COVER PAGE

Bid #2209 Jackson @ Horseshoe Roundabout Utility Relocation Package 1 – Steel Poles

Sealed bids and electronic submitted bids for the above will be received until **10:00 AM CST or CDT, Tuesday, October 16, 2018,** and publicly opened in the City of Alexandria Council Chambers or Council Committee Room.

Please file bid by one of the following means:

Hand-Delivered or Express Delivery:

Attention: Donna Jones, City Clerk
City of Alexandria - City Hall
915 Third Street, First Floor
Alexandria, LA 71301
Phone: 318-449-5090

Mailed via USPS:

Attention: Donna Jones, City Clerk
City of Alexandria - City Hall
PO Box 71
Alexandria, LA 71309-0071

Electronic Bid Submission: Central Bidding

Pursuant to Louisiana R.S. 38:2212 B.(6)(a) through E. (1-7) and R.S. 38:2212.1 B.(4)(a), vendors/contractors have the option to submit their bids and bid bonds electronically. Bids and bonds to be filed electronically shall be posted with **Central Bidding** at www.centralauctionhouse.com (phone 1-225-810-4814). Registration will need to be completed prior to posting of bid.

Complete bid specifications are available for viewing and downloading at the City of Alexandria's website **www.cityofalexandriala.com ;** on the left hand side of the opening page, go to the heading *"Business"* then drop down to *"RFP/RFQ/Bids"*; the current bids will be listed for your convenience.

City of Alexandria Buyer Name: Christine Sims, Senior Buyer
Phone Number: (318) 441-6183
Fax Number: (318) 619-3414
E-Mail Address: christine.sims@cityofalex.com

Joe C. Despino
Purchasing Manager

City of Alexandria

Purchasing Department
P.O. Box 71
Alexandria, Louisiana
71309-0071

Office: (318) 441-6180
Fax: (318) 441-6185

Sealed bids will be received until **10:00 AM, Tuesday, October 16, 2018**, and publicly opened in the Council Chambers or Council Committee Room.	City of Alexandria Bid **#2209** Page: 1 of 8 Date Specifications Prepared: 8/21/18
Bid Bond Requirements: A bid bond or check for 10% of the total amount of bid. Performance Bond Requirements: In the event bid is accepted, a performance bond shall be required in the amount of 100%.	**Please file bid with the following:** **Donna Jones, City Clerk** **City of Alexandria - City Hall** **915 Third Street** **P.O. Box 71** **Alexandria, LA 71309-0071** **Phone: 318-449-5090**

INTRODUCTION

JACKSON @ HORSESHOE ROUNDABOUT UTILITY RELOCATON
PACKAGE 1 - STEEL POLES

It is the intent of the City of Alexandria to secure pricing on JACKSON @ HORSESHOE ROUNDABOUT UTILITY RELOCATON PACKAGE 1 - STEEL POLES, for use by the City of Alexandria Electric Distribution Department for the purpose of relocating primary electrical lines in the vicinity of this project site.

All products shall be engineered and manufactured specifically for the end use specified herein. Quoted prices shall be for a complete unit ready for use. Each unit shall be equipped with the manufacturer's equipment and accessories which are included as "standard" in the advertised and published literature for the unit. No such item of equipment shall be removed or omitted for the reason that it was not specified in the bid documents.

All bid prices shall include any and all freight charges. All products are to be shipped F.O.B., freight pre-paid, to the City of Alexandria Electric Distribution Department, 1015 N. Third St., Alexandria, LA 71301, phone 318-473-1301. Deliveries will only be accepted between the hours of 9:00 a.m. and 2:30 p.m.
Completed bid packet should be returned as issued by the City of Alexandria with ALL PAGES intact and all specification response columns filled in. Incomplete columns or missing pages, to include addendum pages, may result in the bidder's (proposer's) entire bid being rejected.

Questions and/or clarifications of bid specifications are to be in written form only, either mailed, faxed, or e-mailed to the attention of Donavan Mapes, BHA Inc., P. O. Box 4467, Baton Rouge, LA 70821; e-mail dmapes@bhabr.com; and must be received by close of business on October 2, 2018.

Note: A pre-bid conference will not be held. Prospective Bidder's should submit questions prior to the deadline prescribed above.

CITY OF ALEXANDRIA BID SPECIFICATIONS FOR
JACKSON@ HORSESHOE ROUNDABOUT UTILITY RELOCATION PACKAGE 1- STEEL POLES

GENERAL CONDITIONS FOR BIDDERS - PLEASE READ CAREFULLY

1. Pursuant to LA R.S 38:2212.1. C.(1)(2), any manufacturer's preference in this proposal is descriptive, but non-restrictive, and is used only to indicate minimum requirement for type, grade and quality unless otherwise specified.

2. Pursuant to LA R.S. 38:2212 B.(1), the provisions and requirement of this bid shall not be considered as informalities and shall not be waived by the City of Alexandria. Therefore, conditions and specifications on this bid form shall be strictly enforced and any and all alterations, deviations, and non-compliance to said conditions and specifications, either on the bid form or by separate attachment, shall be grounds for immediate disqualification.

3. Preference shall be given to bidders quoting F.O.B. Destination (the City of Alexandria using department), FREIGHT PREPAID, unless otherwise requested.

4. Each bidder shall submit his proposal on the proposal form furnished by the City of Alexandria Purchasing Department. The complete bid package must be returned as issued by the City with all pages intact and all specification response columns filled in. Incomplete columns or missing pages, to include addendum pages, shall result in the vendor's entire bid package being rejected.

5. Literature, brochures, and other related paperwork attached to the bid should be identified with the name of the bidder and bid item number.

6. In case of a mathematical discrepancy between unit price and extensions, the unit price shall prevail.

7. Pursuant to LA R.S. 38:2212 F., the bid specifications may contemplate a fixed escalation or de-escalation in accordance with the United States Bureau of Labor Statistic's Consumer Price Index or the Producer Price Index. Bids based on specifications which are subject to a recognized escalation index shall be legal and valid for any item of a public work, at the discretion of the City.

8. Pursuant to LA R.S. 38:2212.1. F., any public procurement unit may participate in a cooperative purchasing agreement with the City of Alexandria to acquire quantities of the above listed items under a contract with the City of Alexandria for items awarded by public bid, pursuant to the cooperative purchasing provisions of Part VII of Chapter 17 of Subtitle III of Title 39 of the Louisiana Revised Statures of 1950, R.S. 39:1701 et seq.

9. The City of Alexandria reserves the right to award by item or by total bid, unless otherwise specified in the bid specifications. (Price(s) should be itemized.)

10. All erasures or corrections on the bid form must be initialed and the City of Alexandria may rely on the apparent authority represented by the initials.

11. The City of Alexandria reserves the right to reject for cause any and all bids or parts of bids, or accept bids most beneficial to the City.

General Conditions for Bidders - Please Read Carefully (Continued)

12. Any bid submitted which contains additions, conditional or alternate bids, or irregularities which may make the proposal incomplete, indefinite, or ambiguous as to its meaning, thus requiring clarification after the specified date and time of bid opening shall be rejected.

13. Bids shall be opened publicly in the City Council Chambers or Council Committee Room.

14. Cash discounts may be accepted, but SHALL NOT be considered in making award.

15. Regarding a bid for purchase of materials, supplies or services, not to include construction of any public works, a written notice of acceptance mailed or otherwise furnished to the successful bidder shall result in a binding contract without further action by either party.

16. When any bid is accepted for the construction or doing of any public works, a written contract shall be executed by and between the City of Alexandria and the Contractor. No contract shall be binding upon the City until it has been executed by the City and delivered to the successful bidder. Should the bidder to whom the contract is awarded fail to execute the contract, the award shall then be made to the next lowest responsible bidder, or re-advertised for public bid, said decision to be in the sole judgment of the City of Alexandria. This action may result in the loss of bidding privileges for a period of one (1) year.

17. The City of Alexandria shall schedule for payment the invoices for articles or services purchased under this bid within thirty (30) days after due and proper delivery accompanied by invoice.

18. The City of Alexandria is exempt from all sales taxes. A sales tax exempt form shall be furnished by the City of Alexandria Purchasing Department, if requested.

19. Bidder(s) awarded item(s) by the City of Alexandria shall be responsible for supplying all products at the awarded price(s). Failure may result in the City's cancellation of the remaining items awarded.

20. Regarding Service Contracts and Procurement Contracts, the terms of the contract shall be binding upon any and all parties involved until goods and supplies are delivered, services have been rendered, and/or work has been completed and accepted by the Mayor on behalf of the City of Alexandria and all payments required to be made to the Contractor have been made. However, a contract may be terminated under any and all of the following conditions:

(a) By mutual agreement and consent of either party upon thirty (30) days written notice to the other party;

(b) By the Mayor, on behalf of the City of Alexandria, as a consequence of the failure of the Contractor to comply with the terms and conditions of the contract or the progress or quality of work to be performed in a satisfactory manner, proper allowance being made for circumstances beyond the control of the Contractor; or

(c) By satisfactory completion of all services and obligations described in the contract.

General Conditions for Bidders - Please Read Carefully (Continued)

If the contract is terminated for any of the terms and conditions authorized in sub-paragraph (b) above, Contractor shall be formally notified in writing by the City of Alexandria Purchasing Department by means of certified mail informing him of cancellation of the contract, giving specific reasons for said cancellation. Contractor shall have the right to appeal to the City Council within ten (10) days from the date that said notification is placed in the U.S. Mail. Contractor's appeal shall be accomplished by means of a letter addressed to the City Council and delivered to the City Clerk, stating that an appeal to the decision of cancellation is desired. The City Council shall thereafter hold a hearing on the appeal, giving all parties the opportunity to present any and all evidence concerning the decision of cancellation. After hearing the appeal, the city Council may, by a majority vote, sustain, modify, or reverse the findings for said decision and shall provide, if requested by Contractor, a written determination of its findings.

21. Contractors submitting bids for Public Works construction projects in excess of $1.00 must show his Contractor's License Number on the front of the bid envelope, except for certain projects for which a Contractor's License Number is not required by the State Contractor's Licensing Board. Failure to comply with this directive shall result in automatic bid rejection, furthermore, any Contractor who submits a bid for a type of construction for which he is not properly licensed shall be acting in violation of LA R.S. 37:2163, and shall be subject to all provisions for violation and penalties thereof. Contractors who are owned by, and are submitting a bid as a subsidiary of a parent company, whose name is listed in the State of Louisiana's Roster of Licensed Contractors, may do so by including a letter of proof of ownership from the parent company with the submitted bid package. The letter must be signed as per LA R.S. 38:2212 B.(5)(a)(b)(c) (see Item #22 below).

22. All bids submitted via USPS (registered or certified), overnight courier or hand delivered, shall be signed by hand and in ink by an authorized company representative per LA R.S. 38:2212 B.(5)(a)(b)(c), which states:

(c)(i) Evidence of agency, corporate, or partnership authority shall be required for submission of a bid to the division of administration or the State of Louisiana. The authority of the signature of the person submitting the bid shall be deemed sufficient and acceptable if any of the following conditions are met:

(aa) The signature on the bid is that of any corporate officer listed on the most current annual report on file with the Secretary of State, or the signature on the bid is that of any member of a partnership or partnership in commendam listed in the most current partnership records on file with the Secretary of State.

(bb) The signature on the bid is that of an authorized representative of the corporation, partnership, or other legal entity and the bid is accompanied by a corporate resolution, certification as to the corporate principle, or other documents indicating authority which are acceptable to the public entity.

(cc) The corporation, partnership, or other legal entity has filed in the appropriate records of the Secretary of State in which the public entity is located, an affidavit, resolution, or other acknowledged or authentic document indicating the names of all parties authorized to submit bids for public contracts. Such document on file with the Secretary of State shall remain in effect and shall be binding upon the principal until specifically rescinded and canceled from the records of the office.

General Conditions for Bidders - Please Read Carefully (Continued)

23. In-State preferences shall not apply to procurements involving federal funds.

24. Pursuant to LA R.S. 38:2212 O.(2)(a)(b), any modifications of plans and specifications will be made through an addendum. No addendum shall be issued within seventy-two (72) hours of the bid opening, excluding weekends and legal holidays, without the extension of the bid opening date. An extension of at least seven (7) but no more than thirty (30) working days is required but, re-advertising is not required. The addendum shall be transmitted by any one of the following methods: (1) facsimile transmission; (2) e-mail; (3) by hand; or (4) posted on the City of Alexandria's website (www.cityofalexandriala.com) and posted on Central Bidding's website (www.centralauctionhouse.com) if applicable.

25. All Federal Transit Administration (FTA) funded procurements, including operating assistance funding contracts, are to follow the *Master Agreement*, to include all applicable federal clauses.

a. Any bidder that is found listed on the Federal Government's *System for Award Management* (SAM) website, at www.sam.gov/portal/sam , under the advanced search feature for *Excluded Parties List System* (EPLS), shall automatically be rejected for the award of this bid, by Category and/or in its entirety. This applies to any portion of the bid that is a procurement funded by FTA.

