (7) days a week to meet a critical need for commodities or services when the Governor of the State of Delaware declares a state of emergency under the current Delaware Emergency Operations Plan. Failure to provide this information could render the bid as non-responsive.

29. **CONTRACT USE BY OTHER STATE AGENCIES**

Other state agencies may procure product under this contract so long as the arrangement is agreeable to all parties. (REF: Title 29, Chapter 6914(e) Delaware Code)

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STEEL POLES
CONTRACT NO. DOT1206-STEEL_POLES

GENERAL:

This contract provides for the preparation and delivery of steel strain poles, steel mast arm poles, steel mast arms, cast aluminum ornamental strain and mast arm pole split bases, and steel pedestal poles to the Division of Transportation Solutions, Traffic Section as designated in the proposal and as ordered by the Chief Engineer or authorized representative.

The Contract will be administered under the Delaware Department of Transportation Standard Specifications for Road and Bridge Construction dated August 2001, as amended by the most current Supplemental Specifications, these Special Provisions, contract Detail Sheets, and any applicable Standard Construction Details.

In all questions relating to this contract, the decision(s) of the Chief Engineer, Department of Transportation, shall be final.

SUBMISSION OF PROPOSALS:

This contract will be bid in its entirety as an Itemized Lump Sum Contract.

Bidders must submit proposals only upon forms provided by the Department. Proposals otherwise submitted will be rejected. Proposals, including all required documentation, must be submitted in a separate envelope and the envelope clearly marked "Proposal for Contract Administration Contract Number DOT1214-STEELPOLES".

FOR BID CONSIDERATIONS:

The bidder must furnish, with his proposal, the manufacturer's latest dated printed brochure(s) which shall contain complete specifications to enable the Department to compare and determine if the article(s) offered comply with the intent of the special provisions and will be satisfactory for the purpose. Upon award of the contract, the bidder shall submit shop drawings to DelDOT for review and approval within one (1) month of award of the contract, prior to execution of the contract.

EXEMPT FROM TAXES:

Articles covered by the proposal are exempt from all Federal and State taxes, if any are applicable, and such taxes shall not be included in the prices quoted. Necessary or applicable tax exemption forms shall accompany each invoice.

LENGTH OF CONTRACT:

The period of this contract is from the date of "Execution" for three (3) calendar years with the option to extend the contract for two (2) additional one-year periods. Both parties in writing must approve any one-year extensions at least 90 days prior to expiration of the existing contract, or any extension thereof.

PRICES QUOTED:

The prices quoted shall be those for which the article(s) will be furnished free-on-board (F.O.B.) at designated points of delivery and shall include all charges that may be imposed under this contract. No qualifying letter or statements in the proposal or separate discounts will be considered in determining the low bid.

QUANTITIES:

The quantities shown are for comparison of bids only. The Department may increase or decrease any quantity or quantities without penalty or change in the bid price.

BASIS OF AWARD:

This contract will be awarded to the lowest qualified bidder on the basis set forth by these provisions and specifications; said specifications are attached to, and are part of this contract.

SUBLETTING OR ASSIGNMENT OF CONTRACT:

No subcontracting is permitted unless approved in writing by DelDOT Traffic Section.

RIGHT TO TERMINATE THE CONTRACT:

The Department reserves the right to terminate the contract for failure to meet the provisions of the contract, in accordance with Section 108.11 of the Standard Specifications.

Failure to meet a delivery deadline shall result in a review for termination. If termination occurs because of failure of the contractor to satisfactorily complete a delivery, the Department may require removal of all equipment not accepted.

DOCUMENTS:

Except as noted below, all documents, plans, specifications, contract correspondence or the like required to be submitted for review, approval, or information after the bids are opened shall be submitted to the Chief Traffic Engineer, Department of Transportation, 169 Brick Store Landing Road, Smyrna, DE 19977.

Proposed Material Sources for all contract items shall be submitted to DelDOT Materials and Research Section, P.O. Box 778, Dover, DE 19903, attention Mr. Gregory Hainsworth with a copy to the Chief Traffic Engineer.

Shop drawings are required for all fabricated items including, but not limited to Steel Round and Ornamental Strain Poles, Steel Round and Ornamental Mast Arms and Poles, Steel Round and Ornamental Pedestal Poles, Steel Round Vehicle Detector Poles, Cast Aluminum Transformer Bases and Cast Aluminum Split Bases.

DELIVERY:

All items shall be ordered by purchase order. Each purchase order shall be promptly acknowledged in writing stating the estimated date of delivery. Delivery must be made within seventy-five (75) calendar days after receipt of a purchase order to the location noted on the purchase order.

Traffic Section
14 Sign Shop Road
Dover, DE 19901

Notification must be given at least three (3) days prior to delivery to the above address. If this notification is not given, any and all expenses incurred because of any unloading delay shall be the responsibility of the contractor.

EXTENSION OF DELIVERY TIME:

The Department will only consider an extension of the delivery time specified under the terms of this contract in cases where labor strikes shall prevent the required fulfillment of the contract. Evidence of such delays must be submitted for consideration. Knowledge of existing or pending strikes will be taken into consideration in awarding the contract.

INSPECTION AND ACCEPTANCE TESTING:

Upon delivery, the article(s) will be inspected by an authorized representative of the Division of Transportation Solutions, and if found damaged from any cause, including but not limited to transportation, or manufacturing or material defects, or if it fails in any way to meet these specifications, it shall be rejected. Rejected material shall be replaced by the supplier within the delivery time limit specified at no cost to the Department.

The Department may require independent testing to show compliance with these specifications. The contractor shall supply such test reports without cost.

The Department reserves the right to inspect fabrication of any contract items in the shop at the discretion of the Engineer.

The Contractor is directed to pay particular attention to the "Buy American" requirements of this contract listed in Subsection 106.06 of the Standard Specifications.

LIQUIDATED DAMAGES:

A sum of One-Hundred Dollars (\$100.00) per day will be deducted by the Department from monies due the contractor, not as a penalty, but as Liquidated Damages for each ordered unit not delivered within seventy-five (75) calendar days from the date of the purchase order. This supersedes the chart shown as part of Supplemental Specification Subsection 108.09, latest update.

Deliveries will not be accepted on Saturdays, Sundays, and State legal holidays.

BASIS OF PAYMENT:

The article(s) required in this contract will be paid for at the unit price bid, upon presentation of triplicate billing certified by an authorized representative of the contractor subject to the Department's approval and acceptance of the delivered item(s).

No payment will be made for any unordered item or any expected profit(s), and/or for any other reason or purpose under any circumstance including but not limited to termination of this contract.

WARRANTY:

The contractor shall provide to the Department any policy guarantee usually offered to purchasers on article(s) and/or service(s) against defective material and workmanship.

DESIGN STANDARDS:

All poles and mast arms shall be designed and manufactured in accordance with the American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 5th Edition, with 2010 and 2011 Interim Revisions. All structures shall have a minimum design life of 50 years and shall be classified as Fatigue Category I. The fatigue design loads to be considered for mast arms are galloping, natural wind gusts, and truck-induced gusts. Appendix C shall not be used to determine wind loading. All poles and mast arms must be adequately designed to resist fatigue design loads without the use of vibration mitigation devices.

Safety performance of the products shall be evaluated in accordance with the requirements of the AASHTO Manual for Assessing Safety Hardware (MASH), 2009 or National Cooperative Highway Research Program (NCHRP) Report 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features, 1993 if the hardware was accepted prior to the adoption of MASH. The bidder must furnish, with his proposal, all required testing documentation.

All materials and workmanship shall conform to the current standards of the American Society for Testing Materials (ASTM) and the current standards of the American National Standards Institute (ANSI). All welding shall be in accordance with Sections 1 through 8 of the American Welding Society (AWS) D1.1/D1.1M: 2010 Structural Welding Code.

For those items not specifically defined herein, good practice and/or "state of the art" as shown in previous equipment supplied by the contractor, and/or as used by the industry in general, shall apply.

A representative of the Department will be available to discuss good practice and "state of the art". The bidder is notified that neither claims for additional costs nor extensions of delivery times will be honored on the basis of good practice and/or "state of the art" problems.

The bidder must show by field review, if necessary, and by the various documents that are required as part of the bid that the materials proposed will perform as required.

PRODUCTS BY NAME, APPROVED EQUAL:

Specifications of a **PRODUCT BY NAME** is intended to be descriptive of quality, workmanship, finish, function, and approximate characteristics desired and are not necessarily intended to be restrictive. Approved equals are always considered.

For each product specified by name, the bidder may present a substitute product(s) for review. Upon review, the Department will determine if it is an **APPROVED EQUAL**.

A substitute product is an **APPROVED EQUAL** of the product named when, in the opinion of the Department; it is equal or superior in quality, workmanship, finish, characteristics, and function to that specified herein.

PRICE ADJUSTMENT:

PRICE ADJUSTMENT: It is the intent of the Department to purchase goods off of this contract during the entire contract life. Extension to future years is dependent on legislative appropriations for these Fiscal Years and agreement on succeeding year's pricing as described herein. The bid prices in the contract must be guaranteed for the first year of the contract from the date of the award. The Vendor's bid price may be adjusted for the difference in price upon the yearly anniversary date of this contract. If the difference exceeds the change in the Producer Price Index (PPI), from the Bureau of Labor Statistics (www.bls.gov) listed in table: Group: Metals and metal products, Item: Steel Pipe and Tube, Series Id: WPU10170601, previous twelve (12) month's average, approval of any price adjustment offered the Vendor above the PPI will be at the

discretion of the Chief Engineer (see calculation explanation below). The Chief Engineer retains the right to cancel the future years purchase if any acceptable agreement cannot be reached with the Vendor on the price adjustment. The Vendor shall supply a dated certified computer printout of the unit ordered showing the bid price on the date of original award or first purchase order and an identical order printout for the same unit at time of order after the first year of the contract to determine the above mentioned pricing changes.

The PPI is calculated as follows:

Average of the available previous twelve months PPI index (including any Preliminary);
minus the PPI index of June 2012;
equals the PPI Difference.
Divide the PPI Difference by the June 2012 index;
equals the PPI factor.
multiply the PPI factor by 100;
equals percentage change from bid price.

FEDERAL LANGUAGE

BUY AMERICA:

References:

23 USC 313

ISTEA Section 1041(a) and 1048(a)

23 CFR 635.410

Applicability:

Applicable to all materials used in Federal-aid projects

Guidance:

This contract requires the use of domestic steel and iron in products produced for Federally funded projects. All foreign steel and iron materials and products are covered by Buy America regardless of the percentage they comprise in a manufactured product or the form they may take. The regulations allow bidders and the contracting agency some latitude through minimum use, waivers, and alternate bids.

All manufacturing processes must take place domestically. Manufacturing begins with the initial melting and mixing, and continues through the coating stage. Any process which modifies the chemical content, the physical size or shape, or the final finish is considered a manufacturing process. These processes include rolling, extruding, machining, bending, grinding, drilling and coating. "Coating" includes epoxy coating, galvanizing, painting, or any other coating that protects or enhances the value of the material.

Buy America does not apply to raw materials (iron ore and alloys), scrap, pig iron or processed, pelletized, and reduced iron ore.

If domestically produced steel billets or iron ingots are shipped overseas for any manufacturing process, and then returned to the U.S., the resulting product does not conform with the Buy America requirements.

The manufacturing process for a steel/iron product is considered complete when the product is ready for use as an item (e.g., fencing, posts, girders, pipe, manhole cover, etc.) or could be incorporated as a component of a more complex product through a further manufacturing process (e.g., the case for a traffic signal head). The final assembly process does not need to be accomplished domestically so long as the steel/iron component is only installed and no manufacturing process is performed on the steel/iron component.

For the Buy America requirements to apply, the steel or iron product must be permanently incorporated into the project. Buy America does not apply to temporary steel items, e.g., temporary sheet piling, temporary bridges, steel scaffolding and falsework, etc.

Buy America provisions apply to all steel and iron materials that is to be permanently incorporated in a Federal-aid project, even if an item is rendered as a "donated material" in accordance with 23 U.S.C. 323 - Donations and Credits.

For additional information, refer to the following website:

<http://www.fhwa.dot.gov/programadmin/contracts/core02.cfm#s2B01>

Refer to section B. Other Contract Provisions.

* * * * *

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more that \$10,000 or imprisoned not more than 5 years or both."

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be

considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies

available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
 - d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

SPECIAL PROVISIONS

PURPOSE:

These Special Provisions include the preparation and delivery of steel strain poles, steel mast arm poles, steel mast arms, steel pedestal poles, steel vehicle detector poles, and cast aluminum ornamental split bases for the installation of traffic control devices. These poles, mast arms, and split bases will be used to replace existing structures and/or for installation of new structures.

All specifications must be met even if a particular location may not require all of the specified elements.

GENERAL:

The Steel Strain Poles supplied under this contract shall be one of two types:

1. A round shaft pole.
2. A 16-flute ornamental shaft pole.

For this contract, the strain pole shaft lengths 25' (7.6 m), 28' (8.5 m), 30' (9.1 m), 32' (9.8 m), and 37' (11.3 m) shall be considered standard.

The Steel Mast Arm Poles supplied under this contract shall be one of two types:

1. A round shaft pole.
2. A 16-flute ornamental shaft pole.

The Steel Mast Arms supplied under this contract shall be one of two types:

1. A round shaft mast arm.
2. A 16-flute ornamental shaft mast arm.

For this contract, the mast arm shaft lengths 20' (6.1 m), 25' (7.6 m), 30' (9.1 m), 35' (10.7 m), 40' (12.2 m), 45' (13.7 m), 50' (15.2 m), 55' (16.8 m), 60' (18.3 m), 70' (21.3 m), 80' (24.4 m), and 90' (27.4 m) shall be considered standard.

The Steel Pedestal Poles supplied under this contract shall be one of two types:

1. A round shaft pole.
2. A 16-flute ornamental shaft pole.

For this contract, the pedestal pole shaft lengths 6' (1.8 m), 10' (3.0 m) and 14' (4.3 m) shall be considered standard.

