

AGENDA
REGULAR DRAINAGE MEETING &
PUBLIC HEARING ON ENGINEER'S REPORT ON REPAIRS OR IMPROVEMENTS
TO MAIN TILE, DRAINAGE DISTRICT 9, HARDIN COUNTY
JUNE 19, 2019 AT 1:00 P.M.
HARDIN COUNTY COURTHOUSE LOWER LEVEL CONFERENCE ROOM

1. Open Meeting
2. Approve Agenda
3. Introductions/Attendance
4. Open Public Hearing
 - 4.I. Verify Publication
Published in the Times Citizen on May 29, 2019
 - 4.II. Explanation Of Project
 - Engineer's Report on Repairs or Improvements to Main Tile
 - Supplement to Engineer's Report on Repairs of Improvements to Main Tile

Documents:

[6735.1 -DD 9 MAIN TILE ENGRS REPORT.PDF](#)
[6735.1 -DD 9 MAIN TILE SUPP ENGRS REPORT.PDF](#)

- 4.III. Written Or Verbal Comments/Discussion
- 4.IV. Close Public Hearing
- 4.V. Possible Action
 - Adopt Recommendation of Engineer's Report
 - Direct CGA to Prepare Plans and Specifications
5. DD 55-3 - Discuss, With Possible Action, Railroad Approval Letter

Documents:

[CONSENT LETTER - RAILROAD.PDF](#)
[CONTRACTORS RIGHT OF ENTRY AGREEMENT RAILROAD.PDF](#)

6. Discuss, With Possible Action, IRUA Update

Documents:

[IRUA 6-13-19.PDF](#)

7. DD 22 - Discuss, With Possible Action, Work Order #176 Concerns
8. DD 22 - Discuss, With Possible Action, Repair Summary For Work Order #198
 - No expense to the district

Documents:

[6532.3 - REPAIR_SUMMARY_2019_06_17.PDF](#)

9. DD 38 Lat 4- Discuss, With Possible Action, Repair Summary For Work Order #231

Documents:

[6739 - DD38WO231 REPAIR SUMMARY.PDF](#)

10. DD 64 - Discuss, With Possible Action, Utility Crossing Summary For 2018-5

Documents:

[2018-5 DD 64 MIDLAND UTILITY CROSSING SUMMARY.PDF](#)

11. DD 78 - Discuss, With Possible Action, Investigation Summary For Work Order #246

Documents:

[DD78WO246-INVESTIGATION.PDF](#)

12. DD 86 - Discuss, With Possible Action, Investigation Summary For Work Order #252
-Schedule Landowners Meeting

Documents:

[DD86WO252 INVESTIGATION.PDF](#)

13. DD 143 - Discuss, With Possible Action, Investigation Summary For Work Order #167

Documents:

[6771.2 - DD143 - UTILITY BREAK.PDF](#)

14. DD 167 - Approve Work Order #260

Documents:

[DD 167 WO 260.PDF](#)
[LETTER TO DRAINAGE CLERK 17JUN2019.PDF](#)

15. Other Business

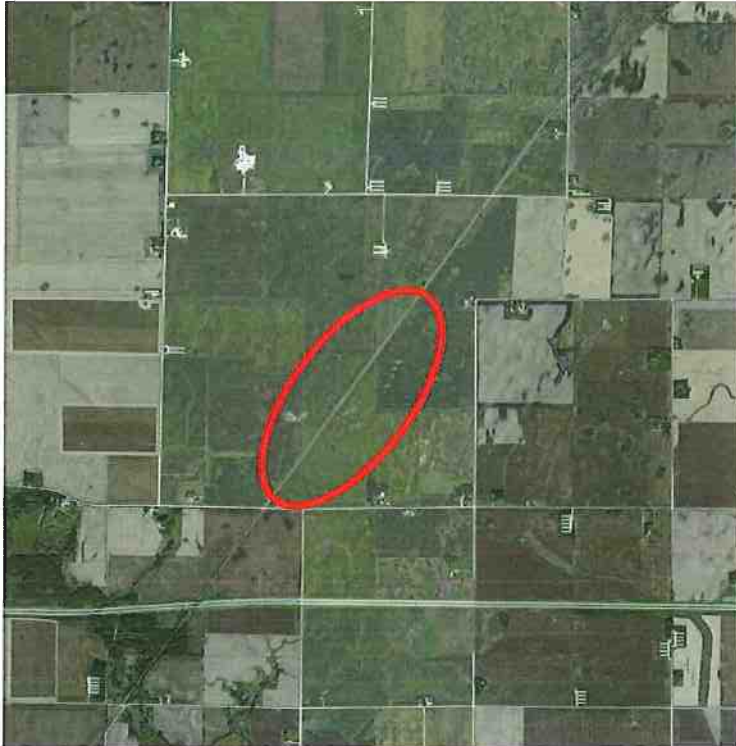
- 15.I. DD 148 - Canvass Election
Monday, June 24, 2019 at 8:30 AM