26. Under the City's *AFEAT (Alexandria Fairness, Equality, Accessibility, and Teamwork Program)*, participation by minority and/or disadvantaged business enterprise firms is encouraged. Inquiries about the *AFEAT* Program should be directed to the Division of Finance. As a part of its RFP response, each Bidder ***shall*** submit documentation of its bona fide effort to secure subcontractors that meet the City's AFEAT goals. Each bidder ***shall*** also submit proof of engagement of any subcontractor selected because of its solicitations. The Bidder's bona fide efforts and engagement(s) are a consideration in bid review and rating.

27. Bidders shall guarantee all prices for a minimum of forty-five (45) days. Should bid award be delayed beyond forty-five (45) days, Bidders agree any change in price shall be limited to the percent change of the LME Steel Rebar index at the time of bid award as compared to the same index at the time of bid submission. Bidders shall supply the LME Steel Rebar index price at the time of bid as part of their bid submission.

CITY OF ALEXANDRIA BID SPECIFICATIONS FOR
JACKSON@ HORSESHOE ROUNDABOUT UTILITY RELOCATION PACKAGE 1- STEEL POLES

Alexandria Fairness, Equality, Accessibility and Teamwork Program (AFEAT)

Dear Vendor:

Under the City's *AFEAT (Alexandria Fairness, Equality, Accessibility, and Teamwork Program*), participation by minority and/or disadvantaged business enterprise firms is encouraged. The AFEAT Program should be inquired about through the Division of Finance. The goals for qualifying disadvantaged, minority and female owned business in the use of professional service agreements with prime contractors will help effectuate the goals of increasing: the competitive viability of small business, minority, and women business enterprise by providing contract, technical, educational, and management assistance; business ownership by small business persons, minority persons, and women (including professional service opportunities); and the procurement by the City of professional services, articles, equipment, supplies, and materials from business concerns owned by small business concerns, minority persons, and women.

Prime contractors offering subcontracting should take specific action to ensure that a bona fide effort is made to achieve maximum results towards meeting the established goals. Primes shall document efforts and shall implement steps at least as extensive as the following in a good faith effort to reach or exceed the established goals:

A. *Establish and maintain a current list of minority and female owned businesses in Alexandria, in Rapides Parish, and in the State of Louisiana.*
B. *Document and maintain a record of all solicitations of offers for subcontracts from minority or female construction contractor and suppliers in Alexandria, in Rapides Parish, and in the State of Louisiana.*
C. *Secure listing of minority and women owned businesses from the City of Alexandria Purchasing Department, the Central Louisiana Business Incubator, and the State of Louisiana Department of Minority Affairs.*
D. *Participate in associations which assist in promoting minority and women owned businesses such as the Central Louisiana Business League, the Central Louisiana Business Incubator, and the Entrepreneurial League System.*
E. *Designate a responsible official to monitor all activity made in the effort to achieve or exceed the established goals; record contacts made, subcontracts entered into with dollar amounts, and other relevant information.*

For more information on AFEAT and the City of Alexandria's Diversity in Action Initiative, and to explore a local and statewide directory of minority businesses, please visit www.diversityinaction.org . Should you have any questions or comments, please do not hesitate to contact our Finance Department at 318-449-5091 or our Purchasing Department at 318-441-6180.

As a part of its RFP response, each Bidder ***shall*** submit documentation of its bona fide effort to secure subcontractors that meet the City's AFEAT goals. Each bidder ***shall*** also submit proof of engagement of any subcontractor selected because of its solicitations. The Bidder's bona fide efforts and engagement(s) are a consideration in bid review and rating.

CITY OF ALEXANDRIA BID SPECIFICATIONS FOR
JACKSON@ HORSESHOE ROUNDABOUT UTILITY RELOCATION PACKAGE 1- STEEL POLES

BID SPECIFICATIONS

SCOPE: The following bid specifications are to be used as minimum and maximum standards for JACKSON @ HORSESHOE ROUNDABOUT UTILITY RELOCATON PACKAGE 1 - STEEL POLES, for use by for use by the City of Alexandria Electric Distribution Department for the purpose of relocating primary electrical lines in the vicinity of this project site. All quoted products shall either meet or exceed the following specifications.

Unless otherwise stated, the use of manufacturer's name and product numbers are for descriptive purposes and to establish general quality levels only, they are not intended to be restrictive.

Prospective bidders are required to state exactly what they intend to furnish, otherwise, it is fully understood that they shall furnish all items as stated. Bidder should indicate in the space provided below, under *"Bidder's Response:",* the necessary information to indicate he/she is conforming with the bid specifications for each item as written. If Bidder is in complete compliance with each bid specification item as written, please write "Comply" in the space provided; if not, please indicate in this space, the necessary information on the product you are proposing. Each specification response is necessary to ensure the proper evaluation and tabulation of this bid. If the "*Exceptions"* section is not filled in or completed, your bid may be rejected; if your response includes no exceptions please indicate so with a response of "None."

==========

1.0 General:

See attached Appendix A for complete pole specifications.

2.0 Exceptions:

The Bidder agrees to supply all products as specified except as noted herein:

3.0 Insurance:

Bidder shall furnish, attached to the bid document, a current copy of his Certificate of Insurance indicating limits of General Liability, Automobile Liability and Worker's Compensation in force at the time of the bidding. Evidence of reliable insurance to fully indemnify against long-term liabilities shall be part of the evaluation criteria for award of this bid. Certificate of Insurance shall have a General Liability Aggregate of Four Million ($4,000,000) Dollars and a per person/per occurrence of Two Million ($2,000,000) Dollars. Automobile Liability will have a Combined Single Limit of Two Million (2,000,000). Also on the Certificate, the City shall be named as an "additional insured" and a waiver of subrogation in favor of the City of Alexandria. On the Certificate of Insurance under Worker's Compensation, it shall state that "This is a standard Worker's Compensation Policy", with statutory limits. Cancellation of any Certificate of Insurance should

require sixty (60) days notice to the City of Alexandria, but under no circumstances less than thirty (30) days notice. Also, the following wording must be removed before acceptance of the Certificate: "Endeavor to" or "But failure to mail such notice shall impose no obligation of liability of any kind upon the company, its agents or representatives." Certificate holder shall be the City of Alexandria, P.O. Box 71, Alexandria, LA 71309-0071, Attention: Purchasing Manager.

4.0 Firm Lump Sum Prices:

Bid price for JACKSON @ HORSESHOE ROUNDABOUT UTILITY RELOCATON PACKAGE 1 - STEEL POLES, new and unused, complete unit ready for use, delivered F.O.B., freight pre-paid, as per the bid specifications:

Engineered Poles				Drilling Guide	Load Tree	Pole Number	Unit		Extended Price
Qty.	Hgt.	Class	Top				Weight	Price	
1	60	ENG	DC-CS8, CS7	DG-01	LT-01	3			
1	40	ENG	C8L	DG-02	LT-02	3-2R			
1	50	ENG	CS8L	DG-03	LT-03	3-1L			
1	50	ENG	C8-1L	DG-04	LT-04	3-3L			
Lot			Pole Steps						
						Total, Engineered Poles			

LME Steel Rebar Index Price, US $/tonne: _____.

Please include written evidence of the index value quoted herein.

Bidder Information:

Company Name:_____

Address:_____

City/State/Zip:_____

Telephone #: (_____)_____ Fax #: (_____)_____

Email:_____

Authorized Printed Name and Title:_____

Authorized Signature:_____

(Per LA R.S. 38:2212(A)(c)(i) - See General Conditions Item #22, Page 4 of these bid specifications.)

BID BOND
BID #2209 - OVERHEAD ELECTRIC CONSTRUCTION UNIT PRICING

Date: _____

KNOW ALL MEN BY THESE PRESENTS:

That_____of_____, as Principal, and_____, as Surety, are held and firmly bound unto the _____ (Obligee), in the full and just sum of five (10%) percent of the total amount of this bid, including all alternates, lawful money of the United States, for payment of which sum, well and truly be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

Surety represents that it is listed on the current U. S. Department of the Treasury Financial Management Service list of approved bonding companies as approved for an amount equal to or greater that the amount for which it obligates itself in this instrument or that it is a Louisiana domiciled insurance company with at least an A - rating in the latest printing of the A. M. Best's Key Rating Guide. If surety qualifies by virtue of its Best's listing, the Bond amount may not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide.

Surety further represents that it is licensed to do business in the State of Louisiana and that this Bond is signed by surety's agent or attorney-in-fact. This Bid Bond is accompanied by appropriate power of attorney.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas said Principal is herewith submitting its proposal to the Obligee on a Contract for:

JACKSON@ HORSESHOE ROUNDABOUT UTILITY RELOCATION PACKAGE 1- STEEL POLES

NOW, THEREFORE, if the said Contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing and give a good and sufficient bond to secure the performance of the terms and conditions of the Contract with surety acceptable to the Obligee, then this obligation shall be void; otherwise this obligation shall become due and payable.

_____ _____
PRINCIPAL (BIDDER) SURETY

BY: _____ BY:_____
AUTHORIZED OFFICER-OWNER-PARTNER AGENT OR ATTORNEY-IN-FACT(SEAL)

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS that _____

_____

(Insert the name and address or legal title of the Contractor)

hereinafter called PRINCIPAL, and _____

_____

(Insert the legal title of SURETY)

hereinafter called SURETY, are held bound unto the City of Alexandria, P.O. Box 71 Alexandria, Louisiana, hereinafter called OWNER, in the total aggregate penal sum of

_____

DOLLARS ($_____), for the payment of which sum will and truly be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the PRINCIPAL entered into a certain CONTRACT with the OWNER, date the _____Day of _____, 2018 a copy of which is attached and made part hereof for the construction of:

JACKSON@ HORSESHOE ROUNDABOUT UTILITY RELOCATION PACKAGE 1- STEEL POLES

NOW THEREFORE, if the PRINCIPAL shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms conditions and agreements of said CONTRACT during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the SURETY and during the one (1) year guaranty period and if the PRINCIPAL shall satisfy all claims and demands incurred under such CONTRACT, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, further, that the said SURETY, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the WORK to be performed there under, or the SPECIFICATIONS accompanying same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the CONTRACT or to the WORK or to the SPECIFICATIONS.

CITY OF ALEXANDRIA BID SPECIFICATIONS FOR
JACKSON@ HORSESHOE ROUNDABOUT UTILITY RELOCATION PACKAGE 1- STEEL POLES

PROVIDED, further, that it is expressly agreed that the BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the CONTRACT not increasing the CONTRACT PRICE more than ten (10%) percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the CONTRACT BOND, and whether referring to this BOND , the CONTRACT DOCUMENTS shall include any alteration, addition, extension, or modification of any character whatsoever.

PROVIDED, further, that final settlement between the OWNER and the PRINCIPAL shall abridge the right of the other beneficiary hereunder, whose claim may be unsatisfied. The OWNER is the only beneficiary hereunder.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this the_____Day of_____ , 2013.

(SEAL)

_____
(PRINCIPAL)

_____ BY: _____
(Witness to Principal)

_____ _____
(Address) (Address)

(SEAL)

_____
SURETY

_____ BY: _____
(Witness to Surety)

_____ _____
(Address) (Address)

NOTE: Date of BOND shall not be prior to date of CONTRACT. If CONTRACTOR is partnership, all partners shall execute BOND.

APPENDIX A
SPECIFICATIONS FOR STEEL SINGLE POLE AND H-FRAME STRUCTURES

1. SCOPE

This specification covers the design, materials, welding, inspection, protective coatings, drawings and delivery of steel transmission single pole and H-frame structures. The proposal submitted by the manufacturer shall include field bolts, locknuts, vangs, attachment provisions for arms and/or insulators, anchor bolts, base plates, and other necessary items to make a complete structure.

2. DEFINITIONS:

Cambering - the fabricating of a slight convex curve in a pole or crossarm

D/t - the ratio of the diameter of a tubular pole to the steel plate thickness

Engineer - a registered or licensed person, who may be a staff employee or an outside consultant, and who provides engineering services. Engineer also includes duly authorized assistants and representatives of the licensed person.

Groundline - a designated location on the pole where the surface of the ground will be after installation of a direct embedded pole

Load factors (LF) - a multiplier which is applied to each of the vertical, transverse and longitudinal structure loads to obtain an ultimate load

P-delta (P-Δ) moment - secondary moment created by the vertical loads acting on the structure when the structure deflects from its unloaded position

Point of fixity - location on the pole at groundline or below groundline where the maximum moment occurs.

Pole twist - spiral rotation of a pole section relative to the pole end. It is caused by the residual stress in the steel as received from the mill, the clamping force holding the tube shells together and the heat applied during the seam welding process.