The Steel Vehicle Detector Poles supplied under this contract shall be round shaft poles. For this contract, the vehicle detector pole shaft length 40' (12.2 m) shall be considered standard.

The Cast Aluminum Transformer Bases supplied under this contract shall be used with steel vehicle detector poles when breakaway support is required.

The Cast Aluminum Ornamental Strain, Mast Arm, and Pedestal Pole Split Bases (Skirts) supplied under this contract shall be used with ornamental strain poles, ornamental mast arm poles, and ornamental pedestal poles when design conditions permit.

The standard colors for round strain, mast arm, pedestal, and vehicle detector poles shall be silver-grey galvanized and black (Coal Black, FS: 27038). The standard color for ornamental poles, ornamental mast arms and split bases shall be black (Coal Black, FS: 17038). Any other color will be considered a special order. The steel poles and mast arms shall be galvanized per ASTM A123. Accessories and hardware shall be galvanized according to ASTM A153.

The black steel poles and mast arms shall be galvanized and powder coated over galvanization. After galvanizing all galvanized surfaces shall be air cooled and prepared for painting according to ASTM D6386. Powder coating material shall be a thermosetting, durable, polyester powder of a degassing grade. Such coating powder must be recommended by its manufacturer for use over hot dipped galvanizing. The coating will be electrostatically applied and cured by heating to a temperature and duration specified by the powder coat material manufacturer. The exterior surface will be coated to dry film thickness 5 - 10 mils (127 - 254 microns).

All non-ornamental poles and arms shall be "true round." Multi-sided poles or arms, including 8, 12, 16, or 18 sided members, or any other press break pole or arms, shall not be permitted.

Each pole and mast arm supplied under this contract shall have a metallic identification plate mechanically attached 6" (152 mm) above the pole base plate and oriented so that the identification plate may be read from a ground observation position. The following information shall be provided and stamped in the plate: name of the manufacturer, current DelDOT Steel Pole contract number, outside shaft diameter (O.D.) at the base in inches, shaft length in feet, wall thickness in GA or schedule, and bolt circle (B.C.) in inches. In addition, anchor bolt diameter and bent length in inches shall be provided for strain and mast arm poles; breakaway coupling dimensions in inches shall be provided for pedestal and vehicle detector poles. Industry common abbreviations are acceptable. Sample identification plate for strain or mast arm pole is shown below.

Manufacturer_____		Contract #:_____	
Pole O.D.:_____	Height:_____	GA:_____	
Anchor Bolt Dia.:__	Length:_____	B.C.:_____	

The following are the detailed specifications for steel strain poles, steel mast arm poles, steel mast arms, steel pedestal poles, steel vehicle detector poles, and cast aluminum ornamental split bases.

- 25' STEEL ROUND STRAIN POLE**
- 28' STEEL ROUND STRAIN POLE**
- 30' STEEL ROUND STRAIN POLE**
- 32' STEEL ROUND STRAIN POLE**
- 37' STEEL ROUND STRAIN POLE**
- 25' STEEL 16-FLUTE ORNAMENTAL STRAIN POLE**
- 28' STEEL 16-FLUTE ORNAMENTAL STRAIN POLE**
- 30' STEEL 16-FLUTE ORNAMENTAL STRAIN POLE**
- 32' STEEL 16-FLUTE ORNAMENTAL STRAIN POLE**
- 37' STEEL 16-FLUTE ORNAMENTAL STRAIN POLE**

Each strain pole shall include a shaft, complete with pole base plate, handhole with handhole cover, top cap, anchor bolts with nuts and washers, and nut covers. A span wire clamp assembly shall be supplied with each

ornamental strain pole. Ornamental split bases for ornamental strain poles shall be supplied separately. See Contract Detail Sheets 1 and 2 for strain pole fabrication details.

Shaft

The round tapered shaft shall be formed from structural quality steel conforming to the requirements of ASTM A595 Grade A and having minimum yield strength of 55,000 PSI (380 MPa) after fabrication. The shaft shall have only one longitudinal welded joint with no intermediate horizontal joints. The submerged with 60 percent penetration arc weld process shall be used.

The fluted shaft shall be formed from a round tapered shaft cold-rolled over a precision steel fluted mandrel. Sixteen (16) uniform and equally spaced Doric flutes shall be free from marring and longitudinal rolling marks throughout the entire length of the shaft.

The walls of round tapered strain pole shafts shall be 0.625" (15.9 mm) in thickness throughout, including welded areas. All shafts shall have a 14" (356 mm) outside diameter at the pole base end. All shafts shall taper 0.14 inches per linear foot (11.7 millimeters per linear meter), measured as a change in O.D. These values are absolute and may not vary more than normal tolerances.

Each shaft shall be provided with a 3" (76 mm) coupling located 24" (610 mm) below the top end of the shaft.

Each shaft shall be provided with a wire support hook welded inside at the top end. A pole base plate shall telescope the lower end of the shaft.

Pole Base Plate

The pole base plate shall be one-piece hot-rolled steel conforming to ASTM A36 or ASTM A572 with minimum yield strength of 36,000 PSI (250 MPa) or 42,000 PSI (290 MPa), respectively. The pole base plate shall be 21" x 21" x 2" (533 mm x 533 mm x 51 mm). The plate shall have provision for four (4) 2" (51 mm)-diameter anchor bolts. The plate shall have a 20" (508 mm)-diameter anchor bolt circle. These values are absolute and may not vary more than normal tolerances. The plate shall be secured to the shaft using continuous welds. The welded connection shall develop the full strength of the adjacent shaft section to resist bending action.

Anchor bolts shall secure the pole base plate to the pole base.

Anchor Bolts

Anchor bolts shall be fabricated conforming to ASTM F1554, Grade 105 with minimum yield strength of 105,000 PSI (724 MPa), minimum ultimate tensile strength of 125,000 PSI (860 MPa), and maximum elongation between minimum yield and minimum ultimate of 18 percent. Each 2" (51 mm)-diameter bolt shall have 8" (203 mm) of threads at the top, 6" (152 mm) "L" bend at the bottom, and a bent length of 90" (2286 mm). The threaded ends shall be hot dip galvanized a minimum of 18" (457 mm) in accordance with ASTM A153. Four (4) anchor bolts shall be supplied with each pole. Each anchor bolt shall be furnished with two (2) galvanized hexagon nuts, two (2) flat washers, and a cast aluminum nut cover.

Nut Covers

Nut covers shall be fastened to the shaft with self-threading stainless steel hexagon head screws. The shafts shall be pre-drilled to accept attachment screws.

All shafts shall be provided with a handhole typically located 18" (457 mm) from the base plate.

Handhole

The minimum nominal inside opening of the handhole shall be 26 sq. in (16,774 sq. mm). The handhole shall be reinforced with a welded-in frame to meet the minimum guaranteed yield strength of the shaft. The handhole frame shall be aligned so that the anchor bolt holes along one set of opposite sides of the pole base plate are at right angles to the frame. A grounding nut holder shall be welded to the frame and include a 1/2" (13 mm) – 13UNC hexagon head bolt and two (2) flat washers. The handhole shall be complete with a steel cover. The cover shall be supplied with two (2) stainless steel hexagon head attachment screws.

The top end of the shaft shall be protected with a top cap.

Top Cap

The cast aluminum top cap shall be removable, secured to the shaft with three (3) stainless steel machine screws spaced at 120 degrees.

Span wire clamp assemblies shall be provided with ornamental strain poles.

Span Wire Clamp Assembly (Steel 16-Flute Ornamental Strain Poles)

A span wire clamp assembly shall include heavy duty steel clamp and U-bolt with two (2) hexagon head nuts and two (2) flat washers.

STEEL ROUND MAST ARM POLE, TYPE A
STEEL ROUND MAST ARM POLE, TYPE B
STEEL ROUND MAST ARM POLE, TYPE C
STEEL 16-FLUTE ORNAMENTAL MAST ARM POLE, TYPE A
STEEL 16-FLUTE ORNAMENTAL MAST ARM POLE, TYPE B

Each mast arm pole shall include a 21.5' (6.6 m) tall shaft, complete with pole base plate, handhole with handhole cover, top cap, clamp assembly for mast arm mounting, anchor bolts with nuts and washers, and nut covers. Ornamental split bases for ornamental mast arm poles shall be supplied separately. See Contract Detail Sheets 3 and 4 for mast arm pole fabrication details.

Three mast arm poles shall be considered standard for this contract:

1. Mast arm pole, Type A, designed to support two (2) – 40' (12.2 m) mast arms. This pole shall also support mast arms ranging from 20' (6.1 m) to 40' (12.2 m) in length.
2. Mast arm pole, Type B, designed to support two (2) – 60' (18.3 m) mast arms. This pole shall also support mast arms ranging from 45' (13.7 m) to 60' (18.3 m) in length.
3. Mast arm pole, Type C, designed to support one (1) – 90' (27.4 m) mast arm. This pole shall also support 70' (21.3 m) and 80' (24.4 m) mast arms.

The design shall be based on a wind speed of 115 MPH. See Contract Detail Sheet 5 for lateral spacing of mast arm attachments.

Shaft

The round shaft shall be formed from structural quality steel conforming to the requirements of ASTM A595 Grade A and having minimum yield strength of 55,000 PSI (380 MPa) after fabrication. The shaft shall have

only one longitudinal welded joint with no intermediate horizontal joints. The submerged with 60 percent penetration arc weld process shall be used.

The fluted shaft shall be formed from a round shaft cold-rolled over a precision steel fluted mandrel. Sixteen (16) uniform and equally spaced Doric flutes shall be free from marring and longitudinal rolling marks throughout the entire length of the shaft.

The wall thickness of the shaft shall be uniform in thickness throughout, including welded areas. The wall thickness and diameter of the shaft shall be designed by the manufacturer. The manufacturer may choose to specify the same dimension for mast arm pole, Type A and B. Shafts shall taper 0.14 inches per linear foot (11.7 millimeters per linear meter), measured as a change in O.D.

Each pole shall be provided with a 4" (102 mm)-diameter hole and cover for wiring at the top end of the shaft. A wire support hook shall be welded inside the shaft 1" (25 mm) above the arm mounting height. A pole base plate shall be attached to the lower end of the shaft. Each shaft shall display a permanent, clearly visible identification label to designate the type of mast arm pole.

Pole Base Plate

The pole base plate shall be one-piece hot rolled steel conforming to ASTM A36 or ASTM A572 with minimum yield strength of 36,000 PSI (250 MPa) or 42,000 PSI (290 MPa), respectively. For mast arm pole Type A and B, the pole base plate shall be 21" x 21" x 2" (533 mm x 533 mm x 51 mm). The plate shall have provision for four (4) 2" (51 mm)-diameter anchor bolts. The plate shall have a 20" (508 mm)-diameter B.C. These values are absolute and may not vary more than normal tolerances. The manufacturer shall design dimensions of the pole base plate, and determine the size and required number of anchor bolts for mast arm pole, Type C.

The pole base plate shall be secured to the shaft by a continuous full penetration groove weld. The welded connection shall develop the full strength of the adjacent shaft section to resist bending action.

Anchor bolts shall secure the pole base plate to the pole base.

Anchor Bolts

Anchor bolts shall be fabricated conforming to ASTM F1554, Grade 105 with minimum yield strength of 105,000 PSI (724 MPa), minimum ultimate tensile strength of 125,000 PSI (860 MPa), and maximum elongation between minimum yield and minimum ultimate of 18 percent. Each 2" (51 mm)-diameter bolt shall have 8" (203 mm) of threads at the top, 6" (152 mm) "L" bend at the bottom, and a bent length of 90" (2286 mm). The threaded ends shall be hot dip galvanized a minimum of 18" (457 mm) in accordance with ASTM A153. Each anchor bolt shall be furnished with two (2) galvanized hexagon nuts, two (2) flat washers, and a cast aluminum nut cover.

A set of anchor bolts shall be supplied with each pole.

Nut Covers

Nut covers shall be fastened to the shaft with self-threading stainless steel hexagon head screws. The shafts shall be pre-drilled to accept attachment screws.

All shafts shall be provided with a handhole typically located 18" (457 mm) from the pole base plate.

Handhole

The minimum nominal inside opening of the handhole shall be 26 sq. in (16,774 sq. mm). The handhole shall be reinforced with a welded-in frame to meet the minimum guaranteed yield strength of the shaft. The handhole frame shall be aligned so that the anchor bolt holes along one set of opposite sides of the pole base plate are at right angles to the frame. A grounding nut holder shall be welded to the frame and include 1/2" (13 mm) – 13UNC hexagon head bolt and two (2) flat washers. The handhole shall be complete with a steel cover. The cover shall be supplied with two (2) stainless steel hexagon head attachment screws.

The top end of the shaft shall be protected with a top cap.

Top Cap

The cast aluminum top cap shall be removable, secured to the shaft with three (3) stainless steel machine screws spaced at 120 degrees.

Clamp Assembly

A clamp-type assembly shall be used to attach all mast arms to mast arm poles. The clamp assembly shall be a two-plate assembly secured around the pole shaft. Each plate shall be fabricated of one-piece hot rolled steel conforming to ASTM A36 with minimum yield strength of 36,000 PSI (250 MPa). The front plate of the clamp shall be welded to the mast arm utilizing a continuous full penetration groove weld. The front plate shall have a deburred hole in the middle of the plate for wiring.

The manufacturer shall determine the size and number of studs required for the clamp assembly. The clamp assembly shall be the same size for mast arm pole, Type A and B. Mast arm pole Type C may utilize a different size clamp assembly, if required.

The mast arm and the clamp shall be designed to provide a 1 to 3 degree rake angle between horizontal and arm center line when installed and loaded.

