

**AGENDA**  
**REGULAR DRAINAGE MEETING**  
**November 27, 2019 11:00 AM**

1. Open Meeting
2. Approve Agenda
3. Approve Minutes  
Approve minutes for Regular Drainage Meeting, dated November 20, 2019.

Documents:

[11\\_20\\_2019 - DRAINAGE MINUTES.PDF](#)

4. DD 150 - Approve Drainage Utility Permit Application 2019-3 With Midland Power Cooperative

Documents:

[2019-11-20 DD 150 MIDLAND DRAINAGE UTILITY PERMIT 2019-3.PDF](#)  
[2019-11-13 MIDLAND UTILITY PERMIT MAP 3972.PNG](#)

5. DD 124 - WO #225 Discuss, W/ Possible Action, Contractor Update  
DD 124 - Contractor Adam Seward will provide an update on WO #225.
6. Discuss W/ Possible Action - Contractor Availability  
Smith will provide an update on the availability of potential out of county contractors.
7. Other Business
8. Adjourn Meeting

**REGULAR DRAINAGE MEETING**  
**November 20, 2019 8:30 AM**

11/20/2019 - Minutes

1. Open Meeting

Hardin County Board of Trustees Chairperson, Renee McClellan opened the meeting. Also present were Trustee Lance Granzow, Trustee BJ Hoffman; Lee Gallentine with Clappsaddle-Garber Associates (CGA), Heather Thomas with Clappsaddle-Garber Associates (CGA); and Drainage Clerk, Denise Smith.

2. Approve Agenda

Hoffman moved, McClellan seconded to approve the agenda as presented. All ayes. Motion carried.

3. Approve Minutes

Hoffman moved, McClellan seconded to approve the agenda as presented. All ayes. Motion carried.

4. Approve Claims For Payment

Hoffman moved, McClellan seconded to approve the claims for payment with a pay date of November 22, 2019. All Ayes. Motion carried.

DD 22 - Main Tile Repairs- Change Order # 1-6, Gehrke Inc. \$56,563.20

DD 72 - Postage - Landowner's Meeting 24 Postcards, Hardin Co. Auditor \$8.40

DD 143 - Project 677.51 For Prof. Services After 5/31/2019 to 10/31/2019 Clappsaddle-Garber Assoc. \$891.00

DD 86 - WO 252 For Prof. Services to 10/31/2019 \$2809.50 Clappsaddle-Garber Assoc. \$2809.50

DD 25 - For Prof. Services After 9-27-19 to 10-31-2019 Clappsaddle Garber Assoc. \$1,972.85

DD 25 - WO 1 For Prof. Services to 10-31-2019 Clappsaddle-Garber Assoc. \$2,540.30

DD 25 - Pay Estimate for repairs to main tile and Lat 3 McDowell & Sons Contractors \$26,696.97

DD 56 - Project 6830.3 For Prof. Services After 9-27-19 to 10-31-19 Clappsaddle-Garber Assoc. \$6,531.80

5. DD 22 - Discuss W/ Possible Action - Request For Additional Rock In Trench

DD 22 - On 11-16-2019, Gehrke got into an area where they lost the blue clay at the bottom of the trench and were in a soupy sand that was not able to hold the 30" pipe consistently. CGA requested authorization to have Gehrke put in a layer of 6" +/- of larger rock down to help get a base to set their granular bedding. They have submitted a price of \$24/ton to purchase, haul and place the rock, which equates to \$5-\$7 per linear foot. Thomas requested (via email) 2 days of authorization ahead of Wednesday's meeting to allow work to proceed, which was granted by the Trustees. Thomas thanked the Trustees for the authorization and provided an update on work on the project. It is getting better and some places needed the additional rock and others did not. They have about 77 tons of rock on-site now, at a cost of \$1,800 right now.

Thomas stated that they would work on the bend on the east side of C Ave. road crossing and then a straight shot up to the manhole, with about 1,000' feet of tile remaining to be put in. Thomas was not sure how much more rock would be needed, but with Trustees permission they would use remaining rock, and gather any additional rock on an as needed basis.

Thomas reports there was an issue with concrete pipe quality, and CGA has rejected some pipe, both full truckloads and partial truckloads that were sorted. The issues they had were that the pipe was not 100% round and there was enough of a difference that the bells could not be seated on the pipe, and some of the bells had to be grouted and pipe thicknesses varied, making it difficult to slide all the way in. Based on these issues, they have sorted truckloads of pipe and only used what was of good quality that could be put together. The supplier was Forterra, and they will come in and pick up the rejected pipe.

Right now the completion date is December 1st, and Thomas does not anticipate Gehrke making that date. Gehrke has been working as much as they can, and they have not left the site, the month of October was very wet and made conditions rough. With 1,000' left and with rain coming, they will wait till the rain goes, do the road crossing and then work on the remaining straight stretch of 1,000'. They will keep working, but water pressure often overwhelms the trench by about 3:00 pm, and Gehrke does have pumps running to try and drain the trench. McClellan asked if they would be requesting an extension. Thomas stated that Gehrke told her to do what was fair, and that she would have them come back in the spring. Everything Gehrke has done has been backfilled and tilled by farmers, but in the spring she will have them come back and do the stretch they are working on now, to make sure it all gets cleaned up before spring planting.

Thomas noted two other issues: there are 2 septic lines on Reyerson's property and Gehrke will try and get those repaired yet this year, and a tile line in the field just across from Silvest's house was running longitudinally with the DD pipe and was offset 10 to 15 feet, and Gehrke got into the old clay line sporadically so about 300' of a private tile will need to be put back in as well. The overflow connections that Thomas had spoken of before, Gehrke says will be in the \$15,000 to \$20,000 range for those private tile connections, and Thomas wants to know if they would like to have a landowner meeting to see if they would like to add in those overflow connections. McClellan asked if these were from private tile to district tile. Thomas stated that these were connections to the old original main to the new main, so CGA sketched out some connection details. There is still corn in over one of the manholes so until CGA can verify that location, they are waiting on a price. Combining started on that field yesterday and corn should be out soon to allow for that verification.

Granzow stated we should have a landowners meeting on the extension and it would be a good time to cover it all. Thomas asked if we wanted to set a date in mid December, by then she hopes Gehrke would have the 30" line in. Granzow asked what reasons there were for not working in the winter. Thomas stated she did want them working on frozen ground because the frost is out now, but earlier there was 6" of frost in the ground, and the contractor was peeling that off and setting it to one side then continuing on with dug excavation material on the other side. Gehrke backfilled with the dug excavation material then covered with the topsoil layer.

Motion by Hoffman to hold the DD 22 Landowner's meeting on Monday, December 16 at 9:00 am in the large conference room at the Courthouse. Second by Granzow. All ayes. Motion carried.