Raking - the practice of installing a straight pole out of plumb, or at an inclined angle

w/t - Ratio of the width of the pole (flat-to-flat) to the plate thickness

Ultimate load - The maximum design load which includes the appropriate load factor specified

UNC – Unified Coarse Threads

3. CODES AND STANDARDS

Codes, standards, or other documents referred to in this specification shall be considered as part of this specification. The following codes and standards are referenced:

a. American Society of Civil Engineers (ASCE) Standard, Design of Steel Transmission Pole Structures, Manual 72, latest edition.

b. American Society for Testing and Materials (ASTM), various standards, latest revision.

c. American Concrete Institute (ACI), Building Code Requirements for Reinforced Concrete, ACI 318, latest edition.

d. American Welding Society (AWS), Structural Welding Code, AWS D1.1, latest edition.

e. American National Standards Institute (ANSI), National Electrical Safety Code, ANSI C2, latest edition.

f. Society for Protective Coatings (SSPC, formerly Steel Structure Painting Council)/ National Association of Corrosion Engineers (NACE) Surface Preparations Specification, SSPC/NACE SP-6/NACE 3.

4. CONFLICT BETWEEN THIS SPECIFICATION, DRAWINGS, AND REFERENCED DOCUMENTS

In the event of conflict between this specification and the above referenced documents, the requirements of this specification shall take precedence. In the case of conflict between several referenced documents, the more stringent requirement shall be followed. If a conflict exits between this specification or the referenced documents and the attached drawings, the attached drawings shall be followed. If clarification is necessary, contact the owner or owner's representative.

5. GENERAL REQUIREMENTS

The design, fabrication, allowable stresses, processes, tolerances, and inspection shall conform to the ASCE Standard, Design of Steel Transmission Pole Structures (Manual 72), latest edition, with the following additions and/or exceptions:

a. Design

(1) Pole designs shall be prepared from the attached configuration drawings (Attachments A and B of this Specification) and design loads (Attachment B of this Specification). The structure shall be capable of withstanding all specified loading cases including secondary stresses from foundation movements when specified in Attachment B of this Specification but not considering the possible

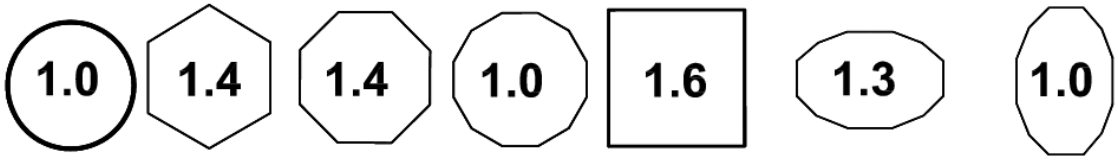
restraining effect of conductors or shield wires. The structure shall withstand the loads without failure, permanent distortion, or exceeding any specified deflection limitations.

(2) Wind pressures shown in the loading criteria shall be multiplied by the appropriate shape factor applied to the poles. Pressures in psf shall be computed as follows:

$$p = W \times C_d$$

Where p = pressure on projected area of the pole normal to wind, W = wind pressure, and C_d = shape (or drag) factor.

Shape factors for computing the wind on poles are:



(3) The maximum design unit stress shall be the minimum yield strength as stated in applicable ASTM specifications for the particular application and types of loads, including load factors.

(4) Poles shall be designed with a minimum number of joints. Field welding shall not be allowed as part of the design of a new pole. The shaft joints to be made in the field shall be slip joints or bolted flange joints. Slip joint length shall be at least 1-1/2 times the largest inside diameter of the female section. Bolted flange joints shall be used for medium angle and heavy angle guyed structures and X-braced H-frame structures. If approved by the owner or owner's representative, a strap across the pole splice to prevent separation of the male and female sections of the pole may be used for X-braced H-frame structures. Approval must be obtained prior to bid.

Manufacturer shall verify slip joint fit before shipment. Joints should not interfere with joints, step nuts, ladder clips, or jacking nuts.

Sufficient jacking lugs and permanent orientation marks shall be provided at all slip joints to ensure proper alignment and complete overlap of the joint.

(5) The ultimate load in guys shall not exceed 65 percent of the rated breaking strength of the guy.

(6) Design of anchor bolts shall be in accordance with the ACI-318-1983 Edition, Building Code Requirements for Reinforced Concrete, assuming a concrete strength as specified by the owner.

When anchor bolts are specified, they shall have the top 2 feet galvanized. Anchor bolts shall be threaded at the top end a distance equal to the baseplate thickness plus the thickness of two anchor bolt nuts plus 2-1/2". Each anchor bolt shall include two heavy hex nuts.

Welding on anchor bolts will only be allowed in the bottom 12 inches. Only one length of anchor bolt shall be used on each pole. Anchor bolts/clusters shall be plainly marked to indicate the structure type, structure number, orientation, and top of concrete.

Anchor bolts shall be designed to be shipped as a rigid cage with top and bottom plates holding the anchor bolts in place. The anchor bolt thread shall be protected during shipping. The anchor bolts shall be welded to the holding plate in the bottom of the cage. The top template shall be designed to be removable and to support the assembled cage during lifting and setting operations without detrimental deformations. Bolt clusters shall be designed to be rigid enough to withstand the normal jolts of shipping, handling and installation with no displacement of bolts from the proper positions within the cluster.

The removable template at the top shall be marked to show the centerline for tangent structures and the angle bisector for angle structures. Matching marks are to be on the base plate of the structure so proper alignment can be made.

(7) Minimum plate thickness for all pole components shall be 3/16 inch.

(8) Structures which are to be direct embedded shall have bearing plates and ground sleeves. Bearing plates shall have a diameter not more than 2 inches greater than the maximum pole diameter.

Galvanized poles shall have a drain hole at the bottom. The drain hole shall not be more than 20% of the bottom plate surface area. When a painted finish is specified, poles shall be hermetically sealed. Ground sleeves shall have a minimum length of 3 feet for single pole structures and 4 feet for H-frames.

The ground sleeve shall have a minimum thickness of 3/16 inch and shall be centered at the groundline. A seal weld shall be provided around the ground sleeve. The ground sleeve shall not be considered in strength calculations.

(9) Poles shall have nearly a uniform taper throughout their entire length. The maximum difference in tapers between two pole sections measured by the diameters shall be .20 inch/ft. for poles with variable taper.

(10) Poles with elliptical cross sections shall have a minor axis dimension equal to at least 75 percent of the major axis dimension.

(11) All unguyed angle poles or unguyed tangent deadends shall be precambered to remain plumb when the calculated deflection at the top of the pole exceeds 1.5 percent of the pole height under an initial conductor tension loading of 60°F, no wind, and no load factors. Pole height shall be the height of the pole from the top of the baseplate, or designated groundline, to the top. Tangent poles with unbalanced vertical loadings shall be precambered for the previously stated conditions.

(12) Arms shall be designed so the end of the arm is at the specified height under a loading of initial conductor tension, 60°F, no wind, and no load factors. Arms shall not deflect vertically more than 12 inches at the end of the arm under heavy ice conditions (without any load factors applied).

Arms shall be upswept or straight, tapered, steel tubular members, of any cross-sectional type, which meet the dimensions shown on the attached drawings (Attachment D of this Specification).

Arm end plate connection details for hardware attachment shall be typical of those shown on the attached drawings. The arms shall be hermetically sealed when a painted finish is specified. Galvanized arms shall have drain holes where appropriate. If weathering steel is used for the arms, attachments and the arm shall be designed to avoid trapping or holding moisture.

(13) Lifting lugs are optional. The manufacturer shall supply all instructions for handling and erection of poles and arms.

(14) In the design of connections for vangs, brackets, or stiffeners attached to the pole shaft, care shall be taken to distribute the loads sufficiently to protect the wall of the pole from local buckling.

(15) Each pole shall be <u>permanently marked</u> on the pole shaft 60 inches above groundline and on the bottom of baseplate or bearing plate with the following identifying information: structure type, height, structure number, ultimate groundline moment, owner name, and date manufactured. The method of identification shall be approved by the owner.

(16) Weathering steel structures shall be designed to eliminate water and refuse traps.

Tubular sections shall be sealed from moisture entering the inside of the pole. Factory drilled pole holes shall be plugged to prevent moisture intrusion during shipping. For field drilled poles and factory drilled poles, manufacturer shall

provide silicon sealant to seal all through-bolt holes. Nondrilled poles when assembled shall be effectively sealed to prevent moisture intrusion.

Connections shall be designed to reduce the effect of pack-out by preventing moisture from entering the joint or by designing the connection to allow moisture to easily drain off.

Plastic plugs shall be installed in all nuts welded to the structure and all tapped holes.

(17) Application requirements: (See Attachment C of this Specification)

b. Materials

(1) All materials shall comply with the applicable requirements of ASTM specifications. Any modifications to ASTM specifications must be approved by the owner's representative prior to bidding.

(2) Poles, arms and conductor brackets shall conform with ASTM A36, ASTM A572, ASTM 581, ASTM A588, ASTM A871 or ASTM A595.

(3) Base plate shall conform with ASTM A572, ASTM A588, ASTM A633, or ASTM A595.

(4) Anchor bolts shall conform to ASTM A615, Grade 60 or 75.

(5) Other bolts and nuts shall conform, as applicable, to ASTM A307, ASTM A325, ASTM A354, ASTM A394, or ASTM A687. Locknuts shall be provided for each structure bolt, or American Nut Company (ANCO) type self-locking nuts may be used. Locknuts shall be the galvanized MF type or ANCO type.

(6) Anchor bolts, structural plate, and weld material, shall meet ASCE requirements for Charpy tests.

(7) For galvanized structures, steel used for the pole shaft and arms shall have a silicon content less than .06 percent.

c. Fabrication

(1) All welding shall be in accordance with the AWS D1.1, latest edition. Welders shall be qualified in accordance with AWS D1.1 welding procedures.

(2) One hundred percent penetration welds shall be required in, but not limited to, the following areas:

- circumferential welds (C-welds) joining structural members;
- longitudinal welds in the female portion of the joint within the slip joint area;
- welds at the butt joints of back-up strips; and
- base plate to shaft weld.
- longitudinal welds for a minimum length of 3 inches where there are adjacent C-welds, flange welds, base welds and ends of tubes.

(3) Full penetration or equivalent 90 percent partial penetration with fillet overlay shall be used for arm-to-arm base, vang-to-plate shaft, and arm box joints.

(4) Quality and acceptability of every inch of the full penetration welds shall be determined by visual and ultrasonic inspection.

(5) All other penetration welds shall have 60 percent minimum penetration. Quality and acceptability of all welds other than full penetration welds shall be determined by visual inspection, supplemented by magnetic particle, ultrasonic or dye penetrant inspection.

(6) All weld back-up strips shall be continuous the full length of the welds. Care shall be exercised in the design of welded connections to avoid areas of high stress concentration which could be subject to fatigue or brittle fractures.

(7) Field welding shall not be permitted except with owner's approval and the manufacturer's direction in repairing a pole.

(8) All parts of the structure shall be neatly finished and free from kinks or twists. All holes, blocks, and clips shall be made with sharp tools and shall be clean-cut without torn or ragged edges.

(9) Before being laid out or worked in any manner, structural material shall be straight and clean. If straightening is necessary, it shall be done by methods that will not damage the metal.

(10) Shearing and cutting shall be performed carefully and all portions of the work shall be finished neatly. Copes and re-entrant cuts shall be filleted before cutting.

(11) All forming or bending during fabrication shall be done by methods that will prevent embrittlement or loss of strength in the material being worked.

(12) Holes for connection bolts shall be 1/16 inch larger than the nominal diameter of the bolts. Holes in the flange plates for bolted splices shall be 1/8 inch larger than the bolt diameter. Holes in the base plates for anchor bolts shall be 3/8 inch larger than the nominal diameter of the anchor bolts. The details of all connections and splices shall be subject to the approval of the owner or his representatives.

(13) Holes in steel plates which are punched must be smooth and cylindrical without excessive tear out or depressions. Any burrs that remain after punching shall be removed by grinding, reaming, etc.

(14) Holes of any diameter may be drilled in plate of any thickness. Care shall be taken to maintain accuracy when drilling stacks of plates.

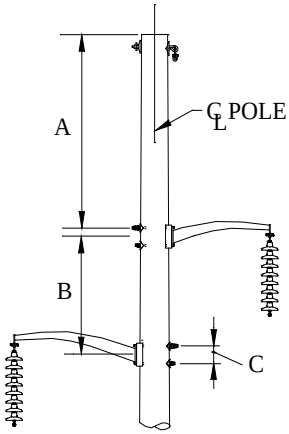
(15) Holes may be made by use of a machine guided oxygen torch. Flame cut edges shall be reasonably smooth and suitable for the stresses transmitted to them.

(16) Field drilled holes must be approved by the owner. If the manufacturer is aware of the owner's intent to field drill holes, the manufacture must supply a galvanizing touch-up kit for galvanized poles or a silicon sealant for weathering steel poles.

d. Tolerances

Manufacturing tolerances shall be limited to the following:

Pole Length	One piece: ±2 inches, or ±1 inch ±1/8 inch per 10 feet of length, whichever is greater (i.e. - 120 foot pole shall have a length of 120 feet ±2½ inches)
	Assembled pole with flange connections: same as for one piece Assembled pole with slip joint connections: The accumulation of the slip joint tolerances not to exceed –6", +12"
Pole Diameter	-0 inch, +1/4 inch
Pole End Squareness	±1/2 inch per foot of pole diameter
Pole Sweep	1/8 inch per 10 feet of pole length
Pole Twist	Limit twist to 1°/10' of length, not to exceed 4°/tube segment. Overall structure twist shall be limited to 10° for embedded and 6° for base plated structures. Connections for all appurtenances to the pole shall account for the pole twist and should align vertically.
Slip Joint tolerances	Tolerances per manufacturer's recommendations and total pole length requirements above.