- 20' STEEL ROUND MAST ARM**
- 25' STEEL ROUND MAST ARM**
- 30' STEEL ROUND MAST ARM**
- 35' STEEL ROUND MAST ARM**
- 40' STEEL ROUND MAST ARM**
- 45' STEEL ROUND MAST ARM**
- 50' STEEL ROUND MAST ARM**
- 55' STEEL ROUND MAST ARM**
- 60' STEEL ROUND MAST ARM**
- 70' STEEL ROUND MAST ARM**
- 80' STEEL ROUND MAST ARM**
- 90' STEEL ROUND MAST ARM**
- 20' STEEL 16-FLUTE ORNAMENTAL MAST ARM**
- 25' STEEL 16-FLUTE ORNAMENTAL MAST ARM**
- 30' STEEL 16-FLUTE ORNAMENTAL MAST ARM**
- 35' STEEL 16-FLUTE ORNAMENTAL MAST ARM**
- 40' STEEL 16-FLUTE ORNAMENTAL MAST ARM**
- 45' STEEL 16-FLUTE ORNAMENTAL MAST ARM**
- 50' STEEL 16-FLUTE ORNAMENTAL MAST ARM**

55' STEEL 16-FLUTE ORNAMENTAL MAST ARM
60' STEEL 16-FLUTE ORNAMENTAL MAST ARM

Each mast arm shall include a shaft, complete with arm cap, and clamp with bolts, nuts and washers for a pole connection. See Contract Detail Sheets 3 and 4 for mast arm fabrication details.

The mast arms shall be designed based on the loading configuration shown on Contract Detail Sheet 5. The design arms shall be loaded with 3-section, and 5-section 12" (305 mm) cast aluminum rigidly mounted signal heads with backplates, an overhead detection unit, an emergency preemption receiver, and mast arm signing. The overhead detection unit shall be a video camera. A dual-tube emergency preemption receiver model shall be used for calculations. Weights of all associated mounting hardware shall be considered. Weight of wiring shall be neglected. Total deflection at the free end of the traffic signal structure shall be limited vertically to 8" (203 mm) for 60' (18.3 m) and shorter arms, and to 1.5% of the arm length for 70' (21.3 m), 80' (24.4 m), and 90' (27.4 m) arms.

The design shall be based on a wind speed of 115 MPH.

Shaft

STATE OF DELAWARE
Department of Transportation
Contract Administration

The mast arm shaft shall be formed from structural quality steel conforming to the requirements of ASTM A595 Grade A and having minimum yield strength of 55,000 PSI (380 MPa) after fabrication. The shaft shall have only one longitudinal welded joint with no intermediate horizontal joints. The submerged with 60 percent penetration arc weld process shall be used.

The round shaft shall be formed, welded longitudinally, and cold-rolled under sufficient pressure to flatten the weld to form a round tube and to provide the physical characteristics of the metal as required.

The fluted shaft shall be formed from a round shaft cold-rolled over a precision steel fluted mandrel. Sixteen (16) uniform and equally spaced Doric flutes shall be free from marring and longitudinal rolling marks throughout the entire length of the shaft.

The wall thickness and diameter of the shaft shall be determined by the manufacturer. All shafts shall be tapered 0.14 inches per linear foot (11.7 millimeters per linear meter), measured as a change in O.D. Mast arm shafts will be one-, two-, or three-section structures depending on the required arm length. Two- and three-section arms shall be field-assembled by telescoping to a firm tapered fit and secured with a galvanized ASTM A325 through bolt. To achieve a snug tight joint a hole for the through bolt shall be shop drilled in the end section of the arm and field drilled in the base section. The minimum overlap between two sections shall be 1.5 times the inside diameter (I.D.) of the end section.

The end of each mast arm shaft shall be protected with an arm cap.

Arm Cap

The end arm cap shall be removable, secured in place with a set of three (3) stainless steel screws spaced at 120 degrees.

The manufacturer shall furnish rubber grommets for field drilled wiring holes, typically one grommet per piece of electrical equipment.

6' STEEL ROUND PEDESTAL POLE
10' STEEL ROUND PEDESTAL POLE
14' STEEL ROUND PEDESTAL POLE
6' STEEL 16-FLUTE ORNAMENTAL PEDESTAL POLE
10' STEEL 16-FLUTE ORNAMENTAL PEDESTAL POLE
14' STEEL 16-FLUTE ORNAMENTAL PEDESTAL POLE

Each steel pedestal pole shall include a shaft, complete with handhole with handhole cover, pole base plate, top cap, breakaway couplings with nuts, washers and shims, skirt, and anchor inserts. Ornamental split bases for ornamental pedestal poles shall be supplied separately. See Contract Detail Sheet 6 for pedestal pole fabrication details.

Pedestal poles shall be designed based on the maximum typical loading. A 6' (1.8 m) design pole shall be loaded with two (2) Accessible Pedestrian Signal (APS) pushbutton assemblies and one (1) 9" x 15" (229 mm x 381 mm) pushbutton sign. A 10' (3.0 m) design pole shall be loaded with two (2) 18.5" x 18.7" x 9.1" (470 x 475 x 231) aluminum pedestrian signal heads, two (2) APS pushbutton assemblies, and one (1) 9" x 15" (229 mm x 381 mm) pushbutton sign. Pedestrian signal heads will be top-mounted on 10' (3.0 m) round pedestal poles and side-mounted on 10' (3.0 m) ornamental pedestal poles. A 14' (4.3 m) design pole shall be loaded with two (2) top-mounted single-section 12" (305 mm) cast aluminum vehicular signal heads and two (2) 0.08" (2 mm) thick aluminum signs. Sizes of the signs shall be 48" x 48" (1219 mm x 1219 mm) and 24" x 30" (610 mm x 762 mm). Weights of all associated mounting hardware shall be considered. Weight of wiring shall be neglected. The design shall be based on a wind speed of 115 MPH.

Shaft

The pedestal pole shaft shall be fabricated of one length and shall have one longitudinal weld, parallel to the long axis of the pedestal pole shaft, with no transverse welds. The longitudinal weld shall be finished to form a smooth outside surface and the wall of the pedestal pole shaft shall be uniform in thickness including the welded area. The fluted shaft shall be formed from a round shaft cold-rolled over a precision steel fluted mandrel. Sixteen (16) uniform and equally spaced Doric flutes shall be free from marring and longitudinal rolling marks throughout the entire length of the shaft.

The outer diameter (O.D.) of the shaft shall be 4.5" (114 mm). Steel round shafts shall be un-tapered. Fluted shafts will be tapered or un-tapered. If tapered the taper shall be 0.14 inches per linear foot (11.7 millimeters per linear meter), measured as a change in O.D. The wall thickness of the shaft shall be determined by the manufacturer.

All shafts shall be provided with a handhole typically located 18" (457 mm) from the base plate.

Handhole

The minimum nominal inside opening of the handhole shall be 15 sq. in (9,677 sq. mm). The handhole shall be reinforced with a welded-in frame to meet the minimum guaranteed yield strength of the shaft. A grounding nut holder shall be welded to the frame and include a 1/2" (13 mm) – 13UNC hexagon head bolt and two (2) flat washers. The handhole shall be complete with a steel cover. The cover shall be supplied with two (2) stainless steel hexagon head attachment screws.

The top end of the shaft shall be protected with a cast aluminum top cap.

Top Cap

The cast aluminum top cap shall be removable, secured to the shaft with three (3) stainless steel machine screws spaced at 120 degrees.

A pole base plate shall telescope the lower end of the shaft.

Pole Base Plate

The anchor plate shall be one-piece hot rolled steel conforming to ASTM A36 with minimum yield strength of 36,000 PSI. The plate shall be welded to the shaft. The 14' (4.3 m) pedestal poles shall have a 12" (305 mm)-diameter B.C. Both 12" (305 mm) and 8" (203 mm)-diameter bolt circles shall be standard for 6' (1.8 m) and 10' (3.0) poles. The manufacturer shall design dimensions of the pole base plate. The plate shall have provision for four (4) breakaway couplings.

Breakaway Couplings

The breakaway couplings for pedestal poles shall be vehicle crash-tested in accordance with MASH or NCHRP Report 350. The couplings shall withstand 2 million loading cycles with no reduction in structural capacity.

Each breakaway coupling shall be threaded at the top to be secured to a pole plate with a nut, and at the bottom for connection with an anchor insert. Thread lengths shall be determined by the manufacturer. Each coupling shall be furnished with a hexagon nut, two (2) flat washers, and two (2) steel shims for leveling. The couplings and hardware shall be galvanized after fabrication in accordance with ASTM A153. Breakaway couplings of the same type and size shall be used for all lengths of pedestal poles.

Anchor Inserts

The anchor inserts shall be designed to support maximum typical loading described above for pedestal poles. The inserts shall be compatible with the breakaway couplings and fit DelDOT standard Pole base, Type 4.

Skirt

The breakaway couplings shall be protected with a skirt. The skirt shall consist of four (4) overlapping aluminum panels secured with stainless steel screws. Minimum lap shall be 2" (51 mm). The skirt shall be designed to cover the pole base plate and not to allow any gap at concrete foundation. The skirt shall fit tight with the pole base plate after installation. Corners of the skirt shall have same radius as the base plate corners.

40' STEEL ROUND VEHICLE DETECTOR POLE

Each vehicle detector pole shall include a shaft, complete with pole base plate, handhole with handhole cover, and top cap. Anchor bolts with nuts, washers, and nut covers will be supplied with each pole. Transformer bases with connection bolts shall be supplied separately. See Contract Detail Sheet 7 for vehicle detector pole fabrication details.

Vehicle detector poles shall be designed based on the loading configuration shown on the Contract Detail Sheet 7 and listed in this paragraph: pole mounted controller cabinet, four (4) solar panels on single mounting bracket, and two (2) vehicle detector units. Weights of all associated mounting hardware shall be considered. Weight of wiring shall be neglected. The design shall be based on a wind speed of 115 MPH.

Shaft

The shaft shall be round, formed from structural quality steel conforming to the requirements of ASTM A595 Grade A and having minimum yield strength of 55,000 PSI (380 MPa) after fabrication. The shaft shall have only one longitudinal welded joint with no intermediate horizontal joints. The submerged with 60 percent penetration arc weld process shall be used.

The wall thickness of the shaft shall be uniform in thickness throughout, including welded areas, and shall be determined by the manufacturer.

The shaft shall have a 9" (229 mm) outside diameter (O.D.) at the pole base end. The shaft shall taper 0.14 inches per linear foot (11.7 millimeters per linear meter), measured as a change in O.D.

Each shaft shall be provided with a wire support hook welded inside at the top end. Each shaft shall include 2" (51 mm) blind half couplings. The position of wire support hook and couplings on the shaft shall be specified per order.

A pole base plate shall telescope the lower end of the shaft.

Pole Base Plate

The pole base plate shall be one-piece hot rolled steel conforming to ASTM A36 or ASTM A572 with minimum yield strength of 36,000 PSI (250 MPa) or 42,000 PSI (290 MPa), respectively. The pole base plate shall be secured to the shaft by a continuous weld. The welded connection shall develop the full strength of the adjacent shaft section to resist bending action. The plate shall have provision for four (4) anchor bolts or (4) connection bolts if mounted on a transformer base (t-base). The plate shall have a 15" (381 mm)-diameter B.C. The manufacturer shall design dimensions of the pole base plate, and determine the size of anchor and connection bolts. The connection bolts will be supplied with a transformer base as a separate item under this contract.

A set of four (4) anchor bolts shall be supplied with this item.

Anchor Bolts

Anchor bolts shall be fabricated conforming to ASTM F1554, Grade 55 with minimum yield strength of 55,000 PSI (380 MPa). The threaded ends shall be hot dip galvanized in accordance with ASTM A153. Dimensions of the anchor bolts

shall be determined by the manufacturer. Each anchor bolt shall be furnished with two (2) galvanized hexagon nuts, two (2) flat washers, and a cast aluminum nut cover.

Nut Covers

Nut covers shall be fastened to the shaft with self-threading stainless steel hexagon head screws. The shafts shall be pre-drilled to accept attachment screws.

All shafts shall be provided with a handhole typically located 18" (457 mm) from the pole base plate.

Handhole

The minimum nominal inside opening of the handhole shall be 26 sq. in (16,774 sq. mm). The handhole shall be reinforced with a welded-in frame to meet the minimum guaranteed yield strength of the shaft. The handhole frame shall be aligned so that the anchor bolt holes along one set of opposite sides of the pole base plate are at right angles to the frame. A grounding nut holder shall be welded to the frame and include 1/2" (13 mm) – 13UNC hexagon head bolt and two (2) flat washers. The handhole shall be complete with a steel cover. The cover shall be supplied with two (2) stainless steel hexagon head attachment screws.

The top end of the shaft shall be protected with a top cap.

Top Cap

The cast aluminum top cap shall be removable, secured to the shaft with three (3) stainless steel machine screws spaced at 120 degrees.

17" CAST ALUMINUM TRANSFORMER BASE FOR STEEL VEHICLE DETECTOR POLE

Each Cast Aluminum Transformer Base shall include a base, complete with door cover, and connection bolts with nuts and washers for connection with a vehicle detector pole. See Contract Detail Sheet 7 for transformer base fabrication details.

Base

Each aluminum transformer base shall be one-piece casting 17" (432 mm) in height with a door opening. The material of the base shall conform to the requirements of AA356 T6. The base shall be designed to fit the steel vehicle detector pole. The top flange of the base shall have provision for four (4) connection bolts on a 13" (330) thru 15" (381 mm)-diameter B.C. The bottom flange shall be arranged for four (4) anchor bolts supplied with a vehicle detector pole as a separate item under this contract. The bottom flange shall have 15" (381 mm) thru 17 1/4" (438) B.C. A grounding nut holder shall be welded to the bottom flange.

Each base shall be complete with a door cover.

Cover

The transformer base cover shall be waterproof, durable, rigid and non-metallic. The cover shall be easily removed and re-installed by means of metal corrosion-proof latch mechanism mounted at top of the cover. The latch mechanism shall be easily operated from the exterior by use of hex head tool. The bottom inside portion of the cover shall include factory molded protrusions allowing for easy seating of the cover in the bottom of the transformer base opening. The cover shall be aligned so that the anchor bolt holes along one set of opposite sides of the bottom flange are at right angles to the cover. Color of the transformer base and the cover shall match color of the vehicle detection steel pole.