Thomas stated that Gehrke had notified her about 30 minutes ago, that they had run into a bunch of buried fence posts and wire, their best guess was it was buried when they put the HDPE in, and was above that pipe. Thomas stated she thought the last contractor buried it, and noted there was a splice directly above in all of the overhead power lines, and was unsure if someone went through the power lines at this location which resulted in the damaged fence and subsequent buried material. Landowner is Marvin Kraus. Granzow motioned that landowner should be contacted and ask what he wants done, and any expense/responsibility for removal would be the landowners. Hoffman seconded. All ayes. Motion carried. Thomas will contact the Marvin Krauss Trust to see if she can get direction from landowner on removal of fence debris.

Thomas stated that last time she was here, she estimated that CGA would hit their pay estimate for CO services on December 3rd., because of rainfall, Thomas is now estimating December 12th. Since CGA are still on-site full time, Thomas asked if we need to make any adjustments on the Dec. 12th date. Granzow stated that we are meeting with landowners on the 16th, he would recommend changing the estimate to December 17th. Thomas will see if there is anytime that can be cut or will request an extension.

Thomas noted that pay estimate for approval of \$56,563 was also presented in claims for approval and was approved with claims for today with payment date of November 22nd.

Granzow stated he would recommend to all contractors not using Forterra as a supplier in the future due to quality issues. Hoffman stated that if someone from CGA were not on-site, that best checks and balances would not be in place. Granzow stated we should bring Forterra in before we make a motion to not use them again in the future. Gallentine stated that Forterra had quality issues with cracked pipe on another project in Radcliffe.

Thomas stated she did request that Forterra send someone out to the site and they verified on-site that it was bad pipe. The Forterra quality rep then said they would send out their best pipe in the next load, and that entire truckload was also rejected. Hoffman stated we want their best pipe in every load. Granzow stated we should have someone come in to speak to the Trustees before we use them again. Granzow stated they should come in and explain their situation before we go further with them on any projects. McClellan directed Smith to request them to come in, Hoffman stated they should come to the landowner's meeting.

## 6. DD 48 - WO #237 Discuss W/ Possible Action

Landowner Lowell Skinner called in and requested an update on WO 237, file notes reflect as of June this year a contractor had not yet been available. Lowell reports he is all harvested and access is good. Smith discussed the situation with Gallentine, and Gallentine has feedback as to the contractor situation.

Gallentine stated that the tenant wanted Gehrke to do the work but crops were already in when Gehrke became available, so it was put on hold until fall. About a month ago, the Trustees said we can use out of county contractors if in county contractors are all booked up. Gallentine has checked with many contractors who are fully booked through December. Contractor Paul Williams previously said he should be free by mid-November and is now booked through December. Hands On is booked up. Gehrke has 4 pages of private tile repairs already booked. Gehrke told Gallentine that he has 4 pages of private tile repairs and if Gallentine can find anyone else to do them to let him know. McDowell is booked, and Adam Seward still has a work order on DD 124 he needs to get to. Smith stated Seward had stopped in and asked for clarification on that WO and Smith provided info on what Seward was to locate.

All in county contractors are booked with no close time to being un-booked. Gallentine asks should we start to seek out of county contractors to pick up some of this work. Franklin county has the same issues now as well. Hoffman stated we have got to get some additional contractors on board. Gallentine will contact Justin Ross. Granzow stated there is plenty of work out there if Ross wants to pick it up. Gallentine stated that there is hardly a work order out there that has been touched since spring and the spring and summer were so wet.

Gallentine stated A&B out of Wright county has also done work for us, McClellan says to check with other contractors. Hoffman asked if Boulder does any drainage, Gallentine stated some but that Boulder is usually tied up with DOT jobs. Gallentine stated Mort's out of Latimer are doing some drainage work, and Ingraham out of Webster City has done work for us in the past. Hoffman asked if Schoppe's out of State Center does excavation work. Hoffman stated Smith can reach out to 3 or 4 other contractors to meet with the Trustees to review the process, and have a new contractor orientation, so the process can be explained. If we can come up with a couple new people we can have them all attend. Hoffman directed to ask for rates from potential contractor and certificates of insurance. Smith will reach out to contractors and come up with a list of potential contractors and request paperwork from contractors. Gallentine will forward Smith an email with Contractor Policy and intro letter. Gallentine states that the work orders that come to mind that are most affected are this WO #'s 237, and DD 167, DD 124, DD 119 also that have been waiting on contractors.

Granzow stated Seward has been busy in the field and we should use locals before we go with out of county contractors, Gallentine stated that the policy is set up that if you have one active work order you should not be getting any more until the first one is completed, and Seward's WO has been since Schlemme was clerk. McClellan asked shouldn't Seward be doing tile work before he is doing trees. Gallentine stated that Seward told him he is more comfortable doing trees than tile, he can do tile. McClellan stated we should be doing tile first, Granzow noted yes, as long as crops are not in the field. Hoffman asked if we had figured out where Seward was with this WO, Gallentine stated that Seward had come back and stated there were 2 tile in the field and Seward was to go and locate them. Smith stated that Seward has paperwork now for clarification. Granzow stated Seward may be rolling now and he hates to give it all to out of county contractors. Gallentine stated we have so much work coming in and rain keeps coming, no lack of work to go around.

#### 7. DD F-H 4-53 - WO #280 Discuss W/ Possible Action

Smith stated this was on the agenda last week in the shared Franklin - Hardin district. Smith had spoken with Gallentine as to whether or not this was private tile and looked at maps, and Gallentine stated this was listed as Lateral 12 on the original map, the 1987 map had it all x-ed out and had Lateral 12 omitted, and that is what GIS currently shows, that it is not Lateral 12 but private tile. They either didn't put the tile in the map or it was abandoned at some point and that is what the 1987 map and GIS reflects. Gallentine stated that it would take research back through records/minutes to determine if it was private or DD tile, or you can go with 1987 map and say it is private tile and landowner responsibility. Granzow stated that if the landowner wants it researched, he can request that.

Smith did reach out to Secondary Roads as it was very near the roadbed but they have not had anyone out to check it out yet, and did not have an update at this time. Smith will let landowner know it is noted as private tile and let them know Secondary Roads will look at it.

#### 8. Other Business

Beaver Trapping- Trapper Jeremiah Andrews reports beaver have left the area, dam debris is corn stubble and minimal and should flush out. Smith confirmed with landowner Randy Madden. No action needed at this time. Gallentine requested trapper's contact info for beaver issues in another county, Smith will provide updated trapper list.

Open Ditch Spraying- Joe Harrah called in and stated he would like to come in and present his estimate to the Trustees at a meeting. Adam Seward had also stopped in this week, and Smith reminded him we need also need an estimate from him for open ditch spraying. Seward stated he was working on it. McClellan asked if Harrah was the awarded bidder last bid cycle. Smith stated that was B&W, and B&W is still on hold for spraying this year, and that Harrah had submitted a bid last bid cycle and the Trustees had wanted him to gain some more experience and that was why he was not awarded the 2016 bid.

