



City of Mora
Kanabec County, Minnesota
Meeting Agenda
Public Utilities Commission

Mora City Hall
101 Lake St. S
Mora, MN 55051

Monday, June 14, 2021

3:00 PM

Mora City Hall

1. **Call to Order**
2. **Roll Call**
3. **Adopt Agenda** *(No item of business shall be considered unless it appears on the agenda for the meeting. Council members may add items to the agenda prior to adoption of the agenda.)*
4. **Consent Agenda** *(Those items listed under Consent Agenda are considered to be routine by the City Council and will be acted upon by one motion under this agenda item. There will be no separate discussion of these items, unless a Council Member so requests, in which event, the item will be removed from the consent agenda and considered immediately after the adoption of the consent agenda.)*
 - a. Regular Meeting Minutes – May 17 ,2021
 - b. May 2021 Claims
 - c. Approve Hire of Water/Wastewater Operator II
 - d. Approve Hire of Administrative Services Director
5. **Open Forum** *(Individuals may address the council about any item not contained on the regular agenda. There is a maximum of fifteen (15) minutes set aside for open forum. A maximum of three (3) minutes is allotted per person. The City Council will take no official action on items discussed at the forum, with the exception of referral to staff for future report.)*
6. **Special Business**
None
7. **Public Hearings**
 - a. Proposed Assessment of Unpaid Utility Charges
8. **New Business**
 - a. Electric Distribution Pole Replacement Project – Advertisement for Bids
9. **Old Business**
 - a. Electric GIS Services Discussion
10. **Communications**
 - a. Utility Billing Monthly Report – May 2021
 - b. Utility Billing Adjustment Report – May 2021
11. **Reports**
 - a. Public Utilities General Manager
 - b. Public Works Director
 - c. Commissioner Baldwin
 - d. Commissioner Christianson
 - e. Chair Ardner
12. **Adjournment**

Pursuant to due call and notice thereof, Commissioner Ardner called to order the regular meeting of the Mora Public Utilities Commission at 3:00 PM on Monday, May 17, 2021, in the city hall council chambers.

2. **Roll Call:** Present: Commissioners Greg Ardner, Brett Baldwin, and Ryan Christianson
Absent: none
Staff Present: Utilities General Manager Lindy Crawford, Public Works Director Joe Kohlgraf, Utility Billing Clerk Jessica Bliss, City Accountant Sara King, and Deputy City Clerk Mandi Yoder
3. **Adopt Agenda:** MOTION made by Christianson, seconded by Baldwin, and unanimously carried to approve the agenda as presented.
4. **Consent Agenda:** MOTION made by Christianson, seconded by Baldwin, and unanimously carried approve the consent agenda as presented.
 - a. Regular Meeting Minutes – April 19, 2021
 - b. April 2201 Claims
 - c. Approve Hire of Water/Wastewater Operator III
 - d. Approve Hire of Administrative Services Director
5. **Open Forum:** No one spoke at open forum.
6. **Special Business:** There were no special business items to discuss.
7. **New Business:**
 - a. **Electric GIS Service Discussion:** Crawford reported after entering into the service agreement with STAR Energy Services in July 2018, staff had been working to implement the GIS mapping software and found issues with the map and user ability. Crawford expounded with a list of identified operating problems including non-compatibility with all staff computers and the utility billing software, STAR's inability to keep up with mapping updates often running two-three months behind, maps that were not web based, and STAR's only mapping capability was for electric, not water or sewer.

Crawford informed the PUC of another organization which may be less expensive with more and better operating capabilities and that STAR would need a 60-day notice of non-renewal.

The PUC consensus was to direct staff to obtain proposals and to notify STAR of the intent of Mora Municipal Utilities to discontinue services upon contract completion.
8. **Old Business:** There were no old business items to discuss.
9. **Communications:** The following communications were reviewed.
 - a. Quarterly Financial Reports: King recapped the financial reports stating all three enterprise funds were within good position. King expounded the fund balance policy was set by the city and the city did not have an investment committee internally, staff worked with Ehlers and received monthly updates. King reported banks followed the US treasury rates when issuing CD rates and since the COVID-19 pandemic, interest rates had plummeted, and it could remain that low until 2023 based on the Federal Reserve Bank.
 - b. Utility Billing Monthly Report – April 2021: Bliss reported one adjustment of a 90% tax reduction, which was billed and had been received.
 - c. Utility Billing Adjustment Report – April 2021

10. Reports:

- a. Public Utilities General Manager: Crawford reported the City Council would be meeting with the Mora Housing & Redevelopment Authority at a 5:00 pm work session tomorrow to discuss the terms and conditions of the loan from the PUC to the City Council, to the Mora HRA, and that Amanda Peterson would start as the Administrative Services Director next Monday.
- b. Public Works Director: Kohlgraf reported one of the three utility new trucks purchased had been received, the city was still waiting for the digger derek truck, and the electric transformers had begun arriving for the school project.
- c. Commissioner Baldwin: Nothing new to report.
- d. Commissioner Christianson: Christianson was curious about the status of the reed beds at the Wastewater Treatment Plant. Kohlgraf reported the reeds grew to approximately 12-18 inches high and spread out to fill in sparse areas; the final payment for the WWTP project was still withheld and CWG and Gridor would be in contact with Kohlgraf about a visit in early June.
- e. Chairperson Ardner: Nothing new to report.

11. Adjournment: MOTION made by Christianson, seconded by Baldwin, and unanimously carried to adjourn at 3:23 PM.

Chair

Secretary

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CHECK #	Search Name	Fund Descr	Dept Descr	Last Dim Descr	Comments	Amount
CHECK # 000724 COMPLETE MERCHANT SOLUTIONS						
000724	COMPLETE MERCHANT	ELECTRIC FUN	ELECTRIC ADMINIST	Payment Processing E	CREDIT CARD PYMT PROCESSI	\$328.00
000724	COMPLETE MERCHANT	WATER FUND	WATER ADMINISTR	Payment Processing E	CREDIT CARD PYMT PROCESSI	\$164.00
000724	COMPLETE MERCHANT	SEWER FUND	SEWER ADMINISTR	Payment Processing E	CREDIT CARD PYMT PROCESSI	\$164.00
CHECK # 000724 COMPLETE MERCHANT SOLUTIONS						\$656.00
CHECK # 000725 MORA MUNICIPAL UTILITIES						
000725	MORA MUNICIPAL UTILI	ELECTRIC FUN	GENERATION & PO	Storm Water	UTILITIES	\$18.35
000725	MORA MUNICIPAL UTILI	ELECTRIC FUN	GENERATION & PO	Sewer	UTILITIES	\$36.27
000725	MORA MUNICIPAL UTILI	ELECTRIC FUN	GENERATION & PO	Water	UTILITIES	\$80.71
000725	MORA MUNICIPAL UTILI	WATER FUND	WATER SUPPLY	Storm Water	UTILITIES	\$23.12
000725	MORA MUNICIPAL UTILI	WATER FUND	WATER SUPPLY	Electricity	UTILITIES	\$865.41
000725	MORA MUNICIPAL UTILI	WATER FUND	WATER TREATMENT	Storm Water	UTILITIES	\$11.56
000725	MORA MUNICIPAL UTILI	WATER FUND	WATER TREATMENT	Electricity	UTILITIES	\$1,146.20
000725	MORA MUNICIPAL UTILI	WATER FUND	WATER DISTRIBUTI	Electricity	UTILITIES	\$40.79
000725	MORA MUNICIPAL UTILI	WATER FUND	WATER DISTRIBUTI	Storm Water	UTILITIES	\$12.91
000725	MORA MUNICIPAL UTILI	SEWER FUND	SEWER LIFT STATIO	Storm Water	UTILITIES	\$11.56
000725	MORA MUNICIPAL UTILI	SEWER FUND	SEWER LIFT STATIO	Electricity	UTILITIES	\$805.41
000725	MORA MUNICIPAL UTILI	SEWER FUND	WASTEWATER TREA	Storm Water	UTILITIES	\$23.79
000725	MORA MUNICIPAL UTILI	SEWER FUND	WASTEWATER TREA	Electricity	UTILITIES	\$3,519.07
000725	MORA MUNICIPAL UTILI	SEWER FUND	WASTEWATER TREA	Water	UTILITIES	\$123.53
CHECK # 000725 MORA MUNICIPAL UTILITIES						\$6,718.68
CHECK # 000726 ONLINE COLLECTIONS						
000726	ONLINE COLLECTIONS	ELECTRIC FUN	ELECTRIC ADMINIST	Cust UB/Collection	NEW UB CUSTOMER CREDIT C	\$54.30
CHECK # 000726 ONLINE COLLECTIONS						\$54.30
CHECK # 000728 MN DEPT OF REVENUE						
000728	MN DEPT OF REVENUE	ELECTRIC FUN		Sales Tax Payable	SALES & USE TAX PYMT-APR	\$26,816.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	GENERATION & PO	Landfill Gen Exp	SALES & USE TAX PYMT-APR	\$1.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	GENERATION & PO	Small Tools & Equipm	SALES & USE TAX PYMT-APR	\$28.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	GENERATION & PO	Repair/Maint - Bldg &	SALES & USE TAX PYMT-APR	\$11.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	GENERATION & PO	Repair/Maint - Bldg &	SALES & USE TAX PYMT-APR	\$1.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	GENERATION & PO	Garbage Removal	SALES & USE TAX PYMT-APR	\$6.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	ELECTRIC DISTRIBU	Miscellaneous	SALES & USE TAX PYMT-APR	\$1.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	ELECTRIC DISTRIBU	Maint of Substation E	SALES & USE TAX PYMT-APR	\$4.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	ELECTRIC DISTRIBU	Truck Expense	SALES & USE TAX PYMT-APR	\$6.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	ELECTRIC DISTRIBU	Maint of St. Lights & S	SALES & USE TAX PYMT-APR	\$1.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	ELECTRIC ADMINIST	Telephone	SALES & USE TAX PYMT-APR	\$12.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	ELECTRIC ADMINIST	Office Supplies	SALES & USE TAX PYMT-APR	\$2.00
000728	MN DEPT OF REVENUE	ELECTRIC FUN	ELECTRIC ADMINIST	Small Tools & Equipm	SALES & USE TAX PYMT-APR	\$91.00
000728	MN DEPT OF REVENUE	WATER FUND		Sales Tax Payable	SALES & USE TAX PYMT-APR	\$802.00
CHECK # 000728 MN DEPT OF REVENUE						\$27,782.00
CHECK # 000730 PAYLIANCE						
000730	PAYLIANCE	ELECTRIC FUN	ELECTRIC ADMINIST	Payment Processing E	E-CHECK PYMT PROCESSING F	\$36.70
000730	PAYLIANCE	WATER FUND	WATER ADMINISTR	Payment Processing E	E-CHECK PYMT PROCESSING F	\$18.35
000730	PAYLIANCE	SEWER FUND	SEWER ADMINISTR	Payment Processing E	E-CHECK PYMT PROCESSING F	\$18.35
CHECK # 000730 PAYLIANCE						\$73.40
CHECK # 000731 SMMPA						
000731	SMMPA	ELECTRIC FUN		Accounts Payable	POWER PURCHASED	\$298,819.98
CHECK # 000731 SMMPA						\$298,819.98
CHECK # 000733 NEIGHBORHOOD NATIONAL BANK						

CITY OF MORA CHECK LIST-PUC

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CHECK #	Search Name	Fund Descr	Dept Descr	Last Dim Descr	Comments	Amount
000733	NEIGHBORHOOD NATIO	ELECTRIC FUN	ELECTRIC ADMINIST	Bad Debts/NSF Check	MONTHLY RETURNED CHECK	\$10.00
000733	NEIGHBORHOOD NATIO	ELECTRIC FUN	ELECTRIC ADMINIST	Payment Processing E	MONTHLY UB ACH FILE FEE	\$30.00
000733	NEIGHBORHOOD NATIO	ELECTRIC FUN	ELECTRIC ADMINIST	Payment Processing E	MONTHLY BUSINESS ONLINE	\$10.00
CHECK # 000733 NEIGHBORHOOD NATIONAL BANK						\$50.00
CHECK # 056363 ARAMARK						
056363	ARAMARK	SEWER FUND	WASTEWATER TREA	Other Operating Suppl	RUGS	-\$88.72
CHECK # 056363 ARAMARK						-\$88.72
CHECK # 056429 CITY OF LAKE CITY						
056429	CITY OF LAKE CITY	ELECTRIC FUN		Fixed Assets	1997 DIGGER DERRICK	\$30,000.00
CHECK # 056429 CITY OF LAKE CITY						\$30,000.00
CHECK # 056442 MN MUNICIPAL UTILITIES ASSN						
056442	MN MUNICIPAL UTILITI	ELECTRIC FUN	ELECTRIC ADMINIST	Meetings, Training, &	CRAWFORD/KOHLGRAF-SUMM	\$630.00
CHECK # 056442 MN MUNICIPAL UTILITIES ASSN						\$630.00
CHECK # 056454 WINDSTREAM						
056454	WINDSTREAM	SEWER FUND	SEWER ADMINISTR	Telephone	APRIL PHONE	\$129.62
CHECK # 056454 WINDSTREAM						\$129.62
CHECK # 056457 BERGANKDV						
056457	BERGANKDV	ELECTRIC FUN	ELECTRIC ADMINIST	Auditing	2020 AUDIT	\$4,303.00
056457	BERGANKDV	WATER FUND	WATER ADMINISTR	Auditing	2020 AUDIT	\$2,151.00
056457	BERGANKDV	SEWER FUND	SEWER ADMINISTR	Auditing	2020 AUDIT	\$2,151.00
CHECK # 056457 BERGANKDV						\$8,605.00
CHECK # 056458 BERGSTADT, GARY						
056458	BERGSTADT, GARY	ELECTRIC FUN	ELECTRIC DISTRIBU	Meetings, Training, &	MEALS FOR MMUA UNDERGRO	\$159.77
CHECK # 056458 BERGSTADT, GARY						\$159.77
CHECK # 056461 FELGER, MATT						
056461	FELGER, MATT	ELECTRIC FUN	ELECTRIC DISTRIBU	Meetings, Training, &	MEALS FOR MMUA UNDERGRO	\$141.00
CHECK # 056461 FELGER, MATT						\$141.00
CHECK # 056462 HARRIS, LATANA						
056462	HARRIS, LATANA	ELECTRIC FUN		Undistributed Receipts	REFUND OVERPAYMENT-101 N	\$43.62
CHECK # 056462 HARRIS, LATANA						\$43.62
CHECK # 056463 HUMPHREY, JESSICA&HEATH JUHNKE						
056463	HUMPHREY, JESSICA&H	ELECTRIC FUN		Undistributed Receipts	REFUND DEPOSIT-552 2ND ST	\$192.24
CHECK # 056463 HUMPHREY, JESSICA&HEATH JUHNKE						\$192.24
CHECK # 056466 KINGEN, BRADLEY & JEANNETTE						
056466	KINGEN, BRADLEY & JE	ELECTRIC FUN		Undistributed Receipts	REFUND OVERPYMT-415 FAIR	\$16.84
CHECK # 056466 KINGEN, BRADLEY & JEANNETTE						\$16.84
CHECK # 056468 KUBSCH, BRIAN						
056468	KUBSCH, BRIAN	ELECTRIC FUN		Undistributed Receipts	REFUND DEPOSIT-470 BEAN A	\$316.18
CHECK # 056468 KUBSCH, BRIAN						\$316.18
CHECK # 056470 NELSON, LUELLA						
056470	NELSON, LUELLA	ELECTRIC FUN		Undistributed Receipts	REFUND OVERPYMT-550 PARK	\$101.54
CHECK # 056470 NELSON, LUELLA						\$101.54
CHECK # 056473 STEPHENS, HEATHER						
056473	STEPHENS, HEATHER	ELECTRIC FUN		Undistributed Receipts	REFUND OVERPYMT-415 CARD	\$120.00

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CHECK #	Search Name	Fund Descr	Dept Descr	Last Dim Descr	Comments	Amount
CHECK # 056473 STEPHENS, HEATHER						\$120.00
CHECK # 056474 ULSETH, JACKIE						
056474	ULSETH, JACKIE	ELECTRIC FUN		Undistributed Receipts	REFUND OVERPYMT-712 FORE	\$27.53
CHECK # 056474 ULSETH, JACKIE						\$27.53
CHECK # 056475 WARNER, CINDY						
056475	WARNER, CINDY	ELECTRIC FUN		Undistributed Receipts	REFUND DEPOSIT-407 CLARK	\$153.29
CHECK # 056475 WARNER, CINDY						\$153.29
CHECK # 056476 MOTOR VEHICLE REGISTRATION						
056476	MOTOR VEHICLE REGIS	ELECTRIC FUN	ELECTRIC DISTRIBU	Miscellaneous	DIGGER DERRICK TITLE TRAN	\$1,997.00
CHECK # 056476 MOTOR VEHICLE REGISTRATION						\$1,997.00
CHECK # 056491 KADLEC EXCAVATING						
056491	KADLEC EXCAVATING	SEWER FUND	WASTEWATER TREA	Repair/Maint - Bldg &	MOVING DEBRIS PILE	\$402.50
CHECK # 056491 KADLEC EXCAVATING						\$402.50
CHECK # 056494 MIDWAY FORD						
056494	MIDWAY FORD	ELECTRIC FUN		Fixed Assets	2021 FORD F250	\$31,176.32
CHECK # 056494 MIDWAY FORD						\$31,176.32
CHECK # 056499 R & G WALDHAM CONTRACTORS INC						
056499	R & G WALDHAM CONT	ELECTRIC FUN	ELECTRIC DISTRIBU	Maint of Underground	TRENCH/PLOW NEW LINE-JAD	\$2,660.81
CHECK # 056499 R & G WALDHAM CONTRACTORS INC						\$2,660.81
CHECK # 056502 ACE HARDWARE						
056502	ACE HARDWARE	ELECTRIC FUN	GENERATION & PO	Repair/Maint - Bldg &	GLUE/CAULK	\$20.98
056502	ACE HARDWARE	ELECTRIC FUN	GENERATION & PO	Small Tools & Equipm	CAULK GUN	\$7.99
056502	ACE HARDWARE	ELECTRIC FUN	ELECTRIC DISTRIBU	Repair/Maint - Bldg &	MOWER SPARK PLUG	\$4.59
056502	ACE HARDWARE	ELECTRIC FUN	ELECTRIC ADMINIST	Office Supplies	COMPUTER BACKUP THUMB D	\$17.99
056502	ACE HARDWARE	WATER FUND	WATER TREATMENT	Small Tools & Equipm	CHEMICAL TRMT DRILL BITS	\$8.76
056502	ACE HARDWARE	WATER FUND	WATER TREATMENT	Repair/Maint - Bldg &	CAULK & BATTERY	\$22.58
056502	ACE HARDWARE	SEWER FUND	WASTEWATER TREA	Repair/Maint - Bldg &	STATE SAMPLE SUPPLIE	\$14.17
056502	ACE HARDWARE	SEWER FUND	WASTEWATER TREA	Repair/Maint - Bldg &	GRASS SEED	\$19.95
CHECK # 056502 ACE HARDWARE						\$117.01
CHECK # 056504 ARAMARK						
056504	ARAMARK	SEWER FUND	WASTEWATER TREA	Other Operating Suppl	MAY RUGS	\$88.72
056504	ARAMARK	SEWER FUND	WASTEWATER TREA	Other Operating Suppl	APRIL RUGS	\$88.72
CHECK # 056504 ARAMARK						\$177.44
CHECK # 056505 AUTO VALUE MORA						
056505	AUTO VALUE MORA	ELECTRIC FUN	GENERATION & PO	Landfill Gen Exp	LFG GASKET MAKER	\$5.49
056505	AUTO VALUE MORA	ELECTRIC FUN	GENERATION & PO	Other Operating Suppl	HAND CLEANER	\$22.99
056505	AUTO VALUE MORA	ELECTRIC FUN	ELECTRIC DISTRIBU	Truck Expense	EMERGENCY LIGHTS	\$14.98
CHECK # 056505 AUTO VALUE MORA						\$43.46
CHECK # 056506 B & B TRANSFORMER						
056506	B & B TRANSFORMER	ELECTRIC FUN		Distribution Inventory	FEEDER UPGRADE-POLE/PADM	\$25,925.74
CHECK # 056506 B & B TRANSFORMER						\$25,925.74
CHECK # 056507 BEAUDRY PROPANE						
056507	BEAUDRY PROPANE	ELECTRIC FUN	GENERATION & PO	Landfill Gen Exp	LFG OIL	\$3,473.40
CHECK # 056507 BEAUDRY PROPANE						\$3,473.40
CHECK # 056508 CAMPBELL KNUTSON, P.A.						

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CHECK #	Search Name	Fund Descr	Dept Descr	Last Dim Descr	Comments	Amount
056508	CAMPBELL KNUTSON, P.	ELECTRIC FUN	ELECTRIC ADMINIST	Legal Services	MISC LEGAL SERVICES-BANKR	\$202.00
CHECK # 056508	CAMPBELL KNUTSON, P.A.					\$202.00
CHECK # 056509	CINTAS					
056509	CINTAS	ELECTRIC FUN	GENERATION & PO	Other Operating Suppl	MATS, MOPS	\$52.81
CHECK # 056509	CINTAS					\$52.81
CHECK # 056512	DGR ENGINEERING					
056512	DGR ENGINEERING	ELECTRIC FUN	ELECTRIC DISTRIBU	Engineering	2021 POLE REPLACEMENT PRE	\$3,404.00
056512	DGR ENGINEERING	ELECTRIC FUN	ELECTRIC DISTRIBU	Professional Services -	CARLSON/CALVARY SOLAR, XF	\$972.00
CHECK # 056512	DGR ENGINEERING					\$4,376.00
CHECK # 056513	EAST CENTRAL SOLID WASTE COMM					
056513	EAST CENTRAL SOLID	ELECTRIC FUN	GENERATION & PO	Garbage Removal	OFFICE AC UNIT DISPOSAL	\$10.00
CHECK # 056513	EAST CENTRAL SOLID WASTE COMM					\$10.00
CHECK # 056516	FERGUSON WATERWORKS					
056516	FERGUSON WATERWOR	WATER FUND		Inventory Materials/S	WATER METERS	\$1,659.84
CHECK # 056516	FERGUSON WATERWORKS					\$1,659.84
CHECK # 056517	FREEDOM MAILING SERVICES INC					
056517	FREEDOM MAILING SER	ELECTRIC FUN	ELECTRIC ADMINIST	Cust UB/Collection	BILL PROCESSING	\$455.38
056517	FREEDOM MAILING SER	WATER FUND	WATER ADMINISTR	Cust UB/Collection	BILL PROCESSING	\$227.69
056517	FREEDOM MAILING SER	SEWER FUND	SEWER ADMINISTR	Cust UB/Collection	BILL PROCESSING	\$227.69
CHECK # 056517	FREEDOM MAILING SERVICES INC					\$910.76
CHECK # 056519	GOPHER STATE ONE-CALL INC					
056519	GOPHER STATE ONE-CA	ELECTRIC FUN	ELECTRIC DISTRIBU	Professional Services -	MAY LOCATES	\$41.18
056519	GOPHER STATE ONE-CA	WATER FUND	WATER DISTRIBUTI	Professional Services -	MAY LOCATES	\$41.18
056519	GOPHER STATE ONE-CA	SEWER FUND	SEWER COLLECTION	Professional Services -	MAY LOCATES	\$41.17
CHECK # 056519	GOPHER STATE ONE-CALL INC					\$123.53
CHECK # 056520	GRAINGER, INC					
056520	GRAINGER, INC	ELECTRIC FUN		Fixed Assets	TRUCK TOOL BOX	\$853.19
CHECK # 056520	GRAINGER, INC					\$853.19
CHECK # 056522	GRANITE WATER WORKS INC					
056522	GRANITE WATER WORK	WATER FUND	WATER DISTRIBUTI	Repair/Maint - Bldg &	CURB STOP, COPPER TUBING,	\$910.56
056522	GRANITE WATER WORK	SEWER FUND	SEWER COLLECTION	Repair/Maint - Bldg &	HOSE CLAMPS, SADDLE WYES	\$79.47
CHECK # 056522	GRANITE WATER WORKS INC					\$990.03
CHECK # 056525	IRBY TOOL & SAFETY					
056525	IRBY TOOL & SAFETY	ELECTRIC FUN	ELECTRIC DISTRIBU	Small Tools & Equipm	OH DISTRIBUTION TOOLS	\$1,197.00
CHECK # 056525	IRBY TOOL & SAFETY					\$1,197.00
CHECK # 056526	JOHNSONS HARDWARE & RENTAL					
056526	JOHNSONS HARDWARE	WATER FUND	WATER DISTRIBUTI	Repair/Maint - Bldg &	CURBSTOP RPR PARTS	\$16.98
056526	JOHNSONS HARDWARE	SEWER FUND	SEWER COLLECTION	Repair/Maint - Bldg &	SEWER LINE SEALING RPR PA	\$41.47
CHECK # 056526	JOHNSONS HARDWARE & RENTAL					\$58.45
CHECK # 056527	KANABEC PUBLICATIONS, INC					
056527	KANABEC PUBLICATION	ELECTRIC FUN	ELECTRIC ADMINIST	Advertising	PH-PROPOSED ASSMT ON UNP	\$30.27
056527	KANABEC PUBLICATION	WATER FUND	WATER ADMINISTR	Advertising	PH-PROPOSED ASSMT ON UNP	\$15.14
056527	KANABEC PUBLICATION	SEWER FUND	SEWER ADMINISTR	Advertising	PH-PROPOSED ASSMT ON UNP	\$15.14
CHECK # 056527	KANABEC PUBLICATIONS, INC					\$60.55
CHECK # 056531	MINNESOTA PUMP WORKS					

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CHECK #	Search Name	Fund Descr	Dept Descr	Last Dim Descr	Comments	Amount
056531	MINNESOTA PUMP WOR	SEWER FUND	SEWER LIFT STATIO	Repair/Maint - Bldg &	2021 LIFT STATION INSPECTI	\$819.00
CHECK # 056531 MINNESOTA PUMP WORKS						\$819.00
CHECK # 056532 MN ENERGY RESOURCES CORP						
056532	MN ENERGY RESOURCE	ELECTRIC FUN	GENERATION & PO	Natural Gas - Heat	NATURAL GAS	\$416.00
056532	MN ENERGY RESOURCE	ELECTRIC FUN	GENERATION & PO	Generation Exp	NATURAL GAS	\$309.59
056532	MN ENERGY RESOURCE	WATER FUND	WATER SUPPLY	Natural Gas - Heat	NATURAL GAS	\$22.50
056532	MN ENERGY RESOURCE	WATER FUND	WATER TREATMENT	Natural Gas - Heat	NATURAL GAS	\$52.03
056532	MN ENERGY RESOURCE	SEWER FUND	WASTEWATER TREA	Natural Gas - Heat	NATURAL GAS	\$63.68
CHECK # 056532 MN ENERGY RESOURCES CORP						\$863.80
CHECK # 056534 MTI DISTRIBUTING, INC						
056534	MTI DISTRIBUTING, IN	SEWER FUND		Fixed Assets	WWTP GROUNDSMASTER MO	\$26,446.65
CHECK # 056534 MTI DISTRIBUTING, INC						\$26,446.65
CHECK # 056535 NORTHERN STATES SUPPLY						
056535	NORTHERN STATES SUP	ELECTRIC FUN	ELECTRIC DISTRIBU	Small Tools & Equipm	DISTRIBUTION TOOLS	\$67.65
CHECK # 056535 NORTHERN STATES SUPPLY						\$67.65
CHECK # 056536 OAK GALLERY & FRAME SHOP						
056536	OAK GALLERY & FRAME	ELECTRIC FUN	ELECTRIC DISTRIBU	Postage	LOCATOR SHIPPING	\$46.04
CHECK # 056536 OAK GALLERY & FRAME SHOP						\$46.04
CHECK # 056537 OFFICE DEPOT						
056537	OFFICE DEPOT	ELECTRIC FUN	ELECTRIC ADMINIST	Office Supplies	OFFICE SUPPLIES	\$21.48
056537	OFFICE DEPOT	WATER FUND	WATER ADMINISTR	Office Supplies	OFFICE SUPPLIES	\$2.64
056537	OFFICE DEPOT	SEWER FUND	SEWER ADMINISTR	Office Supplies	OFFICE SUPPLIES	\$2.64
CHECK # 056537 OFFICE DEPOT						\$26.76
CHECK # 056538 OSLIN LUMBER						
056538	OSLIN LUMBER	SEWER FUND	WASTEWATER TREA	Repair/Maint - Bldg &	WWTP GATE HINGES	\$12.00
CHECK # 056538 OSLIN LUMBER						\$12.00
CHECK # 056540 OXYGEN SERVICE CO, INC						
056540	OXYGEN SERVICE CO, I	ELECTRIC FUN	GENERATION & PO	Repair/Maint - Bldg &	CYLINDER RENTALS	\$27.28
056540	OXYGEN SERVICE CO, I	ELECTRIC FUN	GENERATION & PO	Landfill Gen Exp	CYLINDER RENTALS	\$11.69
056540	OXYGEN SERVICE CO, I	ELECTRIC FUN	ELECTRIC DISTRIBU	Maint of Substation E	CYLINDER RENTALS	\$47.52
056540	OXYGEN SERVICE CO, I	WATER FUND	WATER DISTRIBUTI	Repair/Maint - Bldg &	CYLINDER RENTALS	\$10.85
CHECK # 056540 OXYGEN SERVICE CO, INC						\$97.34
CHECK # 056542 QUALITY DISPOSAL						
056542	QUALITY DISPOSAL	ELECTRIC FUN	GENERATION & PO	Garbage Removal	GARBAGE	\$75.00
056542	QUALITY DISPOSAL	SEWER FUND	WASTEWATER TREA	Garbage Removal	GARBAGE	\$163.80
CHECK # 056542 QUALITY DISPOSAL						\$238.80
CHECK # 056544 RESCO						
056544	RESCO	ELECTRIC FUN	ELECTRIC DISTRIBU	Maint of Underground	URD ELBOW JACKET SEALS &	\$1,374.58
056544	RESCO	ELECTRIC FUN	ELECTRIC DISTRIBU	Maint of Overhead Lin	OH INSULATOR SPOOLS	\$16.03
056544	RESCO	ELECTRIC FUN	ELECTRIC DISTRIBU	Maint of Overhead Lin	OH 100A CUTOUTS	\$2,549.61
CHECK # 056544 RESCO						\$3,940.22
CHECK # 056545 RMB ENVIRONMENTAL LABS INC						
056545	RMB ENVIRONMENTAL	WATER FUND	WATER TREATMENT	Professional Services -	LAB TESTING	\$65.00
056545	RMB ENVIRONMENTAL	SEWER FUND	WASTEWATER TREA	Professional Services -	LAB TESTING	\$568.00
CHECK # 056545 RMB ENVIRONMENTAL LABS INC						\$633.00

CITY OF MORA
CHECK LIST-PUC

06/10/21 4:05 PM
Page 6

CHECK #	Search Name	Fund Descr	Dept Descr	Last Dim Descr	Comments	Amount
CHECK # 056546 SEH						
056546	SEH	WATER FUND	WATER ADMINISTR	Professional Services -	AWIA RISK & RESILIENCE ASS	\$1,315.40
CHECK # 056546 SEH						\$1,315.40
CHECK # 056548 THUL SPECIALTY CONTRACTING INC						
056548	THUL SPECIALTY CONT	SEWER FUND	SEWER COLLECTION	Repair/Maint - Bldg &	2021 MANHOLE REHAB	\$9,455.00
CHECK # 056548 THUL SPECIALTY CONTRACTING INC						\$9,455.00
CHECK # 056549 TOTAL CONTROL SYSTEMS, INC.						
056549	TOTAL CONTROL SYSTE	SEWER FUND	WASTEWATER TREA	Repair/Maint - Bldg &	VFD REPAIR & PARTS	\$693.24
CHECK # 056549 TOTAL CONTROL SYSTEMS, INC.						\$693.24
CHECK # 056553 VIKING ELECTRIC SUPPLY						
056553	VIKING ELECTRIC SUPP	ELECTRIC FUN	ELECTRIC DISTRIBU	Maint of St. Lights & S	STREET LIGHT BULBS	\$1,500.00
CHECK # 056553 VIKING ELECTRIC SUPPLY						\$1,500.00
CHECK # 056556 WINDSTREAM						
056556	WINDSTREAM	SEWER FUND	SEWER ADMINISTR	Telephone	PHONES	\$129.00
CHECK # 056556 WINDSTREAM						\$129.00
						\$497,454.01



MORA MUNICIPAL UTILITIES
PUBLIC UTILITIES COMMISSION CHECK LIST

THE MAY/JUNE 2021 CLAIMS HAVE BEEN APPROVED FOR PAYMENT BY:

CHAIRMAN

COMMISSION MEMBER

COMMISSION MEMBER

SECRETARY



MEMORANDUM

Date: June 14, 2021
To: Public Utilities Commission
From: Lindy Crawford, Public Utilities General Manager
RE: Approve Hire of Water/Wastewater Operator II

SUMMARY

A recent promotion from the position of water/wastewater operator II to water/wastewater operator I (lead) brought an opening in our water/wastewater department. The PUC will approve the hire of a candidate to fill that opening and meet the needs of the department.

