CONTRACT AND SPECIFICATIONS

MATERIALS FOR PROJECT EL-230
FEEDER 249 MATERIALS
FOR
CITY OF HASTINGS, NEBRASKA

Contract No. HU 2023-45

Sealed Proposals Will Be Accepted Until
5:00 PM, Thursday, May 25, 2023

Bid Submitted By: _____

HASTINGS
UTILITIES

ADVERTISEMENT FOR BIDS

The City of Hastings, Nebraska, will receive bids for the: **PROPOSAL FOR MATERIALS FOR PROJECT EL-230 FEEDER 249 MATERIALS, HU 2023-45** until 5:00 p.m. at the City of Hastings, Utilities-Hastings, Nebraska, on Thursday, May 25, 2023 at which time and place all bids will be reviewed. **Brief description of project: Supply materials for Project EL-230 Feeder 249 Materials in Hastings, NE.** If you plan on bidding and are not already on our approved bidders list for this project, you are REQUIRED to fill out the Plan Holders Submittal Form that is located on the City website: https://www.cityofhastings.org/bids/ .

The Contract Documents, including plans and specifications, are on file at the Office of the City Clerk of Hastings, 220 N Hastings Avenue, Hastings, Nebraska 68901. Copies of the plans and specifications in electronic (PDF) format may be obtained by visiting the City of Hastings Website: www.cityofhastings.org/bids. A paper copy is available for $75.00, plus sales tax ($5.25), plus shipping.

No bid shall be withdrawn after opening of bids without the consent of the City of Hastings, Nebraska, for a period of sixty (60) days after scheduled time of closing bids.

Time is of the essence in this contract. In evaluating bid(s) received, the City will consider the timelines of completion of prior construction contracts, existing workload of bidders and available manpower that bidder commits to the project.

DATED AT HASTINGS, NEBRASKA, this 4th day of May, 2023.

_____

Kimberly S Jacobitz, City Clerk

For City Clerk: Publish and Attach two (2) Proofs of Publication
May 9, 2023
May 16, 2023

INSTRUCTIONS TO BIDDERS

All proposal information, including any unit price fill in sheets or other required information, shall be submitted on the proposal forms hereto attached. Copies of addenda, if any, shall be signed and attached to the proposal. City of Hastings does NOT accept faxed or emailed bid returns.

Bidders shall inform themselves of all relevant matters, and, if awarded the contract, shall not be allowed any extra compensation by reason of any matter or thing concerning which such Bidder might not have fully informed himself, prior to the bidding.

The Bidder bidding on the Specifications herein, who has exceptions to those called for in the Specifications, must so state in the space provided on the Proposal fill in sheets and/or attach a letter explaining in detail the exceptions taken to those required in the Specifications. This letter of explanation shall become a part of the bid and shall be attached hereto. **Failure by the Bidder to outline his exceptions will require the successful Bidder to comply with these Specifications.**

The Purchaser will not assume obligations resulting from losses or damages until acceptance of the equipment.

If any person contemplating submitting a bid for this contract is in doubt as to the true meaning of any part of the Specifications or other proposed contract documents, he may submit to Purchaser a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addendum duly issued or delivered to each person receiving a set of such documents. The Purchaser will not be responsible for any other explanation or interpretation of the proposed documents.

All addendums must be signed and attached to bid documents or proposal will not be accepted.

MATERIALS FOR PROJECT EL-230
FEEDER 249 MATERIALS
Contract No. HU 2023-45

IF YOU HAVE QUESTIONS OR
NEED HELP ON THESE SPECIFICATIONS
PLEASE CONTACT ANY OF THE FOLLOWING:

General Questions

Tyler Waite
Engineering Dept
Ph# 402-462-3654
Cell# 402-831-1393
Email: bidquestions@cityofhastings.org

Kyle Patten
Storekeeper
Ph# 402-462-3649
Email: bidquestions@cityofhastings.org

Renae Griess
Engineering Admin Assistant
Ph# 402-462-3665
Email: bidquestions@cityofhastings.org

HASTINGS
UTILITIES

IMPORTANT MAILING (OR HAND DELIVERY) INSTRUCTIONS

Please address your return envelope as shown in the example below. All bids must be sealed in a properly marked envelope.

To hand deliver please drop off between the hours of 8am – noon and 1pm – 5pm Monday-Friday.

Your Return Address

City of Hastings, Utilities
Attn: Renae Griess
1228 N Denver Ave
Hastings, NE 68901

This Information MUST BE typed or written in the lower left hand corner of return envelope
OR SIMPLY CUT OUT AND TAPE ON YOUR RETURN ENVELOPE

✂ ✂ ✂ ✂

BID DOCUMENTS ENCLOSED
ATTN: Renae Griess,
Contract No: HU 2023-45
Materials for Project EL-230 Feeder 249 Materials
Bid Received until 5:00 pm on Thursday, May 25, 2023

If returning Fed-X or similar carrier, please enclose the bid in an "inner" envelope which is sealed. Please make sure BOTH envelopes are properly marked on the OUTSIDE OF THE ENVELOPE as shown in the example above.