McClellan stated we do not want anything sprayed this year, it is too late. Smith asked if she should let Harrah know we are on hold until fall of 2020. McClellan stated yes, we will request an estimate in fall of 2020. Granzow stated that it had been previously decided that it does not need to be bid, we can just request estimates. McClellan said it would be nice to get their rates instead of bidding, to keep in county people honest too. Granzow directed Smith to just request contractor spraying rates per mile and list of chemicals used. Gallentine asked if B&W had sprayed this year, Smith updated Gallentine, that we had reached out to B&W that we had not received any bills so B&W had stated they would begin spraying that following week, and that B&W had been directed to be on hold until further notice. Granzow noted we were waiting on a reply from Darrel Meyer regarding the contract with B&W.

DD 128 - Handsaker worked with landowner Dean Bright to fill in the waterway in a way in which Dean was happy with, when done Handsaker said they did not do near as much work as they had bid, so what Handsaker would like to do is reduce the amount of work he is paid for. Gallentine presented an invoice and highlighted the savings versus the original bid, it ended up being a cost savings of \$4,320. Gallentine will write a formal change order approving that so it does not look like Handsaker is left on the hook for work in which it looks like on paper he did not do. Gallentine wanted to make sure the Trustees were happy with the result. The waterway is deeper than what CGA had designed, the contractor didn't import as much dirt to be hauled in as was specified. Dean Bright had asked them to shape up the banks to accommodate any water that may flow in. Dean was concerned that if it was totally filled in, surface water would spread out into his field, he still wanted in contained. Gallentine noted it should be better now, because they have a tile in there now and the water should be contained within the tile, it is not 100% farmable but much better than it was. It serves the same purpose as pulling the ditch out of being a district facility and turning it into a tile that is district facility. So from now on, that waterway maintenance will be Dean's.

Granzow asked if the surface maintenance would be Dean's responsibility but the tile itself is still District's responsibility. Gallentine said yes. Granzow asked it be noted why the change order is the way it is and that Dean will have to maintain the waterway from here forward. Granzow also noted that the \$4320 in savings should be Dean's for future maintenance on his part, but it would be like submitting a claim against himself. Gallentine stated he could speak to Dean and verify he is ok with Handsaker's work and notify Dean that he is in charge of future maintenance on that waterway, not the tile, just the waterway, and that he may submit a one time damage claim if that is what he wants to do. Gallentine stated if that checks out, he would put it in a change order.

DD 25- Update on railroad crossing. The Railroad came back with 5 questions regarding the depressions in their RR ballast and what we were going to do with that. Gallentine submitted a reply, which the RR stated they received and is now under their review. Gallentine hoped that maybe Mike Richards can get this pushed through and McDowell's can work on it over this winter.

#### 9. Adjourn Meeting

Granzow moved. Hoffman seconded to adjourn. All ayes. Motion carried.



# HARDIN COUNTY

1215 EDGINGTON AVE., SUITE 1  
ELDORA, IA 50627  
(641) 939-8108

## HARDIN COUNTY DRAINAGE DISTRICT UTILITY PERMIT APPLICATION

**FILED**

NOV 20 2019

HARDIN COUNTY AL

Applicant: Midland Power Cooperative  
 Company Name  
1005 E Lincolnway  
 Address  
Jefferson IA 50129  
 City State Zip

Applicant Contact: Casey Huff (515) 386 - 4111  
 Name Phone  
chuff@midlandpower.coop  
 Email

Utility Type: Overhead Electrical

Drainage District(s) Crossed: District # 150

Facilities Crossed (specific tile, open ditch): \_\_\_\_\_

Description of Work: Installation of overhead 3 phase line rebuild  
 (Location plan of proposed utility must be attached.) 3.5 miles along D41. Map 74 sections 32, 33, 34 and 35.

Pursuant to Code of Iowa Section 468.186, approval is hereby requested for the right, privilege and authority to construct, operate and maintain utilities on, over, across or beneath established Hardin County Drainage Districts, subject to the attached Requirements for Construction On, Over, Across or Beneath Established Drainage District. Failure to comply with said requirements shall be ground for revocation of the permit by the Hardin County Board of Supervisors.

[Signature]  
 Applicant Signature

11/18/19  
 Date

Submit Form and Location Plan To: Hardin County Auditor's Office  
 Attn: Drainage Clerk  
 1215 Edgington Ave, Suite 1  
 Eldora, IA 50627  
 Fax (641) 939-8225  
[drainage@hardincountyia.gov](mailto:drainage@hardincountyia.gov)

For Office Use Only

Application Approval:  
 By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Board of Supervisor Chairman, Acting as Drainage District Trustee  
 APPROVED PERMIT #: \_\_\_\_\_



## HARDIN COUNTY AUDITOR

### REQUIREMENTS FOR CONSTRUCTION ON, OVER, ACROSS OR BENEATH ESTABLISHED DRAINAGE DISTRICT

Upon issuance of a permit for utilities on, over, across or beneath established Hardin County Drainage Districts, the applicant shall be governed by these requirements and shall comply with all conditions contained herein.

1. The Applicant shall furnish the Drainage District, or its representative, plats showing the exact location of the proposed construction. If it is found that such locations are in conflict with the present or proposed facilities and that a more desirable location is possible, the Applicant shall review such possible alignment changes. **No construction is to commence with the drainage facility without an approved application.**
2. Applicant shall comply with Iowa One-Call requirements prior to commencing any work.
3. The Drainage District shall provide Applicant access to maps or other information regarding the location of all known drainage district facilities so that reasonable care may be taken by Applicant to avoid un-necessary damage to said drainage district facilities.
4. The Applicant shall hold the Drainage District harmless from any damage that may result to the Drainage District facility because of the construction or maintenance of the utility, and shall reimburse the Drainage District for any expenditures that the Drainage District may have to make on said Drainage District facilities resulting from Applicant's construction and installation of utilities, or their subsequent repair or modification.
5. The Applicant shall take all reasonable precaution during the construction of said utility to protect and safeguard the lives and property of the public and adjacent property owners and shall hold the Drainage District harmless from any damages or losses that may be sustained by adjacent property owners on account of such construction operations. Further, Applicant agrees to replace, repair or reimburse all damages to private property occasioned by Applicant's installation of subsequent modification or repairs.
6. The Drainage District assumes no responsibility for damages to the Applicants property occasioned by any construction or maintenance operation of said Drainage District facilities, subsequent to Applicants installation.
7. A copy of a certificate of insurance naming the County/Drainage District as additional insured for their permit work shall be provided to the County Auditor prior to installation. The limit of liability under the insurance policy shall not be less than \$1,000,000 per occurrence.
8. The Applicant agrees to give the Drainage District twenty-four (24) hours (Saturday and Sunday excluded) notice of its intention to commence construction on any lands within the jurisdiction of the Drainage District. Said notice shall be made in writing to the County Auditor or to the designated Drainage District representative.
9. The Applicant agrees to place permanent, visible markers or monuments at locations where utility crosses Drainage District facilities. These monuments or markers shall identify the owners name, address and phone number.
10. The Drainage District Trustees may appoint a representative to inspect and approve all construction across Drainage District facilities as part of this permit. All compensation, wages, mileage and other expenses for this representative will be paid by the Applicant. It will be the responsibility of the Applicant to make all contacts with private parties (adjacent owners/operators) to determine the location of private drainage facilities. Said representative will also inspect all crossing of Drainage District facilities and may, if required, observe the crossing of private drainage facilities, and shall have the authority to require the Applicant to excavate and expose the crossing of any Drainage District facility where the representative believes it prudent to visually examine Applicants crossing of the Drainage District facility. Further, said representative has the authority to suspend construction and installation by the Applicant within any Drainage District jurisdiction by verbal order to the contractor at the site and a telephone call to Applicants contact person listed on page 1 within six (6) hours of the verbal order.