BACKGROUND INFORMATION

Last month staff recruited applicants to fill the vacant water/wastewater operator II position, and five applications were received. Three candidates were interviewed for the position on Monday, May 24th by the hiring committee (Lindy Crawford, Joe Kohlgraf and Ken Mattson).

Based on the application, experience and interview the committee has made an offer to Luke Vizenor to fill the position under the terms of the attached offer letter. Vizenor's start date will be Monday, June 21, 2021. The wages and benefits offered fit into the 2021 budget.

With this hire we have now filled the following positions in the water/wastewater department over the last several months:

- *Water/wastewater operator I (lead)* – Ken Mattson was promoted from operator II after Rodney Knudsen retired.
- *Water/wastewater operator II* – Luke Vizenor will be hired since Mattson was promoted.
- *Water/wastewater operator III* – Jason Hulbert was promoted from water/wastewater maintenance worker after Jacob Holmes resigned.

Staff will continue to monitor and evaluate the department to determine if the now vacant from water/wastewater maintenance worker position should be filled.

RECOMMENDATIONS

Motion to approve the hire of Luke Vizenor as recommended by the hiring committee and according to the terms of the employment offer letter.

Attachments
Employment Offer Letter



CITY OF MORA MORA MUNICIPAL UTILITIES

101 Lake Street South
Mora, MN 55051-1588

ci.mora.mn.us



320.679.1511

Fax 320.679.3862

320.679.1451

May 28, 2021

Luke Vizenor
11400 Utah Ave N
Champlain, MN 55316

RE: Conditional Offer of Employment

Dear Luke:

Congratulations! On behalf of the City of Mora and Mora Municipal Utilities, I am pleased to offer you the position of Water/Wastewater Operator II, for which you applied. This offer is conditional upon the successful completion of a background investigation and formal approval by the Public Utilities Commission (PUC).

Below are some of the details of this conditional offer for your information:

- **Supervisor.** In this position you will report directly to Joe Kohlgraf, Public Works Director. His phone number is 612-390-8217 and email address is joe.kohlgraf@cityofmora.com.
- **Compensation and Benefits.** If accepted, your hourly wage will be \$24.71 which is Grade 8.5, Step A of the 2021 salary schedule for this position. You will be eligible for wage increases per the AFSCME collective bargaining agreement, generally upon completion of probation and then on your anniversary date. A copy of the City of Mora/ Mora Municipal Utilities personnel policy and AFSCME agreement will be provided to you. This position is eligible for the PERA retirement program and paid leave.
- **Status/Hours.** This position is classified as regular, full-time. It is a union, FLSA non-exempt position. Hours of work are based on employer needs and are generally Monday through Friday 7:00 a.m. to 3:30 p.m. You will be responsible for being on-call on a rotating basis with other water/wastewater employees. The ability to respond to call outs during your on-call weekend within thirty (30) minutes is a requirement of the job. If you cannot meet that requirement at this time you will have six (6) months from your start in which to do so.
- **Commercial Driver's License.** Possessing and maintaining a Class B CDL and tanker endorsement is a requirement of the job. You will be given six (6) months to meet these requirements.
- **Water/Wastewater Licensing.** Possessing and maintaining Class D water and Class C wastewater licenses, type 4 biosolids license/ sludge disposal license or endorsement is a requirement of the job. You will be given six (6) months to meet these requirements if you do not already meet them.

- **Probationary Period.** You will serve a six (6) month probationary period. During this period you will be evaluated as to your suitability for the position.
- **Start Date.** We will set a start date for Monday, July 21, 2021, at 7:00 a.m. Please report directly to the City Hall to complete your HR paperwork.

Other benefits and conditions of employment are explained in the personnel policy and labor agreement.

Please acknowledge your acceptance of this conditional offer in writing by signing below and returning it to Mandi Yoder by Wednesday, June 2, 2021. If you have any questions, please contact her at (320) 225-4804 or by email at m.yoder@cityofmora.com.

Sincerely,

/s/

Lindy Crawford

City Administrator/Public Utilities General Manager

The foregoing offer of promotion is hereby accepted.

Name - PRINTED

Date

Name - SIGNED

**RETURN SIGNED COPY TO: CITY OF MORA, HUMAN RESOURCES OFFICE, 101 LAKE STREET SOUTH,
MORA, MN 55051**



MEMORANDUM



Date: June 14, 2021
June 15, 2021
To: Public Utilities Commission
Mayor and City Council
From: Lindy Crawford, City Administrator/Public Utilities General Manager
RE: Approve Hire of Administrative Services Director

SUMMARY

The City Council and PUC will approve the hire of a candidate to fill the administrative services director position to meet the needs of the administration and finance departments.

BACKGROUND INFORMATION

The City Council and PUC approved filling the vacant clerk/treasurer position and retitled the position administrative services director. After reviewing and approving the position description staff was directed by both boards to advertise for the position. Eight applications were received and five candidates were interviewed for the position on April 9th and April 15th by the hiring committee (Jody Anderson, Greg Ardner, Lindy Crawford, and Beth Thorp).

Based on the application, experience and interview, the committee has made an offer to Natasha Segelstrom to fill the position under the terms of the attached offer letter. Segelstrom's start date will be Tuesday, July 6 2021. The wages and benefits offered fit into the 2021 budgets.

RECOMMENDATIONS

Motion to approve the hire of Natasha Segelstrom as recommended by the hiring committee and according to the terms of the employment offer letter.

Attachments

Employment Offer Letter



CITY OF MORA MORA MUNICIPAL UTILITIES

101 Lake Street South
Mora, MN 55051-1588

ci.mora.mn.us



320.679.1511

Fax 320.679.3862

320.679.1451

May 27, 2021

Natasha Segelstrom
703 Oak Street
PO Box 63
Danube, MN 56230

RE: Conditional Offer of Employment

Dear Natasha:

Congratulations! On behalf of the City of Mora and Mora Municipal Utilities, I am pleased to offer you the position of administrative services director, for which you applied. This offer is conditional upon successful completion of a background check and formal approval by the City Council and Public Utilities Commission.

Below are some of the details of this conditional offer for your information:

- **Supervisor.** In this position you will report to Lindy Crawford, City Administrator/ Public Utilities General Manager. My contact information is l.crawford@cityofmora.com, (o) 320-225-4806, and (c) 320-515-0724.
- **Compensation and Benefits.** Your annual salary will be \$68,890 which is Grade 12, Step A of the 2021 salary schedule for this position. You will be eligible for wage increases per the city's/utility's compensation schedule, generally upon completion of probation and then on your anniversary date. A copy of the City of Mora/Mora Municipal Utilities personnel policy will be provided at your orientation. This position is eligible for the PERA retirement program and paid leave.
- **Probationary Period.** You will serve a six-month probationary period. During this period you will be evaluated as to your suitability for the position.
- **Status/Hours.** This position is classified as regular, full-time. Forty (40) hours or more per week is required to fulfill the position requirements. It is a non-union, FLSA exempt position. Hours of work are based on employer needs and are generally Monday through Friday 8:00 a.m. to 4:30 p.m. however, you will be required to attend regular evening meetings.
- **Start Date.** We will set a tentative start date for Tuesday, July 6, 2021, at 8:00 a.m. Please report directly to City Hall.

Other benefits and conditions of employment are explained in the city's personnel policy.

Please acknowledge your acceptance of this conditional offer in writing by signing below and returning it to me by Tuesday, June 1, 2021.

Sincerely,

/S/ Lindy Crawford
City Administrator/Public Utilities General Manager

The foregoing offer of promotion is hereby accepted.

Name - PRINTED

Date

Name - SIGNED

**RETURN SIGNED COPY TO: CITY OF MORA, HUMAN RESOURCES OFFICE, 101 LAKE STREET SOUTH,
MORA, MN 55051**



MEMORANDUM

Date: June 14, 2021
To: Public Utilities Commission
From: Sara B. King, Accountant
RE: Proposed Assessment of Unpaid Utility Charges

SUMMARY

The attached list of unpaid utility charges represent past-due homeowner and/or business owner accounts. If approved by the Public Utility Commission of Mora, these amounts will then be presented to Mora City Council on June 15, 2021 for consideration to certify unpaid charges to the respective property tax statements for taxes payable in 2022.

BACKGROUND INFORMATION

In accordance with Minnesota state law and Mora City Code § 50.24, property owners have been notified of the pending certification and have the right to attend the public hearing to object to the certification of the unpaid charges.

For the purpose of certifying unpaid utility accounts, it is the practice of Mora Municipal Utilities to review past due accounts periodically.

OPTIONS & IMPACTS

1. Recommend to Mora City Council the certification of the entire list of unpaid charges
2. Recommend to Mora City Council the certification of a partial list of unpaid charges
3. Do not recommend certifications

RECOMMENDATIONS

Motion to recommend the certification of the entire list of unpaid charges to Mora City Council.

Attachments

Pending Assessment Roll for Unpaid Utility Charges

CITY OF MORA / MORA MUNICIPAL UTILITIES

PROPOSED SPECIAL ASSESSMENTS FOR UNPAID UTILITY CHARGES

For the Public Hearing on June 14, 2021 at 3:00 pm

Parcel ID	Service Address	Balance	10% Cert Fee	To Certify	Full Billing Name
22.00365.00	724 HWY 65 N	249.39	24.94	274.33	JENNIFER JABAS
22.03785.00	313 HOWE AVE	856.33	85.63	941.96	HEIDI RICHARDSON
TOTAL UTILITY SPECIAL ASSESSMENTS		1,105.72	110.57	1,216.29	



MEMORANDUM

Date: June 14, 2021
To: Public Utilities Commission
From: Lindy Crawford, Public Utilities General Manager
RE: Electric Distribution Pole Replacement Project – Advertisement for Bids

SUMMARY

The PUC will review the advertisement for bids for the multi-year electric distribution pole replacement project, and direct DGR, electrical engineer consultant, to advertise the project for bidding.

BACKGROUND INFORMATION

Listed in the capital improvement plan (CIP) is a multi-year electric distribution pole replacement project throughout the MMU service territory. Over the last several months staff and DGR have been preparing for the project and are now ready to begin advertising the project for bidding. Therefore, staff is requesting PUC approval to do so. Attached is the advertisement for bids and a draft of the project drawing sheets. A full set of the bidding documents is available for review at city hall.

If approved the advertisement will be published as soon as possible and sealed bids will be opened at 2:30pm on July 8th at city hall. At the July PUC meeting, the PUC will review bids received and award the contract. It is anticipated that the first phase of the project will begin in September and continue in separate phases through December 31, 2023.

RECOMMENDATIONS

Motion to direct DGR to advertise the project for bidding as presented.

Attachments

Advertisement for Bids

Draft Project Drawing Sheets

ADVERTISEMENT FOR BIDS

Sealed bids will be received by the General Manager of Mora Municipal Utilities, Mora, Minnesota, at the Utility Offices at 101 Lake Street South, Mora, Minnesota 55051, until **2:30 P.M. on the 8th day of July 2021** for construction of Electric Distribution Pole Replacement, at which time the bids shall be publicly opened and read aloud.

The general nature of the work on which bids will be received consists of replacing approximately 95 primary and secondary existing overhead structures. The project includes supplying and installing materials, including poles, pole top assemblies, conductor, guying, grounding materials, termination materials, and conduit.

The above work shall be in accordance with the specifications and proposed form of contract now on file in the office of the Utilities in said City of Mora, Minnesota, by this reference made a part hereof, as though fully set out and incorporated herein.

All bids shall be made on proposal forms furnished by the Engineer and shall be accompanied by bid security in the form of a certified check or bid bond, made payable to Mora Municipal Utilities, Mora, Minnesota, in the amount of ten percent (10%) of the bid, which security becomes the property of Mora Municipal Utilities in the event the successful bidder fails to enter into a contract and post satisfactory Performance and Payment Bonds.

Complete digital project bidding documents are available at www.questcdn.com. You may download the digital plan documents for \$20.00 by inputting Quest project #7890681 on the website's Project Search page. Please contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership registration, downloading, and working with this digital project information. An optional paper set of the proposal forms and specifications for individual use may be obtained from the office of the Engineer, DGR Engineering, 1302 South Union, P.O. Box 511, Rock Rapids, Iowa 51246, telephone 712-472-2531, Fax 712-472-2710, e-mail: dgr@dgr.com, upon payment of \$100, none of which is refundable.

Payment to the Contractor will be made on the basis of ninety percent (95%) upon certification of work completed; five percent (5%) within thirty-one (31) days after final completion and acceptance.

The construction shall be performed upon a Notice to Proceed issuance. The project is to be completed in three separate phases over the course of three years. Substantial completion of the project shall be no later than December 31, 2023. See Section 01 3213 "Construction Schedule" in the Technical Specifications for more details on construction timing requirements.

Mora Municipal Utilities reserves the right to defer acceptance of any bid for a period not to exceed thirty (30) days after the date bids are received and no bid may be withdrawn during this period. Mora Municipal Utilities also reserves the right to reject any or all bids and enter into such contract as it shall deem to be in the best interest of the Utility.

MORA MUNICIPAL UTILITIES

By /S/ Lindy Crawford
General Manager

ELECTRIC DISTRIBUTION IMPROVEMENTS

OVERHEAD POLE REPLACEMENT

MORA MUNICIPAL UTILITIES

MORA, MINNESOTA

UTILITY OFFICIALS

MAYOR: ALAN SKRAMSTAD

COUNCIL MEMBERS: JODY ANDERSON
SADIE BROEKEMEIER
JAKE MATHISON
KYLE SHEPARD

PUC MEMBERS: GREG ARDNER
BRETT BALDWIN
RYAN CHRISTIANSON

PUBLIC WORKS DIRECTOR: JOE KOHLGRAF

CITY ADMINISTRATOR LINDY CRAWFORD



DGR PROJECT NO. 427800

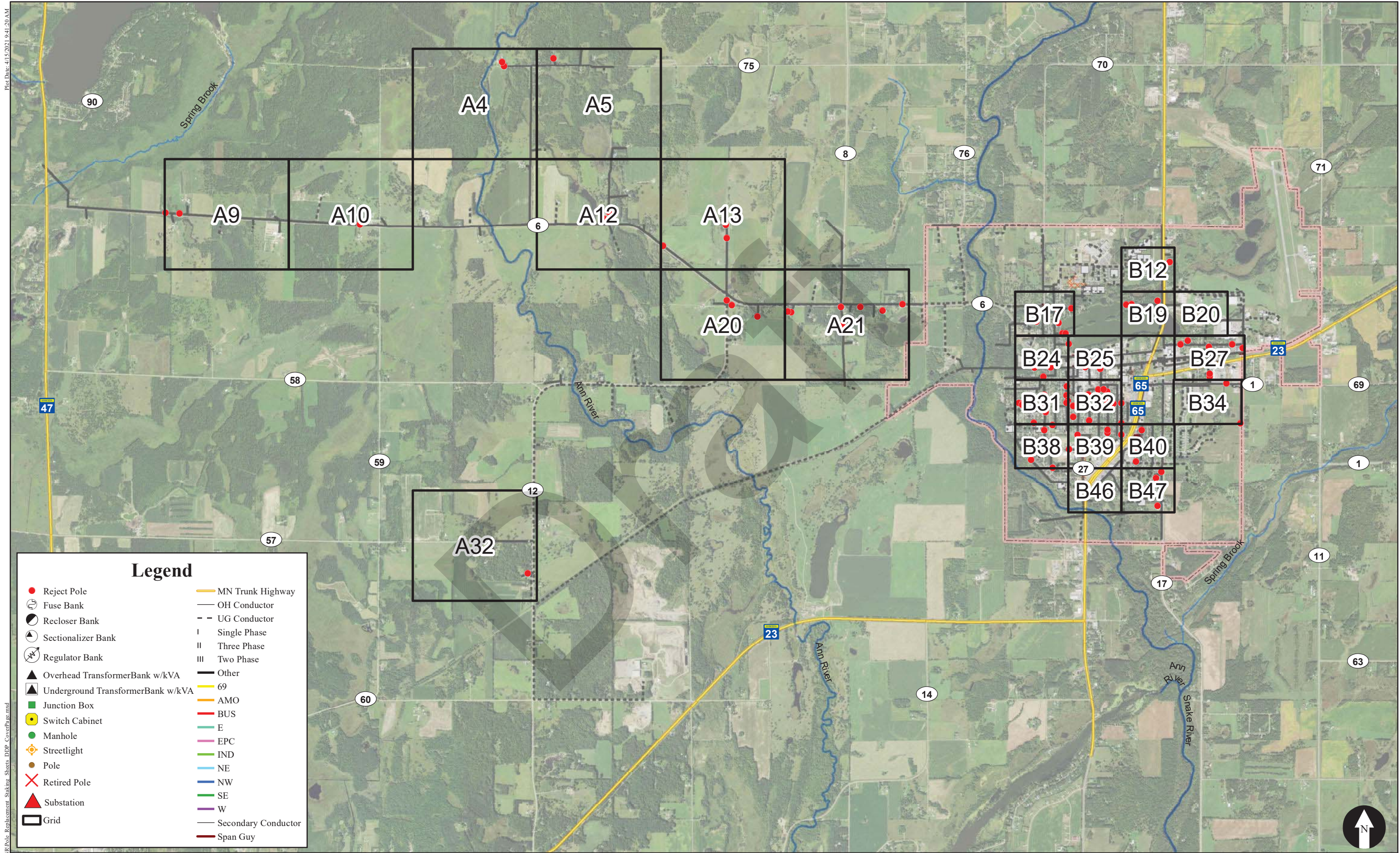
GENERAL LIST OF DRAWINGS

KEY	STAKING SHEETS KEYMAP	
	STAKING SHEETS WITH UNIT SHEETS	
	UNIT DRAWINGS	
1 OF 22	1Ø Tangent (Pin Ins.)	A1.1
2 OF 22	1Ø Tangent on Xarm (Pin Ins.)	A1.11
3 OF 22	1Ø Single Deadend	A5.1
4 OF 22	1Ø Single Deadend on Xarm	A5.21
5 OF 22	1Ø Double Deadend, Vertical	A6.1
6 OF 22	1Ø Double Deadend, on Xarm	A6.21
7 OF 22	2Ø Tangent on Xarm (Pin Ins.)	B1.11
8 OF 22	3Ø Tangent on Xarm (Pin Ins.)	C1.11
9 OF 22	3Ø Tangent, Double Xarms (Pin Ins.)	C2.21
10 OF 22	3Ø Single Deadend on Xarm	C5.21
11 OF 22	3Ø Double Deadend on Xarm	C6.21
12 OF 22	Down Guy, 3/8" HSS, Single	E1.1L
12 OF 22	Screw Anchor, Single Helix	F2.10
13 OF 22	Overhead Guy, 3/8" HSS, Single	E1.4L
14 OF 22	Grounding Assembly – Ground Rod Type	H1.1
15 OF 22	Secondary Deadend Assembly	J2.1
15 OF 22	Secondary Deadend Assembly, Large Angle	J3.1
16 OF 22	1Ø Surge Arrester – Xarm	P1.01
16 OF 22	1Ø Surge Arrester – Bracket	P1.1
17 OF 22	Cutout - Single Phase, Xarm	S1.01
17 OF 22	Cutout - Single Phase, Bracket	S1.1
18 OF 22	1Ø Primary Riser, Fused	UA1
19 OF 22	1Ø Primary Riser, Fused	UA2
20 OF 22	3Ø Primary Riser, Fused	UC1
21 OF 22	3Ø Primary Riser, Bladed	UC2
22 OF 22	Secondary Riser	UM5

I hereby certify that this plan, specification or report was prepared by me, or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

By _____ Chad A. Rasmussen, P.E.
License no. 41434 Date: 6/15/2021





P:\04278\00\GIS\DCR\Pole Replacement Staking Sheets DDP CoverPage.mxd Plot Date: 4/15/2021 9:41:20 AM

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

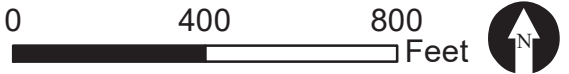
ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

SHEET
OVERALL

Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
250898	C			35-5	1	A1.1			1	H1.1	1	E1.1L	1	F2.10					1	J3.1	
	X	2	1/0ACSR-6/1												1	G1.2	1	TRPLX			
250893	C			35-5	1	A1.1			1	H1.1											
	X	2	1/0ACSR-6/1																		
250884	C			35-5	1	A1.1			1	H1.1											
	C				1	A5.1															
	X	2	1/0ACSR-6/1								1	E1.1L									
	X	2	#4ACSR-6/1																		



SEE SHEET A10



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

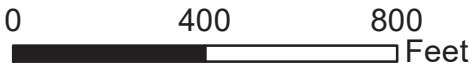
ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
250864	C			35-5	1	A1.1			1	H1.1											
	X	2	#2ACSR-7/1																		

SEE SHEET A9



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

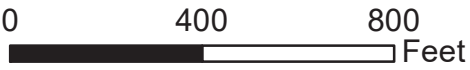
MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
241791	C			30-5					1	H1.1									1	J3.1	
	X										1	E1.1L					1	TRPLX	1	SL	
	X																		1	UM5	
241789	C			30-5															1	J3.1	
	X										1	E1.4L					1	TRPLX			
	X										1	E1.1L									



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

S H E E T	A4
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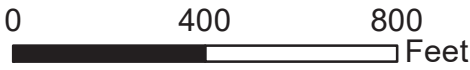
SEE SHEET A5

Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
241798	C			35-5	1	A5.1			1	H1.1									1	J3.1	
	C																		1	S1.1	
	X	2	#4ACSR-6/1								1	E1.1L			1	G1.2	1	TRPLX			

SEE SHEET A4



SEE SHEET A12



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
244066	C			35-5	1	A1.1			1	H1.1											
	X	2	1/0ACSR-6/1																		
250822	C			30-5					1	H1.1								1	J3.1		
	X																1	TRPLX	1	UM5	
250823	C			35-5	1	A1.1			1	H1.1									1	J3.1	
	X	2	#2ACSR-7/1								1	E1.1L				1	G1.2	1	TRPLX		
244093	C			35-5	1	A1.1			1	H1.1											
	X	2	1/0ACSR-6/1																		

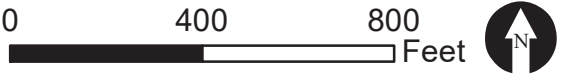
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SEE SHEET A13



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

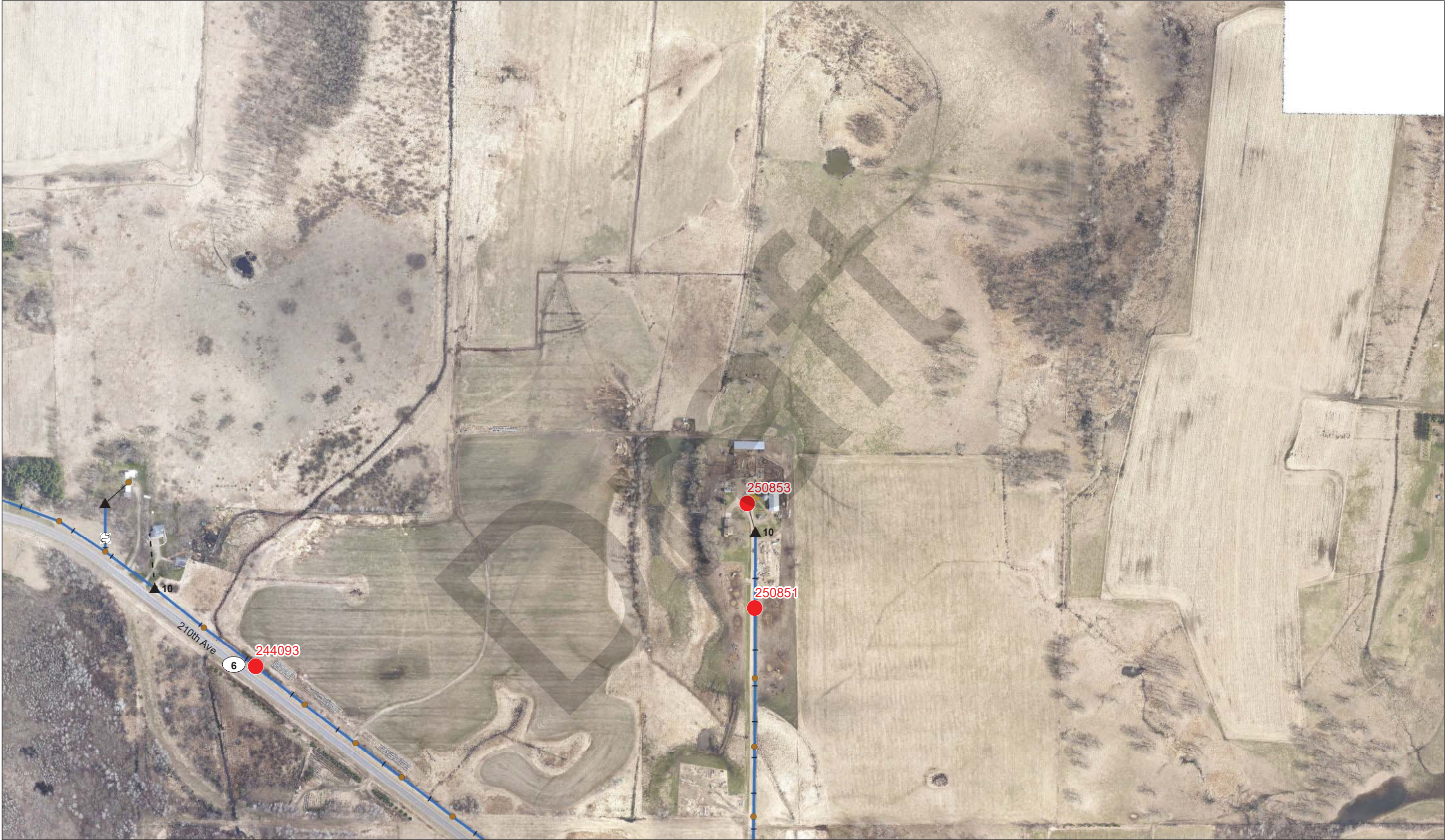
ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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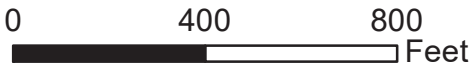
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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
250853	C			30-5					1	H1.1									1	J2.1	
	X										1	E1.1L					2	TRPLX	1	SL	
	X																		3	UM5	
250851	C			35-5	1	A1.1			1	H1.1											
	X	4	#4ACSR-6/1																		

SEE SHEET A12



SEE SHEET A20



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

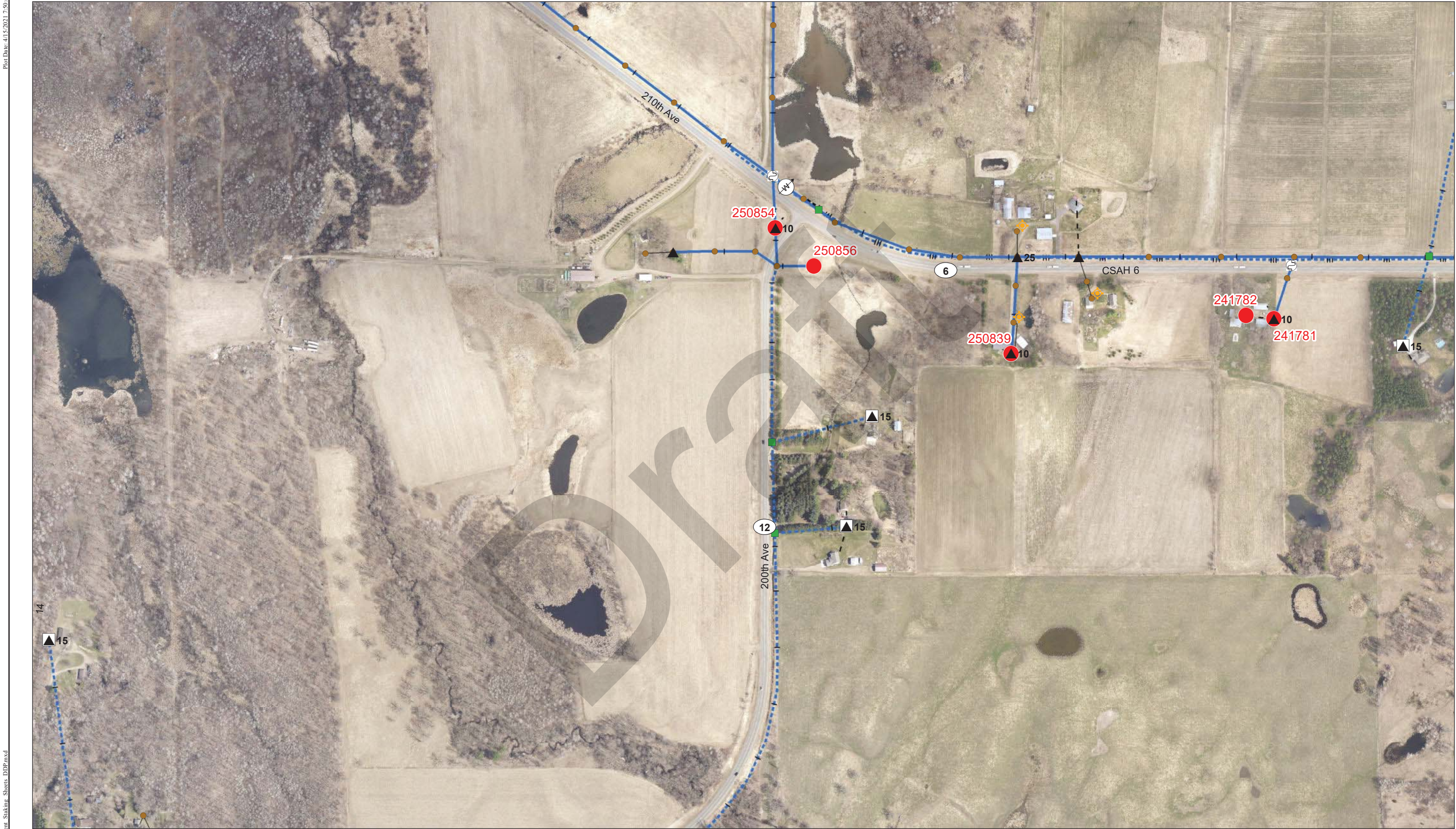
MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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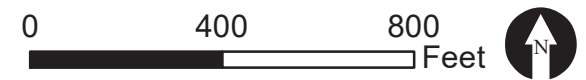
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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
250854	C			40-5	1	A6.1													1	P1.01	
	X	4	#4ACSR-6/1												1	G1.2			1	UM5	
250856	C			35-5	1	A5.1			1	H1.1									1	P1.1	
	X	2	1/0ACSR-6/1								1	E1.1L									
250839	C			35-5	1	A5.1			1	H1.1									1	J3.1	
	X	2	#6 HD CU.								1	E1.1L			1	G1.2	2	TRPLX			
241782	C			30-5					1	H1.1									1	J2.1	
	X																		2	UM5	
	X																		1	SL	
241781	C			35-5	1	A5.1			1	H1.1											
	X	2	#2ACSR-7/1								1	E1.1L			1	G1.2			1	UM5	