Location of Groups of Bolt Holes from Top of Pole	±1.0 inches (tolerance to dimension 'A',Figure 2)	 FIGURE 2
Location of Centerline Between Groups of Bolt Holes	±1.0 inch (tolerance to dimension 'B', Figure 2)	
Location of Holes Within a Group of Bolt Holes	±1/8 inch (tolerance to dimension 'C',Figure 2)	
Bolt Hole Alignment	Not to vary from the longitudinal pole centerline of that group of holes by more than 1/16 inch	
Location of Identification Plate	±2.0 inch	

e. Grounding

(1) A grounding connection shall be welded to the pole shaft, 18 inches above the groundline or 6 inches above the ground collar. The grounding connection will be either the two-hole NEMA pad, or a nut, or a threaded insert installed in the pole, or an approved alternative.

(2) Grounding pad face shall not be painted or covered with other coatings. The grounding nut thread and grounding pad threads shall be protected from coatings.

(3) Threaded inserts installed for grounding shall be made of Type 316 stainless steel and provided with standard ½ inch, 13 UNC threads. Threads shall be protected from coatings.

f. Climbing Devices

(1) Design Loads

(a) Step Bolts and removable steps: The step bolts, removable steps and attachment to the pole shall be designed to support a minimum of a 300 pound worker and equipment multiplied by a load factor as defined in paragraph 5.f.(2). The load shall be at the outer edge of the step or bolt.

(b) Removable Ladders: The ladder and each attachment to the pole shall be designed to support a minimum of a 300 pound worker and equipment multiplied by a load factor as defined in paragraph 5.f.(2). The load shall be at the outer edge of the step or bolt.

(2) Load Factor

A load factor of 2.0 shall be applied to the design loads in 5.6.1. These loads shall be supported without permanent deformation.

(3) Location

Climbing devices shall start 8 feet above groundline and extend to the pole top unless specified by the owner. The climbing device shall be spaced such that each step is 1 foot 6 inches apart and orientated to provide maximum ease of climbing. They shall be located to avoid interference with other attachments

g. Finishes

(1) The following finishes are acceptable: galvanizing, zinc primer and painting, weathering steel, and below grade coating.

(a) Galvanizing - All structures and structural components which are hot-dip galvanized shall meet all the requirements of ASTM A123 or ASTM A153. Measures shall be taken to prevent warping and distortion according to ASTM A384 and to prevent embrittlement according ASTM A143. Poles made of ASTM A588 steel shall not be galvanized due to the high silicon content of the steel. One gallon of zinc enriched paint shall be provided with each five poles.

(b) Zinc Primer and Painting - Poles which are to be painted shall be hermetically sealed to prevent corrosion of interior surfaces. After shot or sand blasting and cleaning in accordance with the surface preparations specification, SSPC/NACE SP-6/NACE 3, a zinc primer of 3 mils dry film thickness (DFT) and two coats of finish paint, each 3 mils DFT shall be applied to all exterior surfaces in accordance with the paint supplier's recommendations. One gallon each of primer and finish paint shall be supplied with each five poles. A guarantee against flaking or fading of the paint for a minimum of 5 years shall be provided.

(c) Weathering Steel - Steel shall conform to ASTM A588 or A871. After fabrication, poles made of weathering steel shall be cleaned of oil, scale, etc., in accordance with the surface preparation specification SSPC/NACE SP-6/NACE 3, to ensure uniform and rapid formation of the protective oxide layer.

(d) Coatings for the Embedded Portion of the Pole - When poles are to be directly embedded, a 16 mil (minimum dry film thickness), two component hydrocarbon extended polyurethane coating that is resistant to

ultraviolet light shall be applied on the exposed surface of the embedded portion of the pole. The coating shall extend from the butt to the top of the ground sleeve. Other coatings shall be approved by the owner prior to their use.

(2) Bolts and nuts with yield strengths under 100,000 psi shall be hot-dip galvanized per ASTM A153 and ASTM A143, or mechanically coated with zinc in accordance with ASTM B454, Class 50. Bolting materials with yield strengths in excess of 100,000 psi shall not be hot-dip galvanized. Instead, they shall be painted with zinc enriched paint or mechanically coated with zinc per ASTM B454, Class 50.

(3) Compliance with coating thickness requirements shall be checked with a magnetic thickness gauge.

h. Inspection and Testing

(1) The owner and the owner's designated agents shall have free entry at all times while work is being carried on, to all parts of the manufacturer's plant to inspect any part of the production of the poles covered by this specification.

(2) Steel members which are bent or warped or otherwise improperly fabricated shall be properly repaired or replaced.

(3) The cost of tests made by the manufacturer (except full scale load tests on poles), including cost of the certified test reports shall be considered included in the price.

(4) The manufacturer shall make tests in accordance with ASTM A370 and ASTM A673 to verify that the material used in the structures meets the impact properties.

(5) Mill test reports showing chemical and physical properties of all material furnished under this specification shall be maintained by the manufacturer for a period of 5 years and shall be traceable to the structure.

(6) All plates over 1-1/2 inches thick shall be ultrasonically tested to assure against defects which could lead to lamellar tearing.

(7) Welders or welding operators shall be qualified in accordance with the provisions of AWS D1.1.

(8) The manufacturer shall make certified welding reports for each structure. The reports covering welding shall include all welds of each structure. Each weld shall be clearly identified; and the report shall consist of the

method of testing, whether the weld is acceptable, the identification of the structure, the date, and the name and signature of the inspector.

i. Structure Testing

(1) The structures which are to have full-scale load tests performed on them are listed in Attachment C of this Specification.

(2) Details of the test procedures and methods of measuring and recording test loads and deflections shall be specified by the manufacturer prior to testing and shall be subject to the review and approval of the owner or his representative.

(3) Deflections shall be recorded in the transverse and longitudinal directions when applicable. Deflection measurements shall be taken under the no load condition both before and after testing.

(4) Material procurement for test poles shall be identical to material procurement procedures for regular production run poles.

(5) A full report listing results shall be submitted after completion of all testing. Copies of mill test reports shall be included in the load test report. The report shall also include a complete description of the load tests with diagrams and photographs.

(6) The owner or his representative reserves the right to be present during testing and shall be notified 2 weeks prior to the start of structure fabrication.

j. Shipping

(1) Each shipment shall be accompanied by a list of all parts, identifiable by structure type and number. Arms, bolts and miscellaneous hardware will be identified by the list for match up with the respective pole shaft. All parts required for any one structure shall be in one shipment, if possible.

(2) The owner and owner's representative shall be notified prior to shipment that such shipment is to take place, and they reserve the right to inspect the components prior to shipment. The notification shall give quantities, weight, name of common carrier used, and expected time of arrival.

(3) The anchor bolts shall be welded to the holding plate in the bottom of the cage. A removable template shall be used at the top of the cage and shall be marked to show the centerline for tangent structures and the angle bisector for angle structures. Matching marks are to be on the base plate so proper alignment can be made. Bolt clusters shall be rigid enough to

withstand the normal jolts of shipping and handling with no displacement of bolts from the proper positions within the cluster.

(4) Unless otherwise agreed to by the owner, the anchor bolt cage shall be shipped at least 30 days prior to pole shipment.

(5) Salt-treated wood blocking and urethane foams shall not be used when shipping or storing steel poles.

6. INFORMATION TO BE SUPPLIED BY THE MANUFACTURER

a. Information to be supplied with the proposal (Attachment E of this Specification).

(1) Calculated shipping weight of each structure excluding anchor bolts. Separate weights shall be given for arms and poles.

(2) Calculated shipping weight of anchor bolts.

(3) Ultimate groundline reactions (including load factors) in poles and guy wires.

(4) Anchor bolt size, length and locations (bolt circle diameters).

(5) Type of material of major components (ASTM number).

(6) Description of pole shaft, including thickness, length, diameter, cross-sectional geometry, and method of fastening each shaft component.

(7) Data showing the design of the arm, arm connections, arm attachment plates and brackets.

(8) Sketches or draft drawings of structure and structure attachments.

b. Documentation to be supplied for the owner’s approval prior to fabrication

Documentation includes final design calculations for pole shaft, base plate, anchor bolts, arms, and other appurtenances, including their connections for all structures. The following information shall be supplied:

(1) For the loading cases with load factors, the total shear, axial forces, moments, stresses or stress ratios, section moduli, cross-sectional areas, deflections w/t's for polygonal and D/t's for round cross sections at all splices, at arm attachment points (top and bottom), and at least every 10 feet along the pole.

(2) For the critical loading case, shear and axial forces, moments, stresses, section moduli, cross-sectional areas at the arm connections, bolt stresses in the arm connection, and deflection at the end of the arm.

(3) Anticipated deflections at the top of the pole and at the ends of the arms shall be indicated for each pole for the normal, everyday loading condition of 60°F, no wind, no load factors.

(4) For all specified loading cases, reactions and groundline moments shall be supplied.

(5) Detail drawings for each structure type giving weights of structure components, dimensions, and bill of materials.

(6) Assembly instructions and erection drawings. Slip joint lengths and allowable tolerances. Special handling instructions.

c. Final Documents shall be supplied to the owner for the items in Section 6.b.(5), after erection of all structures and prior to final payment.

d. Test Reports (as requested).

(1) Certified mill test reports for all structural material.

(2) Certified welding reports for each structure.

(3) Impact property test reports showing that the material used in the structures meets the impact properties.

(4) Test reports on coating thickness.

(5) Report of structure testing, when required, including photographs, diagrams, load trees, etc.

7. APPROVAL, ACCEPTANCE, AND OWNERSHIP

a. Final designs must be approved by the owner or owner's representative before material ordering and fabrication. Material ordering and fabrication prior to approval will be at supplier's risk. It is understood that award of this contract does not constitute acceptance of design calculations submitted with the bid, if corrections are required in the final structure designs due to manufacturer's errors, omissions, or misinterpretations of the specifications, the quoted price shall not change. Approval of the drawings and calculations by the owner or the owner’s representative does not relieve the supplier of responsibility for the adequacy of the design, correctness of dimensions, details on the drawings, and the proper fit of parts.

b. After delivery, the poles will be inspected and shall be free of dirt, oil blisters, flux, black spots, dross, tear-drop edges, flaking paint or zinc; and in general, shall be

smooth, attractive, and unscarred. Poles not meeting this requirement shall be repaired or replaced by the fabricator at no additional cost to the owner.

c. All final drawings shall become the property of the owner, who shall have full rights to reproduce drawings and use them as the owner sees fit, including submitting them to other vendors for the purpose of obtaining bids on future steel pole purchases.

8. LIST OF ATTACHMENTS TO THIS SPECIFICATION

- Attachment A, Structure Dimensions and Other Information (to be completed by the engineer)
- Attachment B, Design Loads (to be completed by the engineer)
- Attachment C, Application Requirements (to be completed by the engineer)
- Attachment D, Drawings (to be completed by the engineer)
- Attachment E, Bid Summary-Design Information, Weights, and Costs (to be completed by the manufacturer and submitted with proposal)

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STEEL POLE SPECIFICATIONS

Jackson St. @ Horseshoe Drive Roundabout - Distribution Line Relocation

Attachments A, B & D

Pole Dimension, Framing Detail Drawings & Design Loads

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STEEL POLE SPECIFICATIONS

Jackson St. @ Horseshoe Drive Roundabout - Distribution Line Relocation

Pole Drilling Guide

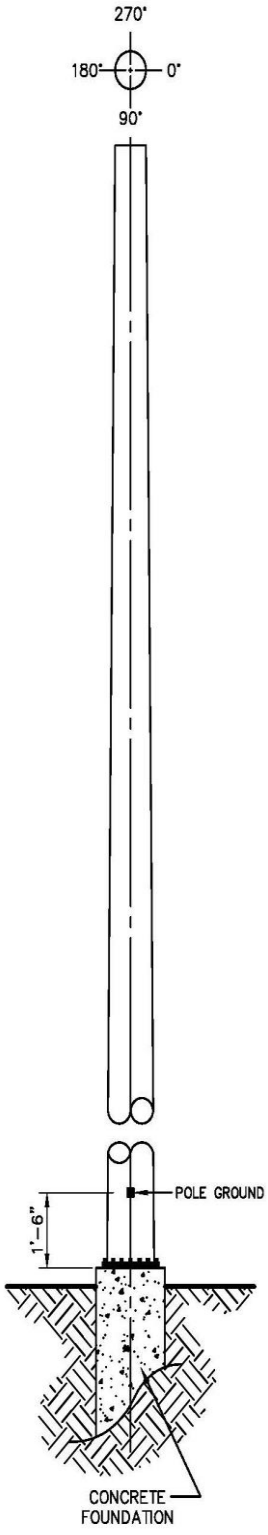
DRILLING GUIDE - DG01 DC-CS8, CS7

Tangent & 55° RT

Jackson Street @ Horseshoe Drive Roundabout

City of Alexandria

BHA Project: 2019H15A



HOLES Required For This Structure

No.	Distance From Top Of Pole	Rotation/ Orientation	Size of Hole	Function
H1	5' - 1"	90° - 270°	13 / 16"	CROSSARM DDE
H2	5' - 11"	90° - 270°	13 / 16"	CROSSARM DDE
H3	10' - 1"	30° - 210°	13 / 16"	CROSSARM DE
H4	10' - 11"	30° - 210°	13 / 16"	CROSSARM DE
H5	15' - 1"	150° - 330°	13 / 16"	CROSSARM DE
H6	15' - 11"	150° - 330°	13 / 16"	CROSSARM DE
H7	20' - 1"	90° - 270°	13 / 16"	CROSSARM DDE
H8	20' - 11"	90° - 270°	13 / 16"	CROSSARM DDE