One bid per envelope. Bid submittal via email is not allowed. Bids must be checked in to the City Clerk prior to 5:00 pm deadline.

MATERIALS FOR PROJECT EL-230
FEEDER 249 MATERIALS
HU 2023-45

City of Hastings, Utilities
1228 N Denver Ave
Hastings, NE 68901

Return Date on or Before: 5/25/2023 Thursday @ 5:00 PM

Bidders:

We, the undersigned, being familiar with all parts of this Proposal including specifications, Quantities, and all other pertinent data, do hereby submit our proposal to **furnish and deliver f.o.b., to Whelan Energy Center, 4520 East Highway 6, Hastings, Nebraska 68901**, the cable and materials as specified at the following prices. Wire contained on this proposal is to be standard production material in accordance with industry standards. Reels to be non returnable and shall be industry standard for conductor size being furnished for the following price, including Nebraska Sales Tax:

GRAND TOTAL FROM MATERIALS ESTIMATE SHEETS

_____

_____ $ _____
(Price In Words)

Terms: _____.

Delivery Date: _____. Delivery date will be a factor in evaluating bids.

Exceptions: ☐ No ☐ Yes (If yes, please attach separate page with exceptions)

Any modification of bid proposal will be considered non-conformance of the bid. All exceptions to the proposal shall be noted as an exception to the bid.

All proposal documents must be submitted with original signatures. **No copies will be accepted.**

MATERIALS FOR PROJECT EL-230
FEEDER 249 MATERIALS
HU 2023-45

City of Hastings reserves the right to accept or reject any or all proposals, to waive any informalities, to accept the proposal which best suits its needs, and also reserves the right to add to the above quantities or delete from the above quantities at unit prices indicated. The City's intent is to award all bid items to a single vendor. However, the City reserves the right to award items to multiple vendors if it best suits the needs of the City.

OFFICIAL NAME & ADDRESS

Firm Name	Signature
Address	Typed or Printed Name
City, State, Zip	Title
Phone No.	Date
Fax No.	Email Address

MATERIAL ESTIMATE B.I. 2.44 W/O EL-230							
Item	**Estimated Quantity**		**City Stock Number**	**Item Description**	**Exceptions Yes/No**	**Unit Price**	**New Material Subtotal**
1.	6	EA	001-02-13	1/2" x 14" Galvanized Machine Bolts -Joslyn J8714			$
2.	10	EA		1/2"x16" Galvanized Machine Bolts - Joslyn J8716			
3.	3	EA	001-03-09	5/8" x 8" Galvanized Machine Bolts -Joslyn J8808			
4.	2	EA	001-03-11	5/8" x 10" Galvanized Machine Bolts -Joslyn J8810			
5.	277	EA	001-03-12	5/8"x12" Galvanized Machine Bolts - Joslyn J8812			
6.	14	EA	001-03-13	5/8" x 14" Galvanized Machine Bolts - Joslyn J8814			
7.	26	EA	001-03-14	5/8" x 16" Galvanized Machine Bolts – Joslyn J8816			
8.	98	EA	001-04-12	¾" x 12" Galvanized Machine Bolts – Joslyn J8912			
9.	44	EA	001-04-13	¾" x 14" Galvanized Machine Bolts – Joslyn J8914			
10.	5	EA	001-06-00	5/8" x 12" Galvanized D.A. Bolts - Joslyn J8862			
11.	4	EA	001-06-05	5/8" x 22" Galvanized D.A. Bolts – Joslyn J8872			
12.	132	EA	001-06-06	5/8" x 24" Galvanized D.A. Bolts – Joslyn J8874			
13.	6	EA		¾" x 12" Galvanized D.A. Bolts – Maclean J8882			
14.	75	EA	001-22-03	5/8" x 12" Galvanized D.U. Bolts – Joslyn J2398			
15.	4	EA	002-02-02	½" x 4" Lag Bolts Joslyn J8754TP			
16.	21	EA	004-11-01	Guy Roller Joslyn J6288			
17.	1000	EA	005-01-03	2 ¼" Square Washers Joslyn J1076			
18.	79	EA	005-02-05	4" x 4" Curved Washers Joslyn J6829			
19.	22	EA	006-04-02	5/8" Galvanized Eyenuts Joslyn J1092			
20.	60	EA	006-04-04	¾" Galvanized Eyenuts Joslyn J1093			
21.	16	EA	007-03-02	½" Square Locknuts Joslyn J8582			
22.	700	EA	007-03-03	5/8" Square Locknuts Joslyn J8583			
23.	83	EA	007-03-04	¾" Square Locknuts Joslyn J8584			
24.	21	EA	008-02-03	Doubled Downguy Clamp Joslyn J7902			
25.	21	EA	008-03-07	7/16" Guy Grip Preformed GDE-1108			
26.	21	EA	008-04-07	7/16" Guy Strandvise Reliable 5253.6			
27.	21	EA	011-05-36	30,000# Fiberglass Strain Insulator Aluma-Form FGS30-36CC			
28.	7	EA	012-01-11	TS-1 Stirrup Hendrix TS-1			
29.	2	EA	012-01-14	BA3-15 Spacer Angle Brackets Hendrix BA3-15			
30.	6	EA	012-01-20	21P Double Insulator Plates Hendrix 21-P			
31.	11	EA	012-02-09	BM-24 Messenger Brackets Hendrix BM-24A			
32.	3	EA	014-02-01	Guy Plates Hughes 28262-13-13-13			
33.	21	EA	018-06-02	3/4" x 10" Twin Helix Anchor Joslyn J23739 CAB2			
				TOTAL PAGE 1			$