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REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
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MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

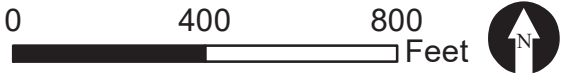
ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
244021	C				1	A5.1	1	UA2	1	H1.1	1	E1.1L	1	F2.10							New underground from north to this pole by others.
	E			35-5																	
	X	2	#2ACSR-7/1																		
241743	C			35-5					1	H1.1									2	J3.1	
	X																2	TRPLX			
241736	C			35-5															1	J3.1	
	X										1	E1.1L					1	TRPLX	1	UM5	
241731	C			35-5	1	A1.1			1	H1.1											
	X	2	1/0ACSR-6/1												1	G1.2			1	UM5	

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REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



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Project Number: 427800
Phone: (712) 472-2531

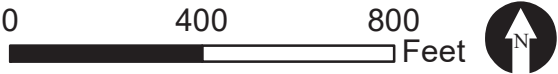
MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
252773	C			35-5	1	A1.1													1	J3.1	
	X	2	#2ACSR-7/1												1	G1.2	1	TRPLX	1	UM5	



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



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Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

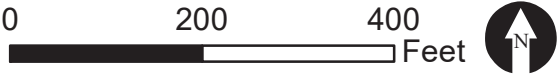
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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
253436	C			30-5															3	J3.1	
	X									1		E1.1L					3	TRPLX			



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REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



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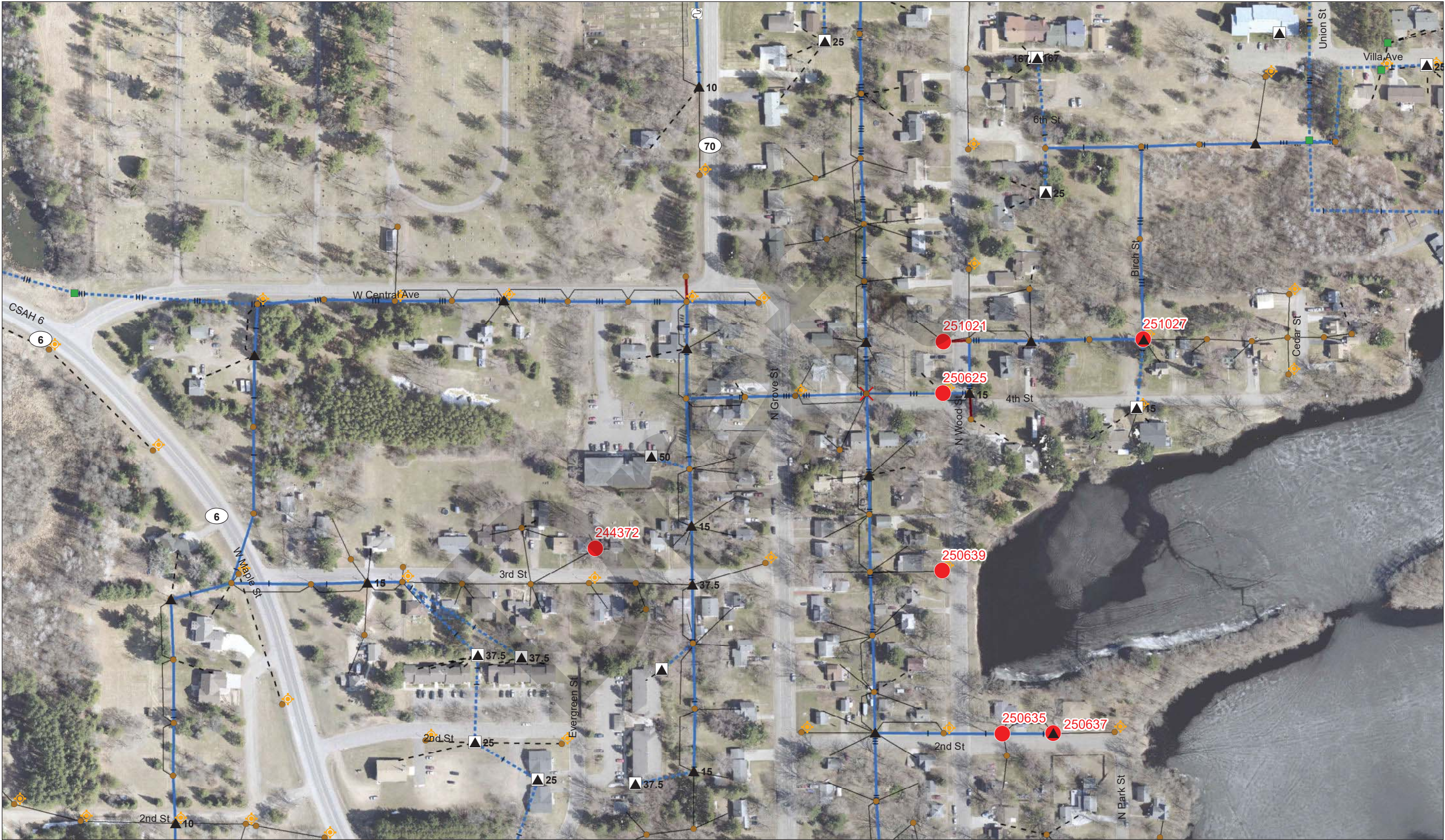
MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
244372	C			30-5															1	J3.1	
	C																		1	J2.1	
	X																2	TRPLX	2	COMM	
250625	C			35-3	1	C1.11			1	H1.1									1	J3.1	
	X	4	1/0ACSR-6/1														1	TRPLX	1	UM5	
	X																		1	SL	
	X																		1	COMM	
251021	C			35-5																	
	X										1	E1.1L									
	X										2	E1.4L							1	COMM	
251027	C			40-3	2	C5.21	1	UA1	1	H1.1									1	J3.1	
	C																		1	J2.1	
	X	8	1/0ACSR-6/1								2	E1.1L			1	G1.2	2	TRPLX	1	SL	
	X																		1	COMM	
250639	C			35-5															1	J3.1	
	X																1	DUPLX	1	SL	
250635	C			35-5	1	A1.11													2	J3.1	
	C																		1	J2.1	
	X	2	#6 HD CU.														4	TRPLX	2	COMM	
250637	C			40-5	1	A5.21			1	H1.1									1	J3.1	
	C																		1	J2.1	
	X	2	#6 HD CU.								1	E1.1L			1	G1.2	2	TRPLX	1	UM5	
	X										1	E1.1L							2	COMM	



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A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
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Project Number: 427800
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MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
253416	C			30-5															2	J3.1	
	X										2	E1.1L					2	TRPLX	2	COMM	
253415	C			35-5	1	A5.1			1	H1.1									1	J3.1	
	X	2	1/0ACSR-6/1												1	G1.2	2	TRPLX	1	SL	
	X																		2	COMM	
253408	C			30-5															1	J3.1	
	X																1	TRPLX	1	UM5	

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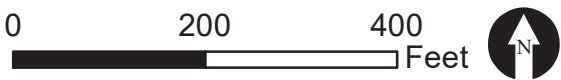
SEE SHEET B18

SEE SHEET B12



SEE SHEET B20

SEE SHEET B26



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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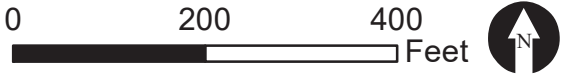
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246393	C			30-5															2	J3.1	
	X															2	DUPLX	1	SL		

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REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



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MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
253552	C			35-3	1	C1.11			1	H1.1											
	X	4	4/0ACSR-6/1																		
250672	C			30-5															1	J2.1	
	X																2	TRPLX	1	COMM	
253554	C			40-3	1	C1.11			1	H1.1									1	P1.01	
	C																		1	S1.01	
	C																		1	J3.1	
	C																		2	N5.1	
	X	6	4/0ACSR-6/1												1	G1.2	1	TRPLX	1	SL	
	X																		1	COMM	
248125	C			45-2	1	C2.21			1	H1.1									2	J3.1	
	X	4	4/0ACSR-6/1														2	TRPLX	1	UM5	
	X																		1	COMM	

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A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
250650	C			35-5															2	J3.1	
	C																		1	A1.011P	
	X										1	E1.4L						2	TRPLX	2	COMM
246371	C			35-5					1	H1.1									4	J3.1	
	X																5	TRPLX	1	UM5	
	X																		2	COMM	
238498	C			40-3	1	C2.21			1	H1.1									1	J3.1	
	X	4	336ACSR-26/7								3	E1.1L			1	G1.2	1	TRPLX	1	SL	
	X																1	DUPLX	2	COMM	

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REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

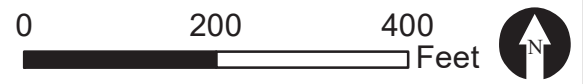
MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

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OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
248439	C			35-3	1	C1.11													2	J3.1	
	X	4	1/0ACSR-6/1														2	TRPLX	3	COMM	
238436	C			30-5															2	J3.1	
	X																3	TRPLX	1	COMM	
238421	C			35-5															2	J3.1	
	X																3	TRPLX			
238410	C			35-3	1	C1.11													2	J3.1	
	X	4	1/0ACSR-6/1														3	TRPLX	1	SL	
																			1	COMM	
251847	C			45-2	1	C1.11			1	H1.1									2	J3.1	
	X	4	266ACSR-18/1		2	SCBL-1									2	G1.2	2	TRPLX	1	UM5	
251845	C			35-3	1	C1.11													2	J2.1	
	X	4	1/0ACSR-6/1														2	TRPLX			
251844	C			35-3	1	C1.11													2	J2.1	
	X	4	1/0ACSR-6/1														2	TRPLX	1	COMM	
251838	C			40-3	1	C1.11			1	H1.1									2	J3.1	
	X	4	1/0ACSR-6/1											1	G1.2	3	TRPLX	1	COMM		

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REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

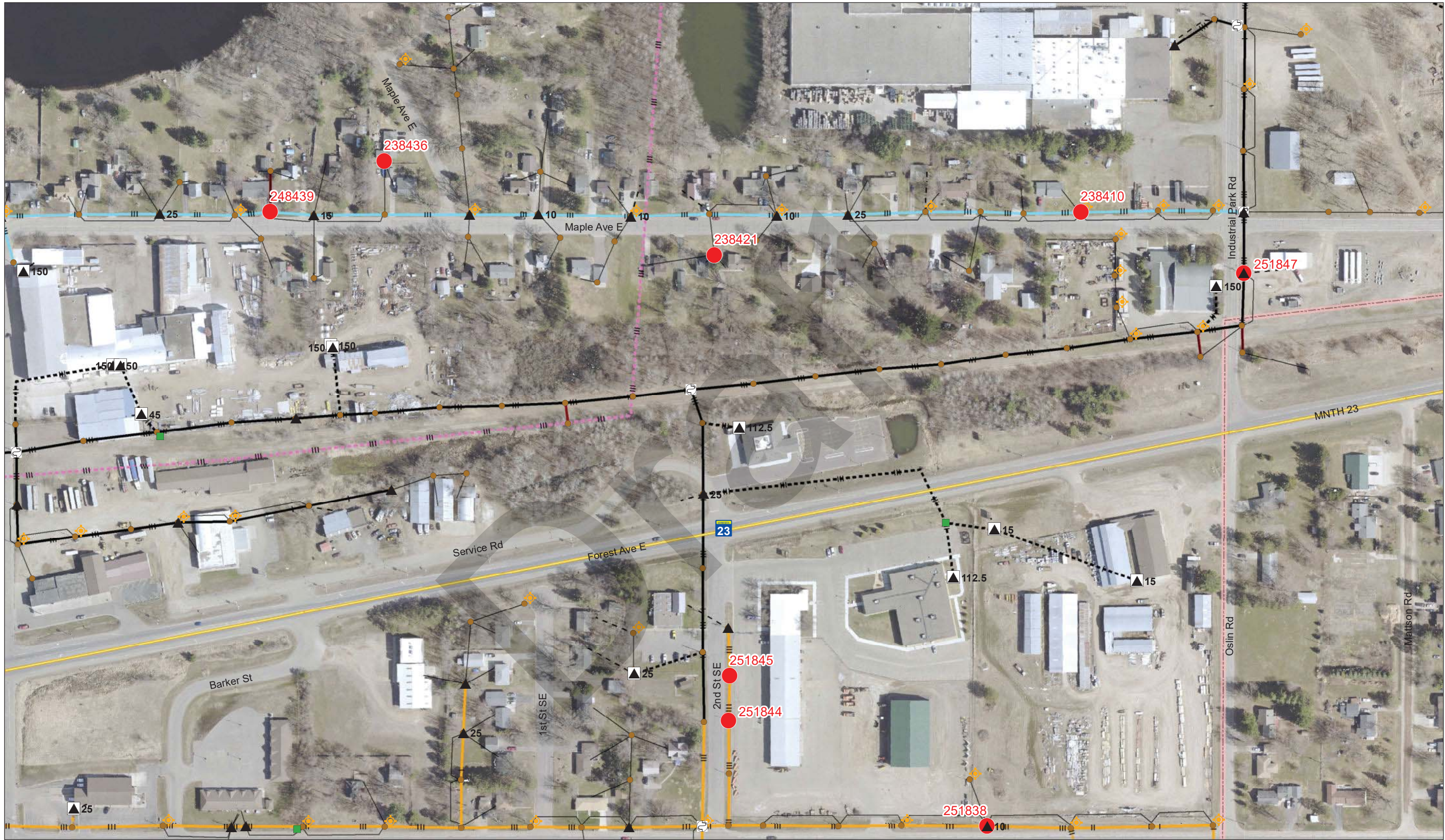
MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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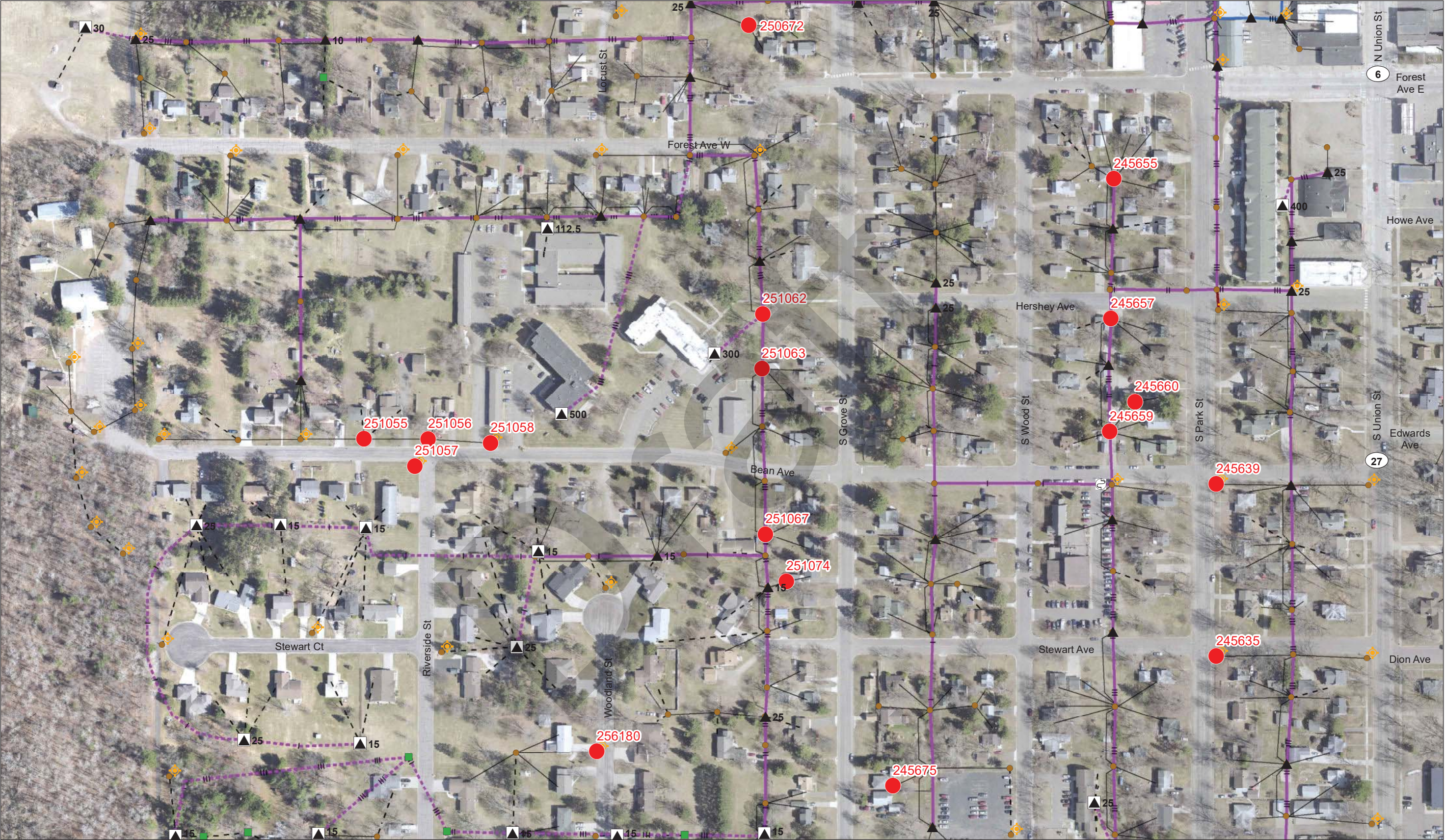
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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT	
251055	C			30-5															2	J3.1		
	X																2	TRPLX	2	UM5		
	X																		1	COMM		
251056	C			30-5															4	J3.1		
	X																4	TRPLX	1	COMM		
251057	C			30-5															1	J3.1		
	X																1	DUPLX	1	SL		
251058	C			35-5															1	J3.1		
	X									2	E1.1L						1	DUPLX	1	SL		
	X																		1	COMM		
251062	C			40-3	1	C1.11	1	UC1	1	H1.1									1	J3.1		
	X	4	1/0ACSR-6/1															1	TRPLX	2		COMM
251063	C			40-3	1	C1.11			1	H1.1									1	J3.1		
	C																		3	J2.1		
	X	4	1/0ACSR-6/1								1	E1.4L						3	TRPLX	4		COMM
251067	C			40-3	1	C1.11													3	J2.1		
	X	4	1/0ACSR-6/1							1	E1.1L							3	TRPLX	2		COMM
251074	C			30-5															2	J3.1		
	X																	2	TRPLX	1		COMM
256180	C			35-5															1	J3.1		
	X																	1	DUPLX	1		SL
245675	C			30-5															3	J3.1		
	X																	3	TRPLX			
245655	C			40-3	1	C5.21													2	J3.1		
	X	4	1/0ACSR-6/1							4	E1.1L							6	TRPLX	2		COMM
245657	C			40-3	1	C1.11													2	J3.1		
	X	4	4/0ACSR-6/1															3	TRPLX	1		UM5
	X																			2		COMM
245660	C			30-5															2	J3.1		
	X																	2	TRPLX			
245659	C			40-3	1	C1.11			1	H1.1									3	J3.1		
	X	4	1/0ACSR-6/1															5	TRPLX	2		COMM
245639	C			30-5															1	J2.1		
	X																	1	DUPLX	1		SL
245635	C			30-5															1	J2.1		
	X																	1	DUPLX	1		SL

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A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

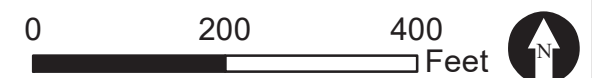
ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
248145	C			40-5	1	B1.11													3	J3.1	
	X	3	1/OACSR-6/1														6	TRPLX	1	UM5	
	X																		2	COMM	
248153	C			40-5	1	B1.11													2	J3.1	
	X	3	1/OACSR-6/1														2	TRPLX	1	SL	
	X																		2	COMM	
248172	C			40-3	1	C6.21					1	E1.1L	1	F2.10					2	J3.1	
	C				1	A5.21															
	X	10	1/OACSR-6/1														4	TRPLX	1	S1.01	
	X																		1	SL	
	X																		1	COMM	
248175	C			35-5	1	A1.11			1	H1.1									3	J3.1	
	X	2	1/OACSR-6/1											1	G1.2	3	TRPLX	1	UM5		
	X																		2	COMM	
251320	C			30-5															1	J2.1	
	X																1	DUPLX	1	SL	
251318	C			35-3	1	C1.11													2	J3.1	
	X	4	4/OACSR-6/1														2	TRPLX	2	COMM	
251315	C			40-3	1	C1.11			1	H1.1									4	J3.1	
	C																		1	S1.01	
	C																		1	P1.01	
	X	4	4/OACSR-6/1										1	G1.2	6	TRPLX	1	SL			
	X																		2	COMM	
251312	C			40-3	1	C1.11			1	H1.1									3	J3.1	
	X	4	4/OACSR-6/1											1	G1.2	6	TRPLX	1	SL		
	X																		2	COMM	
251335	C			30-5															1	J2.1	
	X																1	DUPLX	1	SL	
251336	C			30-5															1	J2.1	
	X																1	DUPLX	1	SL	
251363	C			30-5															1	J2.1	
	X																1	DUPLX	1	SL	



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS OVERHEAD POLE REPLACEMENT

S H E E T	B32
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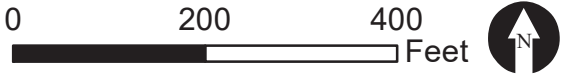
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251833	C			35-5	1	A5.1					1	E1.1L	1	F2.10					1	P1.1	
	X	2	#2ACSR-7/1								1	E1.4L									

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SEE SHEET B27



SEE SHEET B35



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
251083	C			40-3	1	C1.11			1	H1.1									2	J2.1	
	X	4	1/0ACSR-6/1														4	TRPLX	2	COMM	
253576	C			35-5	1	A6.21			1	H1.1									1	J3.1	
	X	4	#4 HD CU.												1	G1.2	1	TRPLX	2	COMM	
251097	C			35-5	1	A1.1													1	J3.1	
	X	2	1/0ACSR-6/1														2	TRPLX	1	COMM	
245611	C			40-3	1	C1.11			1	H1.1									2	J3.1	
	X	4	1/0ACSR-6/1												1	G1.2	3	TRPLX	1	UM5	
	X																		1	SL	
245617	C			40-3	1	C1.11													3	J3.1	
	C				1	A5.21															
	X	4	1/0ACSR-6/1								5	E1.1L					4	TRPLX	2	COMM	
	X	2	#4 HD CU.																		

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SEE SHEET B31



SEE SHEET B39

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

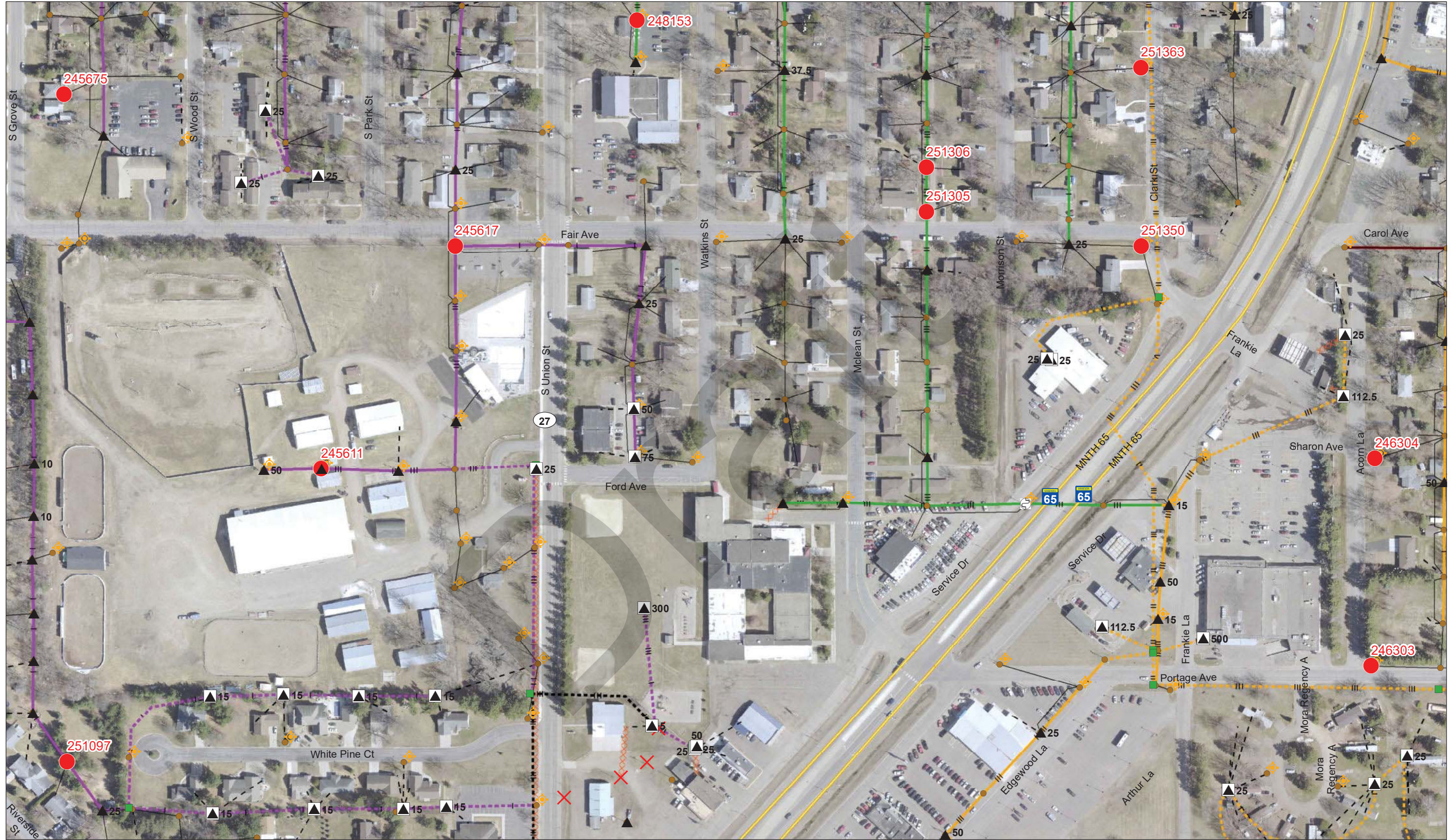
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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
251306	C			40-3	1	C1.11													3	J3.1	
	X	4	4/0ACSR-6/1														3	TRPLX	1	UM5	
	X																		2	COMM	
251305	C			40-3	1	C1.11													1	J3.1	
	X	4	4/0ACSR-6/1							1	E1.1L						2	TRPLX	1	UM5	
																			2	COMM	
251350	C			30-5															1	J2.1	
	X																2	DUPLX	1	SL	

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SEE SHEET B38



SEE SHEET B40

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

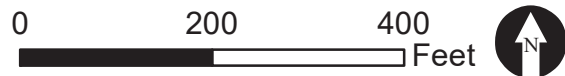
ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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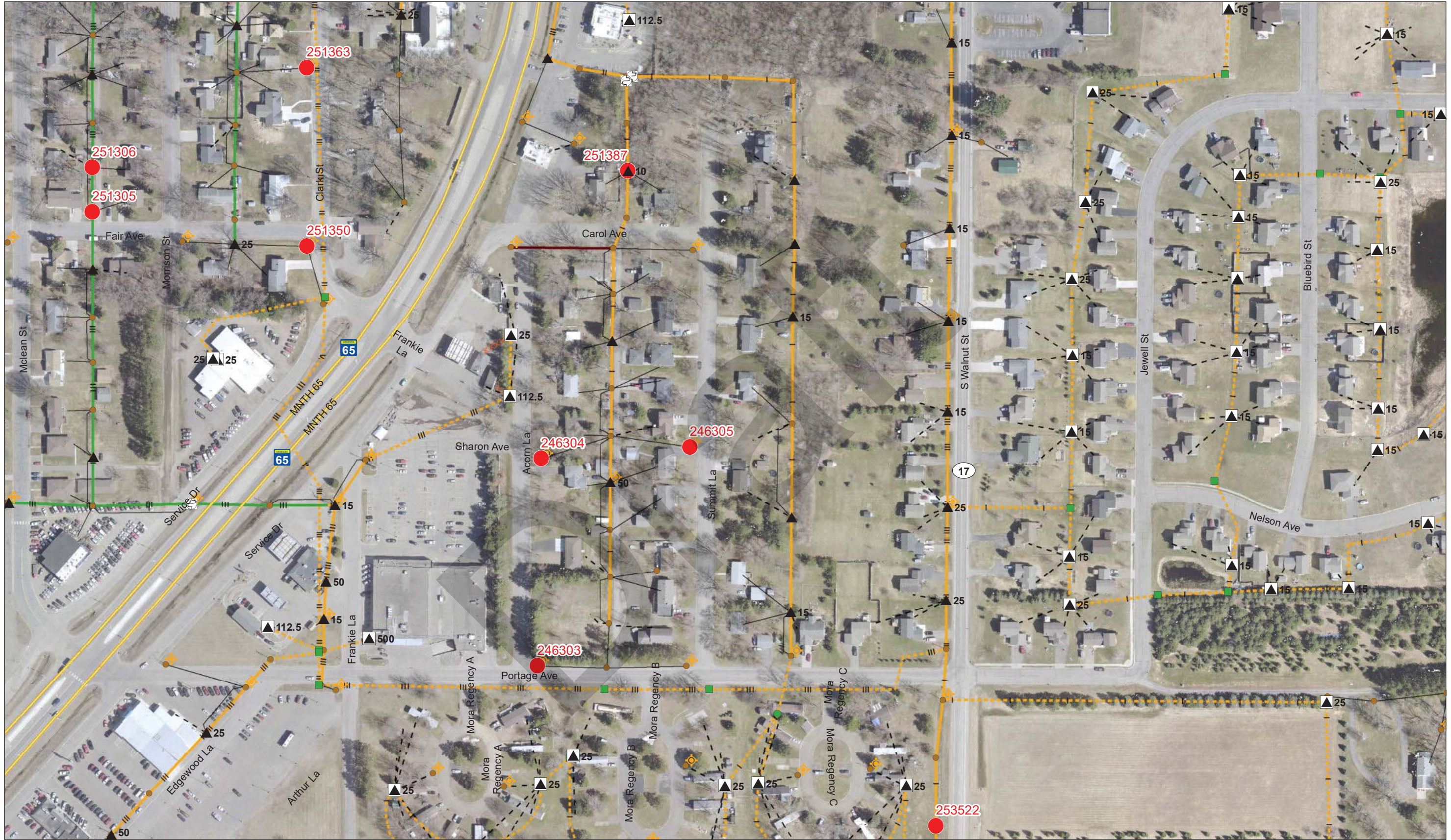
SEE SHEET B32