Vangs Required For This Structure

V1	0' - 6"	90° - 270°	VANG	OH NEUTRAL
V2	1' - 0"	30° - 210°	VANG	OH NEUTRAL
V3	1' - 6"	155° - 335°	VANG	OH NEUTRAL
V4	31' - 6"	0° - 180°	VANG	COMM
V5	32' - 0"	90° - 270°	VANG	COMM
V6	32' - 6"	0° - 180°	VANG	COMM
V7	33' - 0"	90° - 270°	VANG	COMM

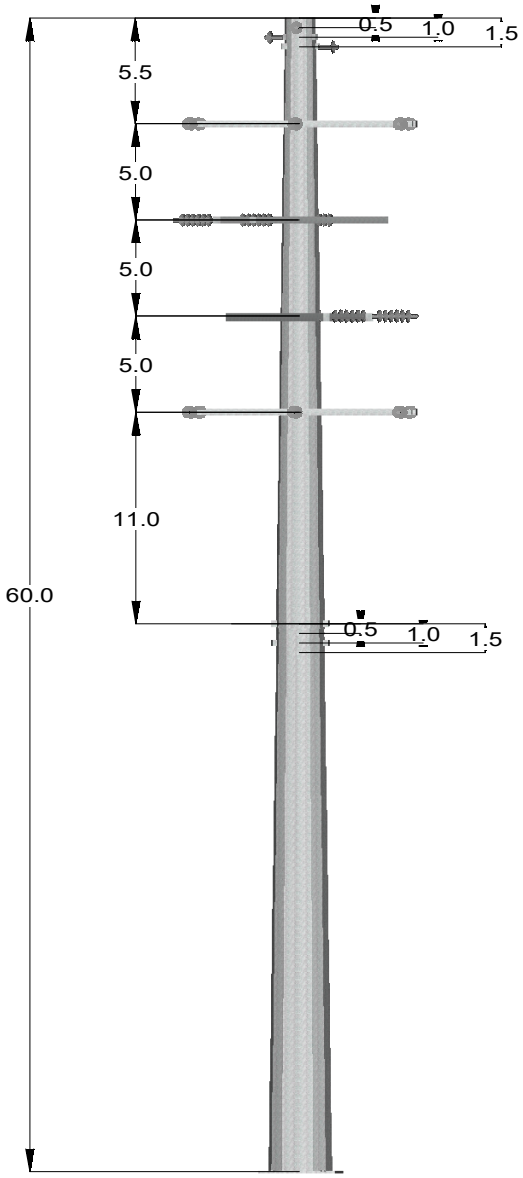
Stainless Steel Grounding Nuts Required For This Structure

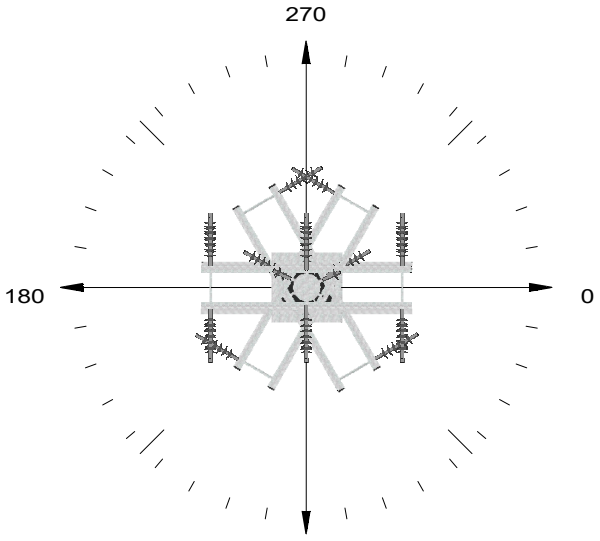
G1	0' - 6"	0° & 180°	1/2" x 13TPI	OH NEUTRAL
G2	2' - 0"	0° & 180°	1/2" x 13TPI	OH NEUTRAL
G3	6' - 0"	0° & 180°	1/2" x 13TPI	DL ARM
G4	11' - 0"	120° & 300°	1/2" x 13TPI	DL ARM
G5	16' - 0"	60° & 240°	1/2" x 13TPI	DL ARM
G6	21' - 0"	0° & 180°	1/2" x 13TPI	DL ARM
G7	1' - 6" AGL	0° & 180°	1/2" x 13TPI	POLE GROUND

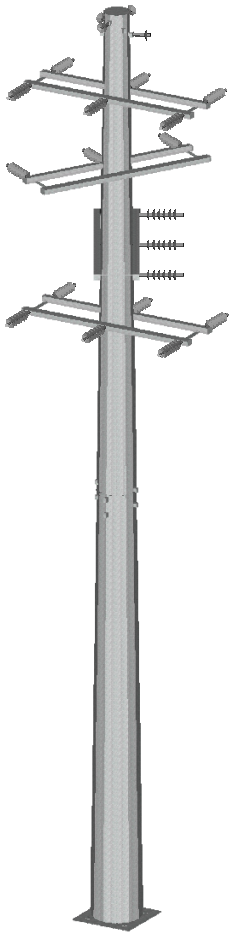
POLE SUMMARY:

Embedment	Height/Class	Quantity	Structure #
Foundation	60' - ENGR	1	3

Rev 0
8/6/2018







Framing

Jackson St @ Horseshoe Drive
Distribution Line Relocation
Framing Detail FD-01

City of Alexandria

BHA , INC.
BATON ROUGE, LOUISIANA

SCALE :	DATE :	PROJECT NO. :	
1"=10`	8/6/2018	2019H15A	
DRAWN :	APPROVED :	DRAWING NO. :	REV. :
DLM	WBS	POLE 3 DC-CS8, 2)CS7	0

LT-01 - Pole #3 Loading Tree

Load Case	Joint Label	Vertical Load (lbs)	Transverse Load (lbs)	Longitudinal Load (lbs)	Transverse Wind (psf)	Longitudinal Wind (psf)
RULE 250B GRADE B NA+,I NA+	sd1	295	233	3786	22	0
	sd2	244	176	-3796	22	0
	sd3	320	3299	-1864	22	0
	sd4	470	-3197	-1953	22	0
	pa1	521	286	5443	22	0
	pb1	521	286	5443	22	0
	pc1	520	286	5443	22	0
	pa2	383	244	-5451	22	0
	pb2	384	215	-5452	22	0
	pc2	384	186	-5453	22	0
	d1-pa2	524	-4622	-2839	22	0
	d1-pb2	515	-4633	-2822	22	0
	d1-pc2	506	-4644	-2806	22	0
	d2-pa2	253	4830	-2576	22	0
	d2-pb2	252	4865	-2509	22	0
	d2-pc2	252	4833	-2570	22	0
	d3-pa1	405	285	5453	22	0
	d3-pb1	405	285	5453	22	0
	d3-pc1	405	285	5453	22	0
	d3-pa2	193	243	-5460	22	0
	d3-pb2	192	214	-5461	22	0
	d3-pc2	192	185	-5462	22	0
	cm1a	84	1522	-981	22	0
	cm2a	84	1522	-981	22	0
	cm1b	44	-1037	-711	22	0
	cm2b	44	-1037	-711	22	0
	v1a-cm1a	97	260	2005	22	0
	v2a-cm2a	97	260	2005	22	0
	v1b-cm1b	68	205	-1844	22	0
	v2b-cm2b	68	205	-1844	22	0
RULE 250B GRADE B NA-,I NA-	sd1	295	-285	3783	-22	-0
	sd2	244	-231	-3793	-22	-0
	sd3	320	3499	-1445	-22	-0
	sd4	470	-3274	-1830	-22	-0
	pa1	521	-360	5438	-22	-0
	pb1	521	-361	5438	-22	-0
	pc1	520	-361	5438	-22	-0
	pa2	383	-268	-5450	-22	-0
	pb2	384	-296	-5449	-22	-0
	pc2	384	-323	-5447	-22	-0
	d1-pa2	524	-4730	-2694	-22	-0
	d1-pb2	515	-4743	-2673	-22	-0
	d1-pc2	506	-4755	-2653	-22	-0
	d2-pa2	253	5048	-2064	-22	-0
	d2-pb2	252	5076	-1995	-22	-0
	d2-pc2	252	5049	-2060	-22	-0
	d3-pa1	405	-360	5449	-22	-0
	d3-pb1	405	-360	5449	-22	-0
	d3-pc1	405	-360	5449	-22	-0
	d3-pa2	193	-268	-5459	-22	-0
	d3-pb2	192	-295	-5458	-22	-0
	d3-pc2	192	-323	-5456	-22	-0
	cm1a	84	1727	-543	-22	-0
	cm2a	84	1727	-542	-22	-0
	cm1b	44	-1113	-585	-22	-0
	cm2b	44	-1113	-585	-22	-0
	v1a-cm1a	97	-276	2003	-22	-0
	v2a-cm2a	97	-276	2003	-22	-0
	v1b-cm1b	68	-215	-1843	-22	-0
	v2b-cm2b	68	-214	-1843	-22	-0
RULE 250C GRADE B NA+,I NA+	sd1	210	203	2579	41	0
	sd2	177	160	-2593	41	0
	sd3	235	2194	-1285	41	0
	sd4	408	-2165	-1345	41	0
	pa1	374	295	3661	41	0
	pb1	374	296	3661	41	0
	pc1	374	296	3661	41	0
	pa2	271	257	-3694	41	0
	pb2	272	237	-3695	41	0
	pc2	272	217	-3696	41	0
	d1-pa2	424	-3076	-1935	41	0

	d1-pb2	416	-3083	-1924	41	0
	d1-pc2	408	-3090	-1914	41	0
	d2-pa2	150	3202	-1792	41	0
	d2-pb2	150	3226	-1748	41	0
	d2-pc2	150	3204	-1788	41	0
	d3-pa1	271	281	3584	41	0
	d3-pb1	271	281	3584	41	0
	d3-pc1	271	281	3584	41	0
	d3-pa2	106	246	-3629	41	0
	d3-pb2	106	227	-3630	41	0
	d3-pc2	106	207	-3631	41	0
	cm1a	32	1142	-755	41	0
	cm2a	32	1142	-755	41	0
	cm1b	26	-707	-502	41	0
	cm2b	26	-707	-502	41	0
	v1a-cm1a	40	211	1522	41	0
	v2a-cm2a	40	211	1522	41	0
	v1b-cm1b	23	170	-1395	41	0
	v2b-cm2b	23	170	-1395	41	0
RULE 250C GRADE B NA-,I NA-	sd1	210	-239	2576	-41	-0
	sd2	177	-198	-2591	-41	-0
	sd3	235	2357	-931	-41	-0
	sd4	408	-2241	-1231	-41	-0
	pa1	374	-346	3657	-41	-0
	pb1	374	-346	3657	-41	-0
	pc1	374	-346	3657	-41	-0
	pa2	271	-273	-3693	-41	-0
	pb2	272	-291	-3692	-41	-0
	pc2	272	-310	-3690	-41	-0
	d1-pa2	424	-3209	-1784	-41	-0
	d1-pb2	416	-3218	-1769	-41	-0
	d1-pc2	408	-3227	-1755	-41	-0
	d2-pa2	150	3388	-1303	-41	-0
	d2-pb2	150	3405	-1257	-41	-0
	d2-pc2	150	3389	-1301	-41	-0
	d3-pa1	271	-330	3580	-41	-0
	d3-pb1	271	-331	3580	-41	-0
	d3-pc1	271	-331	3580	-41	-0
	d3-pa2	106	-262	-3628	-41	-0
	d3-pb2	106	-281	-3627	-41	-0
	d3-pc2	106	-299	-3625	-41	-0
	cm1a	32	1310	-395	-41	-0
	cm2a	32	1310	-395	-41	-0
	cm1b	26	-774	-390	-41	-0
	cm2b	26	-774	-390	-41	-0
	v1a-cm1a	40	-224	1520	-41	-0
	v2a-cm2a	40	-224	1520	-41	-0
	v1b-cm1b	23	-178	-1394	-41	-0
	v2b-cm2b	23	-178	-1394	-41	-0
No Wind,L NA+	sd1	89	-5	680	0	0
	sd2	77	-5	-736	0	0
	sd3	93	610	-297	0	0
	sd4	122	-583	-341	0	0
	pa1	184	-8	1142	0	0
	pb1	184	-8	1142	0	0
	pc1	184	-8	1142	0	0
	pa2	143	-3	-1140	0	0
	pb2	143	-8	-1140	0	0
	pc2	143	-14	-1140	0	0
	d1-pa2	172	-983	-582	0	0
	d1-pb2	170	-986	-578	0	0
	d1-pc2	168	-988	-574	0	0
	d2-pa2	111	1043	-490	0	0
	d2-pb2	111	1049	-475	0	0
	d2-pc2	110	1043	-489	0	0
	d3-pa1	154	-8	1160	0	0
	d3-pb1	154	-8	1160	0	0
	d3-pc1	154	-8	1160	0	0
	d3-pa2	92	-3	-1155	0	0
	d3-pb2	92	-9	-1155	0	0
	d3-pc2	92	-15	-1155	0	0
	cm1a	20	452	-212	0	0
	cm2a	20	452	-212	0	0
	cm1b	17	-452	-272	0	0
	cm2b	17	-452	-272	0	0
	v1a-cm1a	23	-2	494	0	0
	v2a-cm2a	23	-2	494	0	0
	v1b-cm1b	16	-1	-498	0	0
	v2b-cm2b	16	-1	-498	0	0