11. The construction and maintenance of Applicants installation shall be carried on in such a manner as to not interfere with or interrupt the function of said Drainage District facilities without the express written consent of the Drainage District Representative. In the event it becomes necessary to temporarily stop the flow of water, the following shall be completed by the Applicant:
  - a. If the crossing involves a tile line, the replacement of tile with approved materials, in the manner approved by the Drainage Districts designated representative, shall be performed as rapidly as possible. If the approved method of repair is impossible and the volume of water flowing in the tile is sufficient to create the possibility of crop loss or property damage, the Contractor will be permitted to temporarily block the tile line to prevent the flow of this tile water into the pipeline, or tile line ditch. In the event this tile line is so temporarily blocked, the Contractor will be expected to provide sufficient pumping equipment to pump the impounded tile water across the construction ditch to the undisturbed tile line. Such temporary blockages of said Drainage District tile lines will be removed a rapidly as possible and any tile repairs caused by this blockage will be immediately repaired at the Applicants expense.
  - b. If the crossing involves an open ditch that is carrying sufficient flow of water to make it necessary to place a temporary dam across said open ditch, such temporary dams may be constructed only upon approval from the Drainage District designated representative. The maximum elevation of this impounded water shall be determined by the designated Drainage District representative and all excess water must be allowed to flow across the construction ditch through either a closed metal culvert pipe or by pumping. All temporary dam structures are to be removed as soon as the crossing is completed. The construction and removal of these dams shall be in such a manner that the smooth and efficient function of the drainage ditch is not impaired, with all costs and damages borne by Applicant.
12. The Applicant will at any time subsequent to the commencement of construction, and at Applicants sole expense, reconstruct or replace its installation as may be necessary to conform to new grade or alignments resulting from maintenance or construction operations by the Drainage District in connection with any of its drainage facilities. Applicant agrees to do this within forty-five (45) days of receipt of written request from the Drainage District, or such longer time period as the Drainage District may specify, without cost to the Drainage District. Such reconstruction or realignment of Applicants improvements shall be made in accordance with and approved by the Drainage District or its designated representative. If the Applicant is unable to comply within the time period specified above, the Drainage District may cause the work to be done and the Applicant will pay the cost thereof upon receipt of a statement of such costs.
13. CROSSING OF OPEN DITCH FACILITIES. Utility crossings shall be constructed as follows, as directed by the designated representative of the Drainage District:
  - a. Passage of installation in a horizontal plane five feet (5') below design grade of drainage ditch, as established by the Drainage District representative.
  - b. The above depth to extend to a point two (2) times the design base width of ditch either side of centerline of drainage ditch (measured along the centerline of utility) unless the existing base width is greater than the design bases width. If the existing base width is greater than the design with, the depth is to extend to a point two (2) times the existing width.
  - c. The rate of slope for transition from normal utility laying depth of crossings of drainage ditches shall not be steeper than 4:1.
  - d. If such ditch crossings occur at points of outlets of Drainage District or private tile lines or within twenty-five feet (25') of said outlets, such outlets must be relocated to a point not less than twenty-five feet (25') from such crossings. Such relocations shall be at the expense of the Applicant and as directed by the representative of the Drainage District.



14. CROSSING OF DRAINAGE DISTRICT TILE LINES. Utility crossings shall be constructed as follows, as directed by the designated representative of the Drainage District:
- a. All proposed installations must be placed under the existing Drainage District tile lines. These requirements may be waived only upon the review by and approval of the designated representative of the Drainage District. Such waiver must be in writing.
  - b. A minimum of one foot (1') clearance below existing Drainage District facilities must be maintained.
  - c. At all crossings of Drainage District tile lines with the proposed utility, one of the following must be used:
    - i. Replace Drainage District tile with reinforced concrete pipe of same or larger diameter than existing tile. Concrete pipe to be 2,000 D strength (Iowa Department of Transportation approved) with standard tongue and groove joints. Pipe to have a minimum of three (3) bolt-type connectors at each joint.
    - ii. Replace Drainage District tile with cathodic protected corrugated metal pipe. Diameter of corrugated metal pipe to be a minimum of two inches (2") larger than outside diameter of tile line being replaced. (Specifications regarding gage, cathodic protection and other details to be subject to review and approval.)
    - iii. Dual wall plastic with specific approval of Drainage District representative.
    - iv. Bore new utility installation; maintain existing tile in an undisturbed state.
  - d. The length of tile to be replaced by any of the above alternates is as follows:
    - i. Eight-inch (8") tile and smaller: Six feet (6') either side of centerline of proposed installation, measured at right angles to the centerline of installation.
    - ii. Ten inch (10") tile and larger: Ten feet (10') either side of centerline of proposed installation, measured at right angles to the centerline of installation.
  - e. At all crossings of Drainage District tile lines where the Drainage District and private tile lines are damaged by the construction, maintenance or repair of Applicants installation shall be repaired as directed by the Drainage Districts designated representative.
15. This permit is subject to existing regulations and statutes of the State of Iowa and future regulations, which may be promulgated or enacted.
16. This application is subject to revocation by Hardin County, if in its judgment it is necessary for legitimate purposes. In such event, written notice shall be provided to permit holder.
17. Applicant agrees to pay all other legitimate costs, fees and expenses associated with its crossing of the Drainage District facility, including but not limited to, publication costs, engineering costs and legal service costs. Said costs will be paid within thirty (30) days of the mailing of the statements to the Applicant.
18. Applicant agrees to provide a copy of as-built plan of the utility route and location, showing route changes that may have taken place during construction.
19. Applicant agrees to include a copy of these requirements to all bidding specifications; or if the construction and installation contract has been let by the time this permit is approved, Applicant agrees to provide a copy of these requirements to the contractor and to advise them that they are bound by the terms of these requirements.

# IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

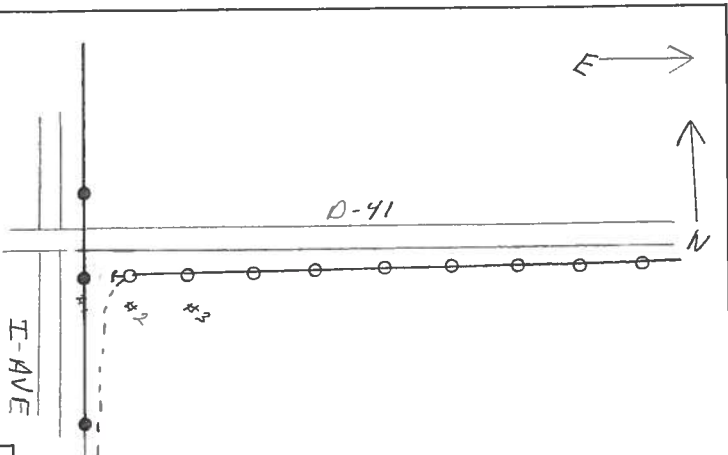
Name Hank Line rebuild 3p  
 Location # 1530--7432  
 Address: Co Hwy D41  
 Phone#: \_\_\_\_\_

15 Sub  
3 Feeder  
AGC Phase  
 Line Sec. \_\_\_\_\_

WORK ORDER CODE	
New Construction	
System Improvement	<input checked="" type="checkbox"/>
Replacement	
Retire No. Replace	

WORK ORDER NO. 13276  
 740C# 330-1  
 Staked By CLA Date 11/12/19  
 Sheet No. 1 of 9  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 74 Twp. 88N R. 21W Sec. 32 Wire 3 Size 4/0 Kind ACSR



Pole No.	Pri. (Back) Span.	Poles H & C Misc.	Pri. Misc.	Line Angle	Trans. "G"	Ground "M2"	Ohm No.	GUY		Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No. CONST. RET.
								Unit "E"	Lead		Unit No. J or K	(Back) Span			
10	178	1	40-3	1	CL11P	H1.1	178						Set 8' deep	35-3	4
9	178	1	40-3	1	CL11P	H5.1								40-3	5
8	202	1	35-3	1	CL11P	H5.1								CL11P	8
7	202	1	35-3	1	CL11P	H5.1								C7.1	1
6	202	1	35-3	1	CL11P	H1.1	178							UM6-27	3
5	202	1	35-3	1	CL11P	H5.1								EL1	3
4	202	1	40-3	1	CL11P	H5.1								FL12	3
3	202	1	40-3	1	CL11P	H5.1									
2	202	1	40-3	1	CL11P	H5.1									
1	178	1	40-3	1	CL11P	H5.1									

**JOB BRIEFING**

Nominal Voltage \_\_\_\_\_  
 Fault Current Available \_\_\_\_\_  
 Hazardous Induced Voltg \_\_\_\_\_  
 Presence Protective Grds \_\_\_\_\_  
 Equipment Grounds \_\_\_\_\_  
 Pole Condition \_\_\_\_\_  
 Environmental Condition \_\_\_\_\_

Loc of Line Protective Dvc \_\_\_\_\_  
 Other Utilities in Area \_\_\_\_\_  
 Personal Protective Equip \_\_\_\_\_  
 Traffic Control \_\_\_\_\_  
 Job Procedure \_\_\_\_\_  
 Individual Job Duties \_\_\_\_\_  
 Other Hazards \_\_\_\_\_

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

**CONSTRUCTION**

Conductor	Pri. Sec.	O.H. U/RD	Pole Line Ft.	No. of Wires	Total Feet
4/0 ACSR	X	X	1568	3	4845
4/0 ACSR	X	X	1568	1	1615
TOTALS	X	X			

**RETIREMENT**

Conductor	Pri. Sec.	O.H. U/RD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS					

**FILED**

NOV 20 2019

HARDIN COUNTY AUDITOR

# IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

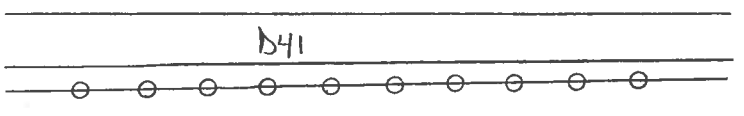
Name 4 mile line rebuild 30  
 Location # 1530--7432  
 Address: Co Hwy D41  
 Phone #: \_\_\_\_\_

15 Sub  
3 Feeder  
ABC Phase  
 County: Hardin  
 Township: Ellis  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	
System Improvement	<input checked="" type="checkbox"/>
Replacement	
Retire No. Replace	

WORK ORDER NO. 13276  
 740c# 330-1  
 Staked By CH Date 11/2/19  
 Sheet No. 2 of 9  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK \_\_\_\_\_ Map Reference 74 Twp. 88N R 21W Sec. 32 Wire 3 Size 4/0 Kind ACSR



Pole No.	Pri. (Back) Span:	Poles H & C		Line Angle	Trans "G"	Ground "M2"	Ohm No.	Unit "E"	GUY 310	Lead	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No. CONST. RET.
		Misc.	Misc.									Unit No. J or K	(Back) Span Meter			
20	223	1	40-3	1		H5.1								35-3	10	
19	232	1	40-3	1		H5.1								40-3	4	
18	196	1	40-3	1		H1.1 (2) P.1								C.I.P	10	
17	246	1	40-3	1		H5.1								4A1	1	
16	246	1	35-3	1		H5.1								H1.1	2	
15	246	1	35-3	1		H5.1								H5.1	8	
14	233	1	35-3	1		H1.1 (3) P.1								P.1	5	
13	233	1	35-3	1		H5.1										
12	233	1	35-3	1		H5.1										
11	233	1	35-3	1		H5.1										

**JOB BRIEFING**

<input type="checkbox"/> Nominal Voltage	<input type="checkbox"/> Loc of Line Protective Dvc
<input type="checkbox"/> Fault Current Available	<input type="checkbox"/> Other Utilities in Area
<input type="checkbox"/> Hazardous Induced Voltg	<input type="checkbox"/> Personal Protective Equip
<input type="checkbox"/> Presence Protective Grds	<input type="checkbox"/> Traffic Control
<input type="checkbox"/> Equipment Grounds	<input type="checkbox"/> Job Procedure
<input type="checkbox"/> Pole Condition	<input type="checkbox"/> Individual Job Duties
<input type="checkbox"/> Environmental Condition	<input type="checkbox"/> Other Hazards

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

**CONSTRUCTION**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1/2 AC S R	X				2321	3	7171
1/2 AS R	X				2321	1	2390
TOTALS	X	X	X	X			

**RETIREMENT**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS	X	X	X	X			

Const. Complt \_\_\_\_\_  
 Retrm. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00

# IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

Name 4 mile line Rebuild 3φ  
 Location #: 1530--7432  
 Address: Co Hwy D41  
 Phone #: \_\_\_\_\_

County: Hardin  
 Township: Ellis  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input checked="" type="checkbox"/>
System Improvement	<input type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13276  
 740c# 330-1  
 Staked By CH Date 11/12/19  
 Sheet No. 3 of 9  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 74 Twp. 88N R. 21W Sec. 32 Wire 3 Size 4/0 Kind ACSR

Pole No.	Pri. (Back) Span.	Poles H & C		Pri. Unit	Line Angle	Trans. "G"	Ground		GUY	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No.	
		Misc.	Misc.				No. J or K	Size Meter			CONST.	RET.				
26	156	1	40-3	1	CL1P		H1.1	P1.1		20'5" FL12			1530-016	P1.1	6	
27	234	1	40-3	1	CL1P		H5.1							H1.1	3	
28	234	1	40-3	1	CL1P		H1.1							G1.3	1	
29	237	1	35-3	1	CL1P		H5.1							C2.24P	1	
30	237	1	35-3	1	CL1P		H5.1							40-3	3	
21	215	1	35-3	1	CL1P		H5.1							32.1T	1	