SEE SHEET B46

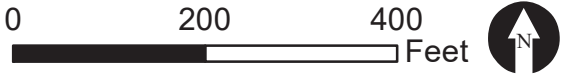


Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
251387	C			35-5	1	A1.11			1	H1.1									2	J3.1	
	X	2	1/0ACSR-6/1												1	G1.2	2	TRPLX	2	COMM	
246304	C			30-5															1	J2.1	
	X																1	DUPLX	1	SL	
246305	C			30-5															1	J2.1	
	X																1	DUPLX	1	SL	
246303	C			30-5															1	J2.1	
	X																1	DUPLX	1	SL	

SEE SHEET B39



SEE SHEET B47



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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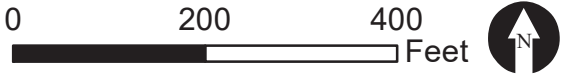
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248170	C			40-3	1	C1.11													1	J3.1	
	X	4	#6 HD CU.														1	DUPLX	1	SL	
	X																		1	COMM	

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SEE SHEET B39



SEE SHEET B47



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

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Structure Number	*	#	PRI. WIRE	HEIGHT CLASS	#	PRI. UNIT OH	#	PRI. UNIT UG	#	GRD	#	GUY	#	ANCHOR	#	SEC.	#	SEC. WIRE	#	MISC. UNIT	COMMENT
253522	C			35-5	1	A1.11															
	X	2	#6 HD CU.																		
253652	C			35-5															1	J2.1	
	X																1	DUPLX	1	UM5	
	X																		1	SL	
253532	C			30-5																	
	X																		1	UM5	
	X																		1	SL	

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SEE SHEET B46

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

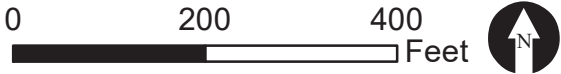
MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

ELECTRIC DISTRIBUTION IMPROVEMENTS
OVERHEAD POLE REPLACEMENT

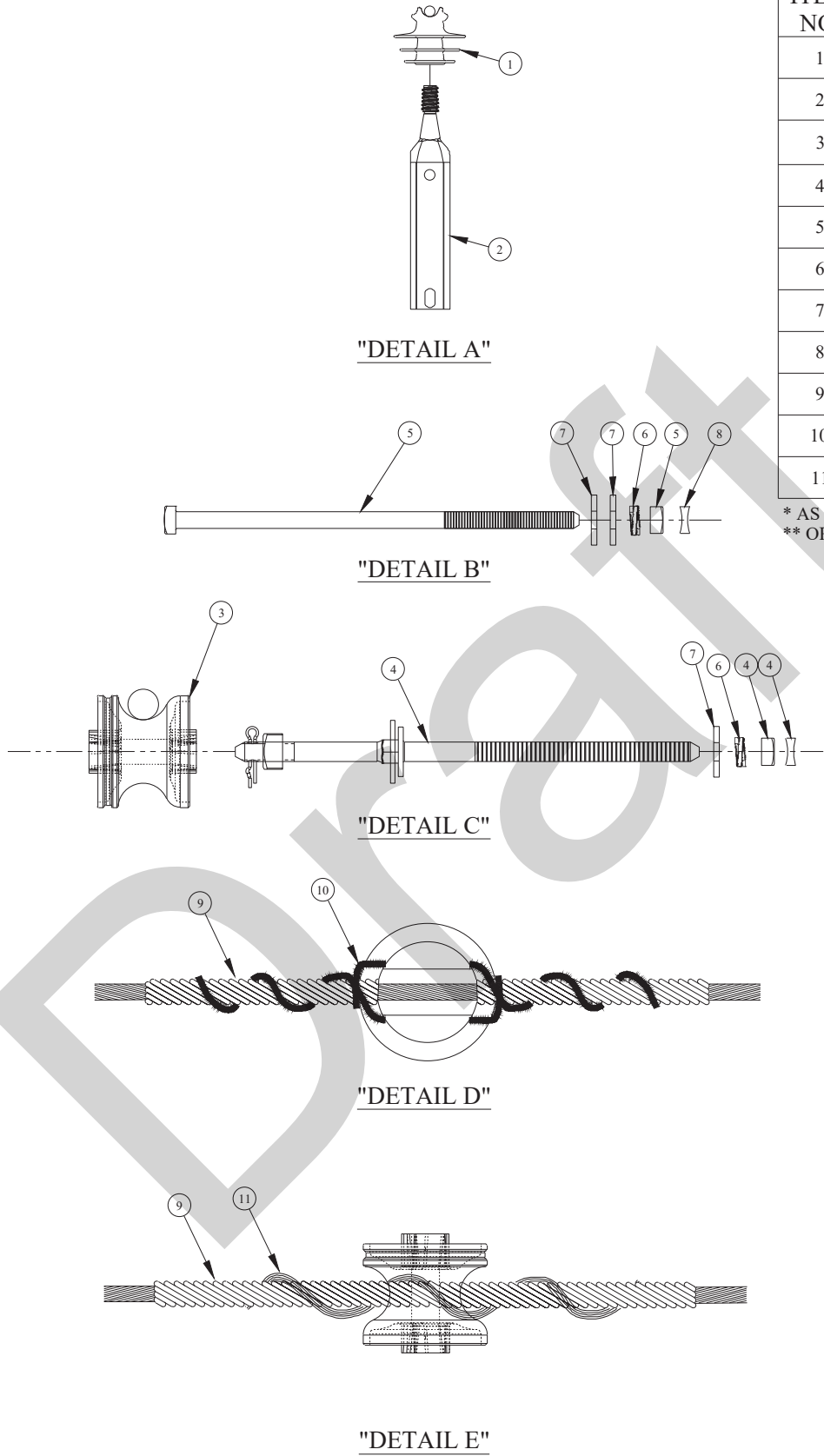
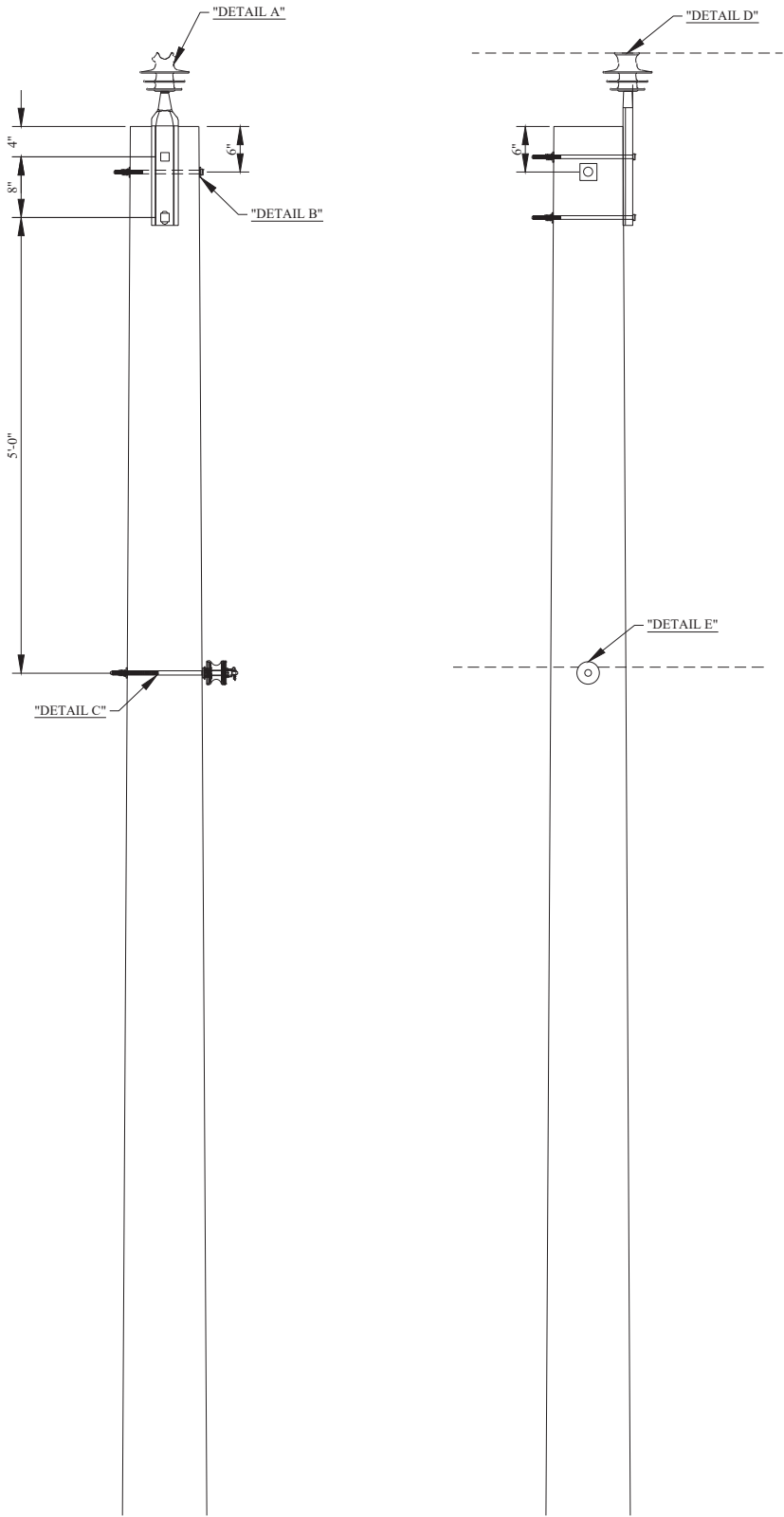
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SEE SHEET B40



Plot Date: 6/10/2021 11:32:01 AM
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MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Line Pin Insulator, Polymer, F-Neck	Preformed	IP-15-F**	1
2	Pin, Pole Top, 20"	Hubbell	2199P**	1
3	Insulator, Spool, 3"	Hendrix	HPI-53-2**	1
4	Bolt, Single, Upset, 5/8" x Req'd Length with Nuts	Hubbell	774 _**	1
5	Bolt, Machine, 5/8" x Req'd Lenght with Nut	Hubbell	88 _**	3
6	Washer, Double Coil, 5/8" Bolt Size	Hubbell	C2050186**	4
7	Washer, Square Flat, 11/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	5
8	Locknut, Type MF, 5/8" Bolt Size	Hubbell	3512**	3
9	Armor Rod (See Below Table)	Preformed	AR-0 _ _ _	2
10	Top Tie (See Below Table)	Preformed	WTF- _ _ _ _	1
11	Spool Tie (See Below Table)	Preformed	SPL- _ _ _ _	1

* AS REQUIRED
** OR APPROVED EQUAL

ARMOR ROD & TIE TABLE			
CONDUCTOR	ARMOR ROD	TOP TIE	SPOOL TIE
#4 ACSR 6/1	AR-0110	WTF-0217	SPL-1358
#2 ACSR 7/1	AR-0114	WTF-0219	SPL-1359
#1/0 ACSR 6/1	AR-0118	WTF-0222	SPL-1360
#4/0 ACSR 6/1	AR-0124	WTF-0226	SPL-1362
#266 ACSR 18/1	AR-0126	WTF-0227	-
#336 ACSR 26/7	AR-0130	WTF-0229	-

*** COPPER CONDUCTORS TO BE HAND TIED WITH NO ARMOR ROD

SINGLE PHASE
TANGENT

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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ARMOR ROD & TIE TABLE			
CONDUCTOR	ARMOR ROD	TOP TIE	SPOOL TIE
#4 ACSR 6/1	AR-0110	WTF-0217	SPL-1358
#2 ACSR 7/1	AR-0114	WTF-0219	SPL-1359
#1/0 ACSR 6/1	AR-0118	WTF-0222	SPL-1360
#4/0 ACSR 6/1	AR-0124	WTF-0226	SPL-1362
#266 ACSR 18/1	AR-0126	WTF-0227	-
#336 ACSR 26/7	AR-0130	WTF-0229	-

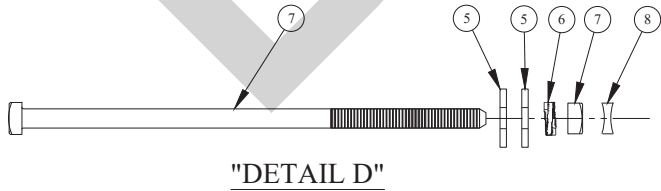
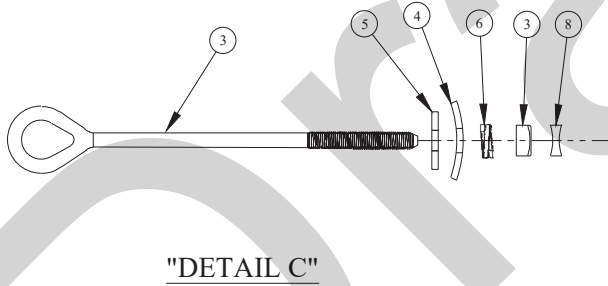
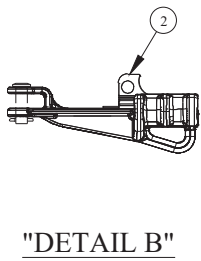
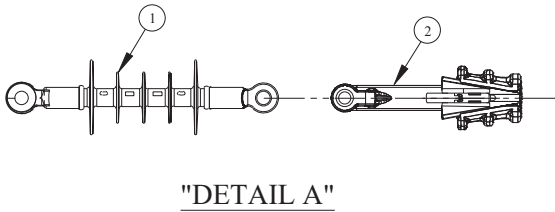
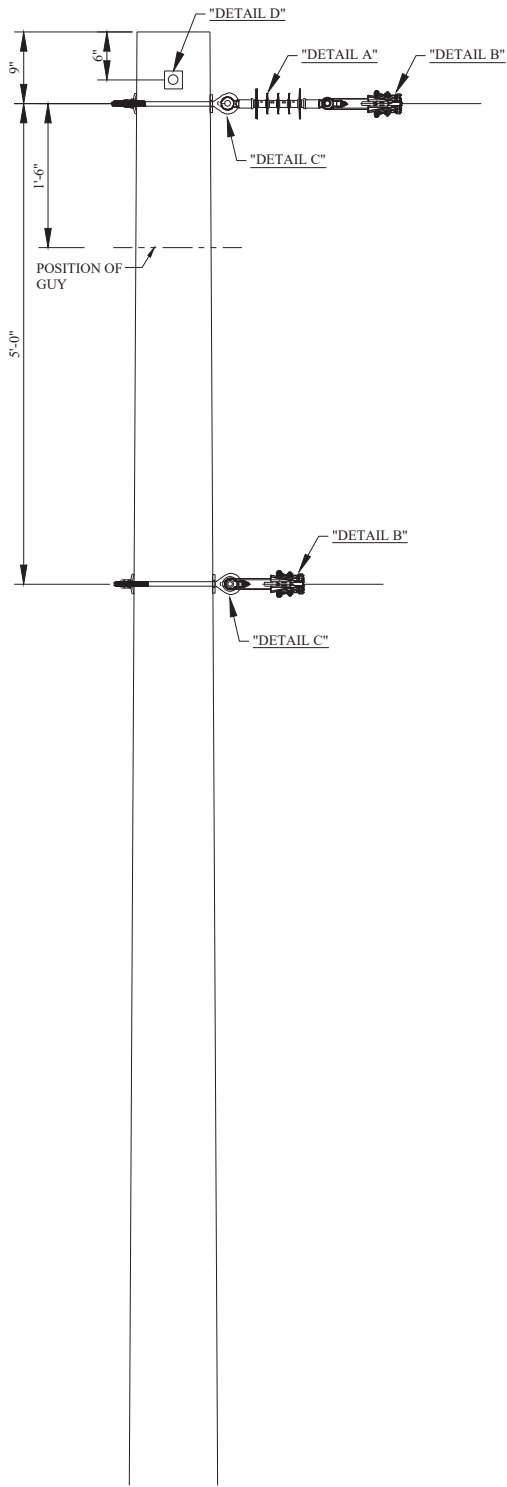
SINGLE PHASE TANGENT ON CROSSARM



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MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

S H E E T	A1.11
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MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Deadend Insulator, Polymer, 15 Kip	Hubbell	401015-0215**	1
2	Deadend Automatic Clamp (#4 Swan - 4/0 Penguin)	Hubbell	GDW2040**	2
3	Bolt, Eye, 5/8" x Required Length, with Nut	Hubbell	299 __**	2
4	Washer, Square Curved, 11/16" Hole, 3" x 3" x 1/4"	Hubbell	682312**	2
5	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	4
6	Washer, Double Coil, 5/8"	Hubbell	C2050186**	3
7	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 __**	1
8	Locknut, Type MF, 5/8"	Hubbell	3512**	3

* AS REQUIRED
** OR APPROVED EQUAL

SINGLE PHASE
DEADEND

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



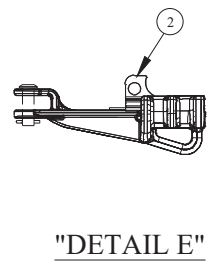
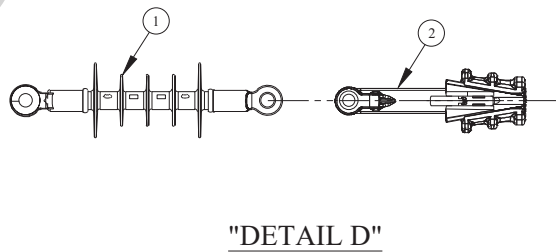
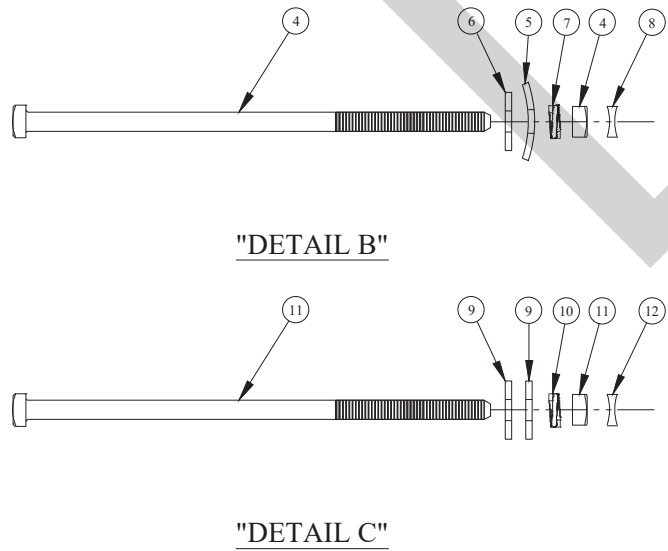
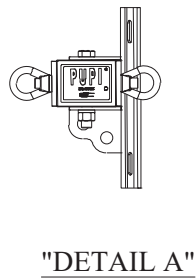
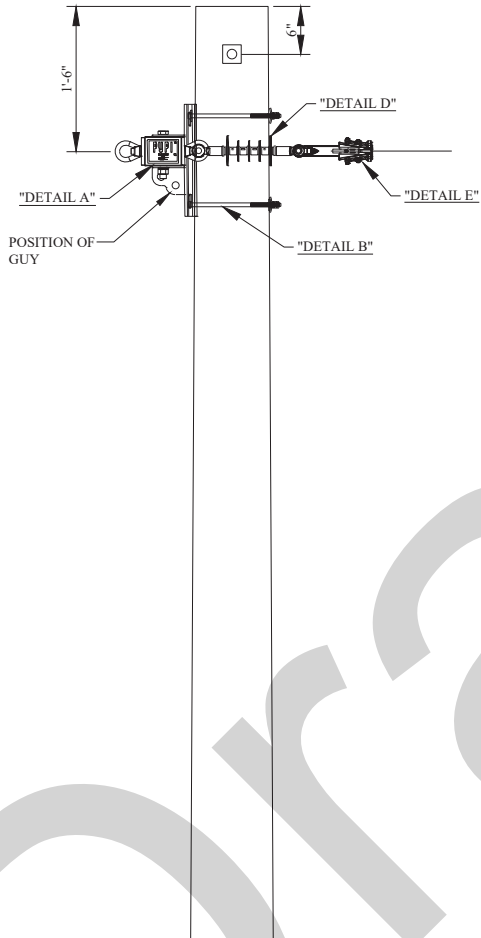
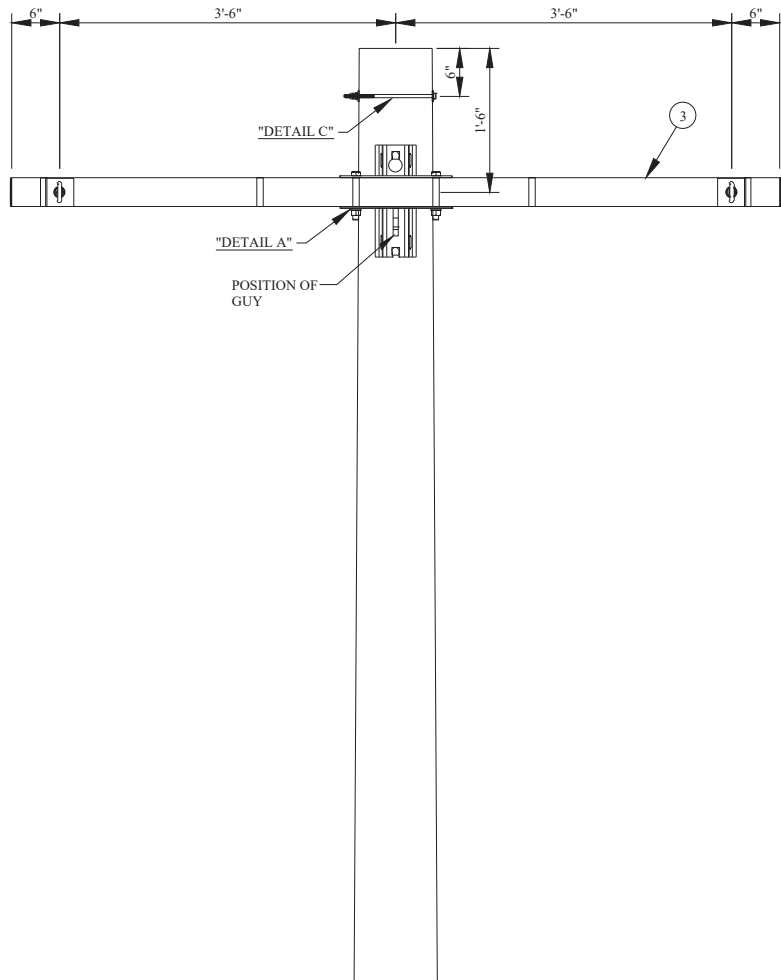
Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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Plot Date: 6/10/2021 11:32:09 AM
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MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Deadend Insulator, Polymer, 15 Kip	Hubbell	401015-0215**	1
2	Deadend Automatic Clamp (#4 Swan - 4/0 Penquin)	Hubbell	GDW2040**	2
3	Fiberglass Crossarm, 3-5/8" x 4-5/8" x 8'-0"	PUPI	DA3000096E2B7X3	1
4	Bolt, Machine, 3/4" x Required Length, with Nut	Hubbell	89 _ **	2
5	Washer, Square Curved, 13/16" Hole, 3" x 3" x 1/4"	Hubbell	682212**	2
6	Washer, Square Flat, 13/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6814**	2
7	Washer, Double Coil, 3/4"	Hubbell	C2050187**	2
8	Locknut, Type MF, 3/4"	Hubbell	3513**	2
9	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	2
10	Washer, Double Coil, 5/8"	Hubbell	C2050186**	1
11	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 _ **	1
12	Locknut, Type MF, 5/8"	Hubbell	3512**	1

* AS REQUIRED
** OR APPROVED EQUAL

SINGLE PHASE
DEADEND ON CROSSARM

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

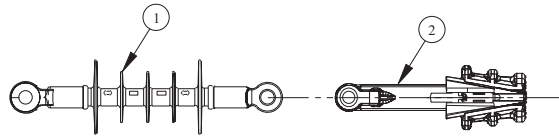
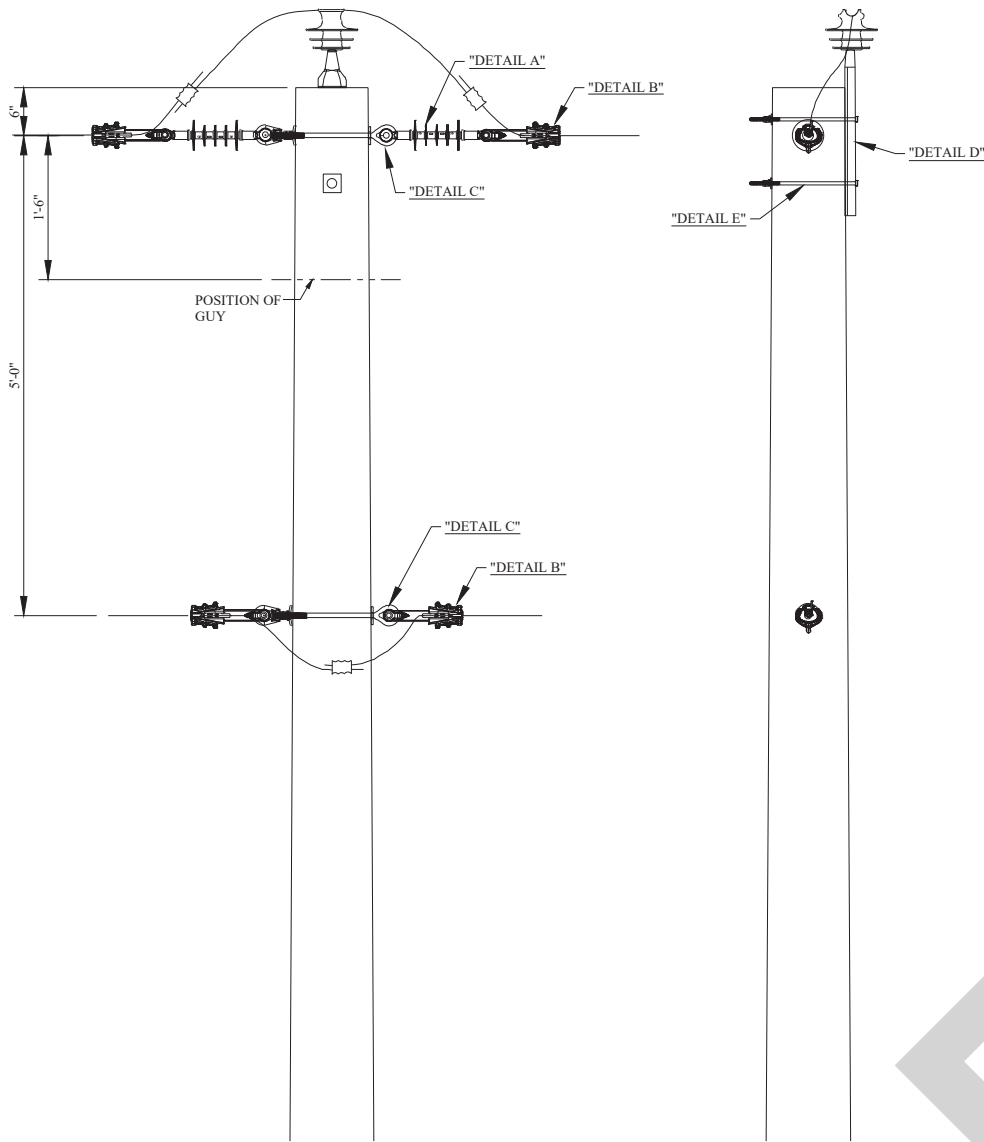
MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

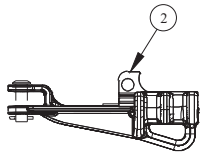
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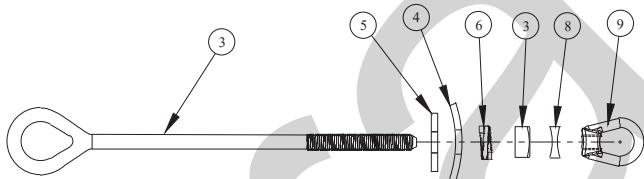
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"DETAIL A"



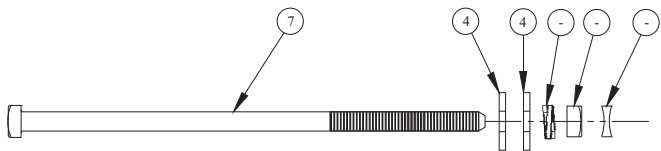
"DETAIL B"



"DETAIL C"



"DETAIL D"



"DETAIL E"

MATERIAL LIST

ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Deadend Insulator, Polymer, 15 Kip	Hubbell	401015-0215**	2
2	Deadend Automatic Clamp (#4 Swan - 4/0 Penguin)	Hubbell	GDW2040**	4
3	Bolt, Eye, 5/8" x Required Length, with Nut	Hubbell	299 __ **	2
4	Washer, Square Curved, 11/16" Hole, 3" x 3" x 1/4"	Hubbell	682312**	2
5	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	4
6	Washer, Double Coil, 5/8"	Hubbell	C2050186**	4
7	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 __ **	2
8	Locknut, Type MF, 5/8"	Hubbell	3512**	4
9	Eye Nut, 5/8"	Hubbell	6502**	2
10	Line Pin Insulator, Polymer, F-Neck	Preformed	IP-15-F**	1
11	Pin, Pole Top, 20"	Hubbell	2199P**	1
12	Top Tie (See Below Table)	Preformed	WTF- ____	1
13	Compression Connector, H-Tap, AL.-AL.	Blackburn	WR ____ **	3

* AS REQUIRED
** OR APPROVED EQUAL

TIE TABLE

CONDUCTOR	TOP TIE
#4 ACSR 6/1	WTF-0200
#2 ACSR 7/1	WTF-0206
#1/0 ACSR 6/1	WTF-0212
#4/0 ACSR 6/1	WTF-0219
#266 ACSR 18/1	WTF-0219
#336 ACSR 26/7	WTF-0221