- 15.II. June 24, 2019 Meeting
-Can we have an afternoon meeting?
- Starting at 1:00 PM or 2:00 PM

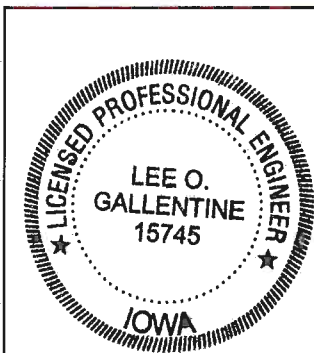
16. Adjourn Meeting

HARDIN COUNTY, IOWA

2019



**ENGINEER'S REPORT
ON REPAIRS OR
IMPROVEMENTS TO
MAIN TILE
DRAINAGE DISTRICT
NO. 9
HARDIN COUNTY,
IOWA**



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA

LEE O. GALLENTINE, P.E.

DATE

LICENSE NUMBER: 15745
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2020
PAGES OR SHEETS COVERED BY THIS SEAL:
SHOWN ON TABLE OF CONTENTS

CGA
ENGINEERS • LAND SURVEYORS

CLAPSADDLE-GARBER ASSOCIATES OFFICE LOCATIONS

16 East Main Street, PO Box 754 | Marshalltown, IA 50158
1523 S. Bell Avenue, Suite 101 | Ames, IA 50010
5106 Nordic Drive | Cedar Falls, IA 50613
739 Park Avenue | Ackley, IA 50601
511 Bank Street | Webster City, IA 50595

Project Office
739 Park Avenue
Ackley, IA. 50601
Phone: 641-847-3273
Fax: 641-847-2303

**Engineer's Report on Repairs or Improvements
to Main Tile, Drainage District No. 9
Hardin County, Iowa**

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Engineer's Report on Repairs or Improvements to Main Tile, Drainage District No. 9 Hardin County, Iowa

1.0 INTRODUCTION

- SCOPE OF WORK – The Hardin County Board of Supervisors, acting as District Trustees, requested Clapsaddle-Garber Associates to investigate and report concerning repairs or improvements to the Main tile of Drainage District No. 9. This report will summarize the history of repairs, investigate the necessity and feasibility of said repairs or improvements, and present opinions of probable construction costs associated with said repairs or improvements. At the Drainage District Meeting held on November 28, 2018, the preliminary results of the investigation for Work Order #229 were discussed and reviewed by the District Trustees. For reference, a copy of the meeting minutes is included in Appendix A and a copy of the final Investigation Summary for Work Order #229 (as considered at the April 24, 2019 Drainage District Meeting) is included in Appendix B. As a result of these meetings, the District Trustees requested Clapsaddle-Garber Associates to move ahead with an investigation and report concerning repairs or improvements to the Main tile.

- LOCATION – The area of investigation was limited to the middle portion of the Main tile that is southeast of the existing railroad. Said middle portion is located in Section 6, Township 88 North (T88N), Range 21 West (R21W) and Section 1, Township 88 North (T88N), Range 22 West (R22W), Hardin County, Iowa. Specifically, the downstream limit of the investigation is at the southernmost railroad crossing approximately 1/8 mile north of County Highway D-25. Going upstream, the tile then proceeds northeast for approximately 1/4 mile when it turns northwest. It then continues northwest for approximately 1/4 mile where it crosses said railroad again. For reference, a map showing the limits of investigation is included in Appendix C.

2.0 PARTIAL DISTRICT HISTORY – The following is a summary of the partial history of Drainage District No. 9 as obtained from the Hardin County Auditor’s drainage minutes and records.

- 1909, June 30 Contract with S.W. Ansell for construction of original district facilities.
- 1917, Sept. 12 Recommendation of repair of the Main tile outlet.
- 1959, May 13 Bill for repair of tile located in Section 6.
- 1959, May 25 Bill for repair of tile located in Section 6.
- 1960, Jun. 1 Bill for repair of tile located in Section 6.
- 1962, May 29 Bill for repair and cleaning of tile located in Section 6.
- 1962, Jun. 27 Bill for repair of tile located in Section 6.
- 1962, Oct. 12 Bill for repair of tile located in Section 6.
- 1968, Nov. 1 Request for repair of tile located in Section 6 as tile was not working along railroad tracks.
- 1969, Apr. 21 Request to repair broken tile located in Section 6.
- 1970, Oct. 20 Request for extension of the Main tile at its outlet and possible annexation as a result.
- 1970, Sept. 14 Bill for repair of Main tile located in Section 1.
- 1972, Oct. 27 Bill for repair of tile blowout located in Section 1.
- 1978, Apr. 27 Bill for repair of broken tile located in Section 6.
- 1991, Oct. 9 Bill for repair of broken Main tile in or near railroad located in Section 1.
- 1995, Nov. 27 Bill for repair of broken Lateral 2 tile located along railroad right of way fence in Section 6.
- 2004, Apr. 28 Request for repair of broken Main tile located in Section 6.