Const. Complt \_\_\_\_\_

Retmt. Complt \_\_\_\_\_

Material Ticket Complt \_\_\_\_\_

500 BH 9-00

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

**JOB BRIEFING**

Nominal Voltage	Loc of Line Protective Dvc
Fault Current Available	Other Utilities in Area
Hazardous Induced Volts	Personal Protective Equip
Presence Protective Grids	Traffic Control
Equipment Grounds	Job Procedure
Pole Condition	Individual Job Duties
Environmental Condition	Other Hazards

**CONSTRUCTION**

Conductor	Pri. Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
4/0 ACSR	X			2173	3	6714
4/0 ACSR	X			2173	1	2238
TOTALS	X	X	X			

**RETIREMENT**

Conductor	Pri. Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS	X	X	X			



# IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

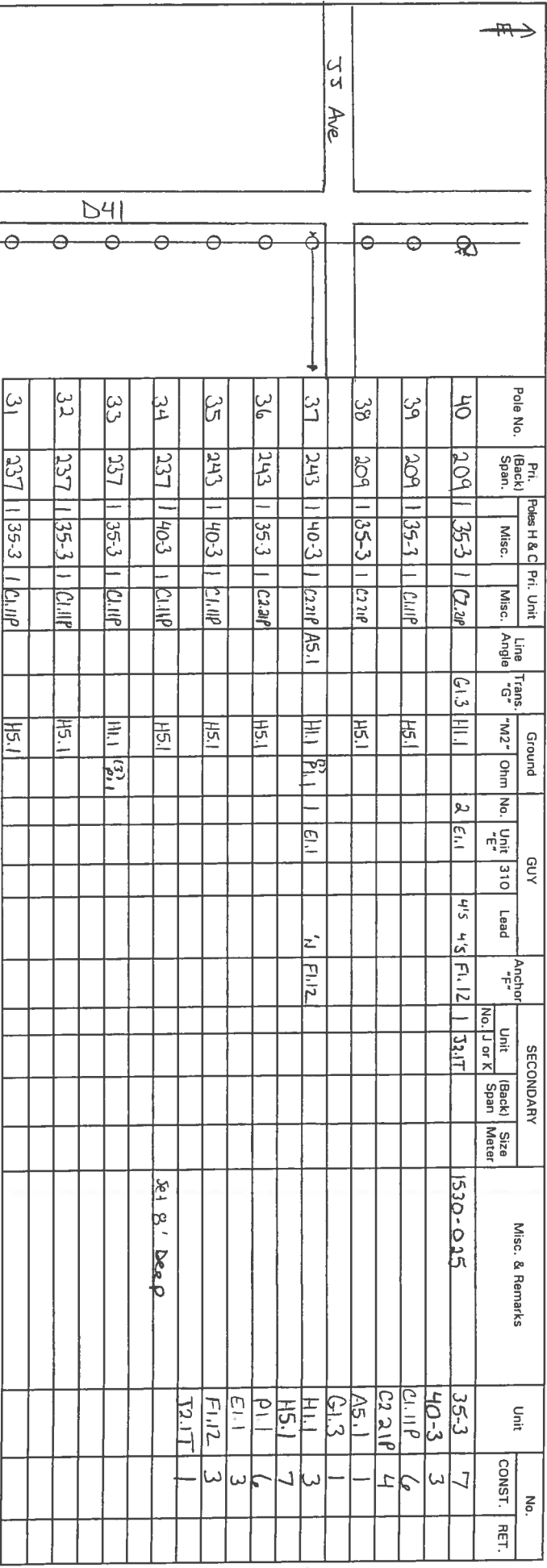
Name Line Resub'd 4 miles 30  
 Location # 1530--7433  
 Address: Co Hwy DHI  
 Phone #: \_\_\_\_\_

15 Sub  
3 Feeder  
ABC Phase  
 County: Hardin  
 Township: Gillis  
 School Dist.: \_\_\_\_\_  
 Line Sec: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input checked="" type="checkbox"/>
System Improvement	<input type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13276  
 740c# 330-1  
 Staked By CH Date 11/22/19  
 Sheet No. 4 of 9  
 Comptd By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 74 Twp. 88N R. 21W Sec. 33 Wire 3 Size 4/0 Kind ACSR



JOB BRIEFING									
Nominal Voltage	_____	Loc of Line Protective Dvc	_____						
Fault Current Available	_____	Other Utilities in Area	_____						
Hazardous Induced Voltg	_____	Personal Protective Equip	_____						
Presence Protective Grids	_____	Traffic Control	_____						
Equipment Grounds	_____	Job Procedure	_____						
Pole Condition	_____	Individual Job Duties	_____						
Environmental Condition	_____	Other Hazards	_____						
Crew Initials	1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____								

CONSTRUCTION									
Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet		
1/0	X				2304	3	7119		
1/2	X				2304	1	2373		
TOTALS	X	X	X	X		X			

RETIREMENT									
Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet		
TOTALS	X	X	X	X		X			

Const. Compt \_\_\_\_\_  
 Reemt. Compt \_\_\_\_\_  
 Material Ticket Compt \_\_\_\_\_  
 500 BH 9-00

# IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

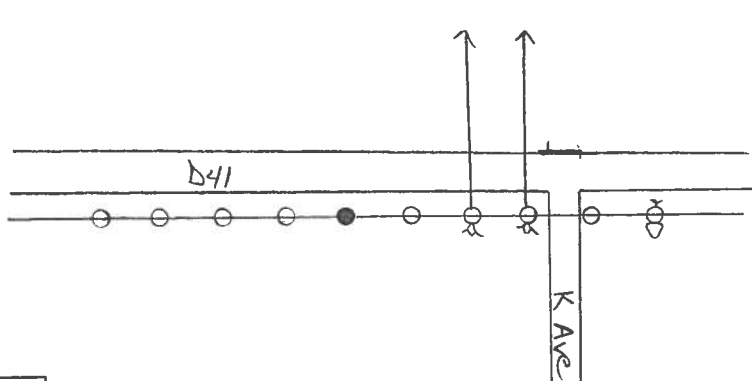
Name 4 mile line Rebuild 30  
 Location # 1530--7433  
 Address: Co Hwy D41  
 Phone #: \_\_\_\_\_

15 Sub  
3 Feeder  
ABC Phase  
 County: Harold  
 Township: Ellis  
 School Dist: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input type="checkbox"/>
System Improvement	<input checked="" type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13276  
 740c# 330-1  
 Staked By CH Date 11/2/19  
 Sheet No. 5 of 9  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 74 Twp. 88N R 21W Sec. 33 Wire 3 Size 4/0 Kind ACSR