Pole Drilling Guide

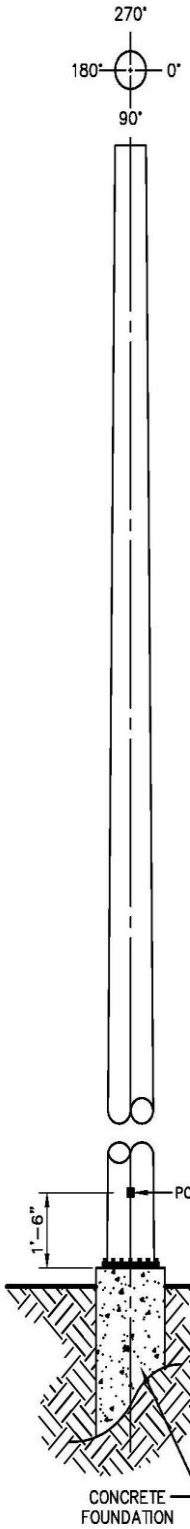
DRILLING GUIDE - DG02 **C8L**

14° LT

Jackson Street @ Horseshoe Drive Roundabout

City of Alexandria

BHA Project: 2019H15A



HOLES Required For This Structure

No.	Distance From Top Of Pole	Rotation/ Orientation	Size of Hole	Function
H1	0' - 7"	90° - 270°	13 / 16"	CROSSARM DDE
H2	1' - 5"	90° - 270°	13 / 16"	CROSSARM DDE

Vangs Required For This Structure

V1	8' - 6"	90° - 270°	VANG	NEUTRAL DE
V2	16' - 0"	90° - 270°	VANG	COMM
V3	17' - 0"	90° - 270°	VANG	COMM

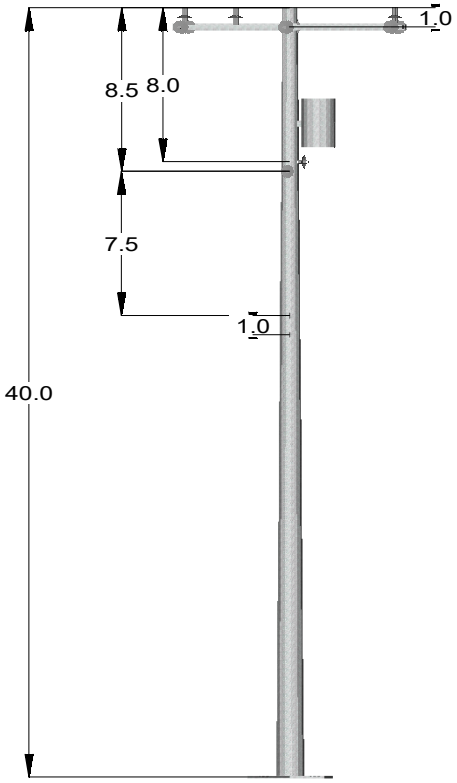
Stainless Steel Grounding Nuts Required For This Structure

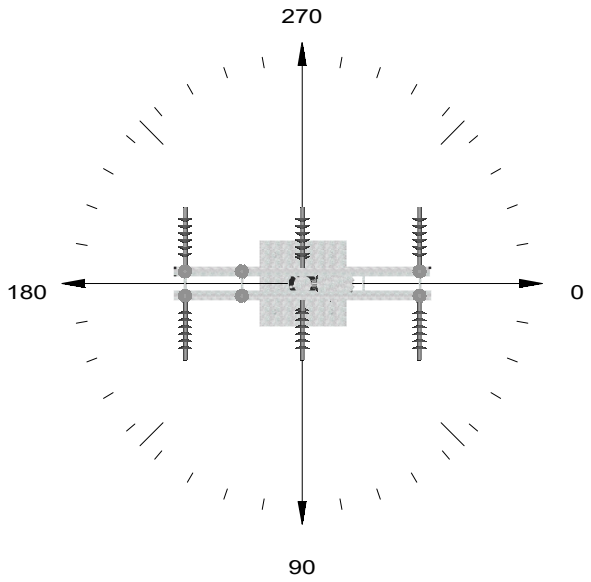
G1	2' - 6"	0° & 180°	1/2" x 13TPI	DL ARM
G2	9' - 6"	120° & 300°	1/2" x 13TPI	DL ARM
G3	1' - 6" AGL	0° & 180°	1/2" x 13TPI	POLE GROUND

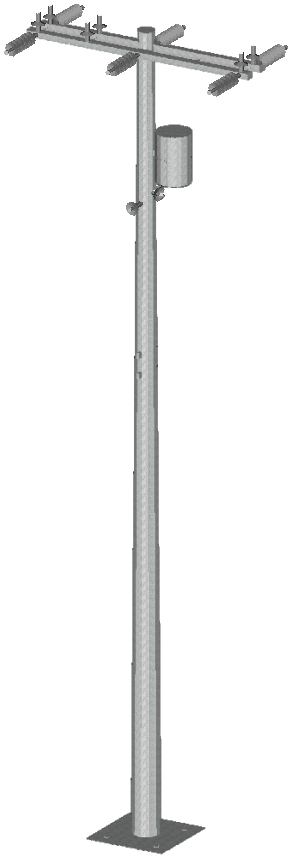
POLE SUMMARY:

Embedment	Height/Class	Quantity	Structure #
Foundation	40' - ENGR	1	3-2R

Rev 0
8/6/2018







Framing

Jackson St @ Horseshoe Drive
Distribution Line Relocation
Framing Detail FD-02

City of Alexandria

BHA , INC.
BATON ROUGE, LOUISIANA

SCALE :	DATE :	PROJECT NO. :	
1"=10`	8/6/2018	2019H15A	
DRAWN :	APPROVED :	DRAWING NO. :	REV. :
DLM	WBS	POLE 3-2R C8L	0

LT-02 - Pole #3-2R **Loading Tree**

Load Case	Joint Label	Vertical Load (lbs)	Transverse Load (lbs)	Longitudinal Load (lbs)	Transverse Wind (psf)	Longitudinal Wind (psf)
RULE 250B GRADE B NA+,I NA+	sw1	50	-229	3587	22	0
	sw2	-185	-187	-3775	22	0
	dla	0	0	0	22	0
	dlb	0	0	0	22	0
	dlc	0	0	0	22	0
	pa1	194	-357	5450	22	0
	pb1	194	-390	5448	22	0
	pc1	195	-422	5446	22	0
	F2-dla	0	0	0	22	0
	F2-dln	0	0	0	22	0
	F2-dlc	0	0	0	22	0
	pa2	-3	-436	-5439	22	0
	pb2	-2	-561	-5427	22	0
	pc2	-1	-425	-5440	22	0
	SD1	159	846	660	22	0
	SD	158	1100	33	22	0
	cm1b	79	-90	-157	22	0
	cm2b	79	-90	-157	22	0
	CM1	0	0	0	22	0
	CM2	0	0	0	22	0
	cm1a	0	0	0	22	0
	cm2a	0	0	0	22	0
RULE 250B GRADE B NA-,I NA-	sw1	50	-550	3552	-22	-0
	sw2	-185	-448	-3753	-22	-0
	dla	0	0	0	-22	-0
	dlb	0	0	0	-22	-0
	dlc	0	0	0	-22	-0
	pa1	194	-762	5411	-22	-0
	pb1	194	-795	5406	-22	-0
	pc1	195	-829	5401	-22	-0
	F2-dla	0	0	0	-22	-0
	F2-dln	0	0	0	-22	-0
	F2-dlc	0	0	0	-22	-0
	pa2	-3	-766	-5405	-22	-0
	pb2	-2	-892	-5386	-22	-0
	pc2	-1	-758	-5406	-22	-0
	SD1	159	984	416	-22	-0
	SD	158	1040	-345	-22	-0
	cm1b	79	-690	-164	-22	-0
	cm2b	79	-690	-164	-22	-0
	CM1	0	0	0	-22	-0
	CM2	0	0	0	-22	-0
	cm1a	0	0	0	-22	-0
	cm2a	0	0	0	-22	-0
RULE 250C GRADE B NA+,I NA+	sw1	13	-102	2163	41	0
	sw2	-192	-100	-2529	41	0
	dla	0	0	0	41	0
	dlb	0	0	0	41	0
	dlc	0	0	0	41	0
	pa1	118	-165	3615	41	0
	pb1	118	-186	3613	41	0
	pc1	118	-208	3612	41	0
	F2-dla	0	0	0	41	0
	F2-dln	0	0	0	41	0
	F2-dlc	0	0	0	41	0
	pa2	-42	-227	-3633	41	0
	pb2	-41	-310	-3627	41	0
	pc2	-41	-219	-3634	41	0
	SD1	140	813	648	41	0
	SD	125	1113	38	41	0
	cm1b	14	-37	-131	41	0
	cm2b	14	-38	-131	41	0
	CM1	0	0	0	41	0
	CM2	0	0	0	41	0
	cm1a	0	0	0	41	0
	cm2a	0	0	0	41	0
RULE 250C GRADE B NA-,I NA-	sw1	13	-367	2135	-41	-0
	sw2	-192	-325	-2510	-41	-0
	dla	0	0	0	-41	-0
	dlb	0	0	0	-41	-0
	dlc	0	0	0	-41	-0

	pa1	118	-576	3577	-41	-0
	pb1	118	-599	3573	-41	-0
	pc1	118	-621	3569	-41	-0
	F2-dla	0	0	0	-41	-0
	F2-dln	0	0	0	-41	-0
	F2-dlc	0	0	0	-41	-0
	pa2	-42	-575	-3600	-41	-0
	pb2	-41	-658	-3586	-41	-0
	pc2	-41	-569	-3600	-41	-0
	SD1	140	955	392	-41	-0
	SD	125	1048	-352	-41	-0
	cm1b	14	-548	-136	-41	-0
	cm2b	14	-548	-136	-41	-0
	CM1	0	0	0	-41	-0
	CM2	0	0	0	-41	-0
	cm1a	0	0	0	-41	-0
	cm2a	0	0	0	-41	-0
No Wind,L NA+	sw1	25	-80	734	0	0
	sw2	-32	-57	-676	0	0
	dla	0	0	0	0	0
	dlb	0	0	0	0	0
	dlc	0	0	0	0	0
	pa1	90	-119	1151	0	0
	pb1	90	-126	1150	0	0
	pc1	90	-133	1149	0	0
	F2-dla	0	0	0	0	0
	F2-dln	0	0	0	0	0
	F2-dlc	0	0	0	0	0
	pa2	35	-127	-1145	0	0
	pb2	35	-153	-1142	0	0
	pc2	35	-125	-1145	0	0
	SD1	42	137	80	0	0
	SD	45	161	-23	0	0
	cm1b	17	-114	6	0	0
	cm2b	17	-114	6	0	0
	CM1	0	0	0	0	0
	CM2	0	0	0	0	0
	cm1a	0	0	0	0	0
	cm2a	0	0	0	0	0

Pole Drilling Guide

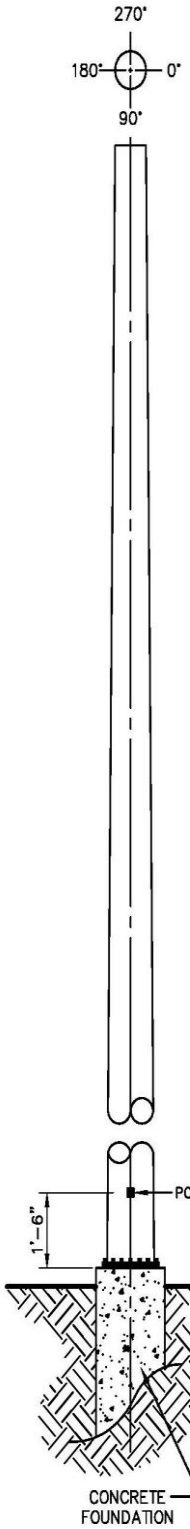
DRILLING GUIDE - DG03 **CS8L**

37° LT

Jackson Street @ Horseshoe Drive Roundabout

City of Alexandria

BHA Project: 2019H15A



HOLES Required For This Structure

No.	Distance From Top Of Pole	Rotation/ Orientation	Size of Hole	Function
H1	5' - 7"	90° - 270°	13 / 16"	CROSSARM DDE
H2	6' - 5"	90° - 270°	13 / 16"	CROSSARM DDE