MATERIAL ESTIMATE B.I. 2.44 W/O EL-230							
Item	**Estimated Quantity**		**City Stock Number**	**Item Description**	**Exceptions Yes/No**	**Unit Price**	**New Material Subtotal**
34.	21	EA	018-08-11	¾" Twin Eyenut Chance 6562			$
35.	21	EA	018-11-02	1" x 7" Anchor Rod Joslyn J12255R no Eyenuts or Chance 12334P			
36.	4	EA	021-01-04	Ground Wire Moldings Hughes 2503.8 (wood)			
37.	21	EA	022-01-02	Guy Guard-Yellow Preformed PG-5718P			
38.	129	EA	022-02-01	Wildlife Guards Howard 2163			
39.	16	EA	023-03-04	Molding Staples Joslyn J143			
40.	305	EA	024-01-02	Insulator Pins Joslyn J203 or Chance 881			
41.	12	EA	024-02-01	Short-Shank Insulator Pins Joslyn J224Z			
42.	165	EA	025-06-04	Fiberglass Pole Top Pins MacLean G1MDR113AS1			
43.	80	EA		Polymer Neutral Spool Insulators Preformed IP-53-2			
44.	80	EA		556.5 TS Dove Wire Spool Ties Preformed SPL-1362-P			
45.	450	EA		15KV Vise-Top Polymer Insulators Hendrix HPI-15VTP 55-3			
46.	9	EA	039-17-02	RTL-15 Cable Spacer Bracket Hendrix RTL-15			
47.	126	EA		35KV 22" Deadend Insulators MacLean DS-35M			
48.	2220	FT	088-03-05	7/16" Guy Wire Armco Utility Grade			
49.	102	EA		Extra-Long "L" Brackets MacLean APP-1341			
50.	4	EA	178-06-13	Triple-Mount Termination Brackets Aluma-Form 51856			
51.	60	FT	178-09-06	Standoff Tee Rail Aluma-Form 4WT-120			
52.	13	EA	178-10-04	6" Standoff Brackets Aluma-Form 6-CSO			
53.	9	EA	178-10-07	9" Standoff Brackets Aluma-Form 9-CSO			
54.	48	EA	190-02-45	45' Class 2 Ductile Iron Poles McWane C2045W See attached Pole Specification			
55.	31	EA	190-02-50	50' Class 2 Ductile Iron Poles McWane C2050W See attached Pole Specification			
56.	2	EA	190-02-55	55' Class 2 Ductile Iron Poles McWane C2055W See attached Pole Specification			
57.	2	EA	190-01-65	65' Class 2 Wood Poles See attached Pole Specification			
58.	150	EA	191-01-04	8' Fiberglass Tangent Crossarms Shakespeare STZ096N1260NB or PUPI TB20000-96-04X2			
59.	1	EA	191-01-06	10' Fiberglass Tangent Crossarm Shakespeare STB120N12602NB			
60.	25	EA	191-03-04	8' Fiberglass Deadend Crossarms Shakespeare XDB096G12242			
61.	6	EA	194-21-84	3" x 84" Galvanized Guard Posts Dixie Power D-8027			
62.	54	EA	901-03-05	Ground Wire Staples Cement-Coat, 1.75" Barb Fence Staples			
63.	168	EA	919-01-00	Pole-Setting Foam Kits BMK-STAB-04GAL Polecrete Stabilizer			
				TOTAL PAGE 2			$