Connection Bolts

The material of the connection bolts shall conform to the requirements of ASTM A325. Dimensions of the connection bolts shall be determined by the manufacturer. Each connection bolt shall be furnished with one (1) galvanized hexagon nut, one (1) lock washer, one (1) hardened washer and one (1) flat washer.

CAST ALUMINUM ORNAMENTAL STRAIN AND MAST ARM POLE SPLIT BASE CAST ALUMINUM ORNAMENTAL PEDESTAL POLE SPLIT BASE

Each cast aluminum ornamental split base shall be a two-piece split casting with a removable door. The split base shall be designed to fit at the base of the steel 16-flute ornamental pole. The material of the split base shall conform to the requirements of AA319.0F aluminum. The cast aluminum split bases shall be black, powder coated.

The cast aluminum split base shall be prepared for powder coating by solvent cleaning and brush blasting as specified in SSPC Surface Preparation Specifications 1 and 7, and a phosphate treatment. The phosphoric acid can be applied by immersion, spray, or soft bristle brush and stay on surfaces for 3 to 6 min. Surfaces should be thoroughly washed with clean water before and after the phosphate treatment. Powder coating should take place soon after the base surfaces are completely dried after the phosphate treatment to avoid pick up of surface contaminants. The exterior surface will be coated to dry film thickness 4 - 10 mils (102 - 254 microns). Powder coating materials shall be specified by the manufacturer to be compatible as an overcoat to an aluminum substrate.

The ornamental split base maximum O.D. shall not exceed 36" (914 mm) for strain and mast arm poles, and 24 ½" for pedestal poles. The split base shall sit securely around the outer diameter of the fluted pole shaft, and breakaway couplings (pedestal poles). The split base will be connected to the shaft by two (2) interlocking stainless steel pins and two (2) bolts, nuts and washers. Pins, bolts, nuts, and washers shall be provided with each ornamental split base.

The split base halves shall be factory assembled before shipment. Internal lugs shall be cast into the split base bottom and the top drilled to accept connecting pins. External connection hardware is not acceptable.

NOTICE TO BIDDERS

Upon notification of being the apparent low bidder, the bidder shall submit shop drawings to DelDOT for review and approval, no later than twenty-one (21) calendar days after notification.

BID QUOTATION REPLY SECTION
CONTRACT NO. DOT1206-STEEL_POLES

STEEL POLES

Please fill out the attached forms fully and completely and return with your bid in a sealed envelope clearly displaying the contract number to the Department of Transportation / Contract Administration by July 10, 2012, 2:00 p.m. local time at which time bids will be opened.

Bids shall be submitted to:

**STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
CONTRACT ADMINISTRATION
800 BAY ROAD
DOVER, DE 19901**

PUBLIC BID OPENINGS

The public bid opening insures the citizens of Delaware that contracts are being bid fairly on a competitive basis and comply with Delaware procurement laws. The agency conducting the opening is required by law to publicly open the bids at the time and place specified and the contract shall be awarded within thirty (30) days thereafter. The main purpose of the bid opening is to reveal the name(s) of the bidders(s), not to serve as a forum for determining the apparent low bidders. The disclosure of additional information, including prices, shall be at the discretion of the contracting agency until such time that the responsiveness of each bid has been determined.

After receipt of a fully executed contract(s), the Delaware public and all bidders are invited to make an appointment with the contracting officer in order to review pricing and other non-confidential information.

ATTACHMENT 1

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
CONTRACT ADMINISTRATION
800 BAY ROAD
DOVER, DE 19901

NO BID REPLY FORM

BID # DOT1206-STEEL_POLES
BID TITLE: STEEL POLES

To assist us in obtaining good competition on our Request for Bids, we ask that each firm that has received an invitation, but does not wish to bid, state their reason(s) below and return in a clearly marked envelope displaying the contract number. This information will not preclude receipt of future invitations unless you request removal from the Bidder's List by so indicating below, or do not return this form or bona fide bid.

Unfortunately, we must offer a "No Bid" at this time because:

- _____ 1. We do not wish to participate in the bid process.
- _____ 2. We do not wish to bid under the terms and conditions of the Request for Bid Document. Our objections are:

- _____ 3. We do not feel we can be competitive.
- _____ 4. We cannot submit a Bid because of the marketing or franchising policies of the manufacturing company.
- _____ 5. We do not wish to sell to the State. Our objections are: _____

- _____ 6. We do not sell the items/services on which Bids are requested.
- _____ 7. Other: _____

FIRM NAME

SIGNATURE

_____ We wish to remain on the Bidder's List **for these goods or services.**

_____ We wish to be deleted from the Bidder's List **for these goods or services.**

ATTACHMENT 2

CONTRACT NO.: DOT1206-STEEL_POLES
TITLE: STEEL POLES

OPENING DATE: July 10, 2012

BIDDER'S INFORMATION

NOTE: Signature of the authorized representative **MUST** be of an individual who legally may enter his/her organization into a formal contract with the State of Delaware, Government Support Services.

COMPANY NAME _____ (Check one)

<input type="checkbox"/>	Corporation
<input type="checkbox"/>	Partnership
<input type="checkbox"/>	Individual

COMPANY ADDRESS _____

PHONE NUMBER _____ FAX NUMBER _____

EMAIL ADDRESS _____

FEDERAL E.I. NUMBER _____ STATE OF DELAWARE LICENSE NUMBER _____

	(circle one)		(circle one)		(circle one)	
COMPANY CLASSIFICATIONS: CERT. NO.	<u>Women Business Enterprise (WBE)</u>	Yes No	<u>Minority Business Enterprise (MBE)</u>	Yes No	<u>Disadvantaged Business Enterprise (DBE)</u>	Yes No

[The above table is for information and statistical use only.]

PURCHASE ORDERS SHOULD BE SENT TO:
 (COMPANY NAME) _____

ADDRESS _____

CONTACT _____

PHONE NUMBER _____ FAX NUMBER _____

EMAIL ADDRESS _____

AFFIRMATION: Within the past five years, has your firm, any affiliate, any predecessor company or entity, owner, Director, officer, partner or proprietor been the subject of a Federal, State, Local government suspension or debarment?

YES _____ NO _____ if yes, please explain _____

NAME OF AUTHORIZED REPRESENTATIVE
 (Please type or print) _____

SIGNATURE _____ TITLE _____

ATTACHMENT 3

BID PROPOSAL FORMS

CONTRACT _DOT1206-STEEL_POLES

STATE OF DELAWARE
Office of Management and Budget
Government Support Services

ALL COLUMNS MUST BE COMPLETED AS INDICATED
BIDS MUST BE IN WHOLE DOLLARS

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
1	3	Ea. 25' (7.6 m) Steel Round Strain Pole @ _____ Dollars & _____ Cents per each		
2	20	Ea. 28' (8.5 m) Steel Round Strain Pole @ _____ Dollars & _____ Cents per each		
3	20	Ea. 30' (9.1 m) Steel Round Strain Pole @ _____ Dollars & _____ Cents per each		
4	20	Ea. 32' (9.8 m) Steel Round Strain Pole @ _____ Dollars & _____ Cents per each		
5	4	Ea. 37' (11.3 m) Steel Round Strain Pole @ _____ Dollars & _____ Cents per each		
6	2	Ea. 25' (7.6 m) Steel 16-Flute Ornamental Strain Pole @ _____ Dollars & _____ Cents per each		

ALL COLUMNS MUST BE COMPLETED AS INDICATED
 BIDS MUST BE IN WHOLE DOLLARS

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
7	4	Ea. 28' (8.5 m) Steel 16-Flute Ornamental Strain Pole @ _____ Dollars & _____ Cents per each		
8	4	Ea. 30' (9.1 m) Steel 16-Flute Ornamental Strain Pole @ _____ Dollars & _____ Cents per each		
9	8	Ea. 32' (9.8 m) Steel 16-Flute Ornamental Strain Pole @ _____ Dollars & _____ Cents per each		
10	4	Ea. 37' (11.3 m) Steel 16-Flute Ornamental Strain Pole @ _____ Dollars & _____ Cents per each		
11	40	Ea. Steel Round Mast Arm Pole, Type A @ _____ Dollars & _____ Cents per each		
12	56	Ea. Steel Round Mast Arm Pole, Type B @ _____ Dollars & _____ Cents per each		

ALL COLUMNS MUST BE COMPLETED AS INDICATED
 BIDS MUST BE IN WHOLE DOLLARS

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
13	18	Ea. Steel Round Mast Arm Pole, Type C @ _____ Dollars & _____ Cents per each		
14	10	Ea. Steel 16-Flute Ornamental Mast Arm Pole, Type A @ _____ Dollars & _____ Cents per each		
15	14	Ea. Steel 16-Flute Ornamental Mast Arm Pole, Type B @ _____ Dollars & _____ Cents per each		
16	2	Ea. 20' (6.1 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		
17	8	Ea. 25' (7.6 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		
18	12	Ea. 30' (9.1 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		

ALL COLUMNS MUST BE COMPLETED AS INDICATED
 BIDS MUST BE IN WHOLE DOLLARS

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
19	12	Ea. 35' (10.7 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		
20	8	Ea. 40' (12.2 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		
21	8	Ea. 45' (13.7 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		
22	16	Ea. 50' (15.2 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		
23	16	Ea. 55' (16.8 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		
24	16	Ea. 60' (18.3 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		

ALL COLUMNS MUST BE COMPLETED AS INDICATED
 BIDS MUST BE IN WHOLE DOLLARS

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
25	6	Ea. 70' (21.3 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		
26	6	Ea. 80' (24.4 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		
27	6	Ea. 90' (27.4 m) Steel Round Mast Arm @ _____ Dollars & _____ Cents per each		
28	2	Ea. 20' (6.1 m) Steel 16-Flute Ornamental Mast Arm @ _____ Dollars & _____ Cents per each		
29	2	Ea. 25' (7.6 m) Steel 16-Flute Ornamental Mast Arm @ _____ Dollars & _____ Cents per each		
30	2	Ea. 30' (9.1 m) Steel 16-Flute Ornamental Mast Arm @ _____ Dollars & _____ Cents per each		

****ALL COLUMNS MUST BE COMPLETED AS INDICATED****
BIDS MUST BE IN WHOLE DOLLARS

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
31	2	Ea. 35' (10.7 m) Steel 16-Flute Ornamental Mast Arm @ _____ Dollars & _____ Cents per each		
32	2	Ea. 40' (12.2 m) Steel 16-Flute Ornamental Mast Arm @ _____ Dollars & _____ Cents per each		
33	2	Ea. 45' (13.7 m) Steel 16-Flute Ornamental Mast Arm @ _____ Dollars & _____ Cents per each		
34	4	Ea. 50' (15.2 m) Steel 16-Flute Ornamental Mast Arm @ _____ Dollars & _____ Cents per each		
35	4	Ea. 55' (16.8 m) Steel 16-Flute Ornamental Mast Arm @ _____ Dollars & _____ Cents per each		
36	4	Ea. 60' (18.3 m) Steel 16-Flute Ornamental Mast Arm @ _____ Dollars & _____ Cents per each		

ALL COLUMNS MUST BE COMPLETED AS INDICATED
 BIDS MUST BE IN WHOLE DOLLARS

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
37	8	Ea. 6' (1.8 m) Steel Round Pedestal Pole @ _____ Dollars & _____ Cents per each		
38	100	Ea. 10' (3.0 m) Steel Round Pedestal Pole @ _____ Dollars & _____ Cents per each		
39	20	Ea. 14' (4.3 m) Steel Round Pedestal Pole @ _____ Dollars & _____ Cents per each		
40	4	Ea. 6' (1.8 m) Steel 16-Flute Ornamental Pedestal Pole @ _____ Dollars & _____ Cents per each		
41	20	Ea. 10' (3.0 m) Steel 16-Flute Ornamental Pedestal Pole @ _____ Dollars & _____ Cents per each		
42	2	Ea. 14' (4.3 m) Steel 16-Flute Ornamental Pedestal Pole @ _____ Dollars & _____ Cents per each		

ALL COLUMNS MUST BE COMPLETED AS INDICATED
 BIDS MUST BE IN WHOLE DOLLARS

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
43	50	Ea. 40' Steel Round Vehicle Detector Pole @ _____ Dollars & _____ Cents per each		
44	4	Ea. Cast Aluminum Ornamental Strain and Mast Arm Pole Split Base @ _____ Dollars & _____ Cents per each		
45	20	Ea. Cast Aluminum Ornamental Pedestal Pole Split Base @ _____ Dollars & _____ Cents per each		
46	100	Ea. Set of Four, Breakaway Couplings with One Hex Nut, Two Flat Washers and Two Shims Per Coupling @ _____ Dollars & _____ Cents per each		
47	50	Ea. Aluminum Skirt for Breakaway Couplings, 8" (203 mm) B.C. _____ Dollars & _____ Cents per each		
48	50	Ea. Aluminum Skirt for Breakaway Couplings, 12" (305 mm) B.C. _____ Dollars & _____ Cents per each		

ALL COLUMNS MUST BE COMPLETED AS INDICATED
 BIDS MUST BE IN WHOLE DOLLARS

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
49	50	Ea. 17" Cast Aluminum Transformer Base for Vehicle Detector Pole with a set of Four Connection Bolts with nuts and washers @ _____ Dollars & _____ Cents per each		
50	12	Ea. Set of Four, 2" x 90" (51 mm x 2286 mm) Anchor Bolts with Two Hex Nuts and Two Flat Washers Per Bolt @ _____ Dollars & _____ Cents per each		
51		_____ Dollars & _____ Cents per each		
52		_____ Dollars & _____ Cents per each		
53		_____ Dollars & _____ Cents per each		
54		_____ Dollars & _____ Cents per each		