- 3.0 INVESTIGATION – All field investigation for this report was performed as part of the Investigation Summary for Work Order #229. Said investigation was limited repairing a tile blowout, excavating the tile at regular intervals, locating tile (including GPS survey), and noting the level of debris in the tile at each excavation. For reference, a copy of the Investigation Summary is included in Appendix B. The following key issues should be noted:
- At the upstream limits of investigation, another sinkhole was found in or near the railroad right of way. From this sinkhole, the tile could not be located upstream (i.e. underneath the existing railroad) due to debris and the Main tile appeared to be approximately ½ full of debris (i.e. rock, sand, soil, silt, etc). It was also noted that the upstream land on the other side of the railroad tracks was extremely saturated and appeared not to be draining.
 - At the last excavation (near the downstream limits of investigation), the tile could not be located downstream (i.e. underneath the existing railroad) due to apparent tree growth inside the railroad right of way.

A review of district history shows that 15 repairs since the original district construction. These repairs have consisted of tile replacement in lengths up to 20 feet and repairs of blowouts/sinkholes. It should be noted that 3 of the repairs have been in or near the existing railroad. It is also possible that a lack of other repairs is not an indication of lack of repairs, but instead an indication of lack of documentation.

- 4.0 DISCUSSION AND CONCLUSIONS – Based on the above, it is obvious that the Main tile has a history of failure, especially in or near railroad right of way. Since the original profile for the Main tile shows installation depths of approximately 3 to 5 feet at the above mentioned upstream sinkhole, the issue is probably not attributable to lack of ground cover. Instead, it is probably due to the utility installation, tile age, or both. Differentiating between these causes would be hard at best.

Regardless of the cause of the tile failure, if repairs or improvements are not performed the Main tile will not properly drain any of the land upstream of the railroad track due to its plugged or restricted state. This will likely prevent crop production on a large portion of the field upstream of the same location. Also, depending upon the condition of said Main tile under the existing railroad tracks, there may be a liability exposure by the drainage district if a sinkhole were to develop in the existing railbed.

5.0 REPAIR METHOD – To repair the existing Main tile, the following option is the most straightforward available:

Tile Replacement

- For the portion of the Main tile in the railroad right of way at the upstream limits of investigation, install a new Main tile at the location dictated by railroad standards and abandon the existing Main tile at its current location.
- For the portion of the Main tile in the railroad right of way at the downstream limits of investigation, jet clean the existing Main tile, CCTV inspect the existing Main tile to verify its condition and remove the trees inside the railroad right of way.
- For reference, the locations of proposed work are shown on the map included in Appendix D.

With the above-mentioned repair methods, the following should be noted:

- The condition of the Main tile at the downstream railroad crossing is unknown.
- For the above option, the current railroad crossing would not be removed, but would be abandoned and a new crossing will be installed at a location dictated by railroad standards.
- For the above option, trees within 50' of the locations of the existing or replaced Main tile inside railroad right of way would be removed to stop infiltration of tree roots.
- The pipe sizes used are those that are currently manufactured that most closely meet the current Main tile size.
- The above option would only remove soil and debris in the existing Main tile at the areas of work.
- The above work is for the identified portions of the Main tile only. No work is proposed for the remainder of the existing Main tile.
- Repairs have historically been viewed as not having an impact on jurisdictional wetlands. As such, individual landowners should consult with applicable staff at the Hardin County NRCS offices to verify the existence of said jurisdictional wetlands and that there will be no impact on them.

Per Iowa Code Chapter 468.126, any of the above actions that do not increase capacity would be considered a repair. As such, Subsection 1, paragraph c of Chapter 468.126 states "If the estimated cost of the repair does not exceed fifty thousand dollars, the board may order the work done without conducting a hearing on the matter. Otherwise, the board shall set a date for a hearing. . ." The opinion of probable construction cost contained in the next section of this report exceeds said \$50,000 limit. Therefore, a hearing will be required. Per Iowa Code Chapter 468.126.1.g, the right of remonstrance does not apply to the proposed repairs.