MATERIAL ESTIMATE

Item	Estimated Quantity		City Stock Number	Item Description	Exceptions Yes/No	Unit Price	New Material Subtotal
64.	19	EA	019-09-06	**5/8" x 10' Ground Rods Joslyn J8340 or Eritech 615800**			$
65.	19	EA	020-02-03	5/8" Ground Clamps Burndy GRC58			
66.	6	EA	042-14-23	556.5 H-Tap Compression Connectors Blackburn 1-60231-3 WR-885			
67.	12	EA	042-23-46	556.5 Two-Hole Terminal Lugs Preformed HD-0123 Gray			
68.	116	EA	044-01-04	Split-Bolt Ground Connectors Blackburn 4H3 or Burndy KS-20			
69.	40	EA	044-01-12	Two-Bolt Ground Connectors Blackburn 2B800PW or Burndy KVSU40			
70.	33	EA	046-08-01	Transformer Ground Connectors Blackburn TTC2			
71.	7	EA		1200 Amp 15KV 3PH Vertical Loadbreak Switches Inertia L11SLFR2263			
72.	3	FT		1200 Amp 15KV 3PH Horizontal Loadbreak Switches Inertia L11SLFH2263			
73.	24	EA	066-04-04	10KV Polymer Lightning Arresters Cooper UHS10050A1A1B1A			
74.	30	EA	066-04-10	10KV Riser Pole Lightning Arrestors w/ "L" Brackets Cooper URT10080A1A1B1A			
75.	455	FT	068-01-04	#4 Bare Copper Ground Wire Soft-Drawn Solid			
76.	56424	FT		TS Conductor 2nd Generation Pretensioned Encapsulated Carbon Core 556.5MCM Aluminum Conductor Dove 1400Amp Capacity (12 reels/4800ft)			
77.	75	FT	072-02-02	#2 600V THHN Copper Jumpers 19 Str SIMpull			
78.	138	FT	072-02-75	750MCM 600V THHN Copper Jumpers 61 Str SIMpull			
79.	19	EA	089-50-03	#2 Two-Hole Terminal Lugs Burndy YA2CA9			
80	96	EA	089-51-75	750MCM Two-Hole Terminal Lugs 3M 40172			
81.	468	EA	322-04-07	½" x 1 ½" Bronze Bolts Blackburn 50150BB			
82.	100	EA	322-04-09	½" x 2" Bronze Bolts Blackburn 50200BB			
83.	568	EA	370-01-06	½" Bronze Lock Washers Fastenal 75240			
84.	1136	EA	370-02-06	½" Stainless Steel Washers Fastenal 78021			
85.	568	EA	381-04-01	½" Bronze Nuts Fastenal 74967			
86.	304	EA		Chain Shackles MacLean ASH-55-BC			
87.	160	EA		Four-Bolt Terminal Lugs with Deadend Bodies for TS Dove AFL B13510-D-TS			
88.	160	EA		Four-Bolt Terminal Lugs for TS Dove Cable Burndy NAR4ZA4N			
89.	6	EA		Four-Bolt Terminal Lugs for 1000MCM Cables Burndy YA4-4-4N			
90.	2	EA		Four-Bolt Terminal Lugs for 1-500MCM Cable Burndy YAB344N			
91.	40	EA		Compression Tee Taps for TS Dove with 4-bolt Spade AFL 5324.3			
92.	280	EA		Air Flow Spoilers Preformed 5058105			
				TOTAL PAGE 3			$

Item	Estimated Quanity		City Stock Number	Item Description	Exceptions Yes/No	Unit Price	New Material Subtotal
93.	800	FT	023-07-03	Red Warning Tape Terra Tape 42-0108			$
94.	114	EA	089-15-20	Cable Positioners Aluma-Form CS-820			
95.	34	EA	098-01-02	Wire Pulling Compound Polywater			
96.	5	EA	098-03-02	PVC Cement Carlon, Rectorseal			
97.	5	EA	098-04-02	PVC Cleaner Weld-on			
98.	34	EA	099-04-05	4-Hole Cable Breakouts for 5" PVC Raychem CBR-4-4-A			
99.	240	FT	113-02-11	5" Steel Pipe Galvanized Rigid Conduit			
100.	20	FT	113-02-12	6" Steel Pipe Galvanized Rigid Conduit			
101.	2800	FT	113-06-11	5" Sch40 PVC Carlon			
102.	40	FT	113-06-12	6" Sch40 PVC Carlon			
103.	3240	FT	113-06-14	5" Sch40 PVC "Bore-Guard" Prime BG540SP-020			
104.	24	EA	114-03-11	5" Steel Elbows-90° 48"R Calconduit?			
105.	8	EA	114-04-11	5" PVC Elbows-90° 48"R Carlon UA9HPB			
106.	16	EA		5" Fiberglass Elbows-30° 48"R Champion CFBG-50C-HW-73-2D			
107.	2	EA		5" Fiberglass Elbows-45° 48"R Champion CFBG-50C-HW-83-2D			
108.	24	EA	114-11-12	5" Fiberglass Elbows-90° 48"R Champion CFBG-50C-HW-93-2D			
109.	2	EA	115-02-12	6" Pipe/Pipe Couplers (PVC) Garvin RC-500			
110.	8		115-04-45	5" PVC/PVC Couplers (PVC) Carlon E941PF			
111.	48	EA	116-18-11	5" Pipe/PVC Couplers (PVC) Carlon E942P			
112.	2	EA	116-18-14	6" Pipe/PVC Couplers (PVC) Carlon E942R			
113.	72	EA	178-11-06	5" Pipe Straps Aluma-Form STK-5			
114.	6	EA	178-11-07	6" Pipe Straps Aluma-Form STK-6			
115.	2	EA	650-20-01	Anode Test Stations Handley Industries T45			
116.	2	EA	650-25-48	48lb Packaged Magnesium Anode with Lead Wires Corrpro 54073817			
117.	12	EA	320-05-05	½" x 1 ½" Hex Cap Screws Big G 57446			
118.	12	EA	375-16-09	½" Caulking Anchors 7/8" Drill Hole			
119.	3	EA	582-00-01	Tube of Silicone Caulk 50 Year Exterior			
120.	6	EA		Terminal Insulating Boots Insulboot I-0343			
121.	6	EA	019-09-06	5/8" x 10" Ground Rods Joslyn J8340 or Eritech 615800			
122.	6	EA	020-02-03	5/8" Ground Clamps Burndy GRC58			
123.	20	EA	044-01-04	Split-Bolt Ground Connectors Blackburn 4H3 or Burndy KS-20			
124.	4	EA	044-01-12	Two-Bolt Ground Connectors Blackburn 2B800PW or Burndy KVSU40			
125.	4	EA	046-01-11	500MCM 600V Terminal Lugs Utilco USG2-500P			
				TOTAL PAGE 4			$