Pole No.	Pri. (Back) Span.	Poles H & C		Line Angle	Trans "G"	Ground "M2"	Ohm No.	Unit No.	GUY 310	Lead	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No. CONST.	No. RET.
		Misc.	Pri. Unit									Unit No. J or K	Span				
50	105	140-3	1 C11P		G13	H1.1		1 E1.1			1 F1.12	1	32.1T	1530-031/032	35-3	7	
49	181	140-3	1 C2.2P			H1.1 (3)									40-3	2	
48	236	135-3	1 C22M	AS.1		H1.1		2 F1.1		5'5	5'5	F1.12		1530-028*	C1.1P	7	
47	257	135-3	1 C11P	AS.1		H1.1		2 E1.1		5'5	5'5	F1.12		1530-026/027	C2.2P	2	
46	257	135-3	1 C11P			H5.1									H1.1	4	
45	228	135-3	1 C11P	UA1		H1.1								1530-026A	H5.1	5	
44	228	135-3	1 C11P			H5.1									P1.1	3	
43	228	135-3	1 C11P			H5.1									E1.1	2	
42	228	135-3	1 C11P			H5.1									F1.12	2	
41	228	135-3	1 C11P			H5.1									32.1T	1	

Const. Complt \_\_\_\_\_  
 Retmt. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00

JOB BRIEFING	
Nominal Voltage	_____
Fault Current Available	_____
Hazardous Induced Voltg	_____
Presence Prctive Grnds	_____
Equipment Grounds	_____
Pole Condition	_____
Environmental Condition	_____
Crew Initials	1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____

CONSTRUCTION							
Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
1/0 ACSR	X		X		2176	3	6723
1/0 ACSR	X		X		2176	1	2241
TOTALS	X	X	X				

RETIREMENT							
Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS							

# IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

Name 4 mile line rebuild 3Ø  
 Location #: 1530--7434  
 Address: Co Hwy D41  
 Phone #: \_\_\_\_\_

15 Sub  
3 Feeder  
ABC Phase  
 Line Sec. \_\_\_\_\_

County: Hardin  
 Township: Ellis  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input type="checkbox"/>
System Improvement	<input checked="" type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13276  
 740c# 230-1  
 Staked By CH Date 11/12/19  
 Sheet No. 6 of 9  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 74 Twp. 88N R 21W Sec. 34 Wire 3 Size 4/0 Kind ACSR

Pole No.	Pri. (Back) Span.	Poles H & C		Pri. Unit	Line Angle	Trans. "G"	Ground	No.	Unit	Lead	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No.
		Misc.	Misc.									Unit (Back) Span	Size Meter			
60	213	140-3	1	C11P			H5.1							35-3	2	
59	213	140-3	1	C11P			H5.1							40-3	4	
58	213	140-3	1	C11P			H5.1							45-3	4	
57	213	135-3	1	C11P			H1.1 P1.1							C11P	10	
56	213	135-3	1	C11P			H5.1							A5.1	1	
55	179	145-3	1	C11P	A5.1		H1.1	2	E1.1	15	15	F1.2		1530-034		
54	179	145-3	1	C11P			H5.1									
53	244	145-3	1	C11P		41.3	H1.1	1	E1.1	12	12	F1.2		1530-033		
52	208	145-3	1	C11P			H5.1									
51	208	140-3	1	C11P			H5.1									

**JOB BRIEFING**

Nominal Voltage \_\_\_\_\_  
 Fault Current Available \_\_\_\_\_  
 Hazardous Induced Voltg \_\_\_\_\_  
 Presence Protective Grids \_\_\_\_\_  
 Equipment Grounds \_\_\_\_\_  
 Pole Condition \_\_\_\_\_  
 Environmental Condition \_\_\_\_\_

Loc of Line Protective Dvc \_\_\_\_\_  
 Other Utilities in Area \_\_\_\_\_  
 Personal Protective Equip \_\_\_\_\_  
 Traffic Control \_\_\_\_\_  
 Job Procedure \_\_\_\_\_  
 Individual Job Duties \_\_\_\_\_  
 Other Hazards \_\_\_\_\_

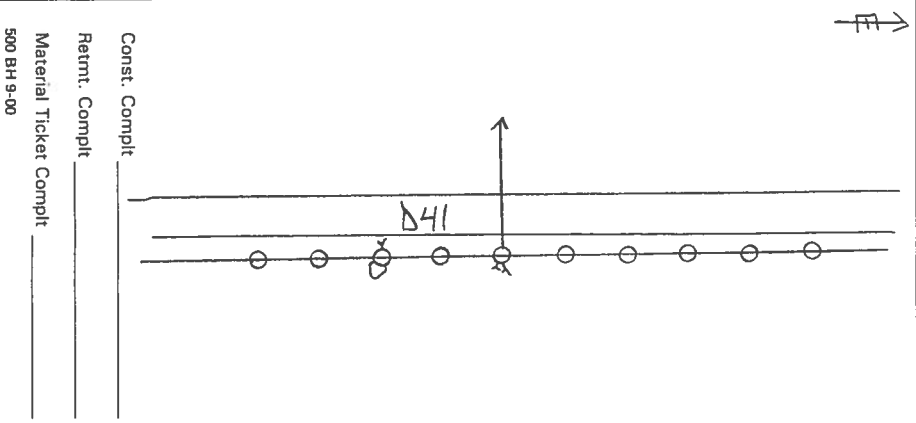
Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

**CONSTRUCTION**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
4/0 ACSR	X				2083	3	6436
1/2 ACSR	X				2085	1	2145
TOTALS	X	X	X	X			

**RETIREMENT**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS	X	X	X	X			



Const. Complt \_\_\_\_\_  
 Retrm. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00



# IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

Name 4 mile line rebuild 30  
 Location # 1530-7434  
 Address: Co Hwy D41  
 Phone #: \_\_\_\_\_

Sub 15  
 Feeder 3  
 Phase ABC  
 Line Sec. \_\_\_\_\_

County: Harrison  
 Township: Ellis  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input type="checkbox"/>
System Improvement	<input checked="" type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13276  
 740c# 330-1  
 Staked By CA Date 11/12/19  
 Sheet No. 7 of 9  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK \_\_\_\_\_ Map Reference 74 Twp. 88N R. 21W Sec. 34 Wire 3 Size 4/0 Kind ACSR

Pole No.	Pri. (Back) Span	Pass H & C		Line Angle	Trans "G"	Ground		GUY		Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No.	
		Misc.	Misc.			"M2"	Ohm	Unit 3/10	Lead		Unit No. J or K	(Back) Span			Size Meter	CONST.
70	201	1 50-3	1 C11P			H11	P11						Set 8' Deep	40-3	7	
69	201	1 50-3	1 C11P			H51								50-3	3	
68	201	1 50-3	1 C11P			H51								C11P	9	
67	201	1 40-3	1 C11P			H51								C2.21P	1	
66	144	1 40-3	1 C11P			G1.3	H11	1 E11	5' S	F112	1 D11T		1530-046	AS1	2	
65	144	1 40-3	1 C11P			H51								E11	2	
64	148	1 40-3	1 C11P			G1.3	H11							F112	2	
63	148	1 40-3	1 C11P			H51								S2.1T	2	
62	213	1 40-3	1 C2.21P	20A5.1		H1.1		1 E11	25' S	F112						
61	213	1 40-3	1 C11P			H1.1	P11									