6.0 IMPROVEMENT METHOD – To improve the drainage capacity for the existing Main tile, the following option is the most straightforward available:

Tile Reroute

- Sever the existing Main tile upstream of the upstream railroad crossing and plug the downstream end on northwest side of the railroad right of way.
- Abandon existing Main tile at said upstream railroad crossing under the railroad tracks.
- Install a new Main tile from the location of severing southwest parallel with the railroad right of way to the downstream side of the downstream railroad crossing and connect the new Main tile with the existing Main tile at this location.
- For the portion of the Main tile in the railroad right of way at the downstream limits of investigation, jet clean the existing Main tile, CCTV inspect the existing Main tile to verify its condition and remove the trees inside the railroad right of way.
- For reference, the locations of proposed work are shown on the map included in Appendix E.

With the above-mentioned improvement method, the following should be noted:

- The condition of the Main tile at the downstream railroad crossing is unknown.
- For the above option, the current railroad crossing would not be removed, but would be abandoned as dictated by railroad standards.
- For the above option, trees within 50' of the locations of the existing Main tile inside railroad right of way would be removed to stop infiltration of tree roots.
- The pipe sizes used are those that are currently manufactured that most closely meet the current Main tile size.
- The above option would only remove soil and debris in the existing Main tile at the areas of work.
- The above work is for the identified portions of the Main tile only. No work is proposed for the remainder of the existing Main tile.
- This improvement would split the current drainage shed of the Main into two different pieces. As a result, these watersheds should be separated and each have its own classification.
- Improvements have historically been viewed as having an impact on jurisdictional wetlands. As such, individual landowners should consult with applicable staff at the Hardin County NRCS office to determine the existence of said jurisdictional wetlands and what said impact may be on them.

Per Iowa Code Chapter 468.126, the above actions would be considered an improvement. As such, Subsection 4, paragraph c of Chapter 468.126 states "If the estimated cost of the improvement does not exceed fifty thousand dollars, the board may order the work done without conducting a hearing on the matter. Otherwise, the board shall set a date for a hearing on whether to construct the proposed improvement and whether there shall be a reclassification of benefits for the cost of the proposed improvement." The opinion of probable construction cost contained in the next section of this report exceeds said \$50,000 limit. Therefore, a hearing will be required. Per Iowa Code Chapter 468.126.4.e, the right of remonstrance may apply to the proposed improvements.

7.0 OPINIONS OF PROBABLE CONSTRUCTION COSTS – Using the above methods of repair and improvement, an itemized list of project quantities and associated opinions of probable construction cost for each option were compiled and are included in Appendices F and G of this report. A summary of said costs are as follows:

METHOD	DRAINAGE COEFF.	CONSTRUCTION COST
Tile Replacement – Repair	Existing	\$195,600
Tile Reroute – Improvement	Existing	\$154,200

It should be noted that said costs include materials, labor, and equipment supplied by the contractor to complete the necessary repair and include applicable engineering, construction observation, and project administration fees by Clapsaddle-Garber Associates. However, said costs do not include any interest, legal fees, county administrative fees, crop damages, other damages, previous repairs, engineering fees to date, wetland mitigation fees, or reclassification fees (if applicable). As always, all costs shown are opinions of Clapsaddle-Garber Associates based on previous lettings on other projects. Said costs are just a guideline and are not a guarantee of actual costs.

8.0 OWNERSHIP AND CLASSIFICATIONS – Any and all information concerning ownership of lands and classifications of said lands within Drainage District No. 9 can be obtained from the Hardin County Auditor’s office.

It should be noted that Iowa Code Chapter 468.65 states “When, after a drainage . . . district has been established . . .” and “. . . a repair . . . has become necessary, the board may consider whether the existing assessments are equitable as a basis for payment of the expense of . . . making the repair . . .” and “If they find the same to be inequitable in any particular . . . they shall . . . order a reclassification . . .” Based on this, it is our opinion that a reclassification may be required if the repair were to move forward.

It should also be noted that since the Main tile is being split into two watersheds, a reclassification of at least the Main tile would be required if the improvement were to move forward.

The final note is that Iowa Code Chapter 468.131 states “When an assessment for improvements . . . exceeds twenty-five percent of the original assessment and the original or subsequent assessment . . . did not designate separately the amount each tract should pay for the main ditch and tile lateral drains then the board shall order a reclassification . . .” Since the proposed project does not involve the laterals, it is not clear if a reclassification separating the laterals would be required or not. Therefore, it is our recommendation that the District Trustees seek advice from their legal counsel.