*** COPPER CONDUCTORS TO BE HAND TIED

SINGLE PHASE
DOUBLE DEADEND

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



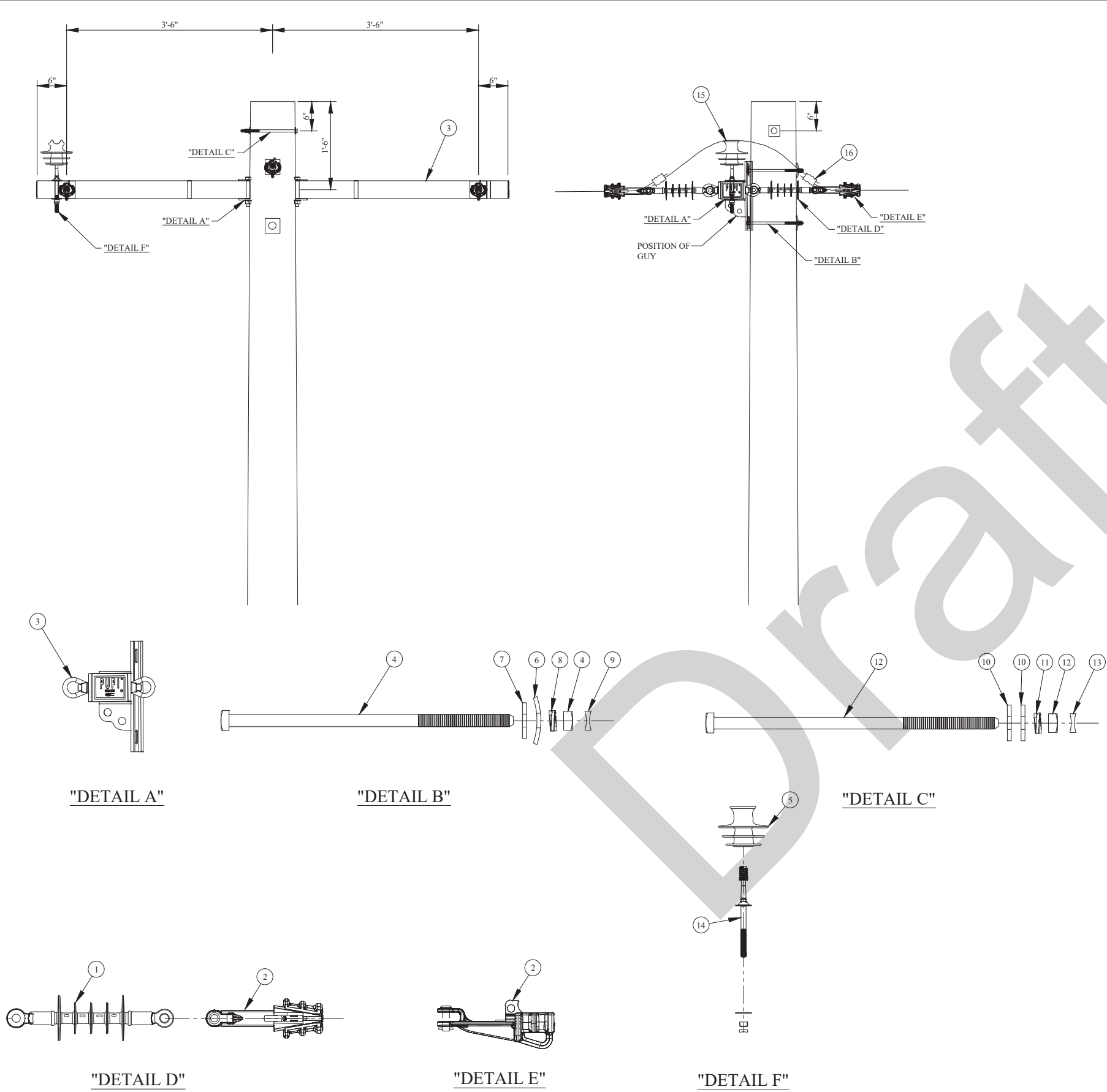
Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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Plot Date: 6/10/2021 11:32:17 AM
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MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Deadend insulator, Polymer, 15 Kip	Hubbell	401015-0215**	2
2	Deadend Automatic Clamp (#4 Swan - 4/0 Penguin)	Hubbell	GDW2040**	4
3	Fiberglass Crossarm, 3-5/8" x 4-5/8" x 8'-0"	PUPI	DA3000096E2B7X3	1
4	Bolt, Machine, 3/4" x Required Length, with Nut	Hubbell	89 __ **	2
5	Line Pin Insulator, Polymer, F-Neck	Preformed	IP-15-F**	1
6	Washer, Square Curved, 13/16" Hole, 3" x 3" x 1/4"	Hubbell	682212**	2
7	Washer, Square Flat, 13/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6814**	2
8	Washer, Double Coil, 3/4"	Hubbell	C2050187**	2
9	Locknut, Type MF, 3/4"	Hubbell	3513**	2
10	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	2
11	Washer, Double Coil, 5/8"	Hubbell	C2050186**	1
12	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 __ **	1
13	Locknut, Type MF, 5/8"	Hubbell	3512**	1
14	Pin, Crossarm, 5/8" x 6-1/2" Shank	Hubbell	881AP**	1
15	Top Tie (See Below Table)	Preformed	WTF- _____	1
16	Compression Connector, H-Tap, AL.-AL.	Blackburn	WR ___ **	4

* AS REQUIRED
** OR APPROVED EQUAL

TIE TABLE	
CONDUCTOR	TOP TIE
#4 ACSR 6/1	WTF-0200
#2 ACSR 7/1	WTF-0206
#1/0 ACSR 6/1	WTF-0212
#4/0 ACSR 6/1	WTF-0219
#266 ACSR 18/1	WTF-0219
#336 ACSR 26/7	WTF-0221

*** COPPER CONDUCTORS TO BE HAND TIED

SINGLE PHASE
DOUBLE DEADEND
ON CROSSARM

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



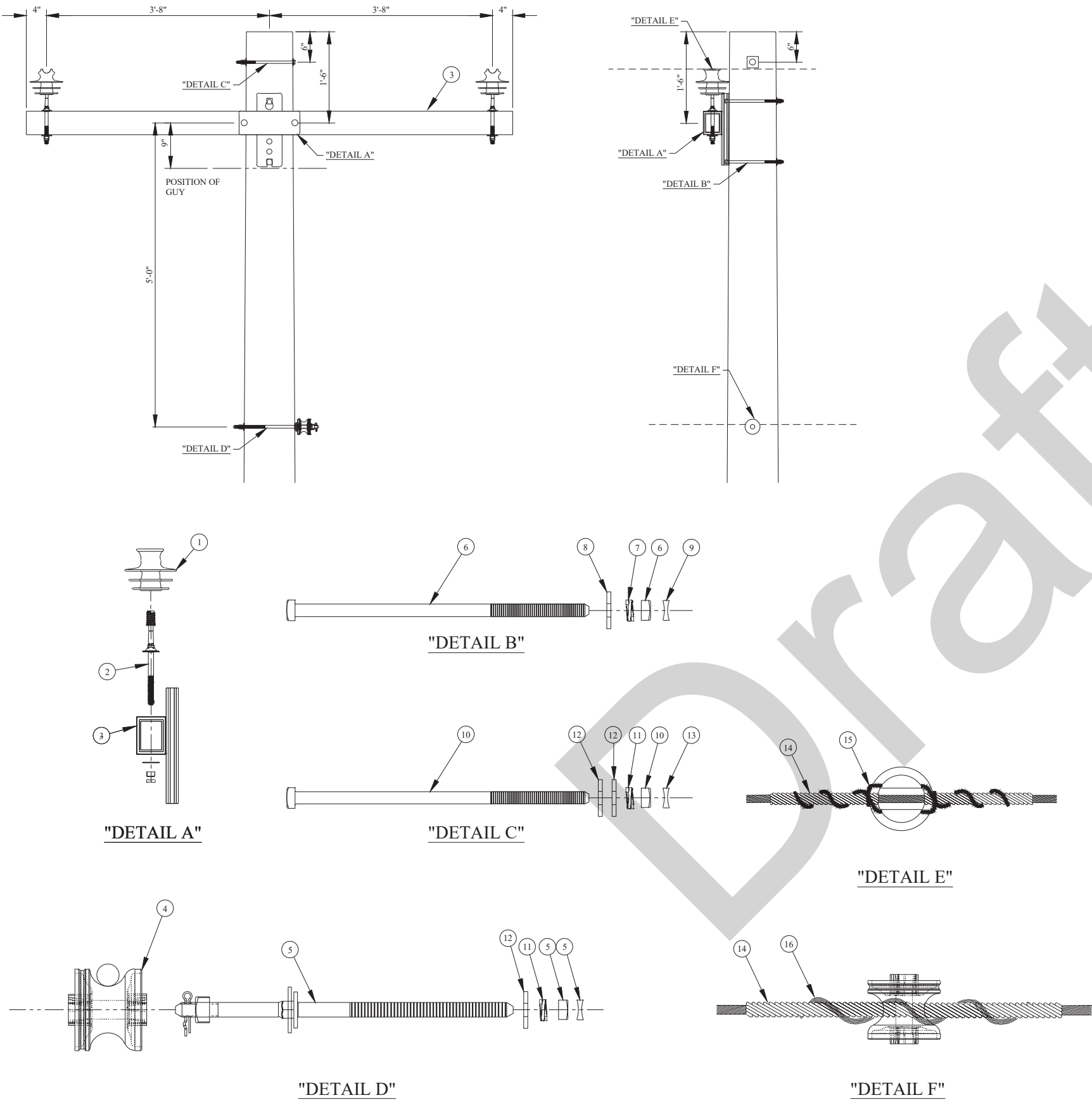
Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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Plot Date: 6/10/2021 11:32:21 AM
P:0427800DWGPOLE REPLACEMENT UNIT DRAWINGS B1.11.DWG



MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Line Pin Insulator, Polymer, F-Neck	Preformed	IP-15-F**	2
2	Pin, Crossarm, 5/8" x 6-1/2" Shank	Hubbell	881AP**	2
3	Fiberglass Crossarm, 3-5/8" x 4-5/8" x 8'-0"	PUPI	TB200009603X3**	1
4	Insulator, Spool, 3"	Hendrix	HPI-53-2**	1
5	Bolt, Single, Upset, 5/8" x Req'd Length with Nuts	Hubbell	774 _**	1
6	Bolt, Machine, 3/4" x Req'd Lenght with Nut	Hubbell	89 __**	2
7	Washer, Double Coil, 3/4" Bolt Size	Hubbell	C2050187**	2
8	Washer, Square Flat, 13/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6814**	2
9	Locknut, Type MF, 3/4" Bolt Size	Hubbell	3513**	2
10	Bolt, Machine, 5/8" x Req'd Lenght with Nut	Hubbell	88 __**	1
11	Washer, Double Coil, 5/8" Bolt Size	Hubbell	C2050186**	2
12	Washer, Square Flat, 11/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	3
13	Locknut, Type MF, 5/8" Bolt Size	Hubbell	3512**	1
14	Armor Rod (See Below Table)	Preformed	AR-0 ____	3
15	Top Tie (See Below Table)	Preformed	WTF- _____	2
16	Spool Tie (See Below Table)	Preformed	SPL- _____	1

* AS REQUIRED
** OR APPROVED EQUAL

ARMOR ROD & TIE TABLE			
CONDUCTOR	ARMOR ROD	TOP TIE	SPOOL TIE
#4 ACSR 6/1	AR-0110	WTF-0217	SPL-1358
#2 ACSR 7/1	AR-0114	WTF-0219	SPL-1359
#1/0 ACSR 6/1	AR-0118	WTF-0222	SPL-1360
#4/0 ACSR 6/1	AR-0124	WTF-0226	SPL-1362
#266 ACSR 18/1	AR-0126	WTF-0227	-
#336 ACSR 26/7	AR-0130	WTF-0229	-

*** COPPER CONDUCTORS TO BE HAND TIED WITH NO ARMOR ROD

TWO PHASE TANGENT
ON CROSSARM

REV	DATE	DESCRIPTION		Project Manager: CAR Designer: DSM Project Number: 427800 Phone: (712) 472-2531	MORA MUNICIPAL UTILITIES MORA, MINNESOTA	UNIT DRAWINGS ELECTRIC DISTRIBUTION POLE REPLACEMENTS	S H E E T	B1.11
A	6-15-2021	RELEASED FOR CONSTRUCTION						

Plot Date: 6/10/2021 11:32:24 AM
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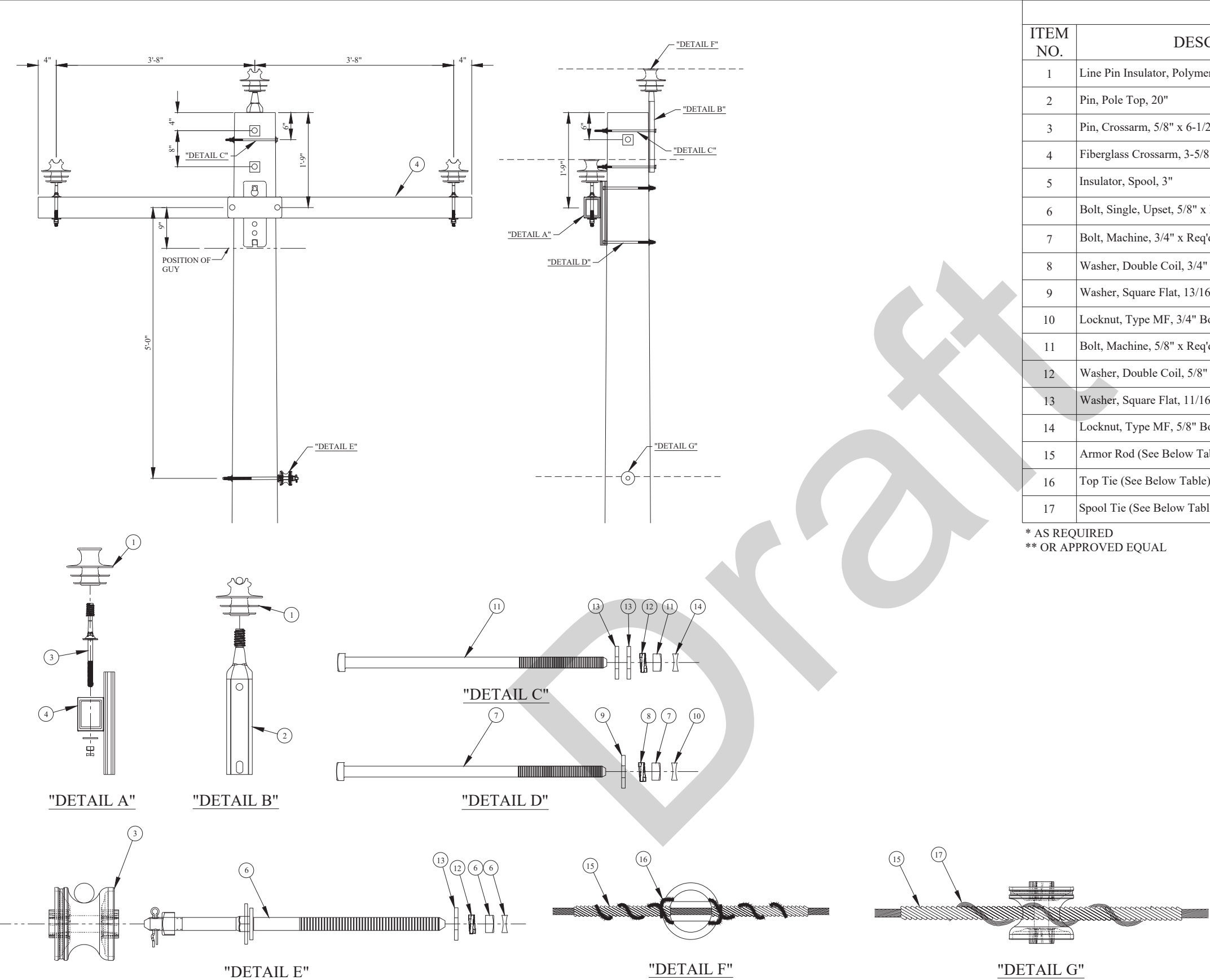
MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Line Pin Insulator, Polymer, F-Neck	Preformed	IP-15-F**	3
2	Pin, Pole Top, 20"	Hubbell	2199P**	1
3	Pin, Crossarm, 5/8" x 6-1/2" Shank	Hubbell	881AP**	2
4	Fiberglass Crossarm, 3-5/8" x 4-5/8" x 8'-0"	PUPI	TB200009603X3**	1
5	Insulator, Spool, 3"	Hendrix	HPI-53-2**	1
6	Bolt, Single, Upset, 5/8" x Req'd Length with Nuts	Hubbell	774 _**	1
7	Bolt, Machine, 3/4" x Req'd Lenght with Nut	Hubbell	89 __**	2
8	Washer, Double Coil, 3/4" Bolt Size	Hubbell	C2050187**	2
9	Washer, Square Flat, 13/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6814**	2
10	Locknut, Type MF, 3/4" Bolt Size	Hubbell	3513**	2
11	Bolt, Machine, 5/8" x Req'd Lenght with Nut	Hubbell	88 __**	3
12	Washer, Double Coil, 5/8" Bolt Size	Hubbell	C2050186**	4
13	Washer, Square Flat, 11/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	5
14	Locknut, Type MF, 5/8" Bolt Size	Hubbell	3512**	3
15	Armor Rod (See Below Table)	Preformed	AR-0 ____	4
16	Top Tie (See Below Table)	Preformed	WTF- ____	3
17	Spool Tie (See Below Table)	Preformed	SPL- ____	1

* AS REQUIRED
** OR APPROVED EQUAL

ARMOR ROD & TIE TABLE			
CONDUCTOR	ARMOR ROD	TOP TIE	SPOOL TIE
#4 ACSR 6/1	AR-0110	WTF-0217	SPL-1358
#2 ACSR 7/1	AR-0114	WTF-0219	SPL-1359
#1/0 ACSR 6/1	AR-0118	WTF-0222	SPL-1360
#4/0 ACSR 6/1	AR-0124	WTF-0226	SPL-1362
#266 ACSR 18/1	AR-0126	WTF-0227	-
#336 ACSR 26/7	AR-0130	WTF-0229	-

*** COPPER CONDUCTORS TO BE HAND TIED WITH NO ARMOR ROD

THREE PHASE TANGENT
ON CROSSARM



REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION

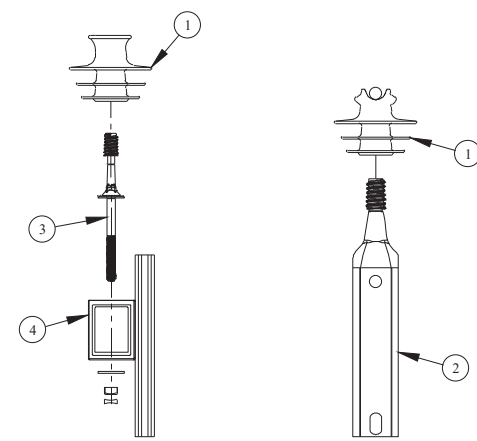
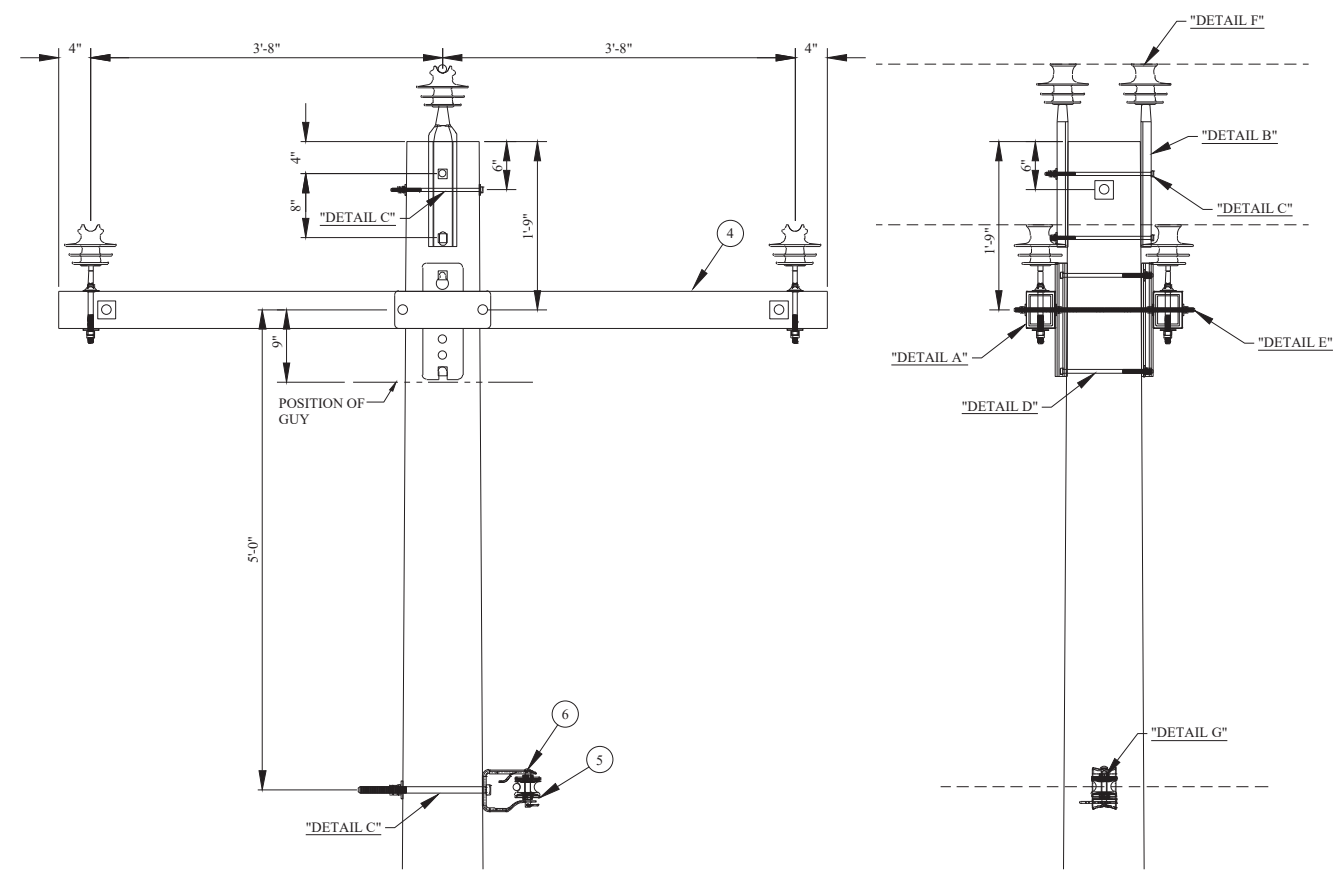


Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

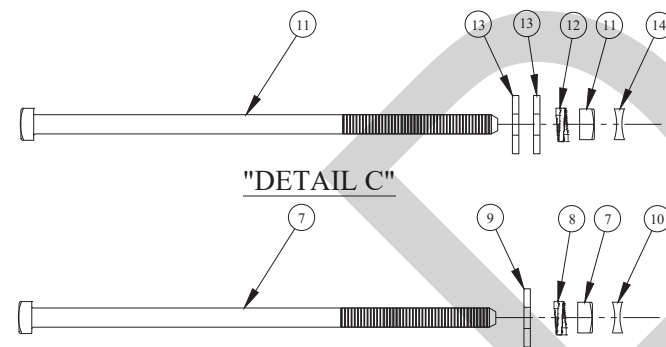
UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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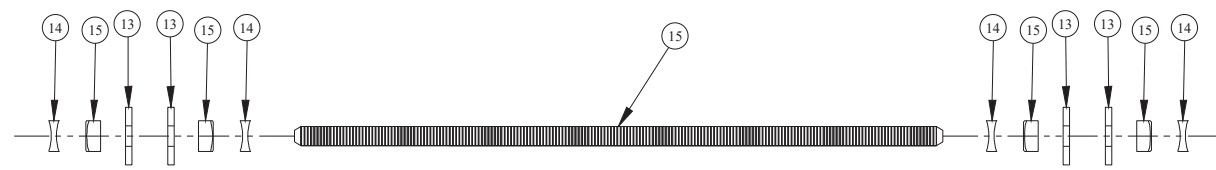
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"DETAIL B"

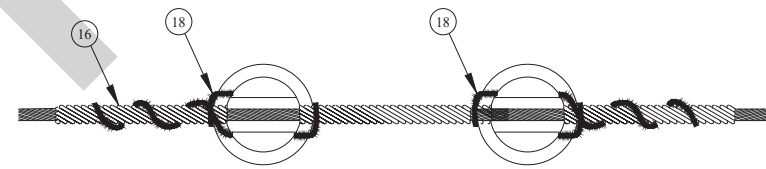


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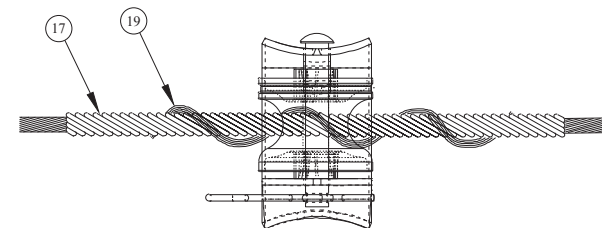
"DETAIL D"



"DETAIL E"



"DETAIL F"



"DETAIL G"

MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Line Pin Insulator, Polymer, F-Neck	Preformed	IP-15-F**	6
2	Pin, Pole Top, 20"	Hubbell	2199P**	2
3	Pin, Crossarm, 5/8" x 6-1/2" Shank	Hubbell	881AP**	4
4	Fiberglass Crossarm, 3-5/8" x 4-5/8" x 8'-0"	PUPI	TB200009603X3**	2
5	Insulator, Spool, 3"	Hendrix	HPI-53-2**	1
6	Insulator Clevis	Hubbell	SA2070177**	1
7	Bolt, Machine, 3/4" x Req'd Lenght with Nut	Hubbell	89 __ **	2
8	Washer, Double Coil, 3/4" Bolt Size	Hubbell	C2050187**	2
9	Washer, Square Flat, 13/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6814**	2
10	Locknut, Type MF, 3/4" Bolt Size	Hubbell	3513**	2
11	Bolt, Machine, 5/8" x Req'd Lenght with Nut	Hubbell	88 __ **	4
12	Washer, Double Coil, 5/8" Bolt Size	Hubbell	C2050186**	4
13	Washer, Square Flat, 11/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	9
14	Locknut, Type MF, 5/8" Bolt Size	Hubbell	3512**	4
15	Bolt, Double Arming, 5/8" x Req'd Lenght with Nuts	Hubbell	887 __ **	2
16	Armor Rod Double (See Below Table)	Preformed	AR-03 __	3
17	Armor Rod (See Below Table)	Preformed	AR-01 __	1
18	Top Tie Double (See Below Table)	Preformed	DST- _ _ _ _	3
19	Spool Tie (See Below Table)	Preformed	SPL- _ _ _ _	1

* AS REQUIRED
** OR APPROVED EQUAL

ARMOR ROD & TIE TABLE			
CONDUCTOR	ARMOR ROD	TOP TIE	SPOOL TIE
#4 ACSR 6/1	AR-0110,AR-0310	DST-0156	SPL-1358
#2 ACSR 7/1	AR-0114, AR-0314	DST-0157	SPL-1359
#1/0 ACSR 6/1	AR-0118,AR-0318	DST-0158	SPL-1360
#4/0 ACSR 6/1	AR-0124,AR-0324	DST-0160	SPL-1362
#266 ACSR 18/1	AR-0126,AR-0326	DST-0161	-
#336 ACSR 26/7	AR-0130,AR-0330	DST-0162	-

*** COPPER CONDUCTORS TO BE HAND TIED WITH NO ARMOR ROD

THREE PHASE TANGENT ON DOUBLE CROSSARM

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager:	CAR
Designer:	DSM
Project Number:	427800
Phone:	(712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

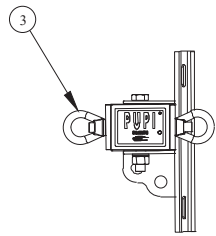
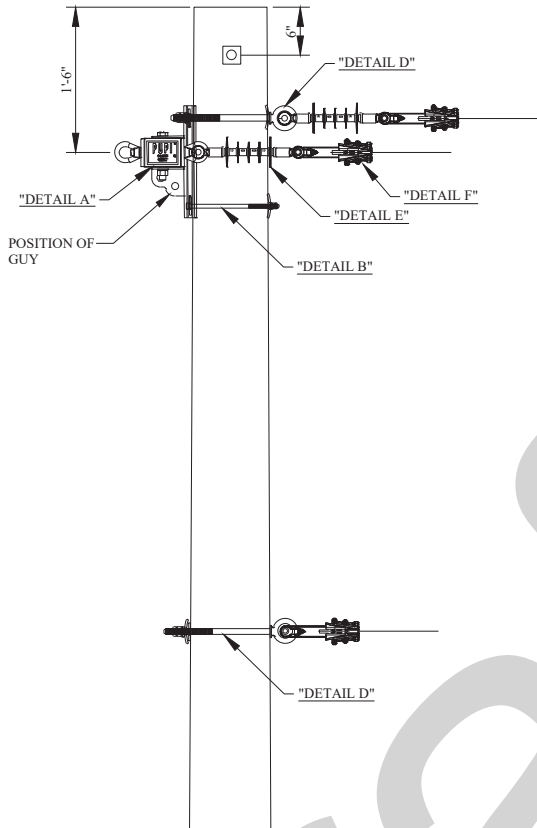
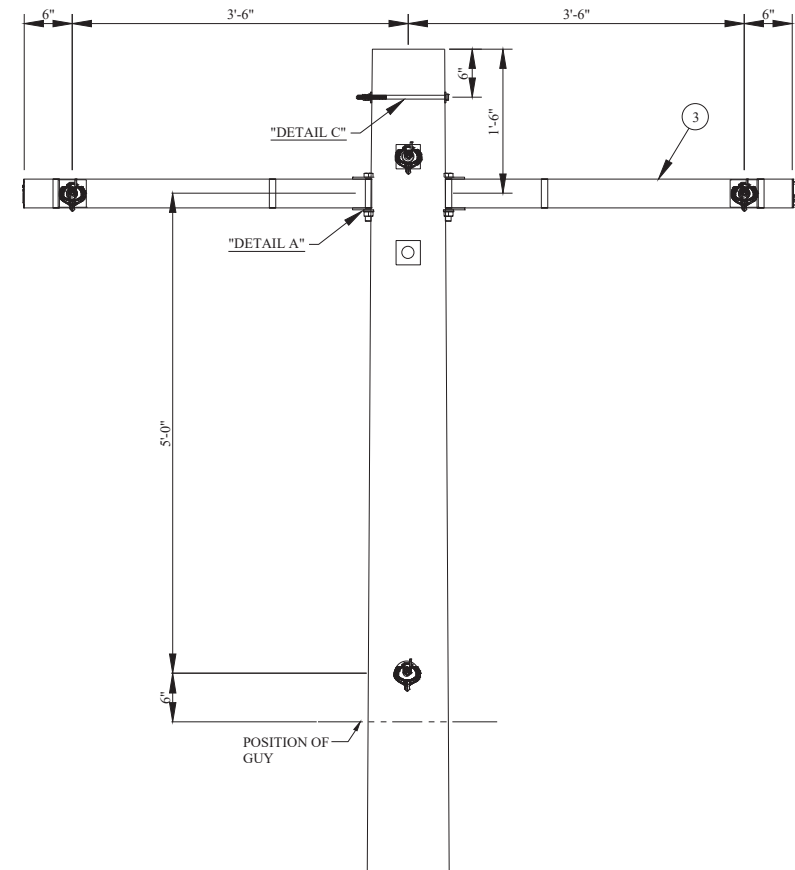
UNIT DRAWINGS