TOTAL BID AMOUNT \$ _____

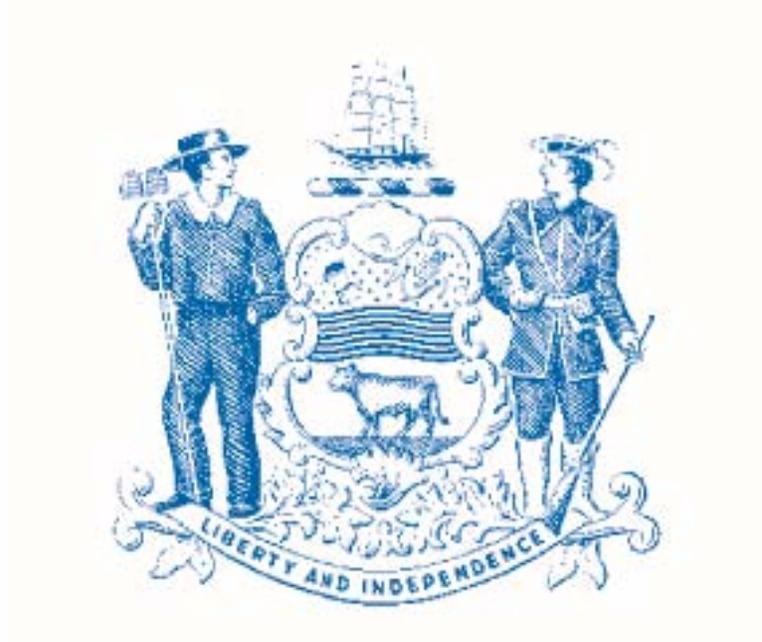
ATTACHMENT 5

OMWBE Certification Application found here:

<http://gss.omb.delaware.gov/omwbe/certify.shtml>

State of Delaware

**Office of Minority and Women Business Enterprise
Certification Information**

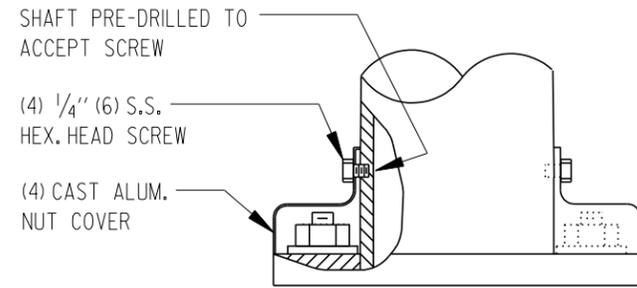


Complete application and mail, email or fax to:

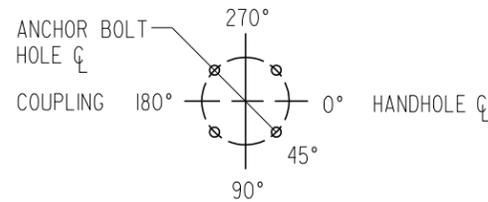
Office of Minority and Women Business Enterprise (OMWBE)
100 Enterprise Place, Suite 4 Dover, DE 19904 Telephone: (302) 857-4554 Fax: (302) 677-7086
Email: deomwbe@state.de.us

Web site: <http://gss.omb.delaware.gov/omwbe/index.shtml>

Link to Certification Application: <http://gss.omb.delaware.gov/omwbe/certify.shtml>

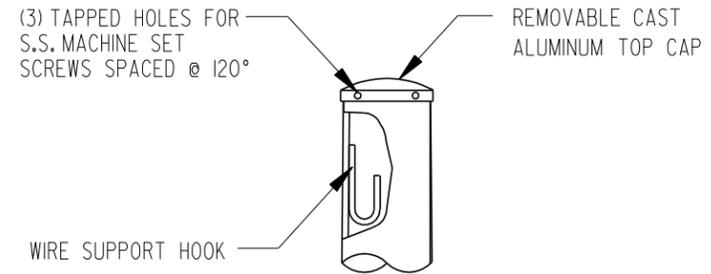


NUT COVER DETAIL

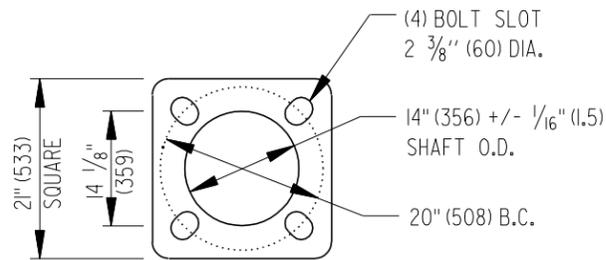


ALL ANGLES MEASURED CLOCKWISE FROM HANDHOLE CENTER LINE (C).

TOP VIEW ORIENTATION

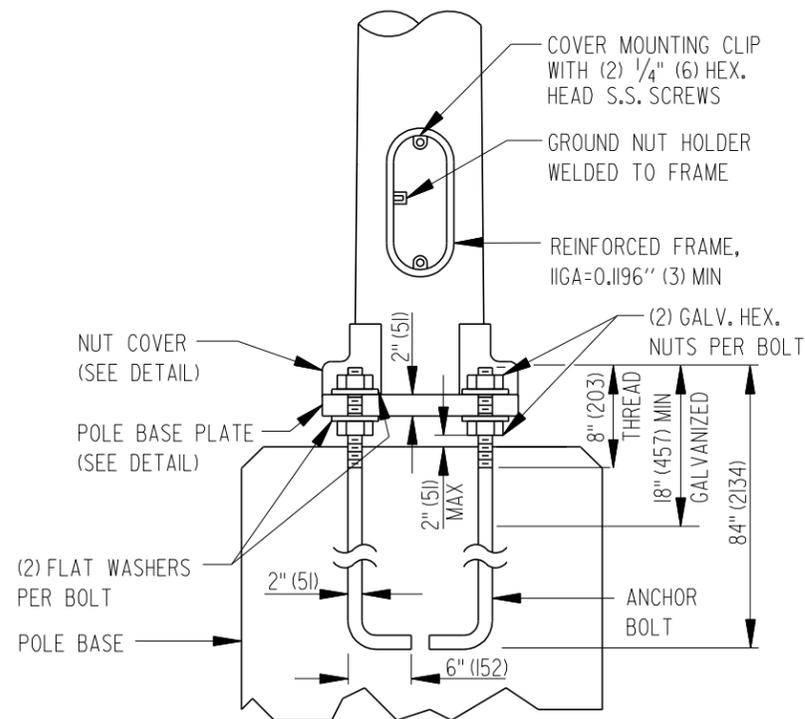


POLE TOP DETAIL
ORIENTATION OF WIRE SUPPORT HOOK AS REQUIRED

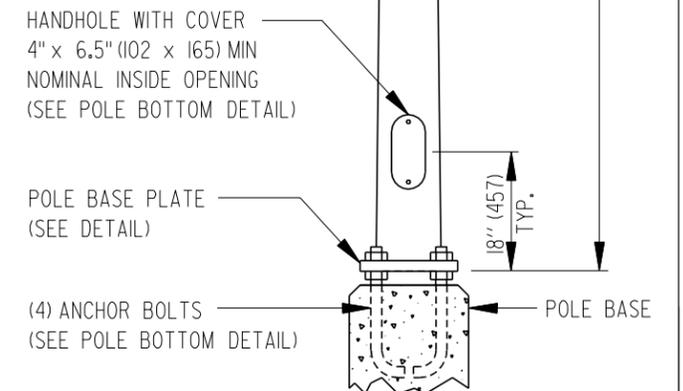


POLE BASE PLATE DETAIL

ROUND TAPERED SHAFTS					
SHAFT LENGTH	SHAFT WALL THICKNESS	SHAFT MATERIAL MIN. YIELD STRENGTH	SHAFT O.D. @ BASE END	SHAFT O.D. @ TOP END	SHAFT TAPER
25' (7.6 M)	0.625" (15.9 MM)	55,000 PSI	14" (356 MM)	10.5" (267 MM)	0.14 IN/FT (11.7 MM/M)
28' (8.5 M)	0.625" (15.9 MM)	55,000 PSI	14" (356 MM)	10.1" (256 MM)	0.14 IN/FT (11.7 MM/M)
30' (9.1 M)	0.625" (15.9 MM)	55,000 PSI	14" (356 MM)	9.8" (249 MM)	0.14 IN/FT (11.7 MM/M)
32' (9.8 M)	0.625" (15.9 MM)	55,000 PSI	14" (356 MM)	9.5" (242 MM)	0.14 IN/FT (11.7 MM/M)
37' (11.3 M)	0.625" (15.9 MM)	55,000 PSI	14" (356 MM)	8.8" (224 MM)	0.14 IN/FT (11.7 MM/M)

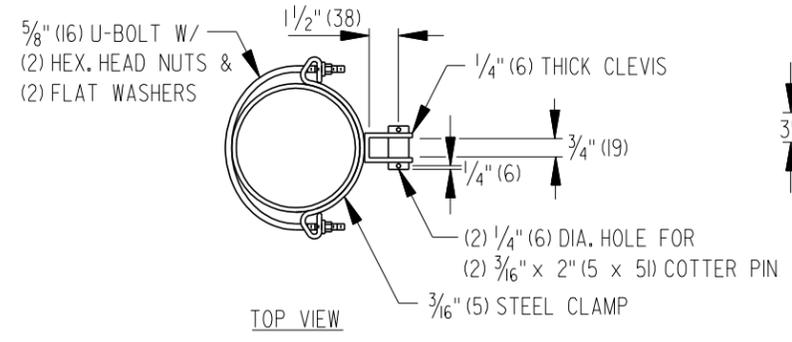


POLE BOTTOM DETAIL

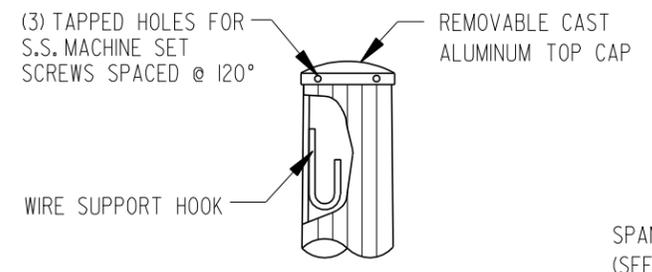
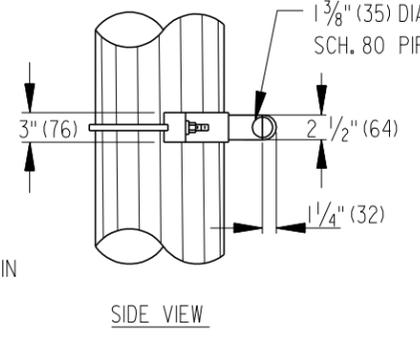


PLAN SYMBOL

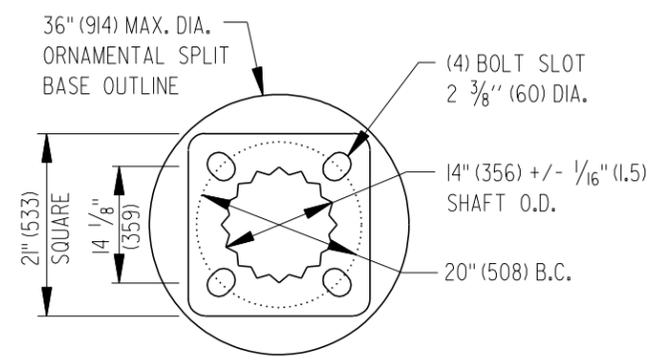
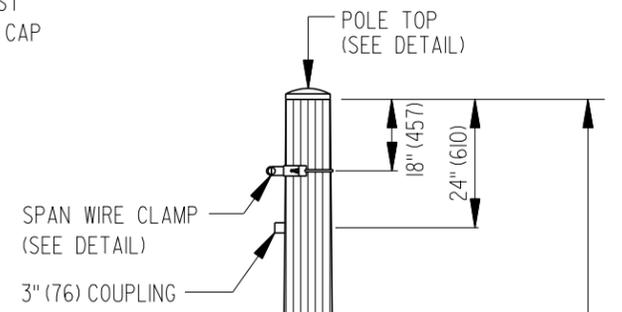
SEE TABLE FOR SHAFT LENGTHS