Item	Estimated Quanity		City Stock Number	Item Description	Exceptions Yes/No	Unit Price	New Material Subtotal
126.	8	EA	046-08-01	Transformer Ground Connectors Blackburn TTC2			$
127.	20	EA	046-10-02	250MCM 600V Terminal Lugs Utilco USG2-350P			
128.	60	FT	068-01-04	#4 Bare Copper Ground Wire Soft-Drawn Solid			
129.	6270	FT	072-02-25	250MCM 600V THHN Copper Neutral 37 Str SIMpull			
130.	600	FT	072-02-50	500MCM 600V THHN Copper Neutral 37 Str SIMpull			
131.	18810	FT	074-07-50	500MCM 15KV Shielded Copper Power Cable-EPR See attached Specifications			
132.	1800	FT		1000MCM 15KV Shielded Copper Power Cable – EPR See attached Specifications			
133.	264	EA	089-17-50	500MCM 15KV Copper Termimatics 3M 7695-S-4			
134.	12	EA	089-17-50	1000MCM 15KV Copper Termimatics 3M 7695-S-4			
135.	264	EA	089-51-50	500MCM Two-Hole Copper Terminal Lugs 3M 40166			
136.	12	EA		1000MCM Two-Hole Copper Terminal Lugs 3M 40178			
137.	3	EA		1500Amp 15KV 3Phase LF Padmount Jct Cabinet 40” x 52” x 42” See Attached Specs			
138.	20	EA	322-04-07	1/2” X 1 ½” Bronze Bolts Blackburn 50150BB			
139.	104	EA	322-04-09	½” x 2” Bronze bolts Blackburn 50200BB			
140.	124	EA	370-01-06	½” Bronze Lock Washers Fastenal 75240			
141.	248	EA	370-02-06	½” Stainless Steel Washers Fastenal 78021			
142.	124	EA	381-04-01	½” Bronze Nuts Fastenal 74967			
143.	1380	FT	072-06-12	#12 600V THHN Copper Tracer Wire (Orange)			
144.	1340	FT		2” Sch 40 PVC Orange Polyduct			
145.	6	EA	116-21-07	2” PVC Caps Carlon E958J			
146.	260	EA		556.5 MCM Armor Rods Preformed AR-0136			
				TOTAL PAGE 5			$

HASTINGS UTILITIES
15KV UNDERGROUND EPR COPPER COMPACT POWER CABLE SPECIFICATIONS
TYPE MV-105, 133% INSULATION LEVEL
FOR ITEMS #131 & 132

SCOPE: This specification covers the physical and electrical characteristics of a EPR (ethylene propylene rubber) insulated, shielded, thermoplastic, jacketed, compact power cable (133% insulation level) suitable for underground distribution at operating voltages up to 15,000 volts phase to phase on a three phase four wire system in duct fed from a grounded wye source. The cable is to be capable of continuous operation at 105 degree C inner conductor temperature, 140 degree C emergency operating temperature, and 250 degree C short circuit conditions.

STANDARDS: The following standards shall form a part of these specifications: ANSI/ICEA S-93-639, S97-682 (including revisions), ethylene propylene rubber insulated wire and cable for transmission and distribution of electrical energy; AEIC CS8-00, latest edition and Underwriters Laboratories Standard 1072 for Medium Voltage Solid Dielectric Cable.

TYPE: Okoguard - Okoseal MV-105 Shielded 15KV EPR Copper Compact Power Cable (133% insulation level) or approved equal.

CONDUCTOR: Annealed uncoated copper, 4/0, 500, 750 or 1000 MCM (as specified on proposal sheet) compact stranded per ASTM B-496.

CONDUCTOR SHIELD: An extruded semi-conducting layer over the conductor meeting the requirement of ANSI/ICEA S-93-639, S-97-682, Standard and UL 1072, or latest revision.

INSULATION: The insulation shall be EPR (ethylene propylene rubber) meeting the requirements of the referenced standards. The average thickness shall be 0.220" for 133% insulation level.

INSULATION SHIELD: The insulation shall be covered with an extruded layer of semi-conducting thermosetting material. Over this layer shall be a helically applied, lapped, 5 mil bare copper tape.

JACKET: The cable shall be provided with a jacket of black PVC conforming to the requirements specified for polyvinyl chloride jackets in ANSI/ICEA S-93-639 and UL 1072, or latest revision.