9.0 RECOMMENDATIONS – There is a definite need to perform one of the above-mentioned actions. The repair would remove the current restrictions and impediments to the Main tile and extend the lifespan of the same. The improvement would do the same and increase the capacity of the Main tile east of the railroad. Therefore, it is recommended that the Hardin County Board of Supervisors, acting as District Trustees, should take action to accomplish the following:

- Approve the Engineer’s Report as prepared by Clapsaddle-Garber Associates.
- Hold the required hearing on the proposed repairs or improvements.
- Adopt one of the recommendations of the Engineer’s Report.
- Direct plans and specifications for the proposed repairs or improvements be prepared by Clapsaddle-Garber Associates.
- Proceed with receiving bids from interested contractors by Clapsaddle-Garber Associates.
- Award contract to the lowest responsible contractor.
- If desired or required by Iowa Code, proceed with reclassification proceedings

REGULAR DRAINAGE MEETING

11/28/2018 - Minutes

1. Open Meeting

Hardin County Board of Supervisor Chairman, BJ Hoffman, opened the meeting. Also present were Supervisors, Lance Granzow and Renee McClellan; Hardin County Attorney, Darrell Meyer; Contractor, Jacob Handsaker with Hands On Excavating; Lee Gallentine with Clapsaddle-Garber Associates (CGA); Drainage Clerk, Tina Schlemme.

2. Approve Agenda

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

3. Approve Minutes

McClellan moved, Hoffman seconded to approve the minutes of the November 14, 2018 regular drainage meeting. All ayes. Motion carried.

4. Approve Claims For Payment

McClellan moved, Hoffman seconded to approve the claims for payment with pay date of Friday, November 30, 2018. All ayes. Motion carried.

DD H-S 3-58 Assessments 2018	Story County Auditor	\$ 943.90
DD H-H 1-103 ASSESSMENTS 2018	Hamilton Co Auditor	\$ 781.00
DD H-F 4-53 ASSESSMENTS 2017	Franklin Co Auditor	\$ 6.00
DD 22 ENG SVCS 9/15-10/20/18	Clapsaddle-Garber Assoc	\$ 660.00
DD 55-3 LAT 9A WO 29 ENG FEES	Clapsaddle-Garber Assoc	\$ 544.65
DD 136 WO 146 POSTAGE	Hardin County Auditor	\$ 7.98
DD 25 CANCEL CONTRACT BONDING COSTS	Farm Tile Pro LC	\$5,336.00
DD 52 Legal Advice for filing petition	The Davis Brown Law Firm	\$ 57.00
DD 148 WO 211 Repair	R D Customs LLC	\$ 967.00

5. DD 41, 77, 123, 128, 143 & Big 4 Main - Approve Change Order #2

Hoffman stated there were concerns with Hands On completing some municipal projects and not working on the contracted drainage projects to meet the deadline. Handsaker replied that due to the weather, they were only able to work on the municipal projects because they were rock surfaces. They completed the streets and waterway drainage projects but did not get the excavator work done due to wet soil conditions. He added that they were hoping to get it done yet this winter or early spring. McClellan moved, Hoffman seconded to approve Change Order #2 for a time extension from November 30, 2018 to May 1, 2019. All ayes. Motion carried.

6. DD 48 - Approve Work Order Request #237

McClellan moved, Granzow seconded to approve Work Order Request #237 for an outlet problem in section 23-88-21. CGA is to investigate and report back. All ayes. Motion carried.

7. DD 21 - Approve Work Order Request #239 For Reclassification

McClellan moved, Granzow seconded to approve Work Order Request #239 for a reclassification to result as discussed at the June 13, 2018 regular drainage meeting. All ayes. Motion carried.

8. DD 9 - Discuss, With Possible Action, Updates To Work Order #229

Gallentine presented a few problems discovered: 1) Trees in the RR right of way with some water flow on the south track crossing of the main tile. 2) A sinkhole in/near RR right of way with fiber optic warning tape in hole. Tile 1/2-3/4 full of dirt and rock and no water flow on the north track crossing of the main tile. 3) A sinkhole in field with tile 1/4-1/2 full of dirt and sand and some water flow on the main tile east of tracks. A couple options were discussed, both being over \$50,000. McClellan moved, Granzow seconded for CGA to

prepare an engineer's report. All ayes. Motion carried.