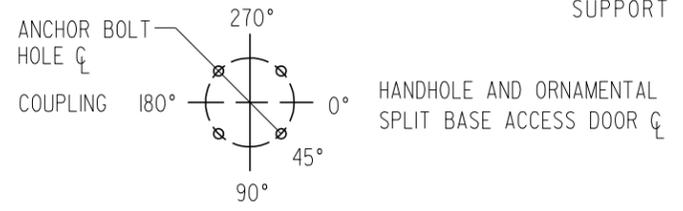
SPAN WIRE CLAMP DETAIL



POLE TOP DETAIL
ORIENTATION OF WIRE
SUPPORT HOOK AS REQUIRED

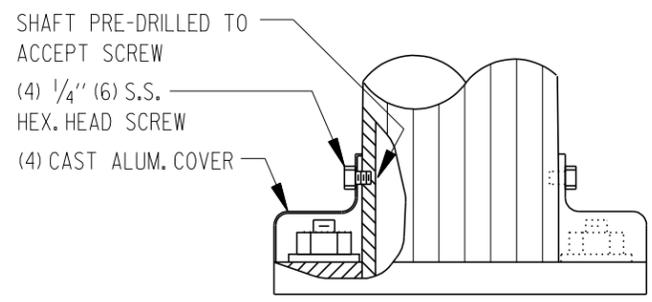


POLE BASE PLATE DETAIL

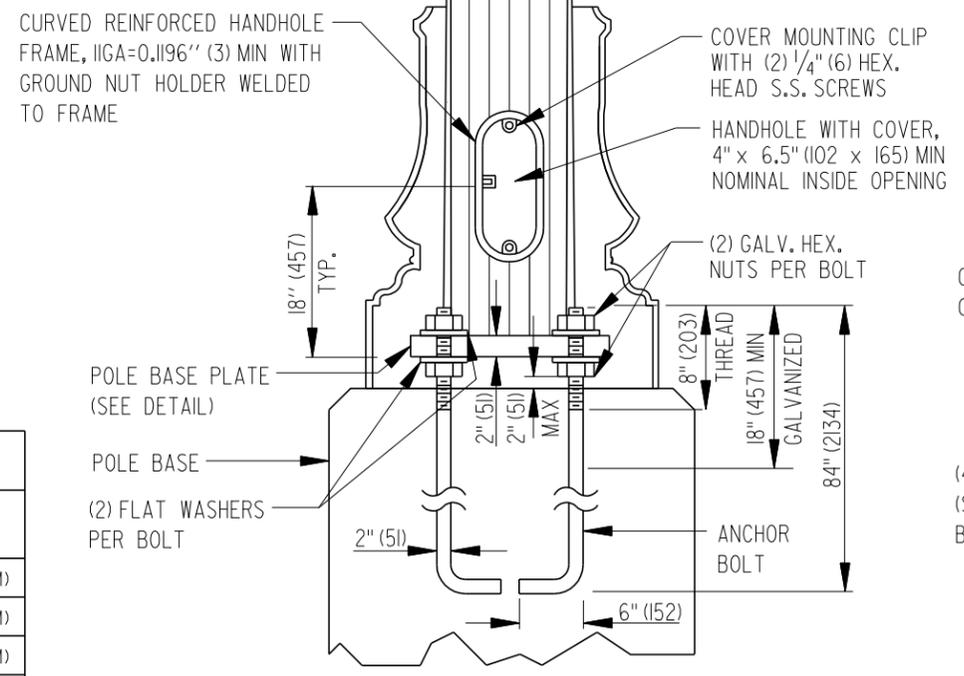


ALL ANGLES MEASURED CLOCKWISE
FROM HANDHOLE C_L

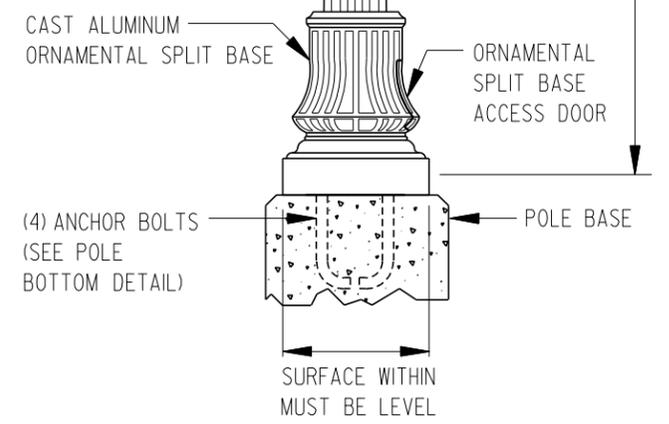
TOP VIEW ORIENTATION



NUT COVER DETAIL



POLE BOTTOM DETAIL



PLAN SYMBOL

16-FLUTE ORNAMENTAL TAPERED SHAFTS					
SHAFT LENGTH	SHAFT WALL THICKNESS	SHAFT MATERIAL MIN. YIELD STRENGTH	SHAFT O.D. @ BASE END	SHAFT O.D. @ TOP END	SHAFT TAPER
25' (7.6 M)	0.625" (15.9 MM)	55,000 PSI	14" (356 MM)	10.5" (267 MM)	0.14 IN/FT (11.7 MM/M)
28' (8.5 M)	0.625" (15.9 MM)	55,000 PSI	14" (356 MM)	10.1" (256 MM)	0.14 IN/FT (11.7 MM/M)
30' (9.1 M)	0.625" (15.9 MM)	55,000 PSI	14" (356 MM)	9.8" (249 MM)	0.14 IN/FT (11.7 MM/M)
32' (9.8 M)	0.625" (15.9 MM)	55,000 PSI	14" (356 MM)	9.5" (242 MM)	0.14 IN/FT (11.7 MM/M)
37' (11.3 M)	0.625" (15.9 MM)	55,000 PSI	14" (356 MM)	8.8" (224 MM)	0.14 IN/FT (11.7 MM/M)



**DELAWARE
DEPARTMENT OF TRANSPORTATION**

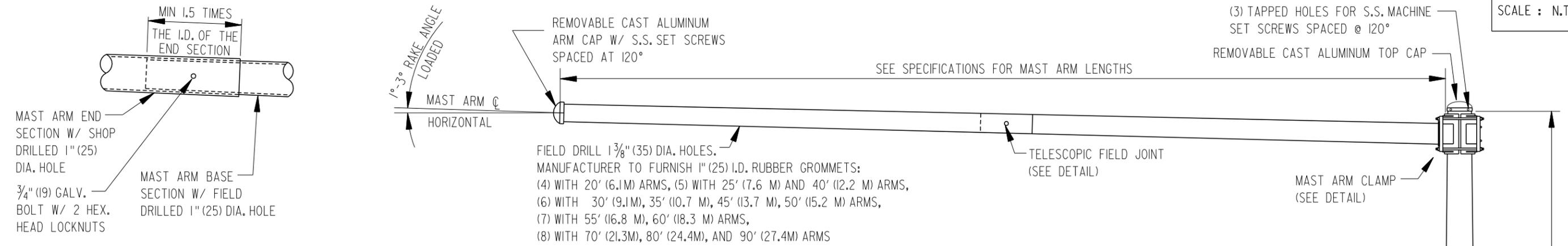
STEEL 16-FLUTE ORNAMENTAL STRAIN POLE

CONTRACT DETAIL SHEET 2 OF 7

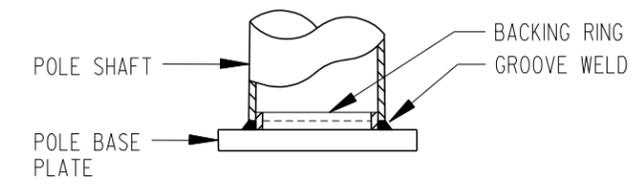
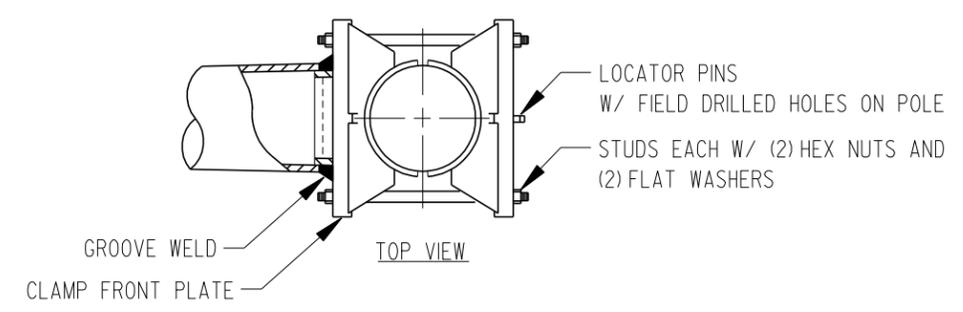
STEEL POLES

CONTRACT: DOT1214-STEELPOLES

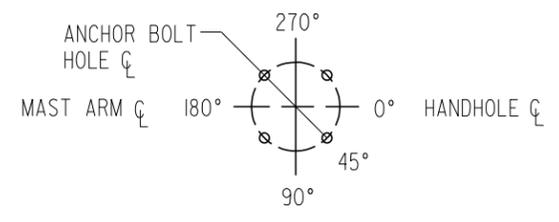
SCALE : N.T.S.



TELESCOPIC FIELD JOINT DETAIL



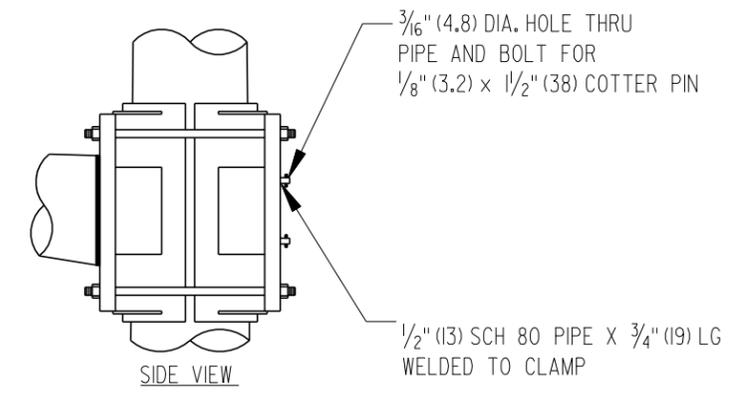
POLE SHAFT TO POLE BASE PLATE CONNECTION DETAIL



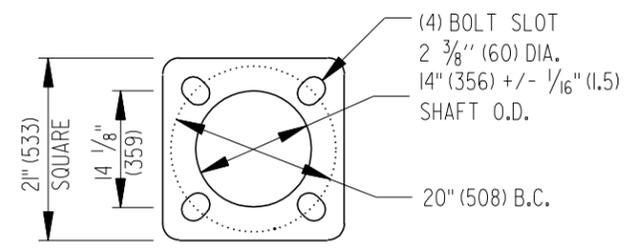
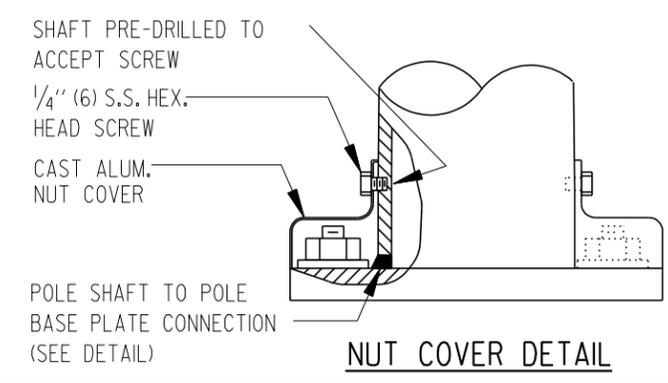
ALL ANGLES MEASURED CLOCKWISE FROM HANDHOLE CL.

TOP VIEW ORIENTATION

(FOR MAST ARM POLES TYPE A AND TYPE B, TYPE C TO BE DETERMINED BY MANUFACTURER)

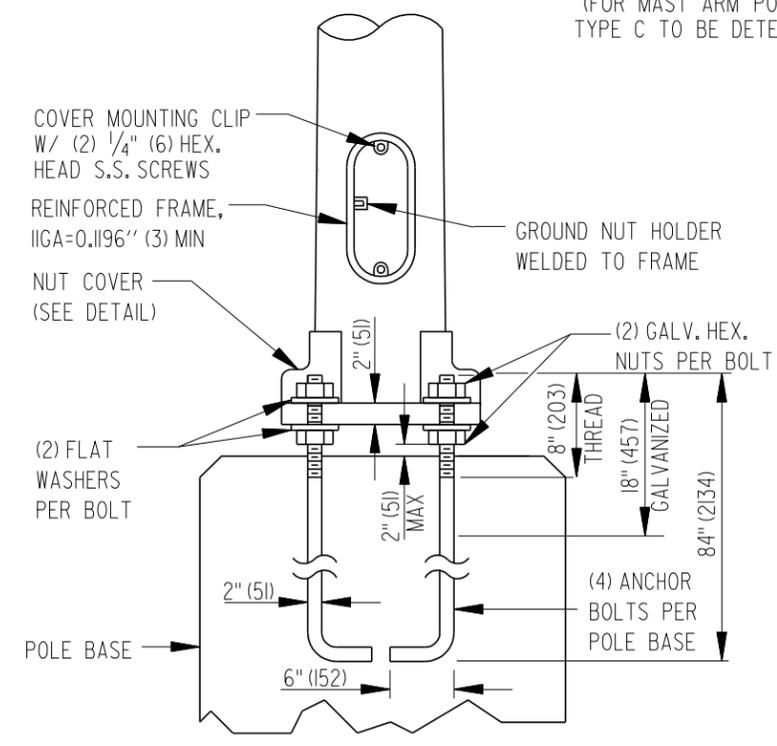


MAST ARM CLAMP DETAIL



POLE BASE PLATE DETAIL

(FOR MAST ARM POLES TYPE A AND TYPE B, TYPE C TO BE DETERMINED BY MANUFACTURER)



POLE BOTTOM DETAIL

(FOR MAST ARM POLES TYPE A AND TYPE B, TYPE C TO BE DETERMINED BY MANUFACTURER)

HANDHOLE W/ COVER 4" x 6.5" (102 x 165) MIN NOMINAL INSIDE OPENING (SEE POLE BOTTOM DETAIL)

POLE BASE PLATE (SEE DETAIL)