IDENTIFICATION: Cable shall be identified by surface printing of the jacket. The legend on the jacket shall include the manufacturer's name, plant number, conductor size, copper, voltage, 133% insulation level, type MV-105, and with sequential footage markings.

TESTS: Tests shall be conducted in accordance with the latest requirements of ANSI/ICEA S-93-639 S-97-682 and Underwriters Laboratories Standard 1072 for Medium Voltage Solid Dielectric Cable (MV-105) and AEIC CS8-00.

GUARANTEE: Power cable to be guaranteed for forty (40) years.

FLAME TEST: Must pass vertical tray requirements of UL 1072 and IEEE 383, or latest revision.

HASTINGS UTILITIES
15KV UNDERGROUND EPR COPPER COMPACT POWER CABLE SPECIFICATIONS
TYPE MV-105, 133% INSULATION LEVEL
FOR ITEMS #131 & 132

TEST REPORTS: Certified test reports shall be provided for all cables provided under this specification. Send to City of Hastings Engineering Office, 1228 North Denver, Hastings, Nebraska 68902-0289 within ten days after scheduled shipment of any cable to be furnished under these specifications.

REELS: Cable shall be furnished in one continuous length as stated on proposal sheet on non-returnable reel. The cable length may not be less than that shown on proposal sheet. Overrun of reel quantity is acceptable up to 5%. Reels shall not exceed 68" in diameter and 50" in width. A water tight seal shall be applied to all cable ends to prevent entrance of moisture.

CABLE FITTINGS: Cable shall be designed to accommodate industry cable fittings.

MANUFACTURER: Shall be American Made.

SPECIFICATIONS FOR
PADMOUNTED 15KV LIVEFRONT 1500AMP THREE PHASE
CABLE TERMINATING CABINETS
FOR ITEM #137

DESCRIPTION:

A. GENERAL

These specifications are a guide to new standard production equipment as outlined in the Technical Specifications. The padmounted 15KV livefront 1500 Amp three-phase cable terminating cabinet shall conform to and be supplied in accordance with these specifications. The cabinet shall be constructed for connection to the utility system with two hole NEMA standard bolt on cable termination lugs.

1. **Certification of Ratings**: The manufacturer shall be completely and solely responsible for the performance of the cable terminating cabinet.

2. **Submittals**: The manufacturer shall furnish with the bid proposal a drawing showing layout dimensions, arrangements, and proposed pad dimensions.

3. **Compliance with Standards and Codes**: All equipment provided under this specification shall conform to the applicable standards of ANSI, NEMA, and IEEE and shall be in accordance with any applicable requirements of the Federal "Occupational Safety and Health Standards".

4. **Enclosure Design**: To ensure a completely coordinated design, the padmounted gear assembly shall be constructed to provide a adequate electrical clearances.

5. **Shipping:** Shipping shall be on a flat bed truck or trailer. Do not ship in an enclosed trailer.

6. **Domestic Manufacture**: All components shall be of domestic manufacture and assembled in the United States.

B. CONSTRUCTION

1. **Enclosure**: The padmounted enclosure shall be of unitized construction (not structural frame and bolted sheet) to maximize strength, minimize weight, and inhibit internal corrosion.

The basic material shall be min. 11 gauge steel sheet or 12 gauge G90 galvanized phosphatized steel.

All structural joints and butt joints shall be welded, and the external seams shall be ground flush and smooth. A welding process shall be employed that eliminates alkaline residues and minimizes distortion and spatter. The enclosure top shall be cross kinked to provide rigidity and to prevent standing water.

Front doors only shall be provided with provisions for padlocking and recessed Penta head security bolt to prevent unauthorized entry. Door holders will be required to hold the doors open in two different positions and resist accidental closing.

SPECIFICATIONS FOR
PADMOUNTED 15KV LIVEFRONT 1500AMP THREE PHASE
CABLE TERMINATING CABINETS
FOR ITEM #137

Hinges and hardware shall be tamper resistant stainless steel to meet or exceed the enclosure security requirements of ANSI C57.12.28.

Lifting provisions must be provided with blind holes on the outside of the enclosure.

2. **Paint Finish**: Paint coatings to meet or exceed enclosure coating system requirements of ANSI C57.12.28-1988 for padmounted equipment. Color: Gray.

3. **BUS:** Copper with all burrs and sharp edges removed.

4. **Insulators:** Cycloaliphatic epoxy mounted with stainless steel hardware.

5. **Barriers:** The safety barrier shall be a removable insulating barrier inside the door. The barrier shall be constructed of .25 inch clear polycarbonate (Lexan or equal) and shall completely close the door opening. A "**DANGER HIGH VOLTAGE"** warning sign shall be located inside the doors. Any hardware extending through the safety barrier shall be non-conductive and complete visual inspection of internal components shall be possible without removal of the door safety barrier.

6. **Grounding:** Ground lugs must be provided on each side of the door openings for customer supplied ground connectors.