9. Discuss, With Possible Action, Drainage Clerk Position

Much discussion was had regarding changing the drainage clerk position to a full-time position under the Board of Supervisors. Meyer submitted Code of Iowa sections pertaining to drainage clerk position. After many ideas were discussed, the Trustees agreed for Meyer to draft an agreement between the Auditor and the Board. The position will begin January 1, 2019 and the clerk will then track all time spent on drainage districts, which will be assessed to the districts annually based off of the calendar year. The current budget will be used for January 1, 2019 to June 30, 2019 and then 100% of the salary will be taken out of a new line item under the Board from the general fund and will be reimbursed when assessments are collected (first collecting in 2020). The Trustees understood that the salary would not be 100% reimbursed due to general administrative duties.

10. Other Business

DD 55-3 Lat 12 - Schlemme updated the Trustees that the Notice of Repair Across Railroad Right-of-Way was mailed to the UPRR on September 27, 2018, giving them 30 days notice. Granzow moved, McClellan seconded to perform the additional actions recommended of removing the trees within 50 feet of the tile, root cleaning and jetting the lateral tile and televising the lateral to verify the condition, as shown in the Repair Summary for Work Order #201. All ayes. Motion carried.

11. Adjourn Meeting

Granzow moved, McClellan seconded to adjourn the meeting. All ayes. Motion carried.

Drainage District:

9

Repair Summary:

- Tenant in SW¼ Section 6, Township 89 North, Range 22 West reported two blowouts/sinkholes on Main tile.
- Visually searched area and found one blowout/sinkhole, approximately 225 feet southeast of railroad right of way (see attached spot repair map).
- Tile blowout/sinkhole is missing one section of VCP tile and is 1/3 full of debris.
- Located Main tile upstream for 590'± and downstream for 1430'± from blowout/sinkhole.
- Upstream found broken VCP tile in sinkhole/blowout just downstream of railroad. The tile appears to have possibly been broken when fiber optic line was installed (see attached spot repair map).
- During location of main tile, excavated 7 observation holes. Excavation of one of the observation holes damaged a 4" private tile. Repaired private tile with 2' of 6" Dual Wall HDPE tile.
- Repaired first blowout/sinkhole with 18.3' of 15" Dual Wall HDPE tile with concrete collars.
- Repaired observation hole approximately 150' south railroad right of way with 6.25' of 15" Dual Wall HDPE tile with fabric wrapped joints.
- Filled holes as much as possible with on-site soil.
- Note: Contractor was changed midway through repairs from Randy Brown per 1-16-2019 Drainage Meeting minutes. McDowell and Sons Contractors completed the work after this date (see breakdown on attached).
- In April, backfilling of excavation was completed by McDowell with un-frozen soil.

Contractor Time and Materials (spent while CGA was on-site):

See attached Tabulated Contractor Time and Materials Sheet.

Additional Actions Recommended:

The unrepaired broken tile in the railroad right of way is severely limiting the drainage upstream and will eventually cause additional blowouts/sinkholes and ponding. Moving forward, we would recommend abandoning the current railroad crossing, install a new crossing meeting Union Pacific Railroad standards/permits to restore the drainage to its original design or install a bypass tile on the north side of the railroad right of way. Based on either of these options, it is my opinion that the construction cost would be well over \$50,000. This cost is high enough that a hearing and engineering report would be required.