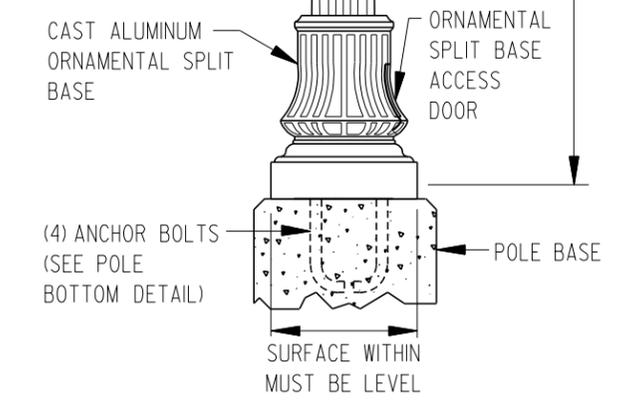
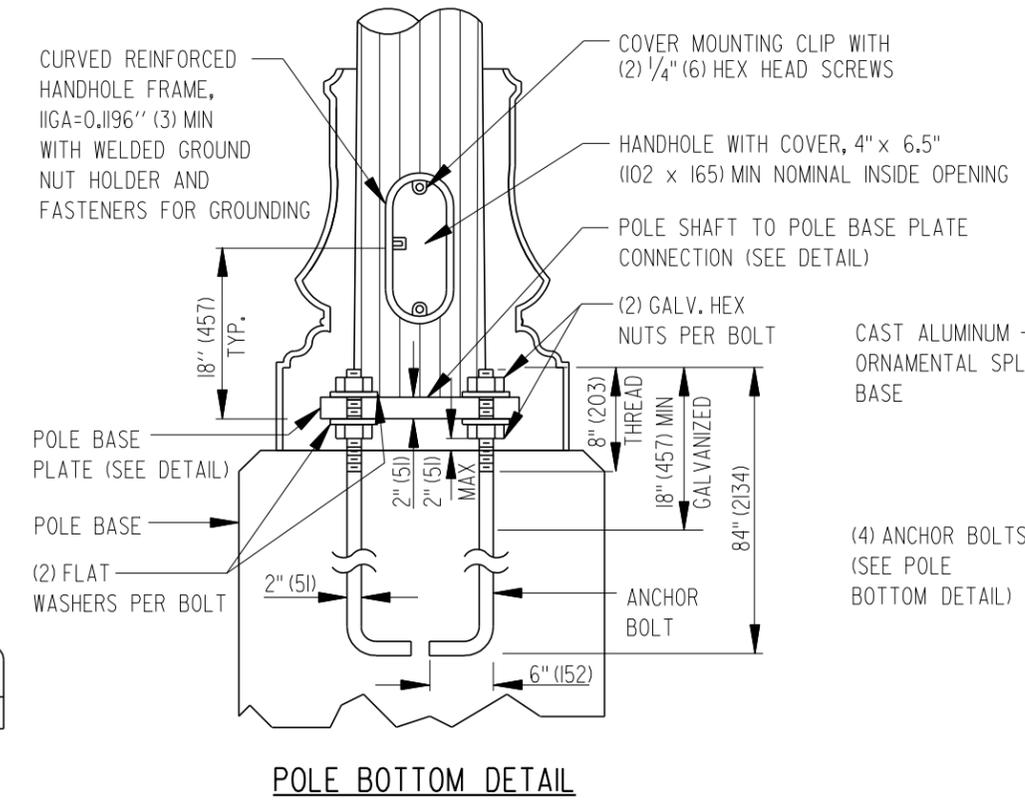
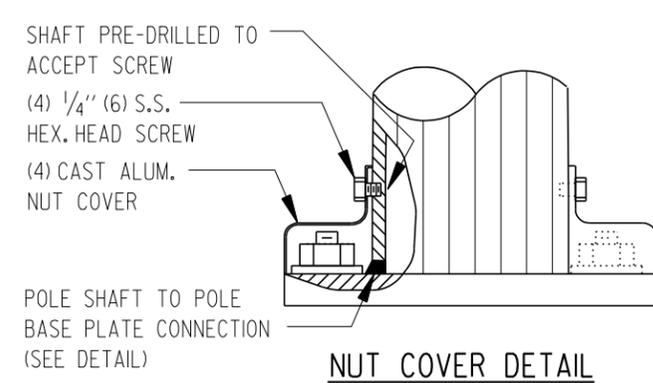
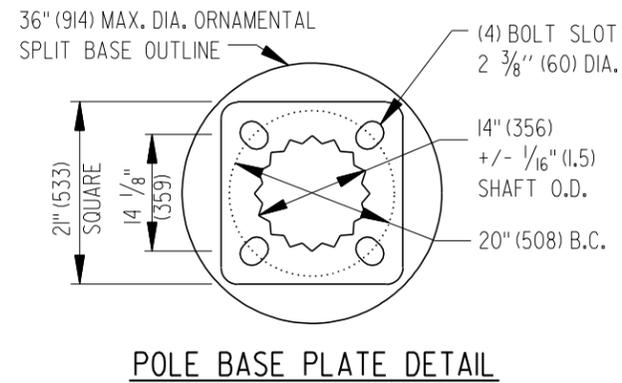
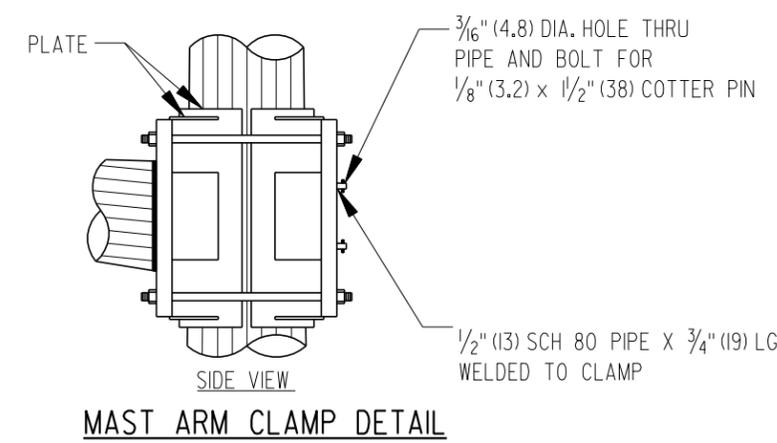
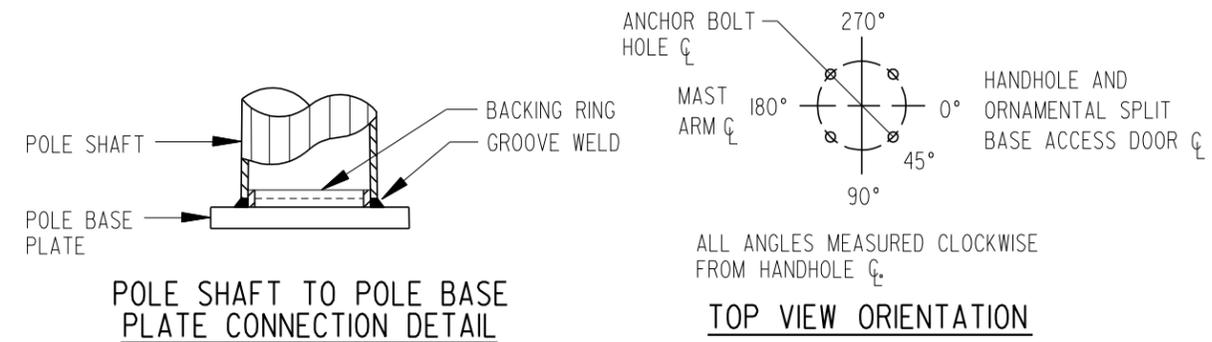
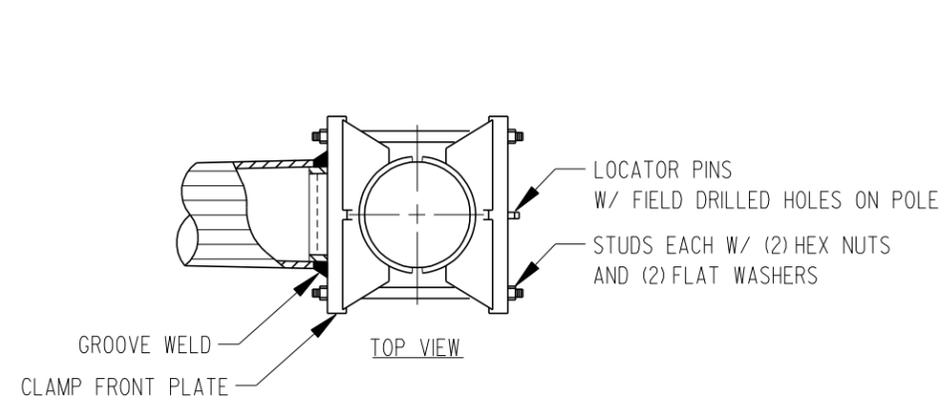
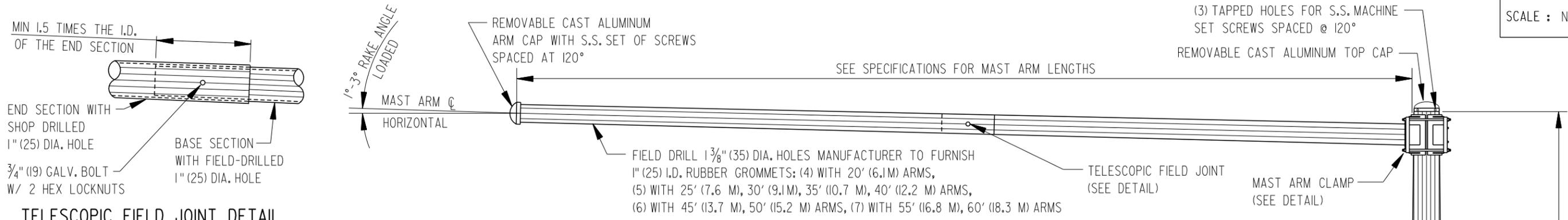
ANCHOR BOLTS (SEE POLE BOTTOM DETAIL)

POLE BASE

PLAN SYMBOL

21.5' (6.6 M)

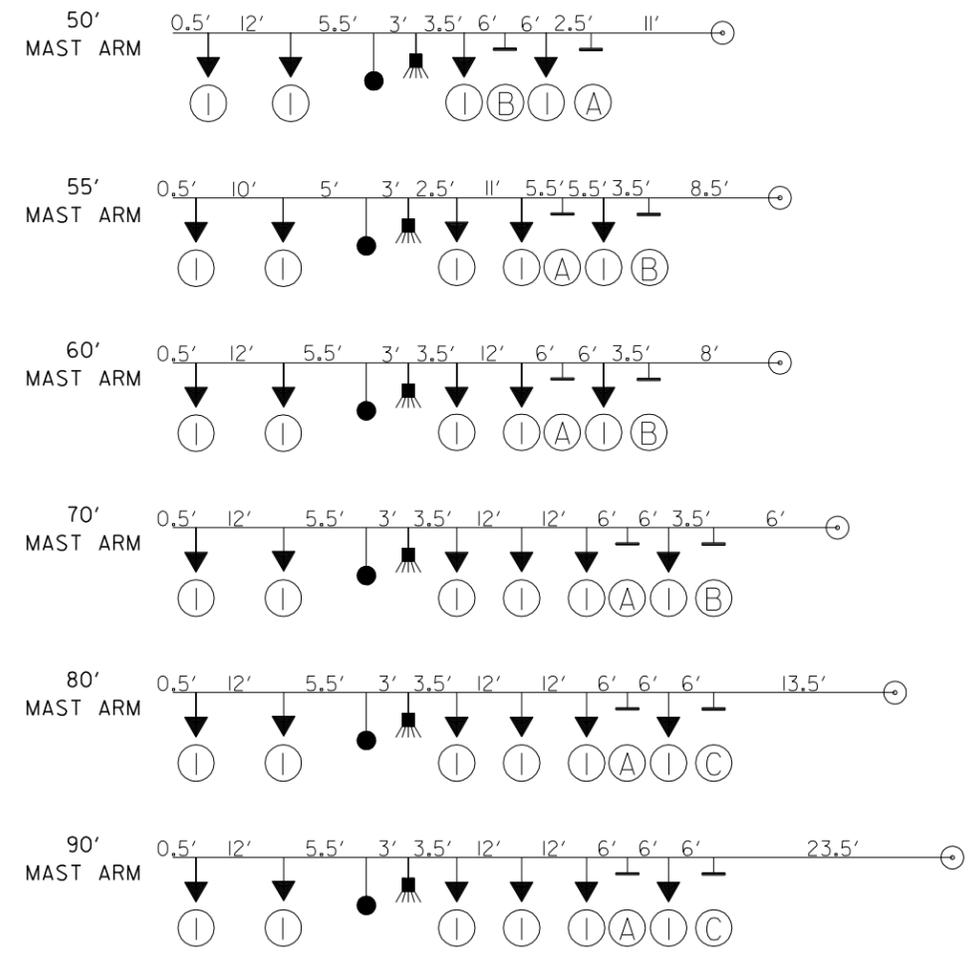
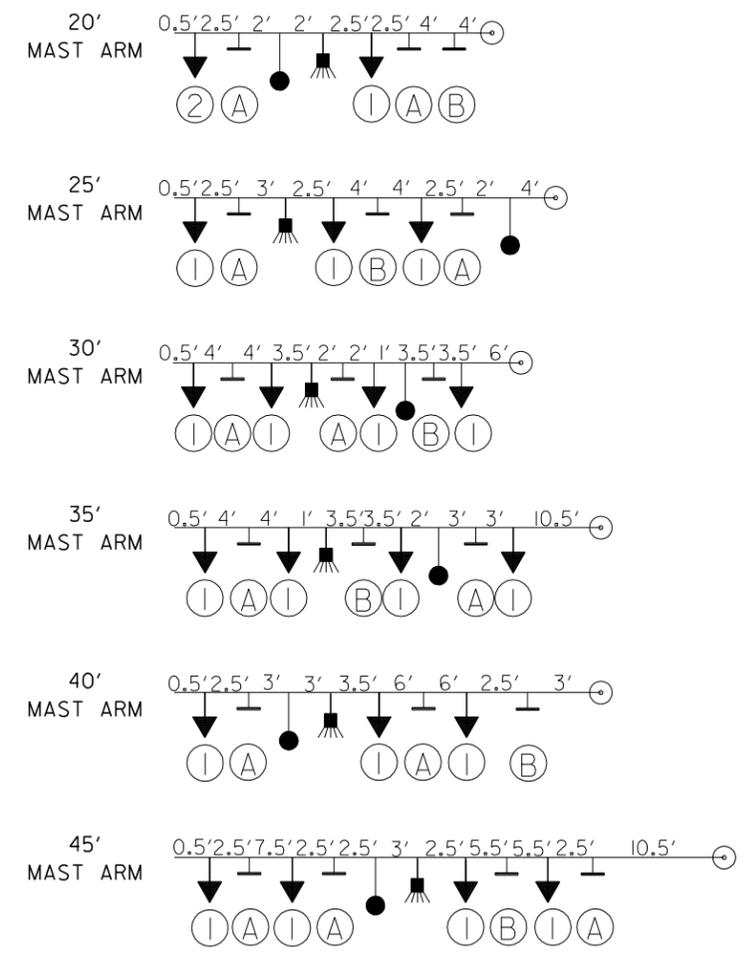
18" (457) TYP.