C. LABELING

1. **Warning Signs**: All external doors shall be provided with NEMA approval **"WARNING-HAZARDOUS VOLTAGE INSIDE-KEEP OUT"** signs.

2. **Nameplate:** An aluminum nameplate shall be inside one enclosure door. The nameplate will provide Type of Equipment, Model Number, Amps Continuous, kV Maximum, Bil, Serial Number, Date Manufactured, and weight of the Equipment.

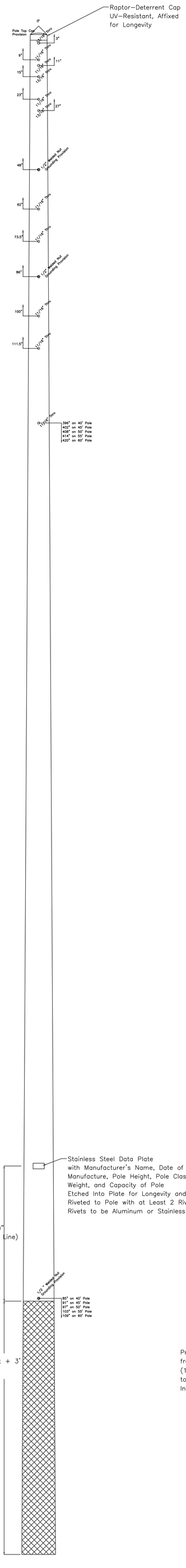
D. DIMENSIONS 40" X 52" X 42" h or bigger.

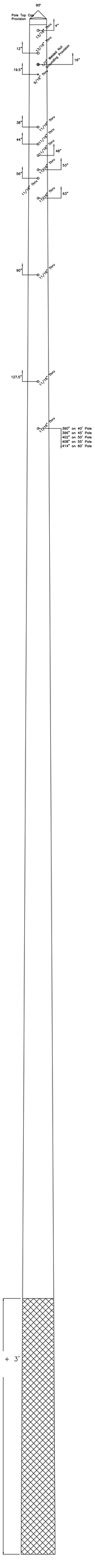
CITY OF HASTINGS Contract No. HU 2023-45
HOLE PATTERN FOR DUCTILE IRON POLES
FOR ITEMS # 54, 55, & 56

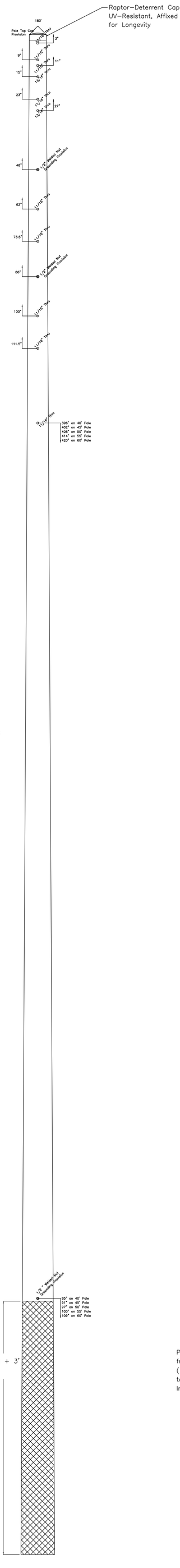
Ductile Iron Poles to be:

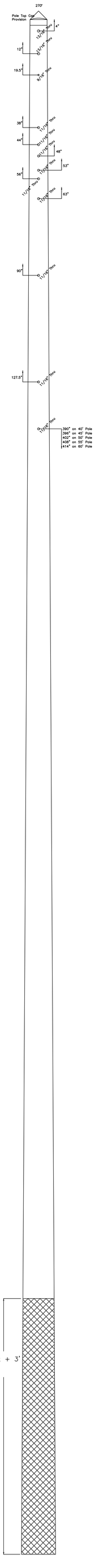
Centrifugally-cast "clean shaft" for direct-embed installation; Class 2, weathered, tapered, with UV-resistant raptor-deterring cap; entire surface of pole inside and out to be coated from 1' above ground line to bottom of pole with a minimum of 20 mils thick ceramic epoxy barrier coating; the balance point of each pole shall be marked with a permanent mark; nameplate, ground nuts, and pre-drilled holes as specified on attached detail; welded on ductile iron base plate, with provision to allow water to escape, permanently marked with pole height and class; inspected and checked for no imperfections; minimum 93% iron constitution; must meet or exceed equivalent minimums for NESC Grade B loading design; packaged, loaded, and shipped in a manner that prevents damage to the poles during shipping; Made In the U.S.A.