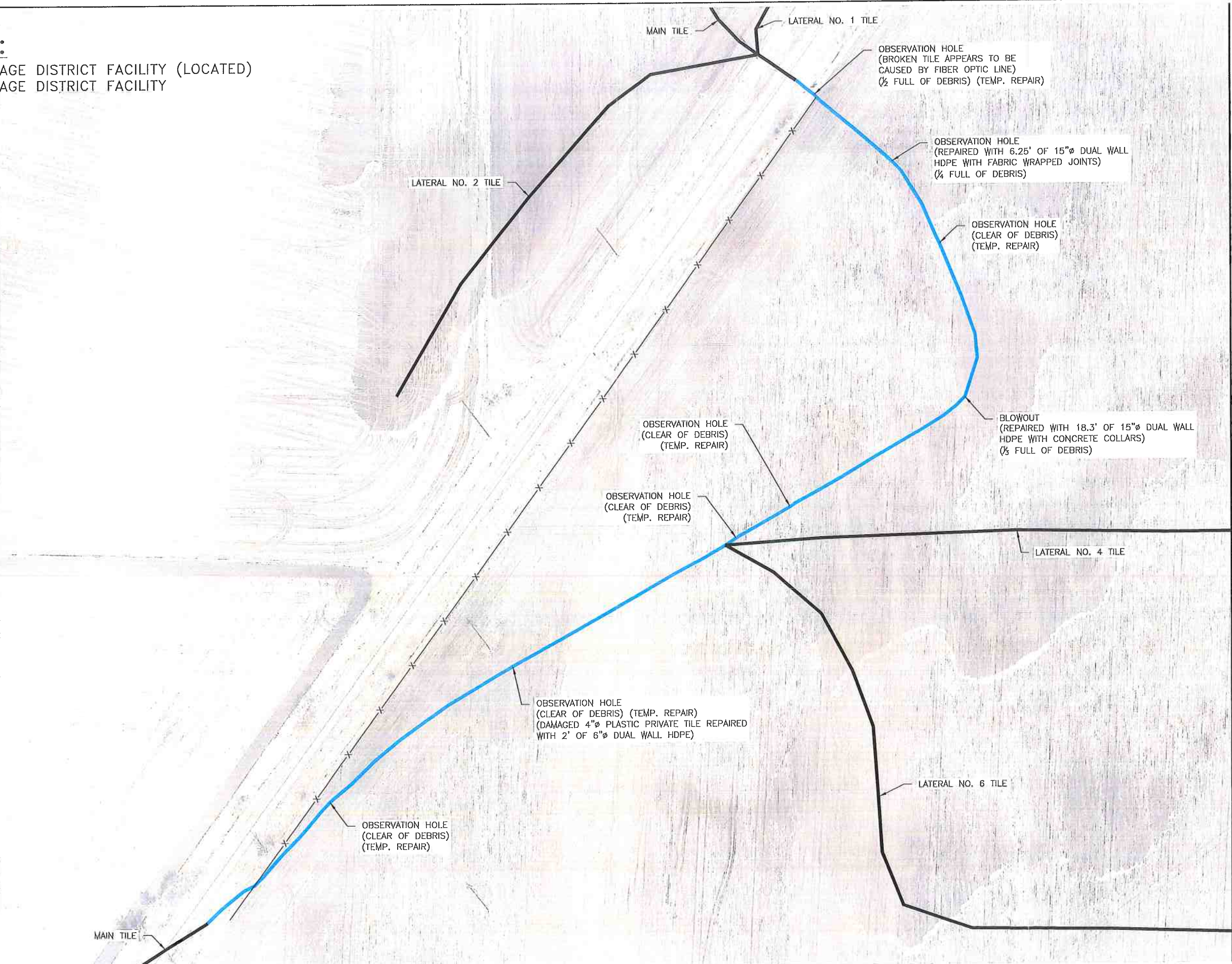
Tabulated Contractor Time and Materials

Date	Totals	11/16/2018	11/19/2018	11/21/2018	11/23/2018	11/26/2018	11/29/2018	3/8/2019
Workman (hrs)	39	7	5.5	2.25	1	2.5	5.5	15
Backhoe (hrs)	17		5.5	2.25		1.25	2.75	5
15" Dual Wall HDPE (ft.)	24.55						6.25	18.3
Concrete Collar (ea.)	2							2
RD Customs								
McDowell								

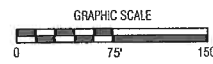


LEGEND:

- DRAINAGE DISTRICT FACILITY (LOCATED)
- DRAINAGE DISTRICT FACILITY



P:\6735\6735-00\Quantities\6735-repair_summary.dwg - CGA Plan - 04-10-19 - 4:49pm - ZDS43



NO.	REVISION	BY	DATE	NO.	REVISION	BY	DATE

CGA Clapsdelle-Garber Associates, Inc.
 1323 S. Bell Ave., Suite 101
 Ames, Iowa 50010
 Ph 515-232-1784
 www.cgaconsultants.com

DESIGNED: ### DATE: ###
 DRAWN: ### DATE: ###
 CHECKED: ### DATE: ###
 APPROVED: ### DATE: ###

DRAINAGE DISTRICT #9

HARDIN, IOWA

SPOT REPAIRS

PROJECT NO. 6735
 SHEET NO. 1



Drainage Work Order Request For Repair Hardin County

Date: 10/26/2018

Work Order #: WO00000229

Drainage District: Drainage Districts \DD 9 (51022)

Sec-Twp-Rge: 06-88-21 Qtr Sec: SW

Location/GIS: 88-21-06-300-002

Requested By: Scott Renaud (Tenant)

Contact Phone: (641) 751-4734

Contact Email: _____

Landowner (if different): Tom Roberts

Description:

DD 9 - Huge lake (approx 15 acres) of corn under water. Blowout approximately 300-500 yards southeast of RR and another one NW of RR along fenceline. All crops are out except those around blowouts.