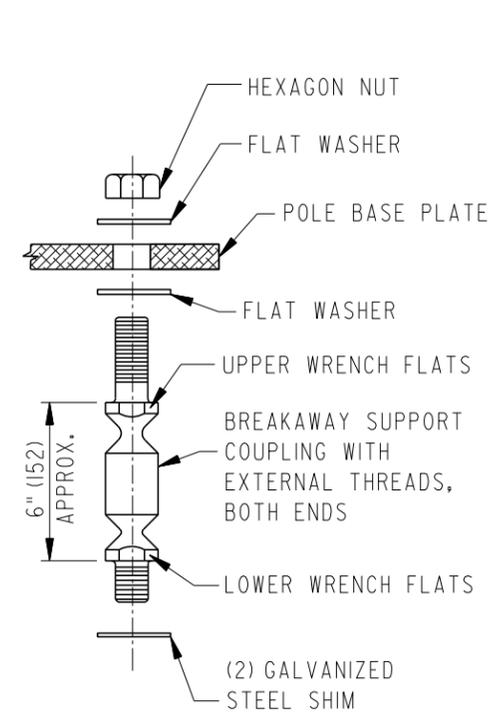


DESIGN LOADING
 TRAFFIC CONTROL EQUIPMENT
 LATERAL SPACING ALONG MAST ARMS

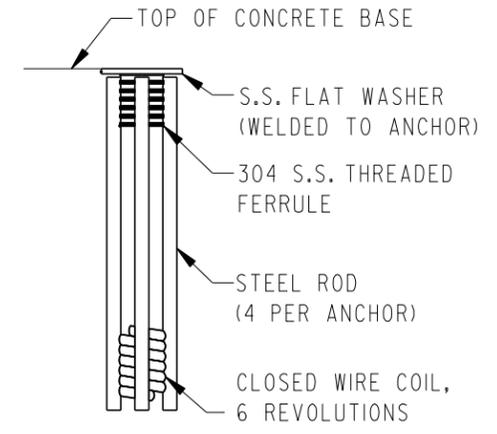
LEGEND

- ➔ ① 3-SECTION SIGNAL HEAD WITH BACKPLATE
- ➔ ② 5-SECTION SIGNAL HEAD WITH BACKPLATE
- ➔ OVERHEAD DETECTION UNIT
- EMERGENCY PREEMPTION RECEIVER
- ⊥ (A) 24" x 30" SIGN
- ⊥ (B) 18" x 60" SIGN
- ⊥ (C) 18" x 120" SIGN
- ⊙ MAST ARM POLE RECEIVER

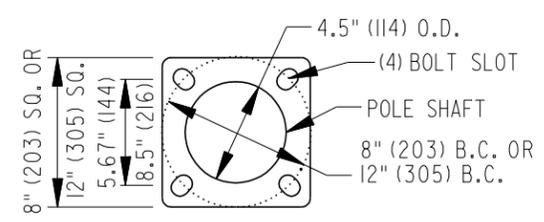




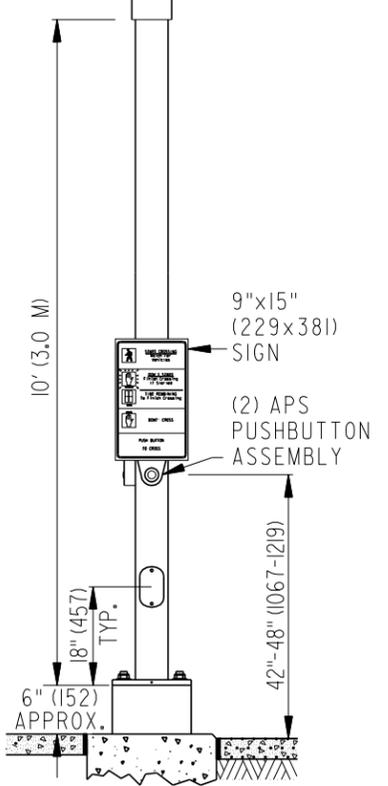
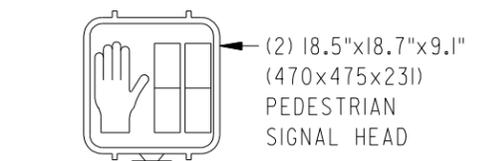
BREAKAWAY COUPLING DETAIL



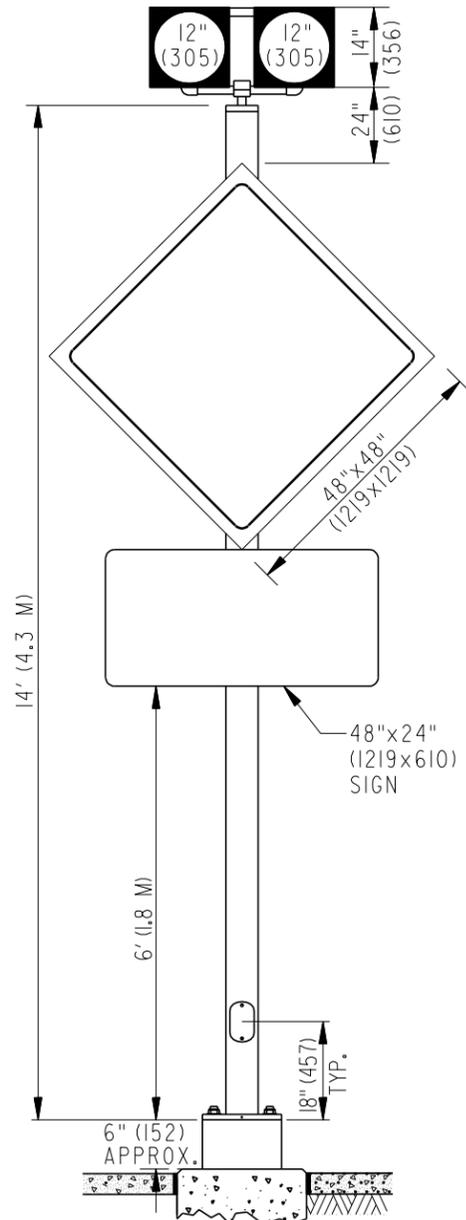
ANCHOR INSERT DETAIL



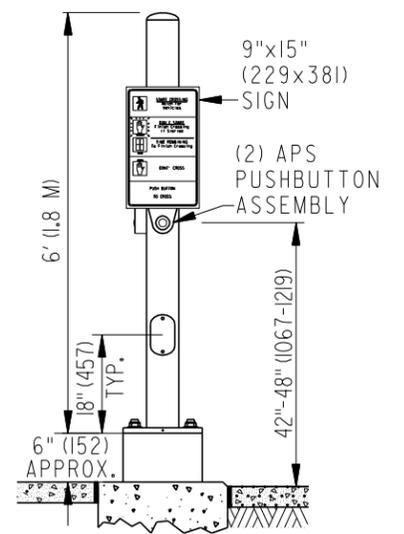
POLE BASE PLATE DETAIL



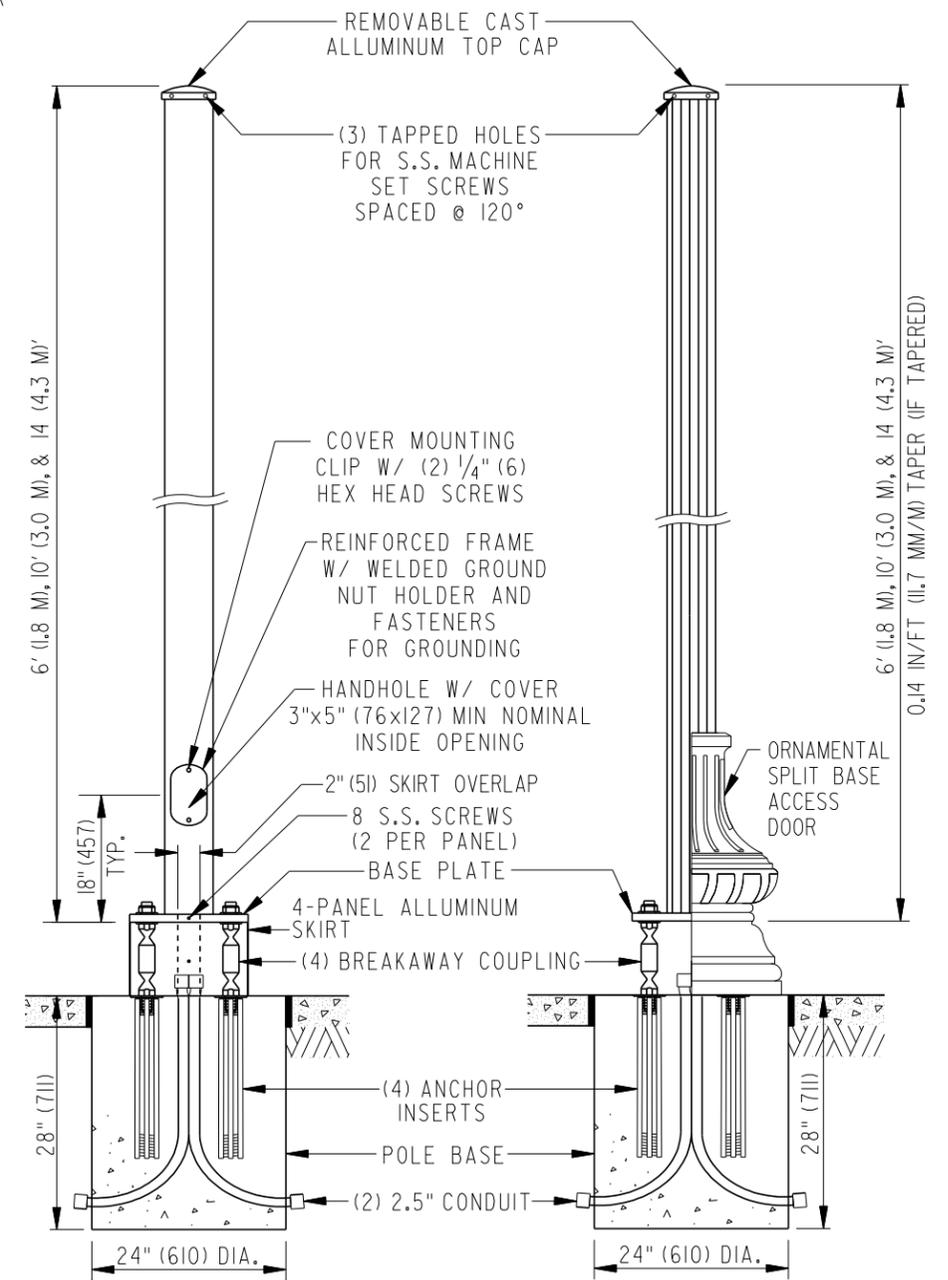
10' POLE DESIGN LOADING
TWO-PEDESTRIAN HEADS & TWO-PUSHBUTTON ASSEMBLIES



14' POLE DESIGN LOADING
HIB ASSEMBLY



6' POLE DESIGN LOADING
TWO-PUSHBUTTON ASSEMBLY



ROUND PEDESTAL POLE

ORNAMENTAL PEDESTAL POLE

PLAN SYMBOL



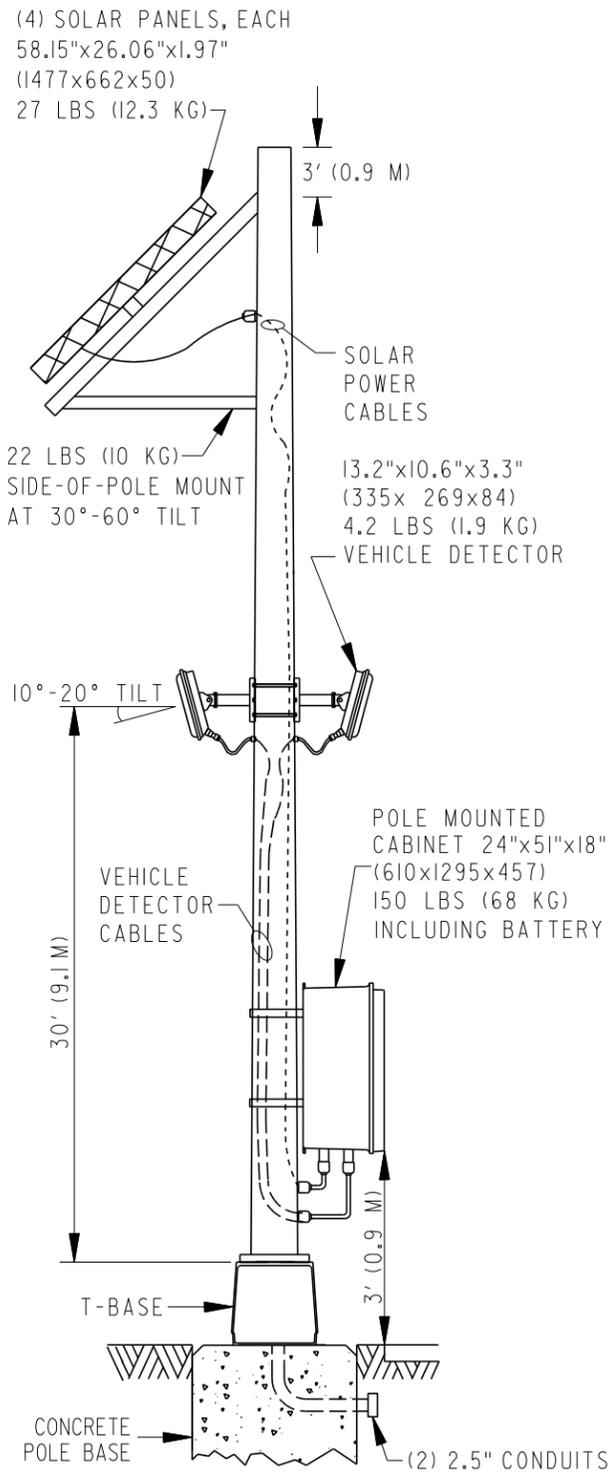
DELAWARE
DEPARTMENT OF TRANSPORTATION

STEEL ROUND AND 16-FLUTE ORNAMENTAL PEDESTAL POLE

CONTRACT DETAIL SHEET 6 OF 7

STEEL POLES

CONTRACT: DOT1214-STEELPOLES



DESIGN LOADING
TWO-DETECTOR SYSTEM
T-BASE OPTION SHOWN
(SOLAR INSTALLATION)

**ALUMINUM TRANSFORMER
BASE (T-BASE) DETAIL**