Vangs Required For This Structure

V1	1' - 0"	90° - 270°	VANG	NEUTRAL DE
V2	22' - 0"	90° - 270°	VANG	COMM
V3	23' - 0"	90° - 270°	VANG	COMM

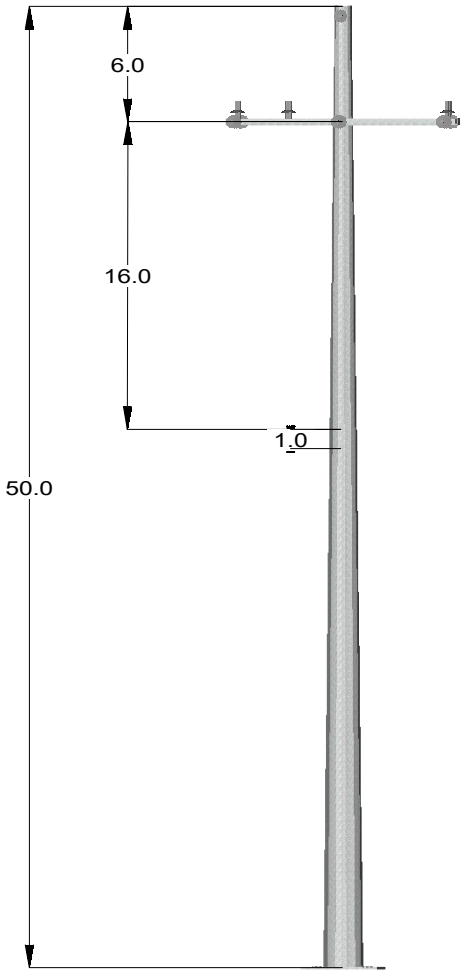
Stainless Steel Grounding Nuts Required For This Structure

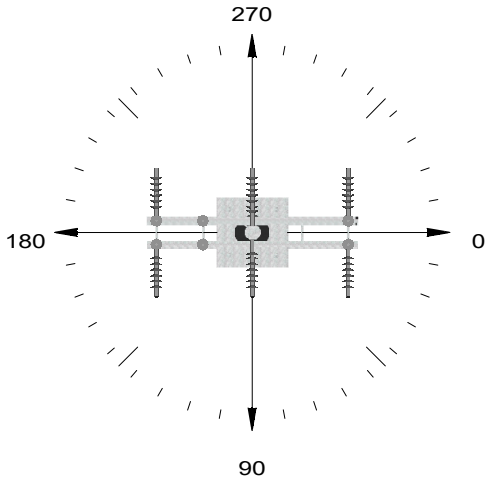
G1	1' - 6"	0° & 180°	1/2" x 13TPI	NEUTRAL
G2	6' - 6"	0° & 180°	1/2" x 13TPI	DL ARM
G3	1' - 6" AGL	0° & 180°	1/2" x 13TPI	POLE GROUND

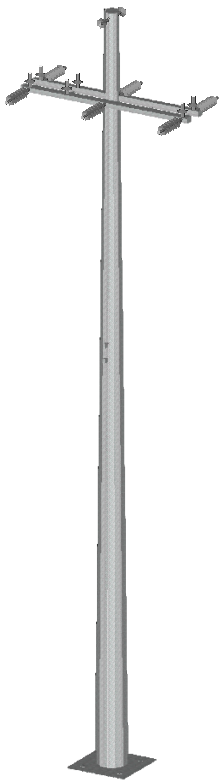
POLE SUMMARY:

Embedment	Height/Class	Quantity	Structure #
Foundation	50' - ENGR	1	3-1L

Rev 0
8/6/2018







Framing

Jackson St @ Horseshoe Drive
Distribution Line Relocation
Framing Detail FD-03

City of Alexandria

BHA , INC.
BATON ROUGE, LOUISIANA

SCALE :	DATE :	PROJECT NO. :	
1"=10`	8/2/2018	2019H15A	
DRAWN :	APPROVED :	DRAWING NO. :	REV. :
DLM	WBS	POLE 3-1L CS8L	0

LT-03 - Pole #3-1L **Loading Tree**

Load Case	Joint Label	Vertical Load (lbs)	Transverse Load (lbs)	Longitudinal Load (lbs)	Transverse Wind (psf)	Longitudinal Wind (psf)
RULE 250B GRADE B NA+,I NA+	sw1	-384	-1113	3579	22	0
	sw2	63	-1015	-3219	22	0
	dla	0	0	0	22	0
	dlb	0	0	0	22	0
	dlc	0	0	0	22	0
	pa1	-309	-1652	5173	22	0
	pb1	-298	-1629	5181	22	0
	pc1	-287	-1607	5189	22	0
	F2-dla	0	0	0	22	0
	F2-dln	0	0	0	22	0
	F2-dlc	0	0	0	22	0
	pa2	205	-1694	-5186	22	0
	pb2	202	-1663	-5196	22	0
	pc2	200	-1634	-5205	22	0
	cm1a	-3	-343	1210	22	0
	cm2a	-3	-343	1210	22	0
	cm1b	21	-417	-1339	22	0
	cm2b	21	-417	-1339	22	0
	CM1	0	0	0	22	0
	CM2	0	0	0	22	0
RULE 250B GRADE B NA-,I NA-	sw1	-384	-1254	3534	-22	-0
	sw2	63	-1120	-3185	-22	-0
	dla	0	0	0	-22	-0
	dlb	0	0	0	-22	-0
	dlc	0	0	0	-22	-0
	pa1	-309	-1834	5119	-22	-0
	pb1	-298	-1815	5127	-22	-0
	pc1	-287	-1797	5134	-22	-0
	F2-dla	0	0	0	-22	-0
	F2-dln	0	0	0	-22	-0
	F2-dlc	0	0	0	-22	-0
	pa2	205	-1833	-5146	-22	-0
	pb2	202	-1806	-5155	-22	-0
	pc2	200	-1781	-5164	-22	-0
	cm1a	-3	-481	1162	-22	-0
	cm2a	-3	-481	1162	-22	-0
	cm1b	21	-520	-1302	-22	-0
	cm2b	21	-521	-1302	-22	-0
	CM1	0	0	0	-22	-0
	CM2	0	0	0	-22	-0
RULE 250C GRADE B NA+,I NA+	sw1	-364	-739	2443	41	0
	sw2	39	-553	-1825	41	0
	dla	0	0	0	41	0
	dlb	0	0	0	41	0
	dlc	0	0	0	41	0
	pa1	-291	-1066	3487	41	0
	pb1	-282	-1050	3492	41	0
	pc1	-273	-1035	3498	41	0
	F2-dla	0	0	0	41	0
	F2-dln	0	0	0	41	0
	F2-dlc	0	0	0	41	0
	pa2	154	-1096	-3473	41	0
	pb2	152	-1075	-3480	41	0
	pc2	149	-1054	-3487	41	0
	cm1a	-17	-222	838	41	0
	cm2a	-17	-222	838	41	0
	cm1b	9	-292	-971	41	0
	cm2b	9	-292	-971	41	0
	CM1	0	0	0	41	0
	CM2	0	0	0	41	0
RULE 250C GRADE B NA-,I NA-	sw1	-364	-873	2401	-41	-0
	sw2	39	-654	-1794	-41	-0
	dla	0	0	0	-41	-0
	dlb	0	0	0	-41	-0
	dlc	0	0	0	-41	-0
	pa1	-291	-1276	3430	-41	-0
	pb1	-282	-1264	3435	-41	-0
	pc1	-273	-1253	3440	-41	-0
	F2-dla	0	0	0	-41	-0
	F2-dln	0	0	0	-41	-0
	F2-dlc	0	0	0	-41	-0

	pa2	154	-1261	-3432	-41	-0
	pb2	152	-1244	-3438	-41	-0
	pc2	149	-1228	-3444	-41	-0
	cm1a	-17	-345	795	-41	-0
	cm2a	-17	-345	795	-41	-0
	cm1b	9	-385	-938	-41	-0
	cm2b	9	-385	-938	-41	-0
	CM1	0	0	0	-41	-0
	CM2	0	0	0	-41	-0
No Wind,L NA+	sw1	-83	-213	641	0	0
	sw2	27	-295	-883	0	0
	dla	0	0	0	0	0
	dlb	0	0	0	0	0
	dlc	0	0	0	0	0
	pa1	-51	-366	1082	0	0
	pb1	-48	-362	1083	0	0
	pc1	-45	-358	1085	0	0
	F2-dla	0	0	0	0	0
	F2-dln	0	0	0	0	0
	F2-dlc	0	0	0	0	0
	pa2	85	-372	-1089	0	0
	pb2	85	-366	-1092	0	0
	pc2	84	-360	-1093	0	0
	cm1a	-9	-173	498	0	0
	cm2a	-9	-173	498	0	0
	cm1b	6	-173	-488	0	0
	cm2b	6	-173	-488	0	0
	CM1	0	0	0	0	0
	CM2	0	0	0	0	0

Pole Drilling Guide

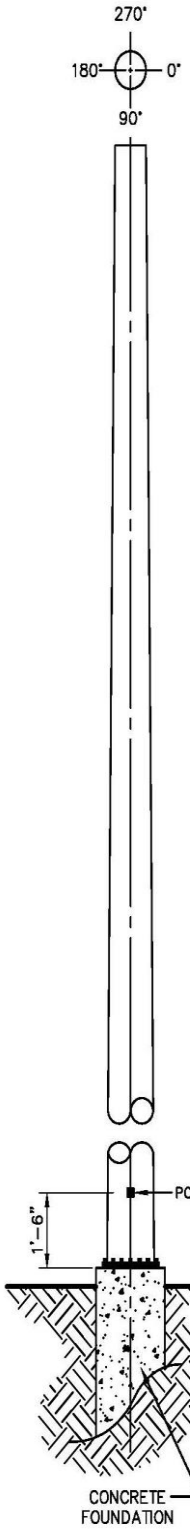
DRILLING GUIDE - DG04 VC8-1L, VA7

6° LT

Jackson Street @ Horseshoe Drive Roundabout

City of Alexandria

BHA Project: 2019H15A



HOLES Required For This Structure

No.	Distance From Top Of Pole	Rotation/ Orientation	Size of Hole	Function
H1	1' - 7"	90° - 270°	13 / 16"	CROSSARM DE
H2	2' - 5"	90° - 270°	13 / 16"	CROSSARM DE
H3	8' - 7"	90° - 270°	13 / 16"	CROSSARM DDE
H4	9' - 5"	90° - 270°	13 / 16"	CROSSARM DDE

Vangs Required For This Structure

V1	26' - 0"	90° - 270°	VANG	COMM
V2	27' - 0"	90° - 270°	VANG	COMM

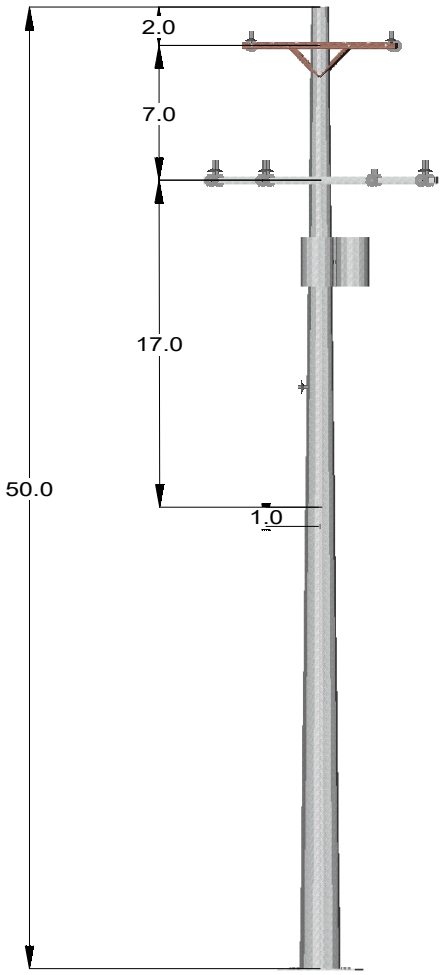
Stainless Steel Grounding Nuts Required For This Structure