**JOB BRIEFING**

Nominal Voltage \_\_\_\_\_

Fault Current Available \_\_\_\_\_

Hazardous Induced Voltg \_\_\_\_\_

Presence Protective Grids \_\_\_\_\_

Equipment Grounds \_\_\_\_\_

Pole Condition \_\_\_\_\_

Environmental Condition \_\_\_\_\_

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

**CONSTRUCTION**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
4/0 ACSR	X		X		1814	3	5605
4/0 ACSR	X		X		1814	1	1868
TOTALS	X	X	X	X			

**RETIREMENT**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS	X	X	X	X			

**Material Ticket Complt** \_\_\_\_\_

Const. Complt \_\_\_\_\_

Retrm. Complt \_\_\_\_\_

500 BH 9-00

# IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

Name 4 mile Line Rebuild 3rd  
 Location #: 1530--7435  
 Address: Co Hungary D41  
 Phone #: \_\_\_\_\_

Sub 15  
 Feeder 3  
 Phase ABC  
 Line Sec. \_\_\_\_\_

County: Hardin  
 Township: Ellis  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE  
 New Construction  
 System Improvement  
 Replacement  
 Retire No. Replace

Staked By CH Date 11/12/19  
 Sheet No. 8 of 9  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

WORK ORDER NO. 132716  
 740c# 230-1

SKETCH OF WORK Map Reference 74 TWP. 88N R 21W Sec. 35 Wire 3 Size 4/6 Kind ACSR

Pole No.	Pri.	(Back) Span.	Misc.	Pri. Unit	Misc.	Line Angle	Trans. "G"	Ground "M2"	Ohm	No.	GUY		Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No.	
											Unit	310		Lead	Unit			(Back) Span	Size Meter
79	201	140-3	1	M33	1	61.3	H1.1			1	E1.1		F1.12	2	321T	1530-049	35-3	1	
80	182	140-3	1	C21P			H5.1										40-3	1	
78	201	135-3	1	M33,WP			H1.1	P1.1									45-3	5	
77	201	145-3	1	C21P			H5.1										50-3	2	
76	201	145-3	1	C21P			H5.1										C21P	4	
75	246	145-3	1	C6.21			H5.1										C6.21	1	
74	233	145-3	1	C11P			H1.1	P1.1									M33,WP	1	
73	233	150-3	1	C11P			H5.1										H1.1	2	
72	233	150-3	1	C11P			H5.1										H5.1	7	
71	233	145-3	1	C11P			H5.1										P1.1	6	

Const. Complt \_\_\_\_\_  
 Retmt. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00

**JOB BRIEFING**

Nominal Voltage \_\_\_\_\_  
 Fault Current Available \_\_\_\_\_  
 Hazardous Induced Voltg \_\_\_\_\_  
 Presence Protective Grds \_\_\_\_\_  
 Equipment Grounds \_\_\_\_\_  
 Pole Condition \_\_\_\_\_  
 Environmental Condition \_\_\_\_\_

Loc of Line Protective Dvc \_\_\_\_\_  
 Other Utilities in Area \_\_\_\_\_  
 Personal Protective Equip \_\_\_\_\_  
 Traffic Control \_\_\_\_\_  
 Job Procedure \_\_\_\_\_  
 Individual Job Duties \_\_\_\_\_  
 Other Hazards \_\_\_\_\_

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

**CONSTRUCTION**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
H10	X		X		2164	3	6486
ACSR	X		X		2164	1	2228
TOTALS	X	X	X	X			

**RETIREMENT**

Conductor	Pri.	Sec.	O.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
TOTALS	X	X	X	X			

Set 8' Deep

# IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

Name 4 mile line Rebuild 3rd  
 Location #: 1530--7435  
 Address: Co Hwy 241  
 Phone #: \_\_\_\_\_

Sub 15  
 Feeder 3  
 Phase ABC  
 Line Sec. \_\_\_\_\_

County: Hardin  
 Township: Ellis  
 School Dist.: \_\_\_\_\_

WORK ORDER CODE	
New Construction	<input checked="" type="checkbox"/>
System Improvement	<input type="checkbox"/>
Replacement	<input type="checkbox"/>
Retire No. Replace	<input type="checkbox"/>

WORK ORDER NO. 13276  
 740c# 330-1  
 Staked By CH Date 11/2/19  
 Sheet No. 9 of 9  
 Compiled By \_\_\_\_\_ Date \_\_\_\_\_

SKETCH OF WORK Map Reference 74 Twp. 88N R 21W Sec. 35 Wire 3 Size 4/0 Kind ACSR

Pole No.	Pri. (Back) Span.	Poles H & C Misc.	Pri. Unit Misc.	Line Angle	Trans "G"	Ground "W2"	Ohm	No.	Unit	GUY 310	Lead	Anchor "F"	SECONDARY		Misc. & Remarks	Unit	No.	
													Unit	(Back) Span			Size Meter	CONST.
89	113	145-3	1 C2.21P		G1.3	H1.1		1	E1.1		25' E	E1.12	1	21T	1530-052	40-3	5	
88	224	145-3	1 C2.21P	AS.21		H1.1		1	E1.1		15	E1.12			1213+36	45-3	3	
87	224	145-3	1 C1.1P			H1.1	3/2 P1.1								1213+36	45-3	3	
86	187	145-3	1 C1.1P			H5.1									1213+36	C2.21P	6	
85	187	140-3	1 C1.1P			H5.1									1213+36	C6.21	1	
84	187	140-3	1 C1.1P			H5.1									1213+36	G1.3	1	
83	187	140-3	1 C1.1P			H1.1	1/2 P1.1								1213+36	H1.1	3	
82	182	140-3	1 C1.1P			H5.1									1213+36	H5.1	5	
81	182	140-3	1 C2.21P			H5.1									1213+36	P1.1	6	
															1213+36	E1.1	1	
															1213+36	E1.12	1	
															1213+36	32.1T	1	

CONSTRUCTION				RETIREMENT							
Conductor	Pri. Sec.	O.H. URD	Pole Line Ft.	No. of Wires	Total Feet	Conductor	Pri. Sec.	O.H. URD	Pole Line Ft.	No. of Wires	Total Feet
H/O		X	1673	3	5169						
A/S R		X	1673	1	1723						
V/O		X									
A/S R		X									
TOTALS											

Const. Complt \_\_\_\_\_  
 Retmt. Complt \_\_\_\_\_  
 Material Ticket Complt \_\_\_\_\_  
 500 BH 9-00

**JOB BRIEFING**

Nominal Voltage	Loc of Line	Protective Dvc
Fault Current Available	Other Utilities in Area	
Hazardous Induced Voltg	Personal Protective Equip	
Presence Protective Grds	Traffic Control	
Equipment Grounds	Job Procedure	
Pole Condition	Individual Job Duties	
Environmental Condition	Other Hazards	

Crew Initials 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_