ELECTRIC DISTRIBUTION POLE REPLACEMENTS

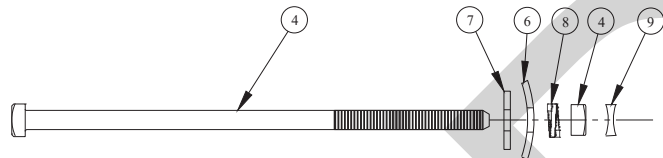
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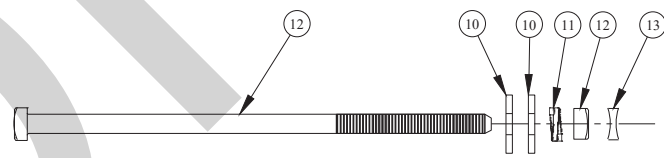
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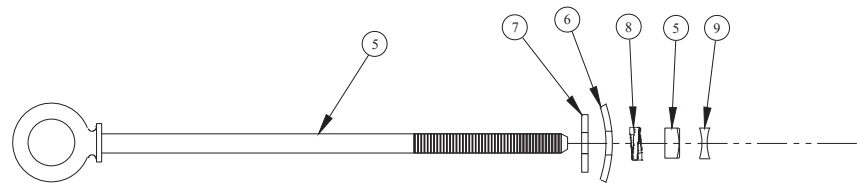
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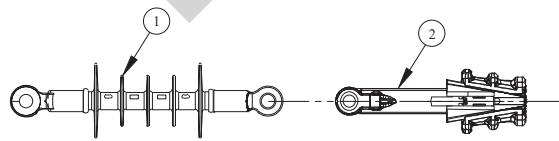
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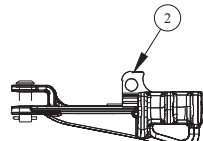
"DETAIL C"



"DETAIL D"



"DETAIL E"



"DETAIL F"

MATERIAL LIST

ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Deadend insulator, Polymer, 15 Kip	Hubbell	401015-0215**	3
2	Deadend Automatic Clamp (#4 Swan - 4/0 Penguin)	Hubbell	GDW2040**	4
3	Fiberglass Crossarm, 3-5/8" x 4-5/8" x 8'-0"	PUPI	DA3000096E2B7X3	1
4	Bolt, Machine, 3/4" x Required Length, with Nut	Hubbell	89 _ **	1
5	Bolt, Shoulder Eye, 3/4" x Required Length, with Nut	Hubbell	PSSE34 _ _ CW**	2
6	Washer, Square Curved, 13/16" Hole, 3" x 3" x 1/4"	Hubbell	682212**	3
7	Washer, Square Flat, 13/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6814**	3
8	Washer, Double Coil, 3/4"	Hubbell	C2050187**	3
9	Locknut, Type MF, 3/4"	Hubbell	3513**	3
10	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	2
11	Washer, Double Coil, 5/8"	Hubbell	C2050186**	1
12	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 _ **	1
13	Locknut, Type MF, 5/8"	Hubbell	3512**	1

* AS REQUIRED
** OR APPROVED EQUAL

THREE PHASE
DEADEND ON CROSSARM

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



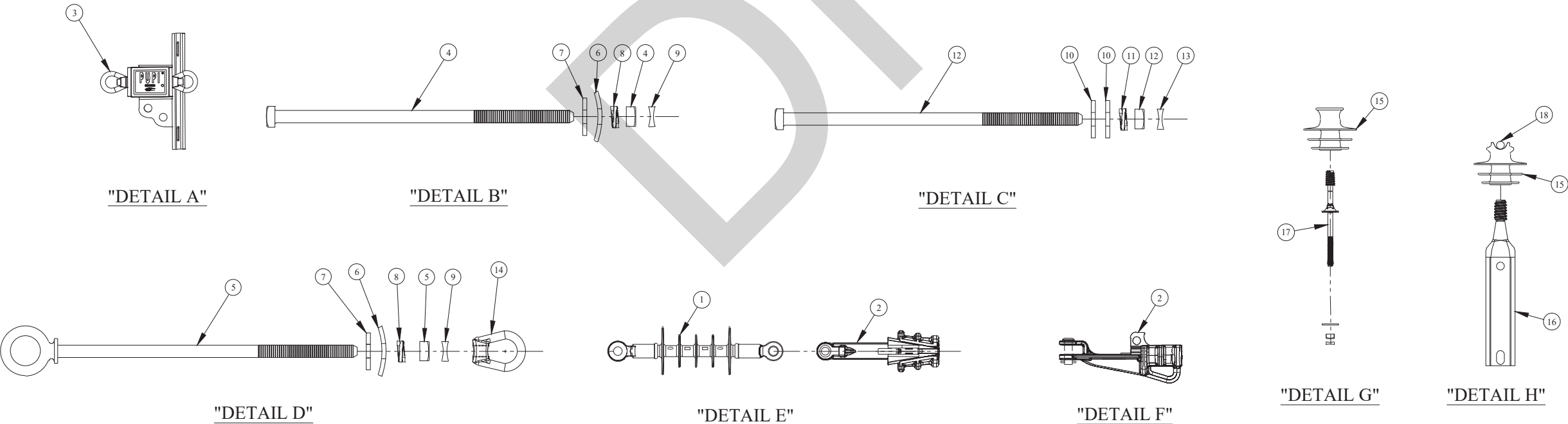
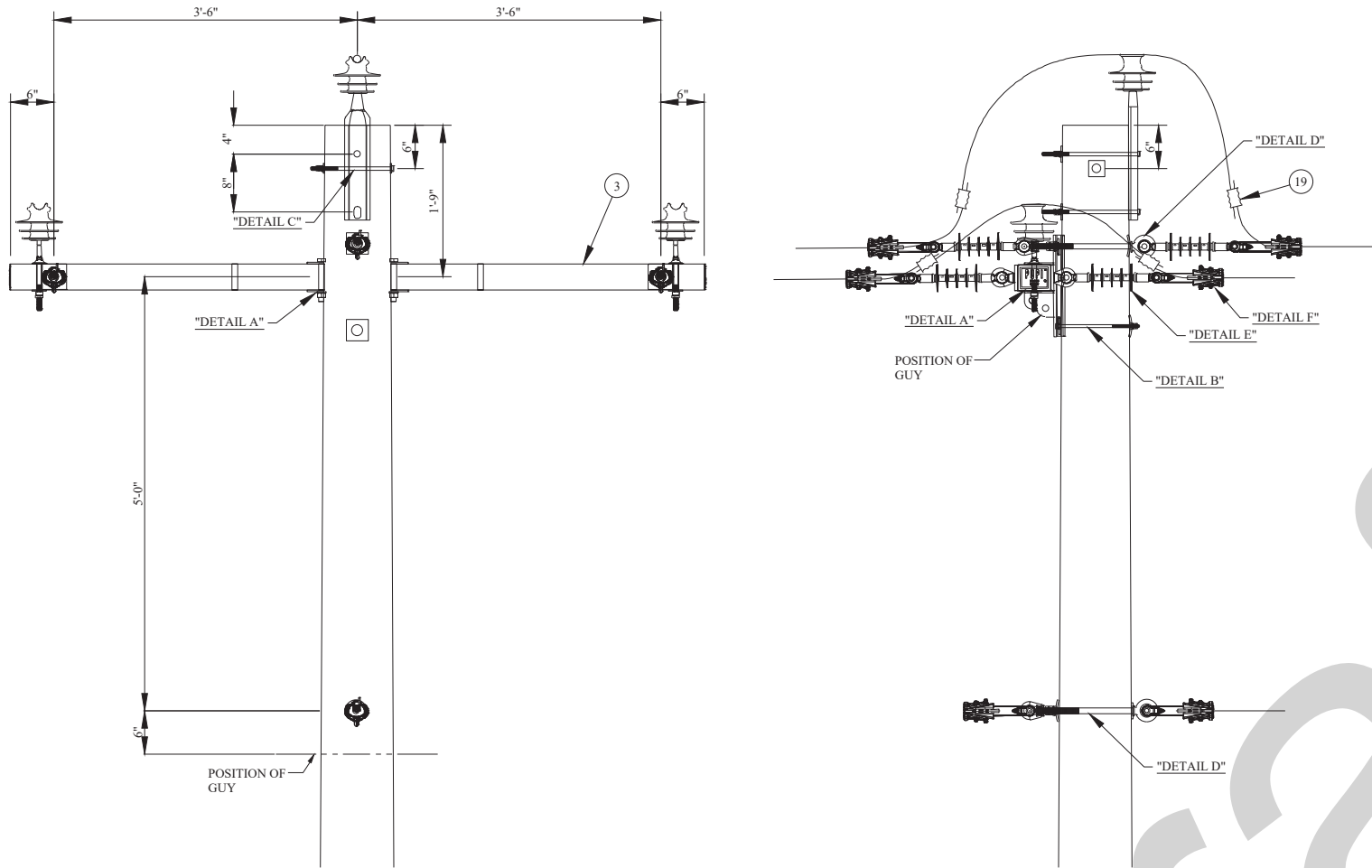
Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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Plot Date: 6/10/2021 11:32:36 AM
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MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Deadend insulator, Polymer, 15 Kip	Hubbell	401015-0215**	3
2	Deadend Automatic Clamp (#4 Swan - 4/0 Penquin)	Hubbell	GDW2040**	4
3	Fiberglass Crossarm, 3-5/8" x 4-5/8" x 8'-0"	PUPI	DA3000096E2B7X3	1
4	Bolt, Machine, 3/4" x Required Length, with Nut	Hubbell	89 __ **	1
5	Bolt, Shoulder Eye, 3/4" x Required Length, with Nut	Hubbell	PSSE34 __ CW**	2
6	Washer, Square Curved, 13/16" Hole, 3" x 3" x 1/4"	Hubbell	682212**	3
7	Washer, Square Flat, 13/16", 2-1/4" x 2-1/4" x 3/16"	Hubbell	6814**	3
8	Washer, Double Coil, 3/4"	Hubbell	C2050187**	3
9	Locknut, Type MF, 3/4"	Hubbell	3513**	3
10	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	2
11	Washer, Double Coil, 5/8"	Hubbell	C2050186**	1
12	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 __ **	1
13	Locknut, Type MF, 5/8"	Hubbell	3512**	1
14	Eye Nut, 3/4"	Hubbell	6503**	2
15	Line Pin Insulator, Polymer, F-Neck	Preformed	IP-15-F**	6
16	Pin, Pole Top, 20"	Hubbell	2199P**	2
17	Pin, Crossarm, 5/8" x 6-1/2" Shank	Hubbell	881AP**	4
18	Top Tie (See Below Table)	Preformed	WTF- ____	3
19	Compression Connector, H-Tap, AL.-AL.	Blackburn	WR __ __ **	6

* AS REQUIRED
** OR APPROVED EQUAL

TIE TABLE	
CONDUCTOR	TOP TIE
#4 ACSR 6/1	WTF-0200
#2 ACSR 7/1	WTF-0206
#1/0 ACSR 6/1	WTF-0212
#4/0 ACSR 6/1	WTF-0219
#266 ACSR 18/1	WTF-0219
#336 ACSR 26/7	WTF-0221

*** COPPER CONDUCTORS TO BE HAND TIED

THREE PHASE
DOUBLE DEADEND
ON CROSSARM

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



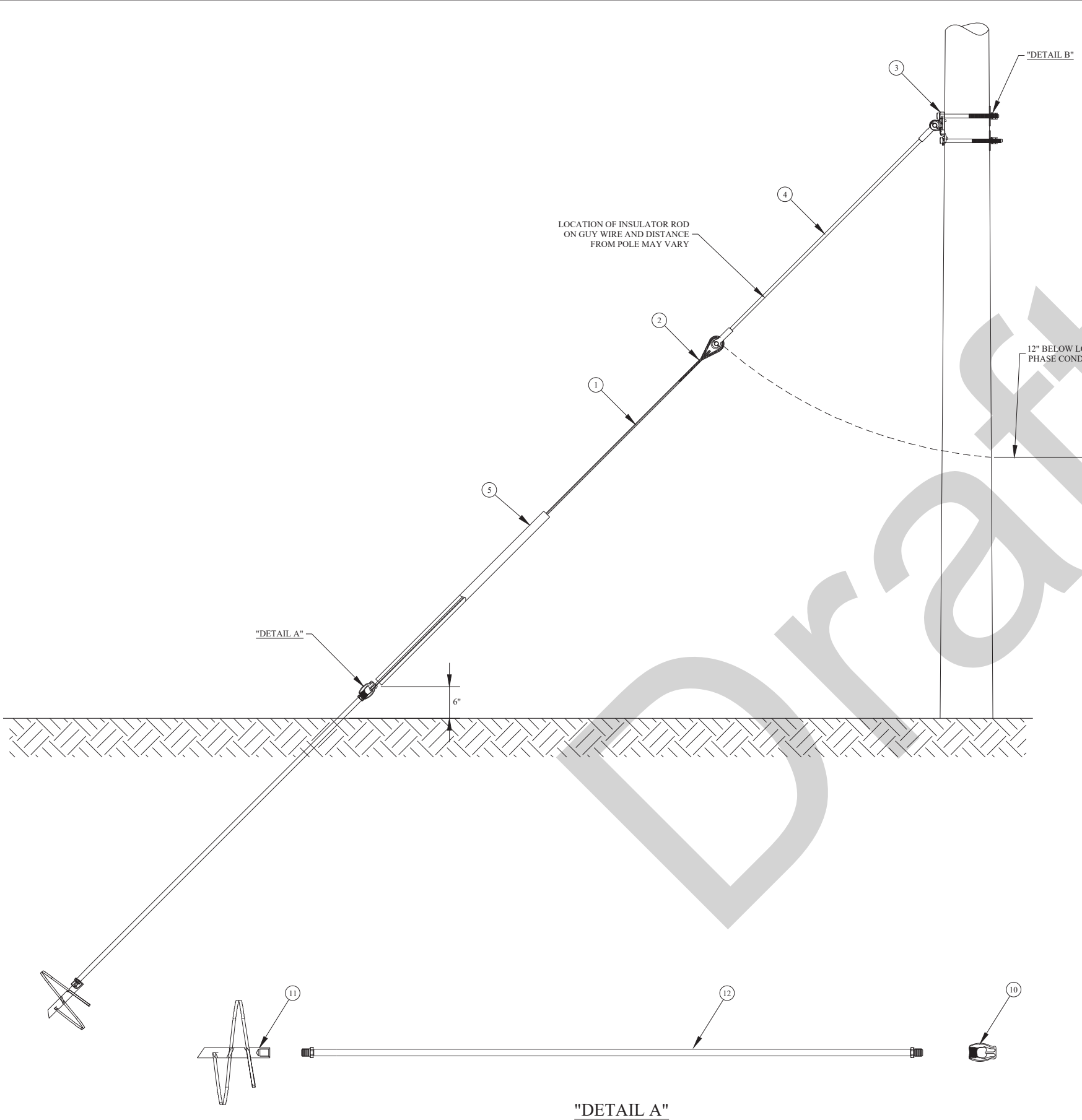
Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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P:0427800.DWG POLE REPLACEMENT UNIT DRAWINGS E1.1L, F2.10.DWG
Plot Date: 6/10/2021 11:32:40 AM



MATERIAL LIST (E1-1L)				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Wire, 3/8" High-strength Steel, Class B	National Strand	3/8 HSS **	*
2	Guy Grip, Wrap Type (3/8" HSS)	Preformed	GDE-1107	2
3	Pole Eye Plate, 21 Kip	Hubbell	GEP6**	1
4	Guy Strain Insulator, Clevis-Clevis with Roller, 21 Kip	Hubbell	GS21078CC1**	1
5	Guy Guard, 8', Plastic, Yellow	Electrical Materials Company	70-70YWOC	1
6	Bolt, Machine, 3/4" x Required Length, with Nut	Hubbell	89_ _**	2
7	Washer, Square Curved, 13/16" Hole, 4" x 4" x 3/16"	Hubbell	DF4W15**	2
8	Washer, Double Coil, 3/4"	Hubbell	C2050187**	2
9	Locknut, Type MF, 3/4"	Hubbell	3513**	2

MATERIAL LIST (F2.10)				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
10	Twin Eye Nut	Hubbell	6562**	1
11	Helix Anchor, 14"	Hubbell	024484**	1
12	Rod, Power Installed, 3/4" X 7'	Hubbell	12632P**	1

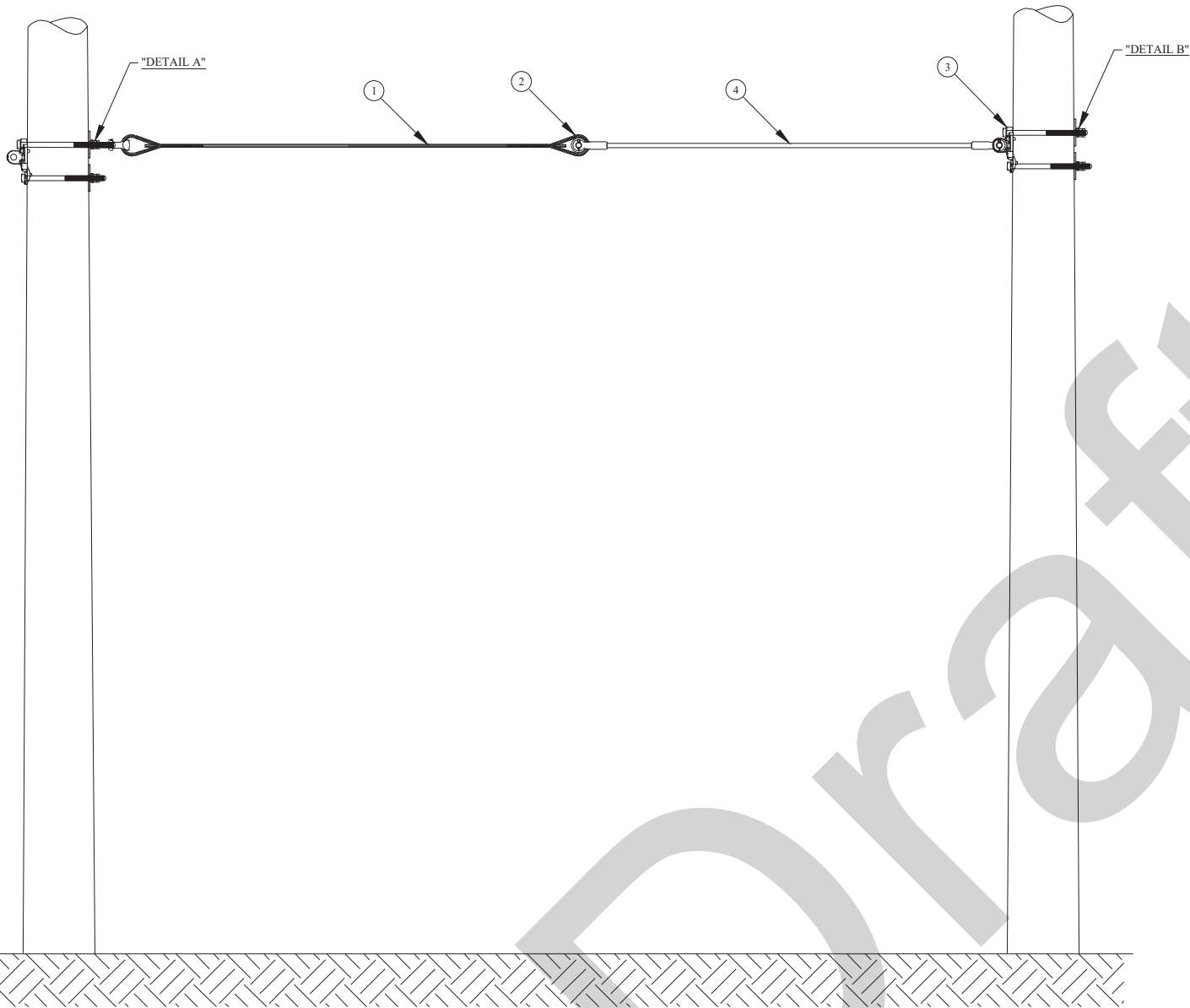
* AS REQUIRED
** OR APPROVED EQUAL

SINGLE DOWN GUY
INSULATED

REV	DATE	DESCRIPTION	<div><div>Project Manager: CAR Designer: DSM Project Number: 427800 Phone: (712) 472-2531</div></div>	MORA MUNICIPAL UTILITIES MORA, MINNESOTA	UNIT DRAWINGS ELECTRIC DISTRIBUTION POLE REPLACEMENTS		S H E E T	E1.1L F2.10
A	6-15-2021	RELEASED FOR CONSTRUCTION						

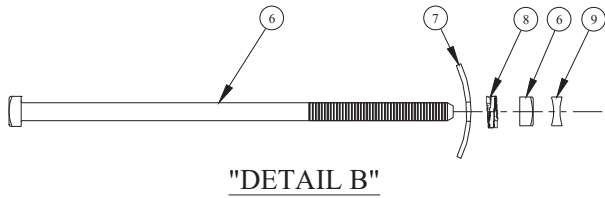
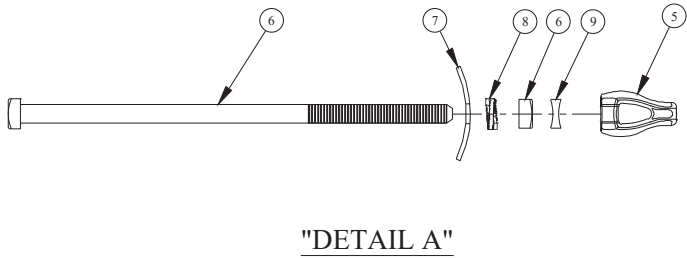
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MATERIAL LIST (E1-4L)				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Wire, 3/8" High-strength Steel, Class B	National Strand	3/8 HSS **	*
2	Guy Grip,Wrap Type (3/8" HSS)	Preformed	GDE-1107	2
3	Pole Eye Plate, 21 Kip	Hubbell	GEP6**	1
4	Guy Strain Insulator, Clevis-Clevis with Roller, 21 Kip	Hubbell	GS21078CC1**	1
5	Thimble Eye Nut	Hubbell	6511**	1
6	Bolt, Machine, 3/4" x Required Length, with Nut	Hubbell	89_ _**	2
7	Washer, Square Curved, 13/16" Hole, 4" x 4" x 3/16"	Hubbell	DF4W15**	2
8	Washer, Double Coil, 3/4"	Hubbell	C2050187**	2
9	Locknut, Type MF, 3/4"	Hubbell	3513**	2

* AS REQUIRED
** OR APPROVED EQUAL



SINGLE OVERHEAD GUY
INSULATED

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



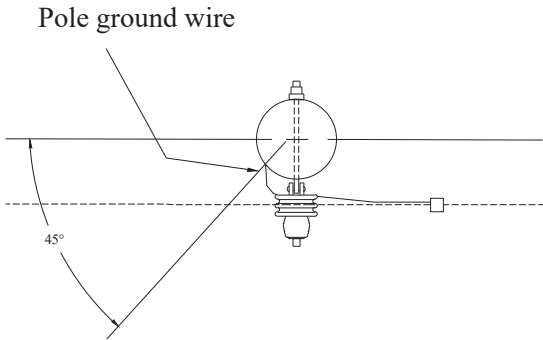
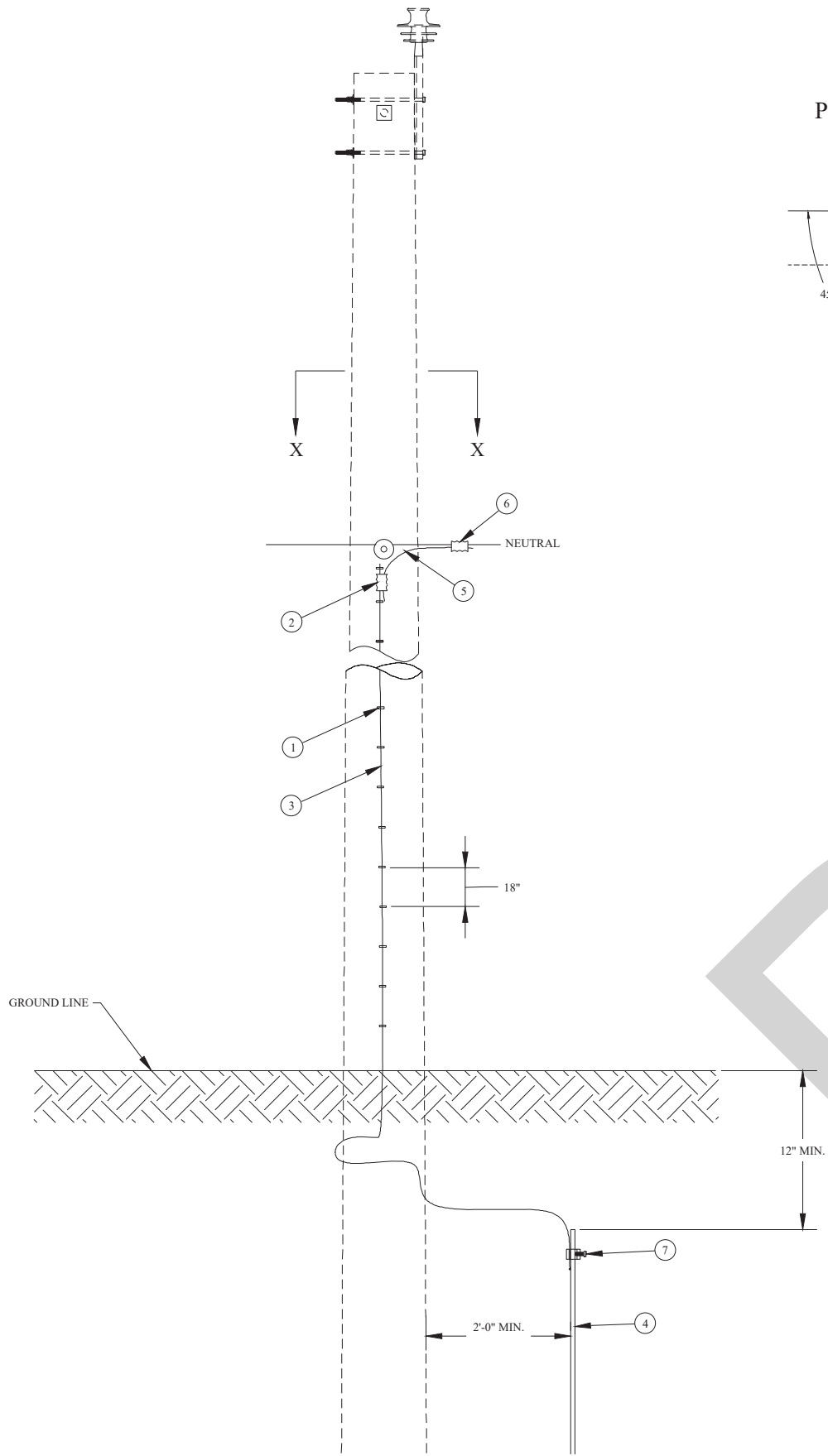
Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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P:0427800DWGPOLE REPLACEMENT UNIT DRAWINGS H1.1.DWG
Plot Date: 6/10/2021 11:32:44 AM



- NOTES:
1. Ground wire to be located on same side as neutral conductor and in quadrant opposite climbing space or pole top pin.
 2. Ground rod to be driven outside of disturbed soil.