CITY OF HASTINGS Contract No. HU 2023-45
HOLE PATTERN FOR DUCTILE IRON POLES
FOR ITEMS # 54, 55, & 56

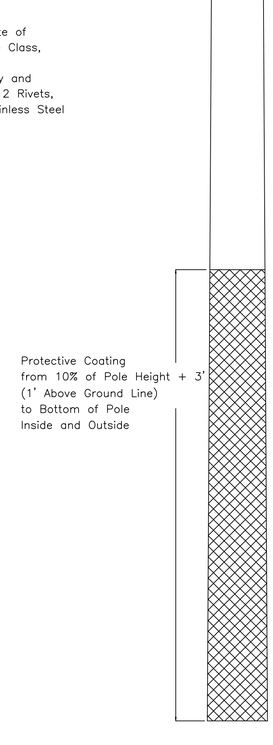


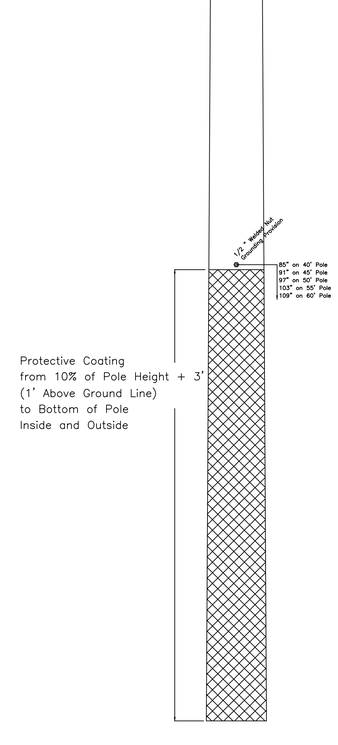


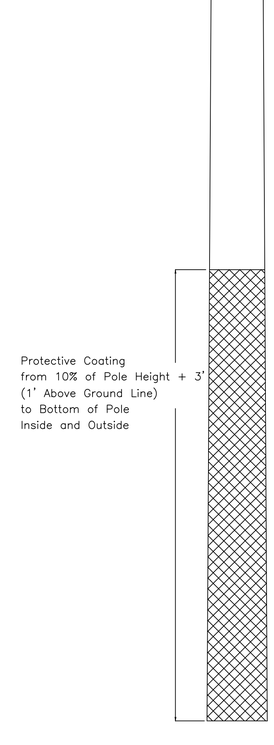




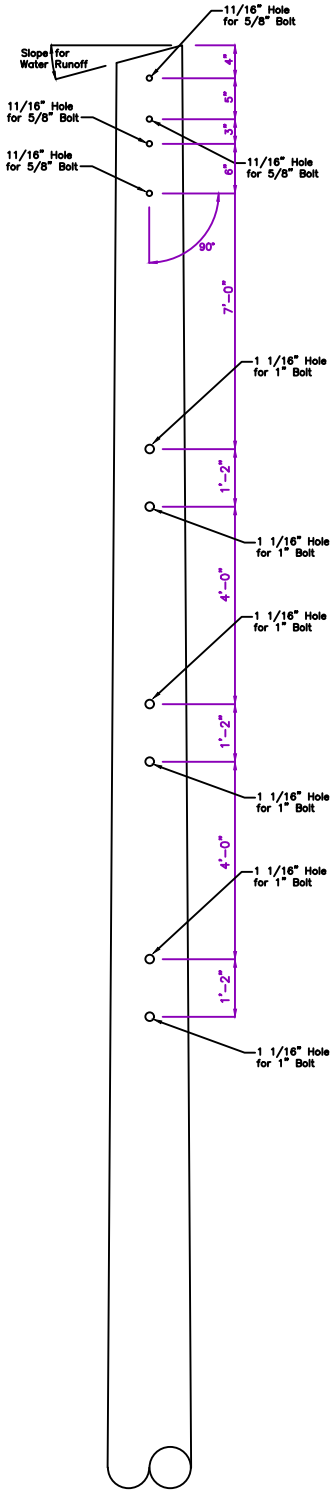
Hole Patterns
for 40', & 45' Class 2,
50', 55' & 60'
Class 1 (and 2) Steel Poles
for Hastings Utilities
10–1–07

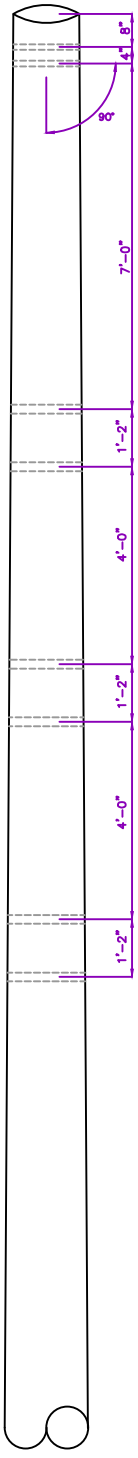






CITY OF HASTINGS Contract No. HU 2023-45
HOLE PATTERN FOR WOOD POLES
FOR ITEM # 57





HOLES

Drill 11/16" or 1 1/16" As Noted

Through Bolt Holes Must be Parallel and in the Same Plane

Neutral Bolt and Split-Bolt Holes Must be at a 90° Angle with the Other 4 Bolt Holes and Parallel, in the Same Plane with Each Other

GAINS

Gains are to be Flat, with Plane at Right Angles to Bolt Holes

ROOFS

Roofs to be 15°, One-Way, Sloped Perpendicular to Gain

TREATMENT

All Poles Treated Full Length Must be Bored, Roofed, and Gained Before Treatment