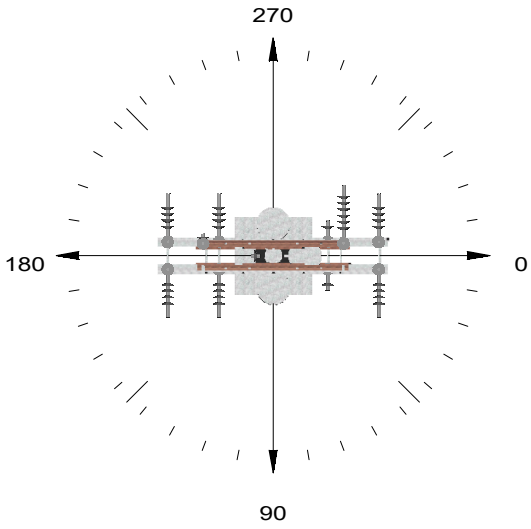
G1	2' - 6"	0° & 180°	1/2" x 13TPI	DL ARM
G2	9' - 6"	0° & 180°	1/2" x 13TPI	DL ARM
G3	1' - 6" AGL	0° & 180°	1/2" x 13TPI	POLE GROUND

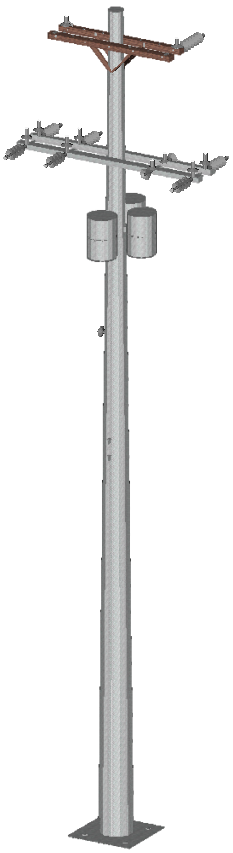
POLE SUMMARY:

Embedment	Height/Class	Quantity	Structure #
Foundation	50' - ENGR	1	3-3L

Rev 0
8/6/2018







Framing

Jackson St @ Horseshoe Drive
Distribution Line Relocation
Framing Detail FD-04

City of Alexandria

BHA , INC.
BATON ROUGE, LOUISIANA

SCALE :	DATE :	PROJECT NO. :	
1"=10`	8/6/2018	2019H15A	
DRAWN :	APPROVED :	DRAWING NO. :	REV. :
DLM	WBS	POLE 3-3L C8-1L, A7	0

LT-04 - Pole #3-3L **Loading Tree**

Load Case	Joint Label	Vertical Load (lbs)	Transverse Load (lbs)	Longitudinal Load (lbs)	Transverse Wind (psf)	Longitudinal Wind (psf)
RULE 250B GRADE B NA+,I NA+	dla	0	0	0	22	0
	dlb	0	0	0	22	0
	dlc	0	0	0	22	0
	dln	0	0	0	22	0
	F2-dla	0	0	0	22	0
	F2-dln	0	0	0	22	0
	F2-dlc	0	0	0	22	0
	F2-dlb	0	0	0	22	0
	pa1	64	-141	5459	22	0
	pb1	64	-13	5461	22	0
	pc1	65	-140	5459	22	0
	pn1	-108	-138	3370	22	0
	pa2	206	-140	-5457	22	0
	pb2	206	-146	-5456	22	0
	pc2	206	-131	-5457	22	0
	pn2	118	-60	-3659	22	0
	N	0	0	0	22	0
	I	0	0	0	22	0
	ins1	76	38	-1158	22	0
	ins3	15	29	-1158	22	0
	SD	275	-789	-207	22	0
	cm1b	42	25	-1746	22	0
	cm2b	42	25	-1746	22	0
	CM1	0	0	0	22	0
	CM2	0	0	0	22	0
	cm1a	0	40	1406	22	0
	cm2a	0	40	1406	22	0
RULE 250B GRADE B NA-,I NA-	dla	0	0	0	-22	-0
	dlb	0	0	0	-22	-0
	dlc	0	0	0	-22	-0
	dln	0	0	0	-22	-0
	F2-dla	0	0	0	-22	-0
	F2-dln	0	0	0	-22	-0
	F2-dlc	0	0	0	-22	-0
	F2-dlb	0	0	0	-22	-0
	pa1	64	-456	5443	-22	-0
	pb1	64	-329	5452	-22	-0
	pc1	65	-456	5443	-22	-0
	pn1	-108	-386	3351	-22	-0
	pa2	206	-470	-5439	-22	-0
	pb2	206	-478	-5439	-22	-0
	pc2	206	-464	-5440	-22	-0
	pn2	118	-320	-3646	-22	-0
	N	0	0	0	-22	-0
	I	0	0	0	-22	-0
	ins1	76	-164	-1149	-22	-0
	ins3	15	-155	-1149	-22	-0
	SD	275	-809	-134	-22	-0
	cm1b	42	-241	-1730	-22	-0
	cm2b	42	-241	-1730	-22	-0
	CM1	0	0	0	-22	-0
	CM2	0	0	0	-22	-0
	cm1a	0	-213	1390	-22	-0
	cm2a	0	-213	1390	-22	-0
RULE 250C GRADE B NA+,I NA+	dla	0	0	0	41	0
	dlb	0	0	0	41	0
	dlc	0	0	0	41	0
	dln	0	0	0	41	0
	F2-dla	0	0	0	41	0
	F2-dln	0	0	0	41	0
	F2-dlc	0	0	0	41	0
	F2-dlb	0	0	0	41	0
	pa1	17	-32	3641	41	0
	pb1	17	54	3641	41	0
	pc1	17	-31	3641	41	0
	pn1	-99	-38	1906	41	0
	pa2	135	-29	-3617	41	0
	pb2	135	-33	-3617	41	0
	pc2	135	-22	-3617	41	0
	pn2	74	-7	-2307	41	0
	N	0	0	0	41	0

	I	0	0	0	41	0
	ins1	43	36	-654	41	0
	ins3	-1	18	-654	41	0
	SD	208	-482	-146	41	0
	cm1b	13	33	-1315	41	0
	cm2b	13	33	-1315	41	0
	CM1	0	0	0	41	0
	CM2	0	0	0	41	0
	cm1a	-26	47	1017	41	0
	cm2a	-26	47	1017	41	0
RULE 250C GRADE B NA-,I NA-	dla	0	0	0	-41	-0
	dlb	0	0	0	-41	-0
	dlc	0	0	0	-41	-0
	dln	0	0	0	-41	-0
	F2-dla	0	0	0	-41	-0
	F2-dln	0	0	0	-41	-0
	F2-dlc	0	0	0	-41	-0
	F2-dlb	0	0	0	-41	-0
	pa1	17	-366	3625	-41	-0
	pb1	17	-281	3632	-41	-0
	pc1	17	-366	3625	-41	-0
	pn1	-99	-258	1889	-41	-0
	pa2	135	-376	-3600	-41	-0
	pb2	135	-380	-3600	-41	-0
	pc2	135	-371	-3601	-41	-0
	pn2	74	-233	-2296	-41	-0
	N	0	0	0	-41	-0
	I	0	0	0	-41	-0
	ins1	43	-107	-648	-41	-0
	ins3	-1	-90	-648	-41	-0
	SD	208	-507	-65	-41	-0
	cm1b	13	-196	-1301	-41	-0
	cm2b	13	-196	-1301	-41	-0
	CM1	0	0	0	-41	-0
	CM2	0	0	0	-41	-0
	cm1a	-26	-172	1003	-41	-0
	cm2a	-26	-172	1003	-41	-0
No Wind,L NA+	dla	0	0	0	0	0
	dlb	0	0	0	0	0
	dlc	0	0	0	0	0
	dln	0	0	0	0	0
	F2-dla	0	0	0	0	0
	F2-dln	0	0	0	0	0
	F2-dlc	0	0	0	0	0
	F2-dlb	0	0	0	0	0
	pa1	52	-63	1151	0	0
	pb1	52	-36	1152	0	0
	pc1	52	-63	1151	0	0
	pn1	-36	-72	928	0	0
	pa2	91	-65	-1155	0	0
	pb2	91	-66	-1155	0	0
	pc2	91	-63	-1155	0	0
	pn2	41	-37	-711	0	0
	N	0	0	0	0	0
	I	0	0	0	0	0
	ins1	47	-6	-119	0	0
	ins3	7	-6	-119	0	0
	SD	52	-105	-22	0	0
	cm1b	10	-31	-500	0	0
	cm2b	10	-31	-500	0	0
	CM1	0	0	0	0	0
	CM2	0	0	0	0	0
	cm1a	-10	-32	516	0	0
	cm2a	-10	-32	516	0	0

Attachment C
Application Requirements

1. Pole deflection limitations
   a. Means of achieving..... Pre-cambered, if necessary
   b. Amount of..... 9"
   c. Loading conditions for..... No-Wind Load Trees

2. Foundation type..... Cylindrical Concrete Pile, with rebar

   a. Design concrete compressive strength (psi).. 3,000 psi
   b. Maximum anticipated foundation rotation measured from the vertical axis(degrees) and maximum anticipated deflection at the groundline (inches)..... 0.5° / 1"

3. Special Charpy requirements..... None

4. Maximum diameter (flat-to-flat) at groundline (inches).....a. Tangent: _____

   b. Angle: _____

   c. Deadend: _____

5. Maximum taper (inches/foot) based on total difference between top and bottom diameters.. 9" Minimum Dia Pole Top

6. Guy wire modulus of elasticity..... _____

7. a. Surface protection desired..... Galvanized
   b. If painted, color desire..... _____

8. a. Climbing device desired..... Removeable Step Clips
   b. Quantity of removable ladders or step bolts. Sufficient for the 2 tallest poles

9. Unguyed angle poles to be raked or precambered..... Precambered, if necessary

10. Unguyed tangent deadends to be raked or precambered..... Precambered, if necessary

11. Grounding plate or nut..... Stainless Steel Nuts, welded to the pole

Attachment C (Cont'd)
Application Requirements

12. Component weight restrictions..... _____
13. Pole length restrictions..... _____
14. Delivery schedule..... _____
15. Free on board destination..... City Of Alexandria, LA

16. Structures to be tested:

Structure Type	Load Cases to be Tested
a.	
b.	
c.	

17. Miscellaneous See the following sheet.

17. **Additional Requirements**

A. All poles shall be 12-sided with a minimum top diameter of 9.0".

B. The pole tag shall include the structure number.

C. Each top section and bottom section shall have a tag indicating the pole number making it easy in the field to determine which sections go together.

D. The manufacturer shall supply a quantity of removable steps sufficient for the two tallest poles.

E. Do not install any pole step attachments within 12" above or below any through-hole.

F. All nuts welded to the pole shall be protected during the galvanizing process and re-tapped afterward to prevent or remove zinc build-up. The pole supplier shall insure that all connections fit properly in the nuts welded on the poles.

G. The pole supplier shall provide all assembly instructions necessary including proper methods of handling, subassembly and erection.

H. Show pole weights on bid sheets as galvanized (shipped) weights, and pole weights on attachment C as black weights.

I. Installed vangs must be oriented in accordance with supplied drilling guides. Vangs installed in other orientations, even though designed and fabricated to accommodate any intentional mis-alignment, are not acceptable. Installed vangs must pass through the center of the pole. On structure approval drawings, all dimensions shall be based on the same reference as the supplied drilling guides. In most cases, this reference is the top of the assembled pole. Some dimensions use the groundline as a reference. Angles shall be based on the same reference and orientation as the drilling guides and shall be indicated in **degrees**.

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Attachment E, Bid Summary-Design Information, Weights, and Costs (to be completed by the manufacturer and submitted with proposal)

POLE DESIGN

DESCRIPTION		STRUCTURE HEIGHT									
DIAMETER TAPER (IN/FT), 1ST SECT.											
DIAMETER TAPER (IN/FT), 2ND SECT.											
BOTTOM DIAMETER											
TOP DIAMETER											
CROSS SECTION TYPE											
MATERIAL THICKNESS (IN),1ST SEC											
MATERIAL THICKNESS (IN),2ND SEC											
ASTM	MATERIAL										
	GRADE										
GOVERNING LOAD CASE(S)											
MAX. MOMENT AT GROUNDLINE											
MAX. SHEAR AT GROUNDLINE											
MAX. AXIAL LOAD AT GROUNDLINE											
MAX. LOAD IN GUY											
ANCHOR BOLTS	SIZE/SPACING										
	LENGTH										
	CAGE DIAMETER										

ARM DESIGN

DESCRIPTION		ARM TYPE AND DATA									
		A	B	C	D	E	F			OHGW	
TAPER (IN/FT)											
END DIAMETER (IN)											
DIAMETER AT POLE (IN)											
CROSS SECTION TYPE											
ASTM	MATERIAL										
	GRADE										
GOVERNING LOAD CASE(S)											
MOMENT AT THE POLE (KIP-FT)											
GOVERNING LOAD CASE(S)											
MOMENT AT THE POLE (KIP-FT)											

SUMMARY

ITEMS	STRUCTURE HEIGHTS									
WEIGHT OF ARMS (TOTAL)										
WEIGHT OF POLE										
WEIGht OF ANCHOR BOLTS										
TOTAL WEIGHT PER STRUCTURE										
TOTAL COST PER STRUCTURE										
NUMBER OF STRUCTURES										
TOTAL WEIGHTS										
TOTAL COSTS										

COMMENTS

TRANSMISSION LINE STRUCTURE

ATTACHMENT E

BID SUMMARY - DESIGN, WEIGHTS, AND COSTS

(information to be supplied with proposal)

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