MATERIAL LIST (TM-9)				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Staple, Diamond Point, Cu. Coated, 2" x 2-1/2"	Hubbell	9154**	*
2	Compression Connector, H-tap, Cu.-Cu.	Blackburn	CFS-22-1**	1
3	Wire, #6 Bare Copper, Soft-Annealed, Solid Drawn	Southwire	#6 CU.**	*
4	Ground Rod, Copper-Coated, 5/8" x 8'	Eritech	615833**	1
5	Wire, #4 Bare Copper, Soft-Aneald, Stranded Class B	Southwire	#4 CU.**	*
6	Compression Connector, H-tap, Al-Cu	Blackburn	WR___**	1
7	Ground Rod Clamp	Erico	CP58**	1

* AS REQUIRED
** OR APPROVED EQUAL

GROUNDING ASSEMBLY
GROUND ROD TYPE

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



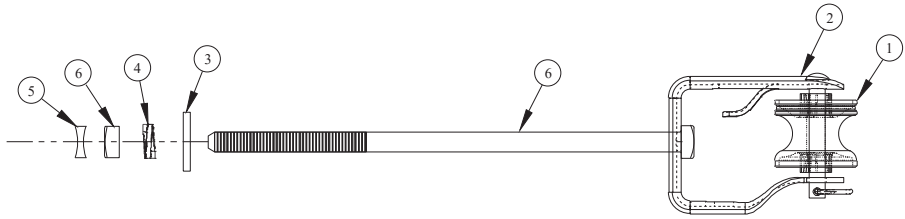
Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

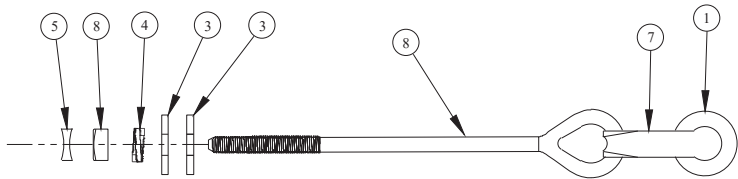
UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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P:\0427800\DWG\POLE REPLACEMENT\UNIT DRAWINGS\J2.1&J3.1.DWG Plot Date: 6/10/2021 11:32:46 AM



"DETAIL J2.1"



"DETAIL J3.1"

MATERIAL LIST (J2.1)				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Insulator, Spool, 3"	Hubbell	HPI-53-2**	1
2	Insulator Clevis	Hubbell	SA2070177**	1
3	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	2
4	Washer, Double Coil, 5/8"	Hubbell	C2050186**	1
5	Locknut, Type MF, 5/8"	Hubbell	3512**	1
6	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88_ _**	1

MATERIAL LIST (J3.1)				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Insulator, Spool, 3"	Hubbell	HPI-53-2**	1
3	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	2
4	Washer, Double Coil, 5/8"	Hubbell	C2050186**	1
5	Locknut, Type MF, 5/8"	Hubbell	3512**	1
7	Insulator Clevis, Swinging	Hubbell	0352**	1
8	Bolt, Eye, 5/8" x Required Length, with Nut	Hubbell	299_ _**	1

* AS REQUIRED
** OR APPROVED EQUAL

SECONDARY & SERVICE
ASSEMBLY

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



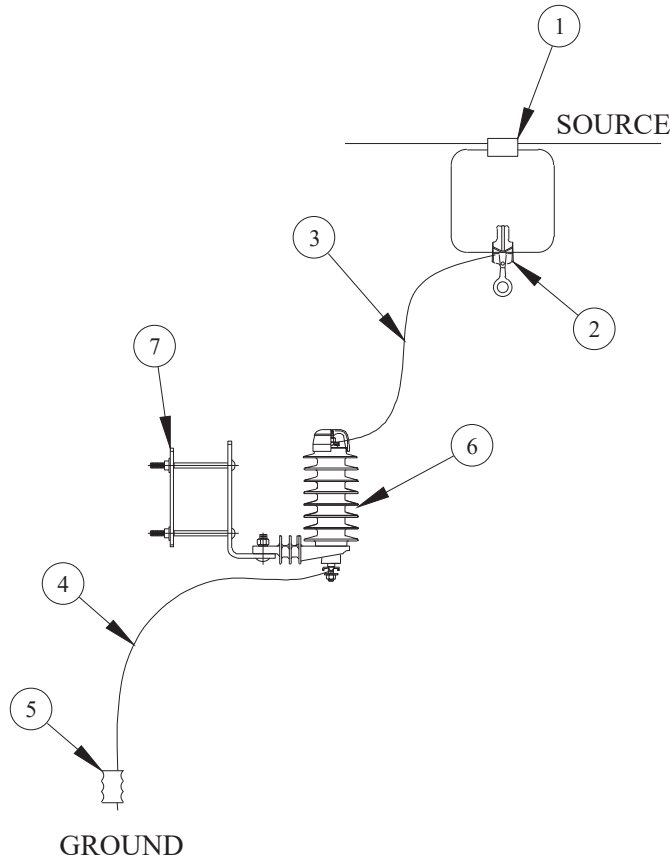
Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

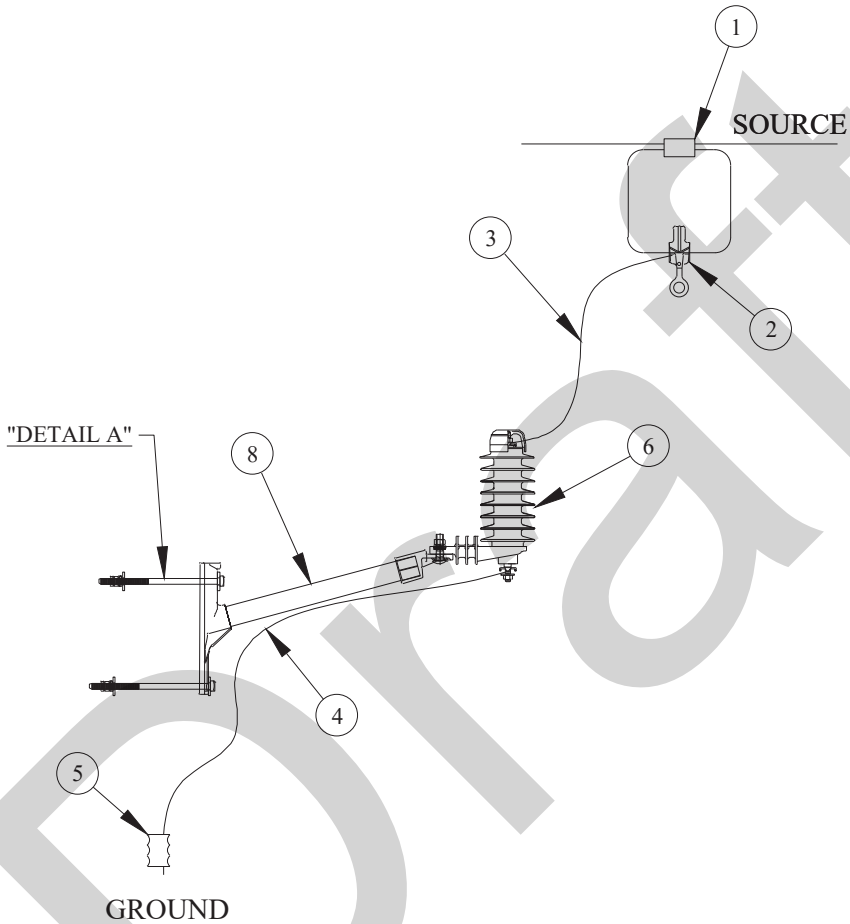
UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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P:0427800DWGPOLE REPLACEMENTUNIT DRAWINGS(P1.01,P1.1).DWG Plot Date: 6/10/2021 11:32:50 AM



"P1.01"

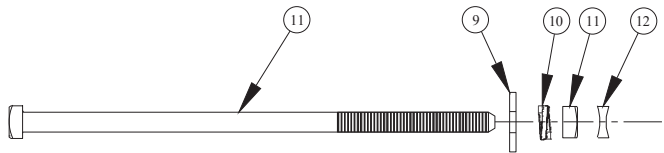


"P1.1"

MATERIAL LIST (P1.01)				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Hot Line Stirrup, Compression Type	Blackburn	WRQ _ _ _ **	1
2	Hot Line Clamp	Hubbell	BC20**	1
3	Jumper Wire, Covered #4 Cu.	Hendrix	TAP04CUSTR	*
4	Wire, #4 Bare Copper, Soft-Aneald, Stranded Class B	Southwire	#4 CU.**	*
5	Compression Connector, H-tap, Cu.-Cu.	Blackburn	CFS-22-1**	1
6	Arrester, Heavy Duty	Hubbell	213 _ _ _ **	1
7	Standard Crossarm Mounting Bracket "NEMA B"	Hubbell	C2060283**	1

MATERIAL LIST (P1.1)				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Hot Line Stirrup, Compression Type	Blackburn	WRQ _ _ _ **	1
2	Hot Line Clamp	Hubbell	BC20**	1
3	Jumper Wire, Covered #4 Cu.	Hendrix	TAP04CUSTR	*
4	Wire, #4 Bare Copper, Soft-Aneald, Stranded Class B	Southwire	#4 CU.**	*
5	Compression Connector, H-tap, Cu.-Cu.	Blackburn	CFS-22-1**	1
6	Arrester, Heavy Duty	Hubbell	213 _ _ _ **	1
8	Fiberglass Stand-Off Bracket, Single Position	Hubbell	1SBM18AMB**	1
9	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	2
10	Washer, Double Coil, 5/8"	Hubbell	C2050186**	2
11	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 _ _ **	2
12	Locknut, Type MF, 5/8"	Hubbell	3512**	2

* AS REQUIRED
** OR APPROVED EQUAL



"DETAIL A"

ARRESTER - SINGLE PHASE
CROSSARM OR BRACKET

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



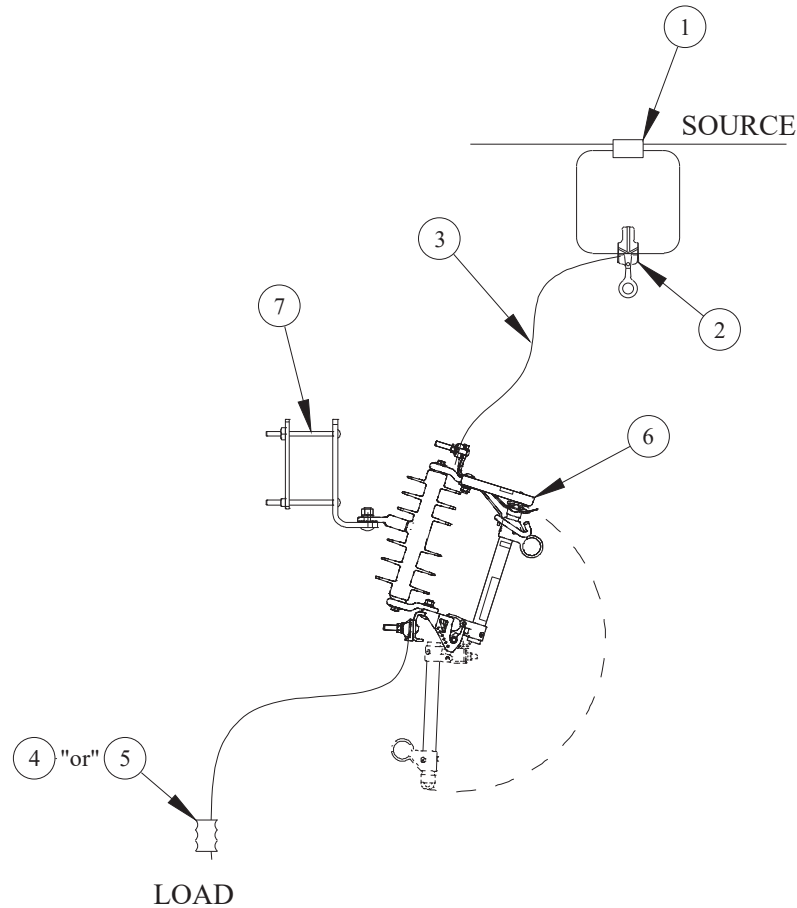
Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

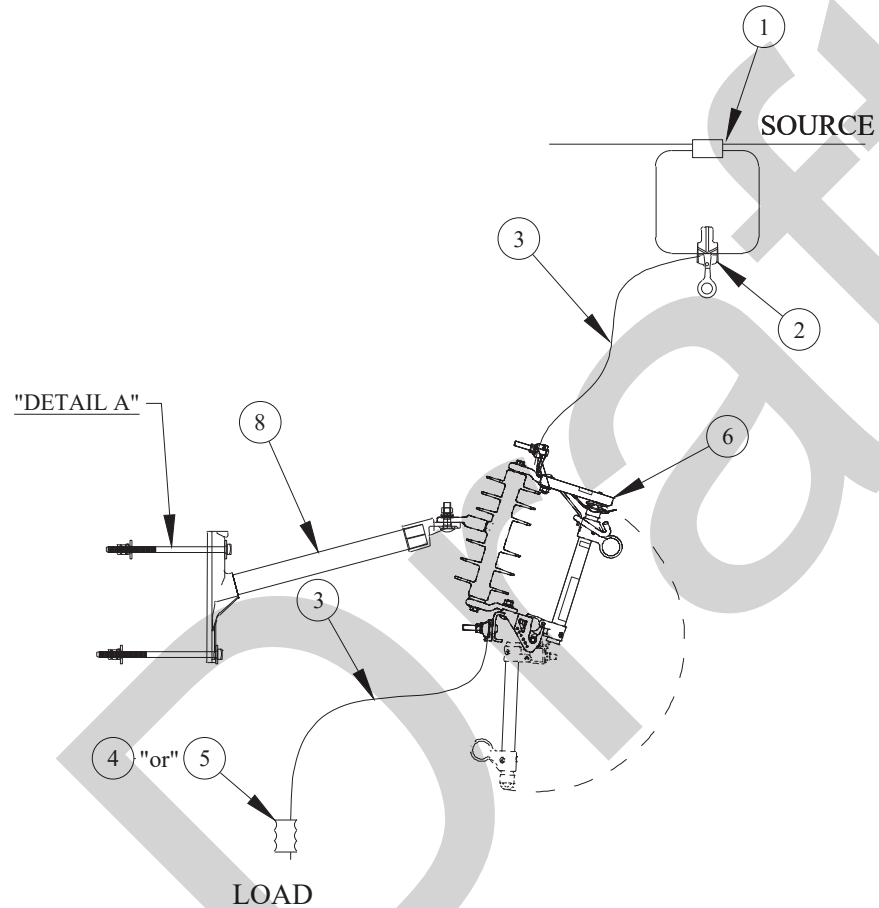
UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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P1.01
P1.1



"S1.01"

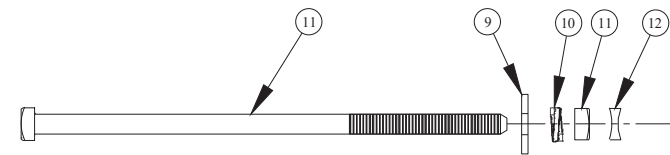


"S1.1"

MATERIAL LIST (S1.01)				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Hot Line Stirrup, Compression Type	Blackburn	WRQ ___ **	1
2	Hot Line Clamp	Hubbell	BC20**	1
3	Jumper Wire, Covered #4 Cu.	Hendrix	TAP04CUSTR	*
4	Compression Connector, H-Tap, Al.-Cu.	Blackburn	WR ___ **	1
5	Compression Connector, H-tap, Cu.-Cu.	Blackburn	CF ___ **	1
6	Cutout, 15 kV, 110 kV BIL, 100 Amp	Hubbell	CP710112P**	1
7	Standard Crossarm Mounting Bracket "NEMA B"	Hubbell	C2060283**	1

MATERIAL LIST (S1.1)				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Hot Line Stirrup, Compression Type	Blackburn	WRQ ___ **	1
2	Hot Line Clamp	Hubbell	BC20**	1
3	Jumper Wire, Covered #4 Cu.	Hendrix	TAP04CUSTR	*
4	Compression Connector, H-Tap, Al.-Cu.	Blackburn	WR ___ **	1
5	Compression Connector, H-tap, Cu.-Cu.	Blackburn	CF ___ **	1
6	Cutout, 15 kV, 110 kV BIL, 100 Amp	Hubbell	CP710112P**	1
8	Fiberglass Stand-Off Bracket, Single Position	Hubbell	1SBM18AMB**	1
9	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	2
10	Washer, Double Coil, 5/8"	Hubbell	C2050186**	2
11	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 ___ **	2
12	Locknut, Type MF, 5/8"	Hubbell	3512**	2

* AS REQUIRED
** OR APPROVED EQUAL



"DETAIL A"

CUTOUT - SINGLE PHASE
CROSSARM OR BRACKET

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

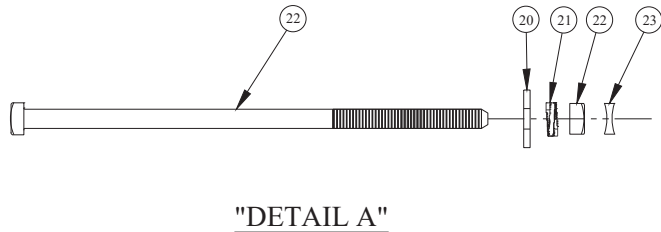
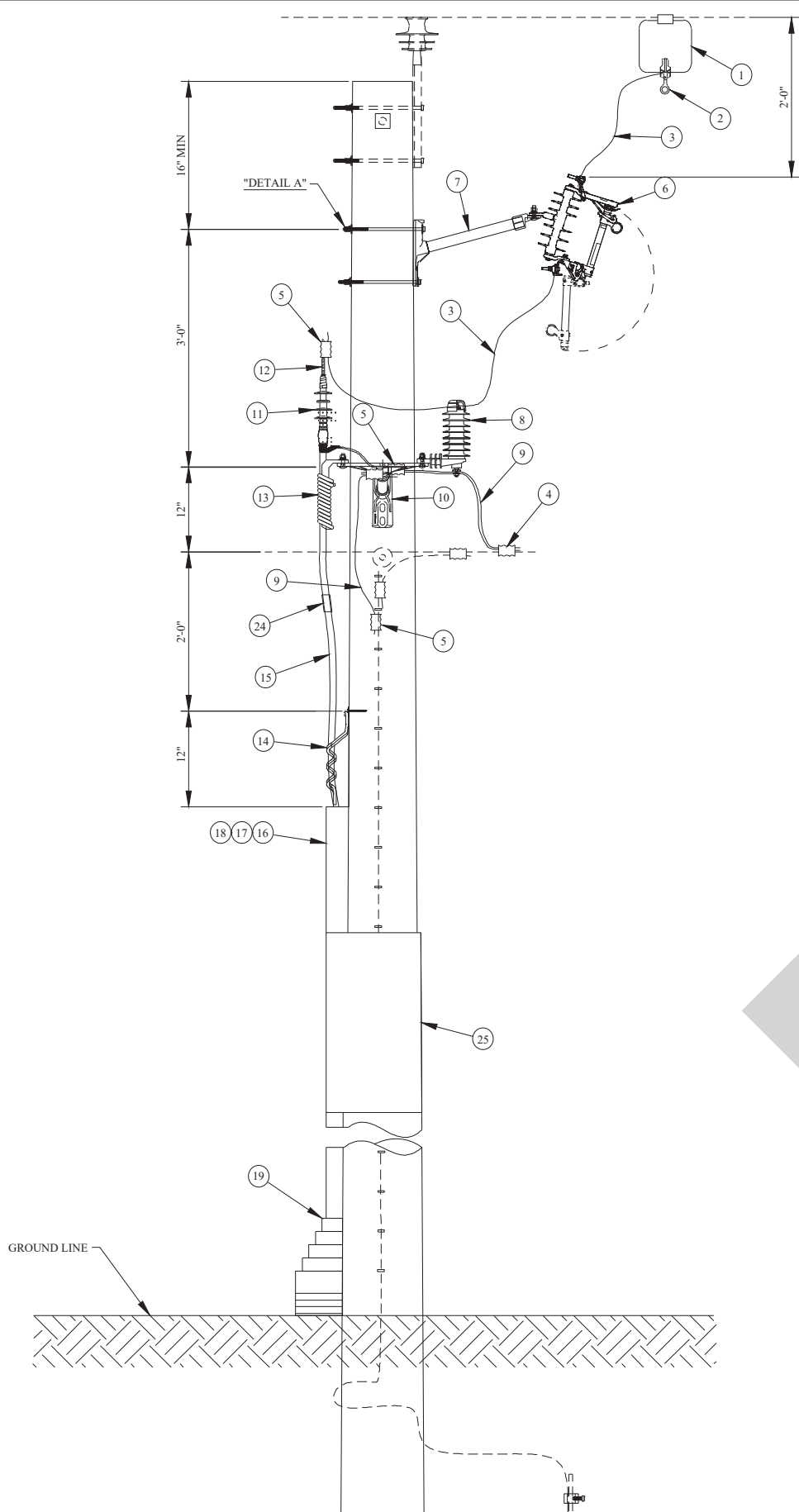
MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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P:0427800DWGPOLE REPLACEMENT UNIT DRAWINGS/UA1.DWG Plot Date: 6/10/2021 11:32:55 AM



MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Hot Line Stirrup, Compression Type	Blackburn	WRQ ___ **	1
2	Hot Line Clamp	Hubbell	BC20**	1
3	Jumper Wire, Covered #4 Cu.	Hendrix	TAP04CUSTR**	*
4	Compression Connector, H-Tap, Al.-Cu.	Blackburn	WR ___ **	1
5	Compression Connector, H-tap, Cu.-Cu.	Blackburn	CF ___ **	3
6	Cutout, 15 kV, 110 kV BIL, 100 Amp	Hubbell	CP710112P**	1
7	Fiberglass Stand-Off Bracket, Single Position	Hubbell	1SBM18AMB**	1
8	Arrester, Riser Duty	Hubbell	221 ___ **	1
9	Wire, #2 Bare Copper, Soft-Aneald, Stranded Class B	Southwire	#2 CU.**	*
10	Fiberglass Stand-Off Bracket, Double Position	Hubbell	1SBM18AMSB**	1
11	Cable Terminator, Outdoor 4-skirt, (#2 - 4/0 AL.)	3M	7652-S-4**	1
12	Stem Connector, 1/0 AL. Solid	3M	SC0001**	1
13	Cable Support at Bracket	Hubbell	CCS820CE**	1
14	Cable Support at Pole with 4-1/2" x 1/2" Lag Scerw	Hubbell	GJ8558**	1
15	Primary Power Cable to Bottom of Trench	-	-	*
16	Riser U-guard 2", High Impact Plastic, 10 Ft.	Hubbell	PSC2030548**	*
17	Riser Back Plate 2", High Impact Plastic, 10 Ft.	Hubbell	PSC2030560**	*
18	Lag Screw, 2" x 1/4"	Hubbell	PSC2050504**	*
19	U-guard Adapter, 2" - 6" Plastic	Electric Materials Company	PEAD2-6P**	1
20	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	4
21	Washer, Double Coil, 5/8"	Hubbell	C2050186**	4
22	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 ___ **	4
23	Locknut, Type MF, 5/8"	Hubbell	3512**	4
24	Cable Tape, Red, White or Blue	3M (Scotch)	35- ___	*
25	Pole Wrap, 30" x Required Length	Reliaguard	RW- ___ **	*

* AS REQUIRED
** OR APPROVED EQUAL

SINGLE PHASE
PRIMARY RISER
FUSED

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR

Designer: DSM

Project Number: 427800

Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES

MORA, MINNESOTA

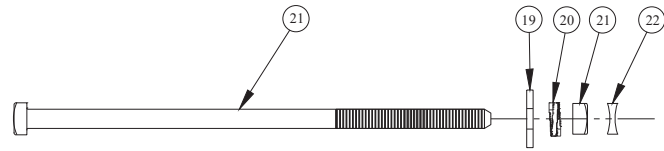
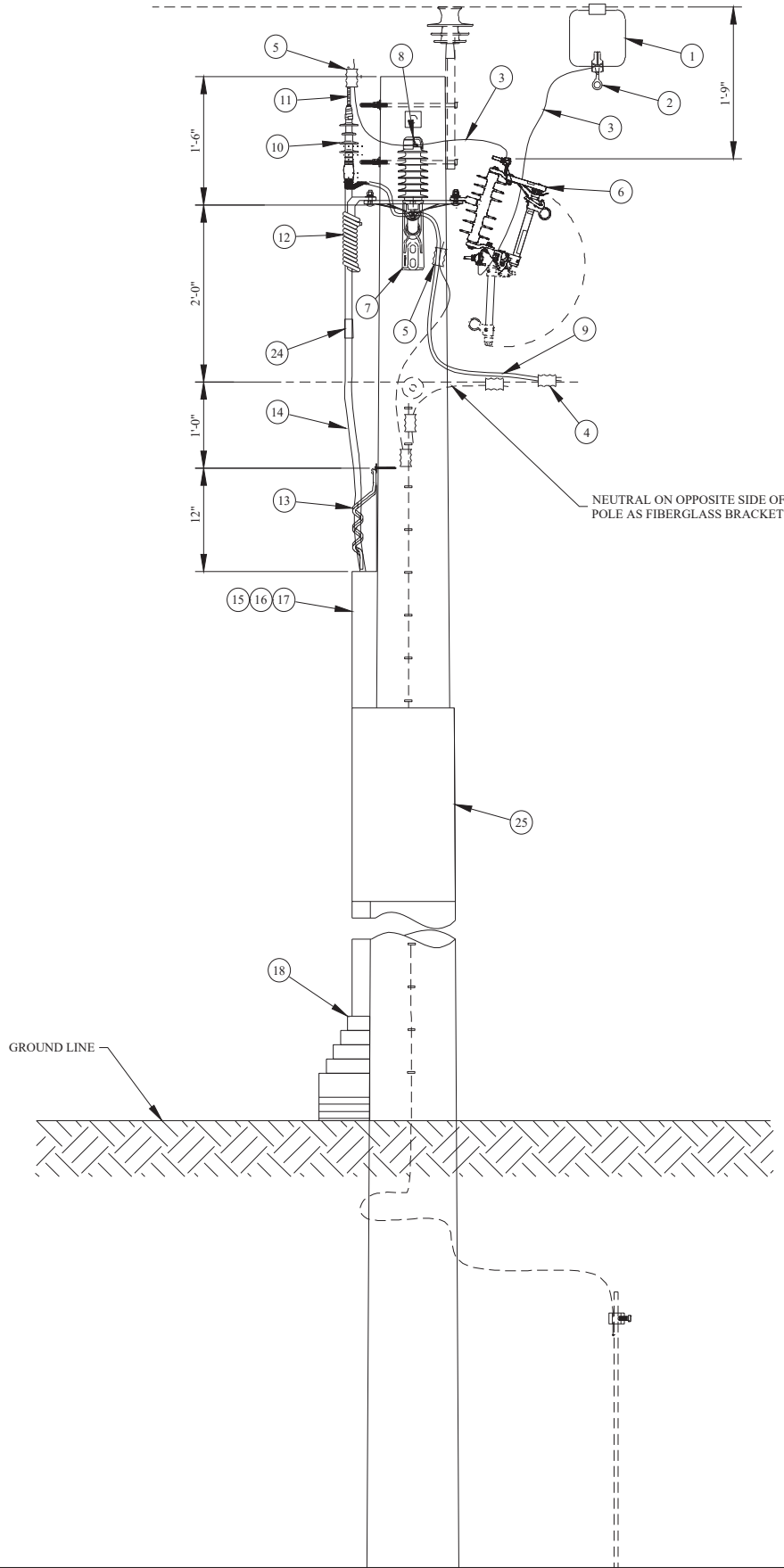
UNIT DRAWINGS

ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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P:0427800DWG POLE REPLACEMENT UNIT DRAWINGS UA2.DWG
Plot Date: 6/10/2021 11:32:58 AM



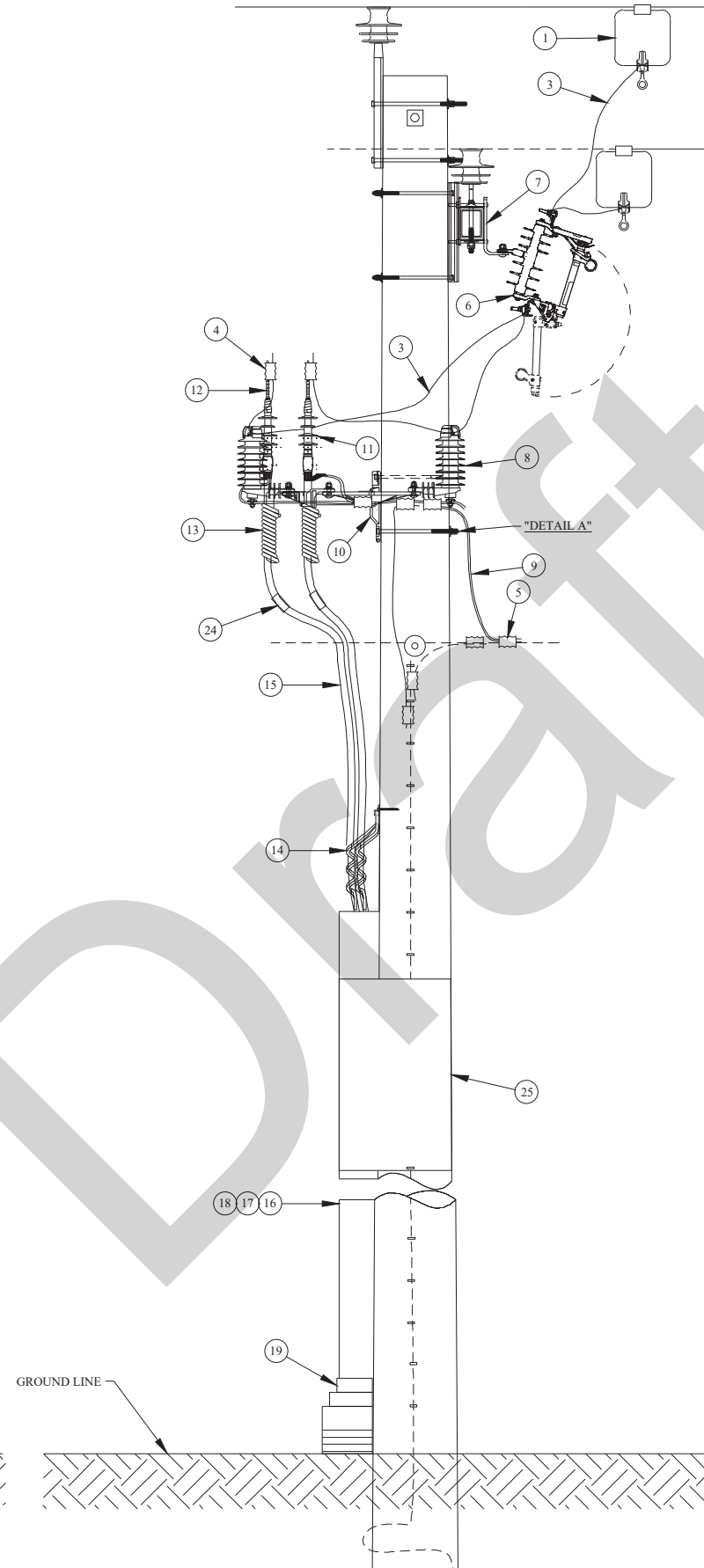
"DETAIL A"

MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Hot Line Stirrup, Compression Type	Blackburn	WRQ ___ **	1
2	Hot Line Clamp	Hubbell	BC20**	1
3	Jumper Wire, Covered #4 Cu.	Hendrix	TAP04CUSTR**	*
4	Compression Connector, H-Tap, Al.-Cu.	Blackburn	WR ___ **	1
5	Compression Connector, H-tap, Cu.-Cu.	Blackburn	CF ___ **	3
6	Cutout, 15 kV, 110 kV BIL, 100 Amp	Hubbell	CP710112P**	1
7	Fiberglass Stand-Off Bracket, Double Position	Hubbell	1SBM18AMSB**	1
8	Arrester, Riser Duty	Hubbell	221 ___ **	1
9	Wire, #2 Bare Copper, Soft-Aneald, Stranded Class B	Southwire	#2 CU.**	*
10	Cable Terminator, Outdoor 4-skirt, (#2 - 4/0 AL.)	3M	7652-S-4**	1
11	Stem Connector, 1/0 AL. Solid	3M	SC0001**	1
12	Cable Support at Bracket	Hubbell	CCS820CE**	1
13	Cable Support at Pole with 4-1/2" x 1/2" Lag Scerw	Hubbell	GJ8558**	1
14	Primary Power Cable to Bottom of Trench	-	-	*
15	Riser U-guard 2", High Impact Plastic, 10 Ft.	Hubbell	PSC2030548**	*
16	Riser Back Plate 2", High Impact Plastic, 10 Ft.	Hubbell	PSC2030560**	*
17	Lag Screw, 2" x 1/4"	Hubbell	PSC2050504**	*
18	U-guard Adapter, 2" - 6" Plastic	Electric Materials Company	PEAD2-6P**	1
19	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	4
20	Washer, Double Coil, 5/8"	Hubbell	C2050186**	4
21	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 ___ **	4
22	Locknut, Type MF, 5/8"	Hubbell	3512**	4
24	Cable Tape, Red, White or Blue	3M (Scotch)	35- ____	*
25	Pole Wrap, 30" x Required Length	Reliaguard	RW- ____ **	*

* AS REQUIRED
** OR APPROVED EQUAL

SINGLE PHASE
PRIMARY RISER
FUSED

REV	DATE	DESCRIPTION		Project Manager: CAR	MORA MUNICIPAL UTILITIES MORA, MINNESOTA	UNIT DRAWINGS ELECTRIC DISTRIBUTION POLE REPLACEMENTS	S H E E T	UA2
A	6-15-2021	RELEASED FOR CONSTRUCTION		Designer: DSM				
				Project Number: 427800				
				Phone: (712) 472-2531				



* AS REQUIRED
** OR APPROVED EQUAL



THREE PHASE PRIMARY RISER FUSED



DGR
ENGINEERING

Project Manager:	CAR
Designer:	DSM
Project Number:	427800
Phone:	(712) 472-2531

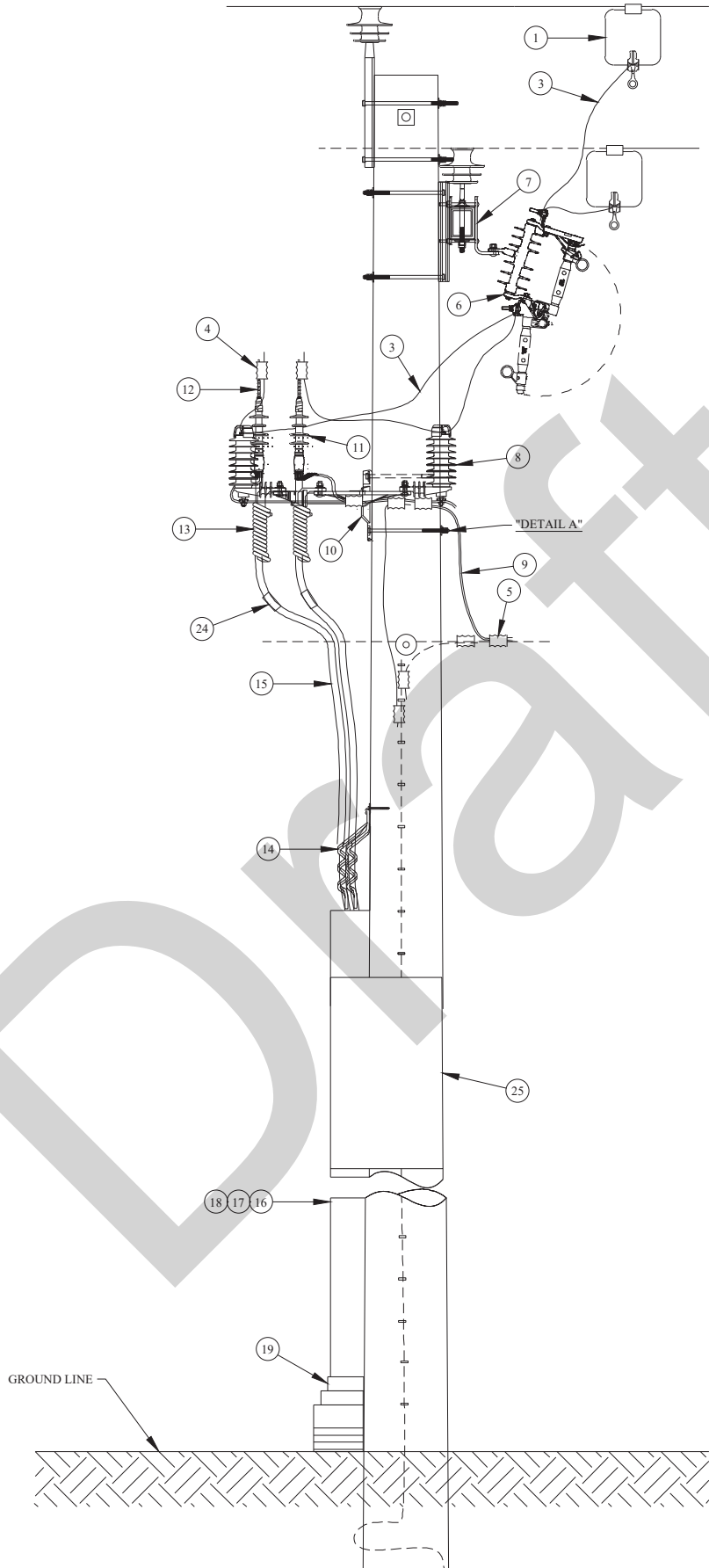
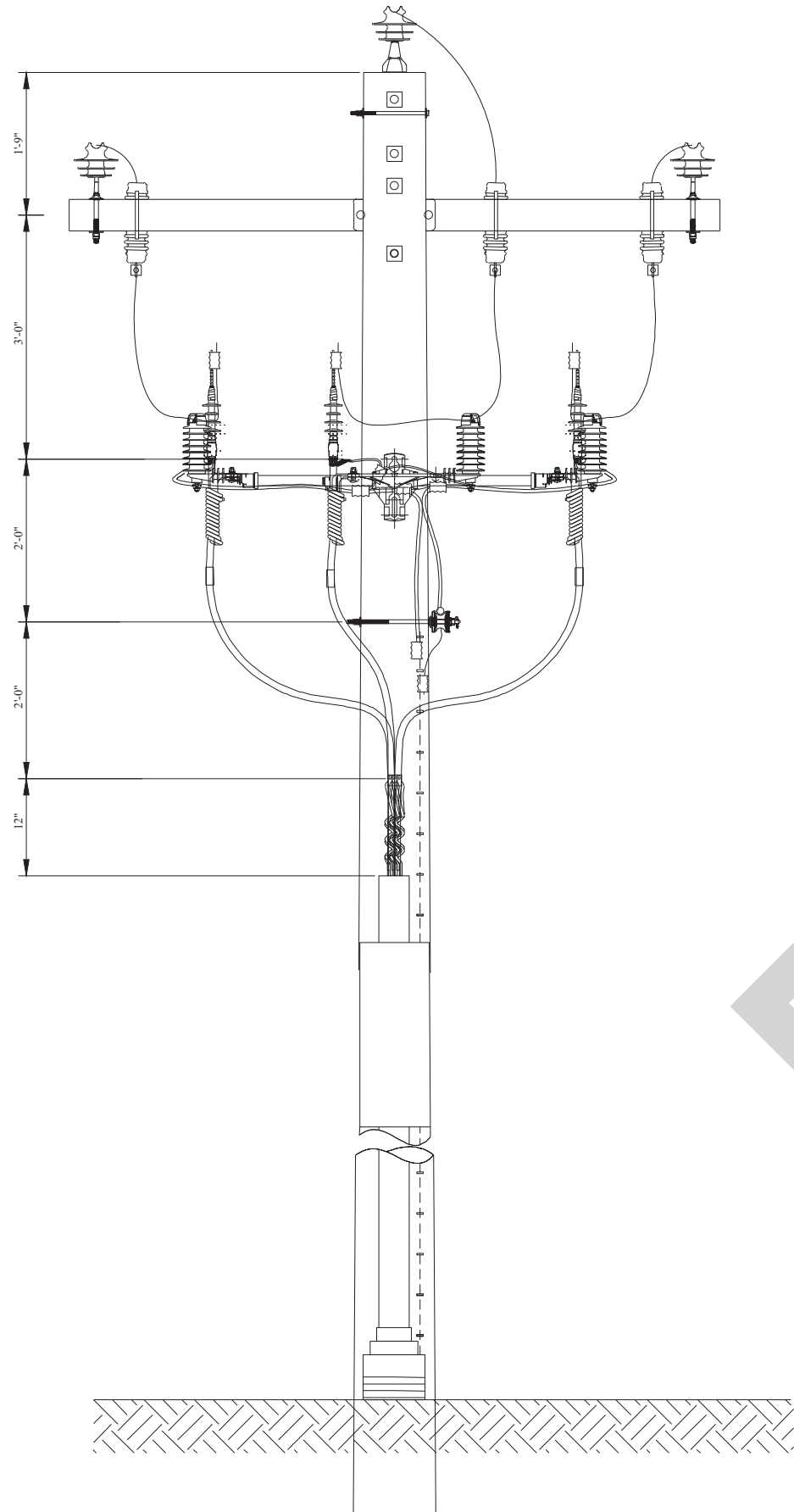
MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS

ELECTRIC DISTRIBUTION POLE REPLACEMENTS

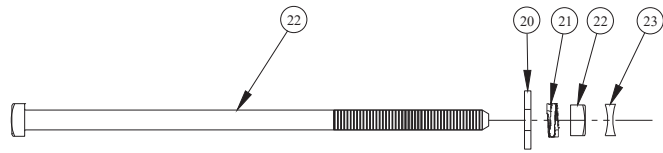
S H E E T	UC1
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P:0427800DWGPOLE REPLACEMENT UNIT DRAWINGS UC2.DWG
Plot Date: 6/10/2021 11:39:38 AM



MATERIAL LIST				
ITEM NO.	DESCRIPTION	MANUF.	CAT. NO.	QTY
1	Hot Line Stirrup, Compression Type	Blackburn	WRQ ___ **	3
2	Hot Line Clamp	Hubbell	BC20**	3
3	Jumper Wire, Covered #2 Cu.	Hendrix	TAP02CUSTR**	*
4	Compression Connector, H-Tap, Al.-Cu.	Blackburn	WR ___ **	1
5	Compression Connector, H-tap, Cu.-Cu.	Blackburn	CF ___ **	10
6	Cutout, 15 kV, 110 kV BIL, 300 Amp	Hubbell	CP710133P**	3
7	Standard Crossarm Mounting Bracket "NEMA B"	Hubbell	C2060283**	3
8	Arrester, Riser Duty	Hubbell	221 ___ **	1
9	Wire, #2 Bare Copper, Soft-Aneald, Stranded Class B	Southwire	#2 CU.**	*
10	Fiberglass Stand-Off Bracket, Three Phase, Double Position	Hubbell	3SBM4813CTB**	1
11	Cable Terminator, Outdoor 4-skirt, (#2 - 4/0 AL.)	3M	7652-S-4**	3
12	Stem Connector, 4/0 AL. Stranded	3M	SC0040**	3
13	Cable Support at Bracket	Hubbell	CCS820CE**	3
14	Cable Support at Pole with 4-1/2" x 1/2" Lag Scerw	Hubbell	GJ8558**	3
15	Primary Power Cable to Bottom of Trench	-	-	*
16	Riser U-guard 4", High Impact Plastic, 10 Ft.	Hubbell	PSC2030552**	*
17	Riser Back Plate 4", High Impact Plastic, 10 Ft.	Hubbell	PSC2030564**	*
18	Lag Screw, 2" x 1/4"	Hubbell	PSC2050504**	*
19	U-guard Adapter, 2" - 6" Plastic	Electric Materials Company	PEAD2-6P**	1
20	Washer, Square Flat, 11/16" Hole, 2-1/4" x 2-1/4" x 3/16"	Hubbell	6813**	2
21	Washer, Double Coil, 5/8"	Hubbell	C2050186**	2
22	Bolt, Machine, 5/8" x Required Length, with Nut	Hubbell	88 ___ **	2
23	Locknut, Type MF, 5/8"	Hubbell	3512**	2
24	Cable Tape, Red, White or Blue	3M (Scotch)	35- ___	*
25	Pole Wrap, 30" x Required Length	Reliaguard	RW- ___ **	*

* AS REQUIRED
** OR APPROVED EQUAL



"DETAIL A"

THREE PHASE
PRIMARY RISER
BLADED

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager: CAR
Designer: DSM
Project Number: 427800
Phone: (712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS
ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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* AS REQUIRED
** OR APPROVED EQUAL

REV	DATE	DESCRIPTION
A	6-15-2021	RELEASED FOR CONSTRUCTION



Project Manager:	CAR
Designer:	DSM
Project Number:	427800
Phone:	(712) 472-2531

MORA MUNICIPAL UTILITIES
MORA, MINNESOTA

UNIT DRAWINGS

ELECTRIC DISTRIBUTION POLE REPLACEMENTS

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MEMORANDUM

Date: June 14, 2021
To: Public Utilities Commission
From: Lindy Crawford, Public Utilities General Manager
RE: Electric GIS Services Discussion

SUMMARY

The PUC will review and consider proposals for electric GIS services.

BACKGROUND INFORMATION

At the last PUC meeting staff was directed to seek proposals for electric GIS services. Staff obtained two proposals from mPower and DGR Engineering.

mPower has put together a proposal for a handful of SMMPA member communities, including Mora. To get set up with mPower and through the first year would cost \$24,080, and \$4,800 annually thereafter.

- mPower's application is web-based and there is no limit to the number of users or utilities, but there would be an additional set up fee to add other utilities.
- This application offers an outage management system (OMS).
- This application is similar to the services we currently have, but cheaper and appears to be more user friendly.

DGR also provided a proposal which also includes water, wastewater and stormwater utilities. To get set up with DGR and through the first year would cost \$16,650, and \$2,350 annually thereafter.

- DGR's application is web-based and the quote includes all utilities plus the purchase of an iPad and Trimble R2 for fieldwork.
- There is no outage management system (OMS) with this option and this may require more staff time to complete fieldwork.
- This application is more so on the basic end of applications, appears to be much more user friendly, the cheapest option, but staff would most likely be responsible for technical and fieldwork. Staff has not had the chance to complete a demo of this application yet.

RECOMMENDATIONS

Review, discuss and direct staff appropriately.

Attachments

Proposal from mPower

Proposal from DGR Engineering



Sales Quotation

Account Name City of Mora
Shipping Address 101 Lake Street South
Mora, MN 55051-1588

Created Date 6/3/2021
Quote Name SMMPA Hosted Integrator and OMS
Quote Number 00000994

Contact Name Lindy Crawford
Phone (320) 679-1451
Email l.crawford@cityofmora.com

Prepared By Greg Calcari
Phone (920) 470-0292
Email gcalcari@mpwr.net

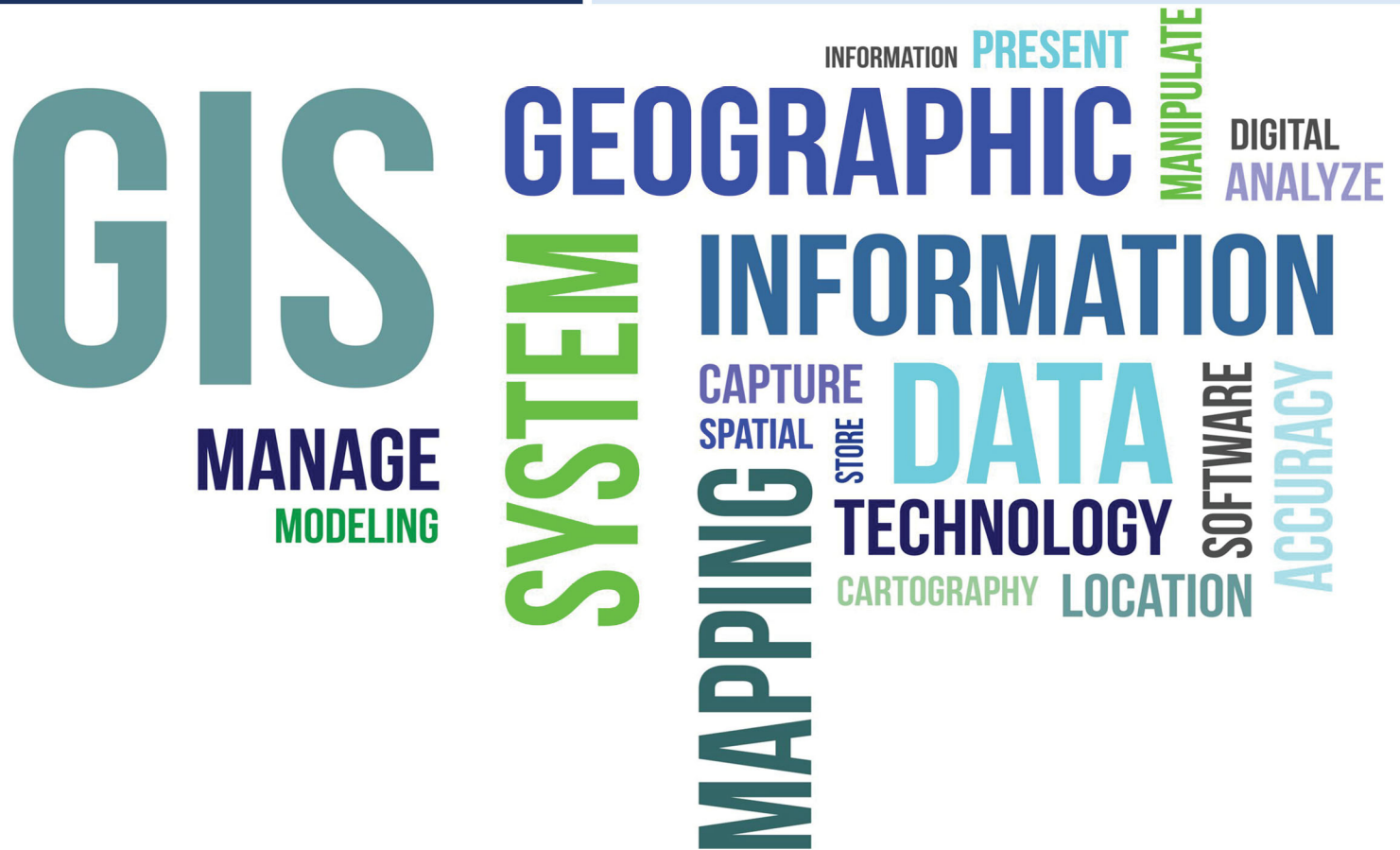
Product	Description	Quantity	Sales Price	Total Price	Line Item Description
Integrator Editor Bundle	Integrator and Editor	1.00	\$7,000.00	\$7,000.00	
OMS - mPower Outage Management System	mPower Outage Management System	1.00	\$4,000.00	\$4,000.00	
Integrator Editor Deployment Services	Integrator and Editor Deployment Services	3.00	\$1,380.00	\$4,140.00	3 days software installation, integration and deployment services - no limit to number of attendees
OMS Deployment Services	OMS Deployment and Training Services	3.00	\$1,380.00	\$4,140.00	3 days software installation, integration and deployment services - no limit to number of attendees
Integrator Editor annual software maintenance	Annual software maintenance for Integrator& Editor bundled solution	1.00	\$3,500.00	\$3,500.00	
OMS Annual Maintenance	OMS Annual Maintenance	1.00	\$1,300.00	\$1,300.00	

Total Price \$24,080.00

Terms and Conditions

50% deposit required for software, maintenance and deployment services. Balance(s) due upon software installation and/or completion of services. mPower services are provided on a time and material basis; travel, lodging and per diem expenses to be reimbursed by customer.

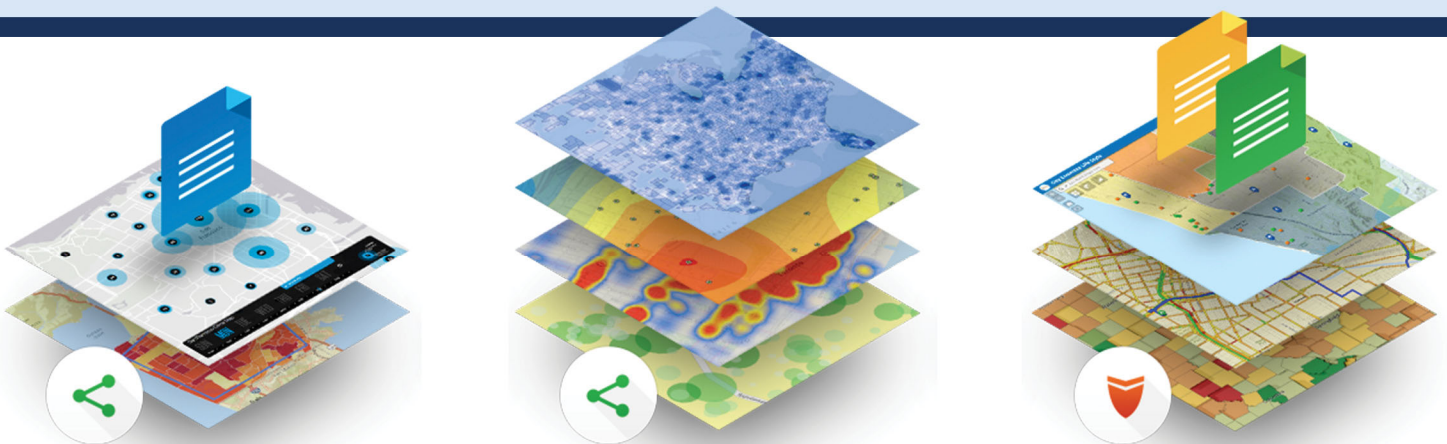
This proposal is to be treated as confidential and is not to be viewed by, or shared with, anyone that is not directly or contractually involved in the solicitation, preparation, evaluation or procurement of goods and services as outlined in this proposal.



Geographic Information System Services

City of Mora, Minnesota

June 11, 2021





June 11, 2021

Lindy Crawford
City of Mora
101 Lake St. South
Mora, MN 55051

**RE: Proposal for Professional Services
GIS Services**

Dear Mrs. Crawford:

Thank you for the opportunity to provide our proposal for professional services to the City of Mora in publishing your Geographic Information System (GIS) to a new system. With your staff working in partnership with DGR Engineering (DGR), we believe that we will be successful in providing a tool that will be valuable to your system now and into the future.

We value our long-term relationship with the City and look forward to continuing and growing that relationship as part of this proposal. Our GIS team, led by Tim Bents, is looking forward to partnering with your staff and is excited to get started. We believe DGR has an excellent solution to transition your system into a user friendly GIS experience.

Should you have questions on our proposal or need further information, please contact me or Tim and we will be happy to answer your questions.

We look forward to working with you on your project!

Best Regards,

DGR Engineering

A handwritten signature in blue ink that reads "Chad Rasmussen".

Chad Rasmussen, P.E.

Enclosures

Background

DGR Engineering (DGR) is pleased to submit this proposal to assist the City of Mora (City) in the development of a Geographic Information System (GIS) for its existing utilities and miscellaneous infrastructure. The proposed scope of work will utilize the existing electronic data that DGR has of your electric system, and GPS technology for field data collection to develop a modern GIS solution that is accessible to staff throughout your organization.

DGR is an established consulting firm with direct experience working with your system and staff. DGR will use that knowledge and that relationship to customize the GIS development to suit the needs of your City's infrastructure. The initial phase of GIS development will include the following features:

- **GIS Model:** For the electric system, the existing Milsoft WindMil® model will need to be converted to a GIS model that includes information about each feature. Optionally, for the water, storm, and sanitary systems, any existing data provided will be utilized as the GIS model for each of these utilities. Other miscellaneous data, including parcel and street information, will be attached to the GIS model as well. All data is considered City owned and available at any time.
- **Online Access:** The GIS will be served from an online cloud platform that can be accessed through an internet browser or by an app on a mobile device (e.g. smart phone or tablet). All data is securely uploaded and only accessible to the City.
- **Field Mobility:** The GIS will be accessible and editable in the field for use in day-to-day operations and provide real-time updates to all users wherever online access is available.
- **System Maintenance:** DGR will provide expertise and support to perform periodic system updates, editing and maintenance to preserve an up-to-date system.

Scope of Work

The following tasks will be accomplished as part of this GIS project:

1. Electric System Conversion – Existing Windmil® Model to GIS format

- 1.1. Existing WindMil® models have data pertinent to the electrical system, and should be very up-to-date based on recent study efforts. During the conversion process the utmost care will be given to replicate this data in GIS form.
- 1.2. Open points on switches and throughout the distribution system will be clearly visible and easy to change from open to closed on the map after conversion.
- 1.3. Transmission and distribution poles, and alignment locations will be uploaded to the GIS as well, if desired.

2. Optional - Water, Storm and Sanitary System– Existing GIS format

- 2.1. Utility data already in GIS format can be obtained by the City and uploaded to the new online GIS. It's our understanding that this information exists today, but needs to be obtained from the city's Civil Engineer.
- 2.2. Equipment symbols will be replicated to look similar to each utility's industry standard.
- 2.3. Locations of assets will be assumed as accurate.

3. Miscellaneous Infrastructure to GIS format

- 3.1. Additional existing data provided by the City or from any existing data will be uploaded into the GIS on an hourly basis.

Scope of Work

4. Upload GIS to Online Access

- 4.1.** Assist the City in purchasing ArcGIS Online and set up logins and administrative privileges. Initial licensing purchase dependent on staff needs.
 - 4.1.1.** ArcGIS Online will allow the City users to view and edit their GIS system at any time using an electronic device.
 - 4.1.2.** Maps can be viewed in real time where internet connectivity is available via PC, iPad or other portable devices. If internet connectivity is not available, staff can download the latest version of the map, and view it offline.
 - 4.1.3.** Registered users can make changes to the GIS system in real-time out in the field.

5. System Maintenance and Editing

- 5.1.** System updates and application development can be added on an annual basis as requested by the City.
- 5.2.** Additional layers may be desired in the future, these can be created by DGR or the City staff can be trained to create them.

6. Field Data Collection

- 6.1.** Configure Maps for access in Collector for ArcGIS, a mobile GIS application to collect utility features with GPS equipment (GPS equipment is optional. Included in the equipment fees).
 - 6.1.1.** Features and attributes in the field will be selected from the geodatabase layers as recommended by DGR and approved by the City staff.
- 6.2.** Possible field data collection will include verification of feature attributes and photographing visible features (photos stored in ArcGIS Online).
- 6.3.** A cellular data plan will be needed to connect field devices to ArcGIS Online in real-time. Offline data collection is possible where data access is limited or unavailable.
- 6.4.** Train staff in using Collector for ArcGIS.

Scope of Work

7. Equipment and ESRI Licensing

- 7.1.** ArcGIS Online utilizes a cloud-based file storage hosted by ESRI. The annual cost for ArcGIS Online (Purchased directly from ESRI) is \$500 for an administrator license and \$350 for a field license. To start, 1 license should suffice (1 administrator). This will be a \$500/year recurring cost, which the City will pay directly to ESRI. The GIS will only be accessible by the City and your approved users through a secure log-in. Additional licenses can be added at any time.
- 7.2.** DGR can assist the City in the purchase of GPS equipment to be used for field data collection by City staff. If this equipment is desired by the City, DGR recommends the City purchase a Trimble R2 sub-foot rover with range pole and pole mount accessories. For a “field computer”, DGR recommends the City purchase an iPad Air 2 tablet (or equivalent) with hard cover case. The estimated cost of this GPS equipment and mobile device is \$6,800. The Trimble R2 can utilize the Minnesota DOT’s real time correction service to typically collect GPS data at 3cm horizontal accuracy. As an option, rental for this equipment is also available from Frontier Precision at \$140 per day.

8. Training

- 8.1.** We recommend a minimum of two days of training in Mora for your operators to get a good understanding of how to use the GIS capabilities. We like to have one training session initially after the GIS system is set up and another session 3-6 months later to answer questions the operators might have. If GPS equipment is purchased, GPS training can coincide with the GIS training.

Fee Arrangement

We propose the following fee arrangement for this work:

Initial GIS Conversion – DGR (Year 1 Costs):	<u>Budget</u>
ArcGIS Online site set up (hourly)	\$ 2,000
Electric System – Convert from AutoCAD to GIS (hourly)	1,500
Water, Storm, Sanitary Systems – Convert from Existing GIS (hourly)	1,000
Miscellaneous Infrastructure - Convert from electronic files (hourly)	1,000
GIS and Data Collection Training (2 days – hourly)	<u>3,500</u>
Total	\$ 9,000

Initial GIS Conversion – ESRI/Equipment (Year 1 Costs):	
ArcGIS Online License (1 Editor, Lump Sum)	\$ 500
iPad and Subfoot GPS (Trimble R2) (Lump Sum) -Optional for Field Use	<u>6,800</u>
Total	\$ 7,650

Annual System Maintenance and Misc. Costs (2nd year Onward):	
Annual System Maintenance (As requested – hourly estimate)	\$ 1,500
ArcGIS Online License (2 Editors, Lump Sum, Annual)	<u>850</u>
Total	\$ 2,350

Work will begin on migrating the existing mapping to online access upon execution of a Professional Services Contract. The majority of the data conversion process is anticipated to take place within one-to-three months after a contract is in place. Final mapping cleanup and GIS training will take place following completion of the initial data conversion.

All DGR work will be billed at the current Hourly Fee Schedule in effect at the time the work is performed. A copy of the current 2021 Hourly Fee Schedule is included. In addition to the amount relating to the personnel grade of the individuals doing the work, the only other expenses expected to be billed directly are travel-related costs (primarily mileage) and subsistence costs (primarily meals). This work will be invoiced monthly as the project progresses.

Hourly Fee Schedule

Our 2021 Hourly Fee Schedule is listed below. DGR will bill for all hours that employees have related to the project. Each employee has a designated hourly rate that the client will be billed for. In addition, reimbursable expenses such as mileage and meals are billed separately. Each month you will be billed for the hours that are associated with the project.

HOURLY FEE SCHEDULE A

JANUARY 2021

Personnel Grade	Engineer Hourly Rate	Technician Hourly Rate	Administrative Hourly Rate
01	\$96	\$56	\$52
02	\$101	\$61	\$54
03	\$107	\$66	\$58
04	\$113	\$70	\$62
05	\$122	\$75	\$66
06	\$134	\$79	\$70
07	\$145	\$84	\$74
08	\$155	\$90	\$80
09	\$167	\$96	\$86
10	\$179	\$101	\$92
11	\$191	\$107	\$99
12	\$203	\$112	\$112
13	\$216	\$118	\$129
14	\$222	\$126	\$159
15	\$228	\$136	\$209

Reimbursable Expenses:

1. Standard vehicle mileage at the IRS standard mileage rate in effect at the time.
2. Survey/staking/heavy duty trucks at \$0.80 per mile.
3. Other travel, subsistence, lodging at actual out-of-pocket cost.
4. GPS Survey Equipment (when used) at \$31.25 per hour.
5. ATV and UTV Equipment (when applicable) at \$12.50 per hour.

Utility Billing Monthly Report

Calendar Year 2021

Description	As of 1/31/2021	As of 2/28/2021	As of 3/31/2021	As of 4/30/2021	As of 5/31/2021	As of 6/30/2021	As of 7/31/2021	As of 8/31/2021	As of 9/30/2021	As of 10/31/2021	As of 11/30/2021	As of 12/31/2021
Total Account Balances	\$ 705,463.87	\$ 838,680.11	\$ 638,754.31	\$ 727,051.37	\$ 524,737.07							
Current Period	\$ 550,107.03	\$ 669,489.60	\$ 484,941.07	\$ 594,147.47	\$ 387,789.93							
1 Period Overdue	\$ 29,860.88	\$ 37,597.29	\$ 31,120.64	\$ 18,432.55	\$ 30,218.69							
2 Periods Overdue	\$ 8,883.94	\$ 16,142.17	\$ 8,959.81	\$ 10,881.69	\$ (381.13)							
3 Periods Overdue	\$ 116,610.92	\$ 115,451.05	\$ 113,732.79	\$ 103,589.66	\$ 107,109.58							
Total Penalty Balances on Accounts	\$ 8,647.92	\$ 10,826.67	\$ 6,257.44	\$ 6,504.45	\$ 7,606.26							
Past Due/Disconnection Notices Mailed (customer 30 days or more past due and missed payment on arrangements) *	55	51	73	53	53							
Utility Disconnects	2	0	4	2	6							
Missed Payments on Payment Agreement	2	0	2	1	3							
No Response to Past Due/Disc Notice/Door Tag	0	0	2	1	3							

* Does not include Quamba residents and water only accounts.

COMMENTS:

Credit balance for '3 Periods Overdue' is due to pre-payment on accounts, energy assistance, and a solar connection credits.

Monthly Utility Account Adjustments Report
For Adjustments \$50.00 or higher

DATE	SERVICE	QTY	AMOUNT	NOTES
MM YYYY				
05/2021	NO ADJUSTMENTS TO REPORT FOR MAY, 2021			