Repair labor, materials and equipment: _____

Repaired By: _____ Date: _____

Please reference work order # and send statement for services to:
Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

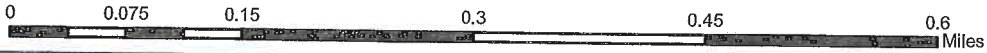
Approved: _____ Date: _____



Hardin County Auditor's Office



Date: 10/26/201



The Data is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining accuracy, completeness, timeliness, merchantability and fitness for or the appropriateness for use rests solely on the requester. Hardin County makes no warranties, express or implied is to the use of the Data. There are no implied warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update. Cadastral Data represents land ownership, but does not define it. This Data does not replace a legal survey.

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

11/19/18
11/16/18

PROJECT NUMBER:

6735

COUNTY, ROUTE, ROAD:

DD 9 HARLOW CO

LOCATION:

D25, "RACINE", UPRR

DAYS OF WEEK:

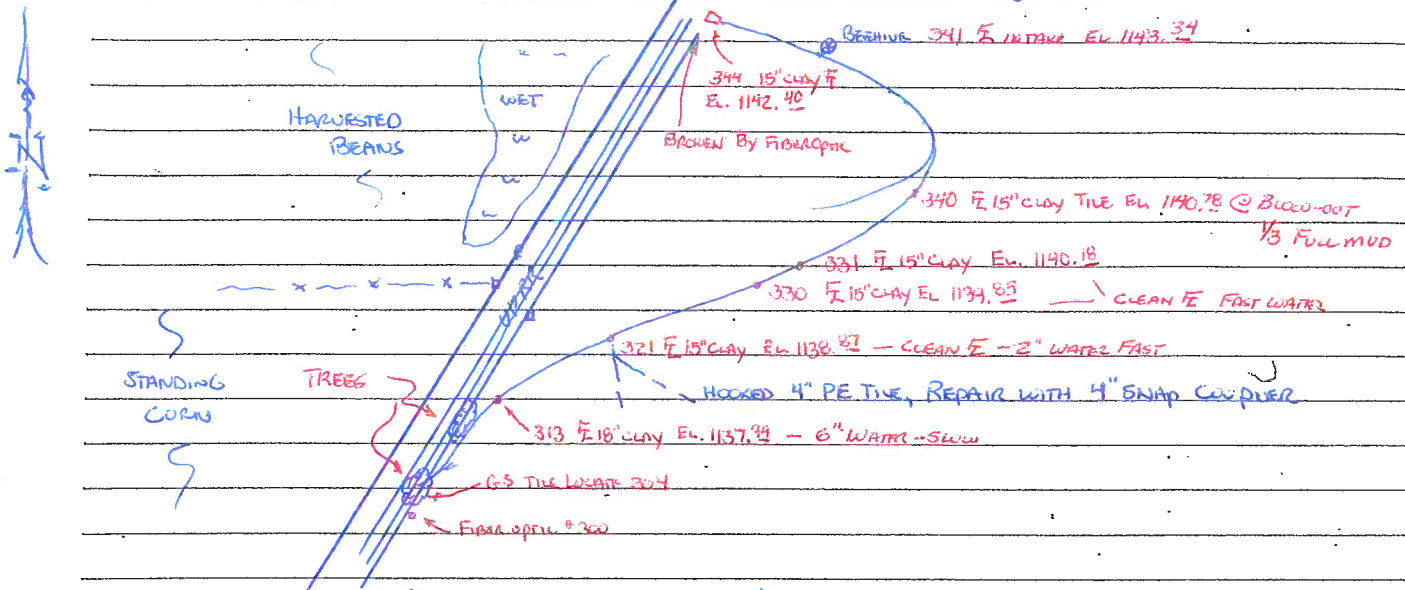
S M T W T F S

SHEET NO.

1 OF 1

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUE NAME, ITEM NO. AND LOCATION

9:00, 2 man crew on site, dug up TIE @ Blow-out AND TRIED TO FIND TIE WHERE IT CROSSES UPRR DOWN STREAM TO SW.



11/19/18; 10:00, SET \bar{R} ON #87 (DD41 JOB), RANDY BROWN ON SITE WITH RUBBER TIRE BACKHOE (NO HELPER). 2:00 DONE LOCATING DOWNSTREAM TO UPRR. COULD NOT GET UNDER RR WITH CABLE. WHEN CORN IS OUT ON W. SIDE RR, WE SHOULD LOCATE AND INSPECT TIE ON WEST SIDE OF RR. DUG 4 POT HOLES AND LOCATED WITH CABLE FROM BLOW-OUT TO UPRR. SHOTS 300-344 LEFT JOB @ 3:30

WATER ON W. SIDE RR IS SURFACE DRAINING THRU RR CMP TO DOWNSTREAM TIE @ 344. INTAKE @ 341 HAS BROKEN BECAUSE BUT TIE IS DRY (OFFSET INTAKE)

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

[Handwritten Signature]

Date Prepared:

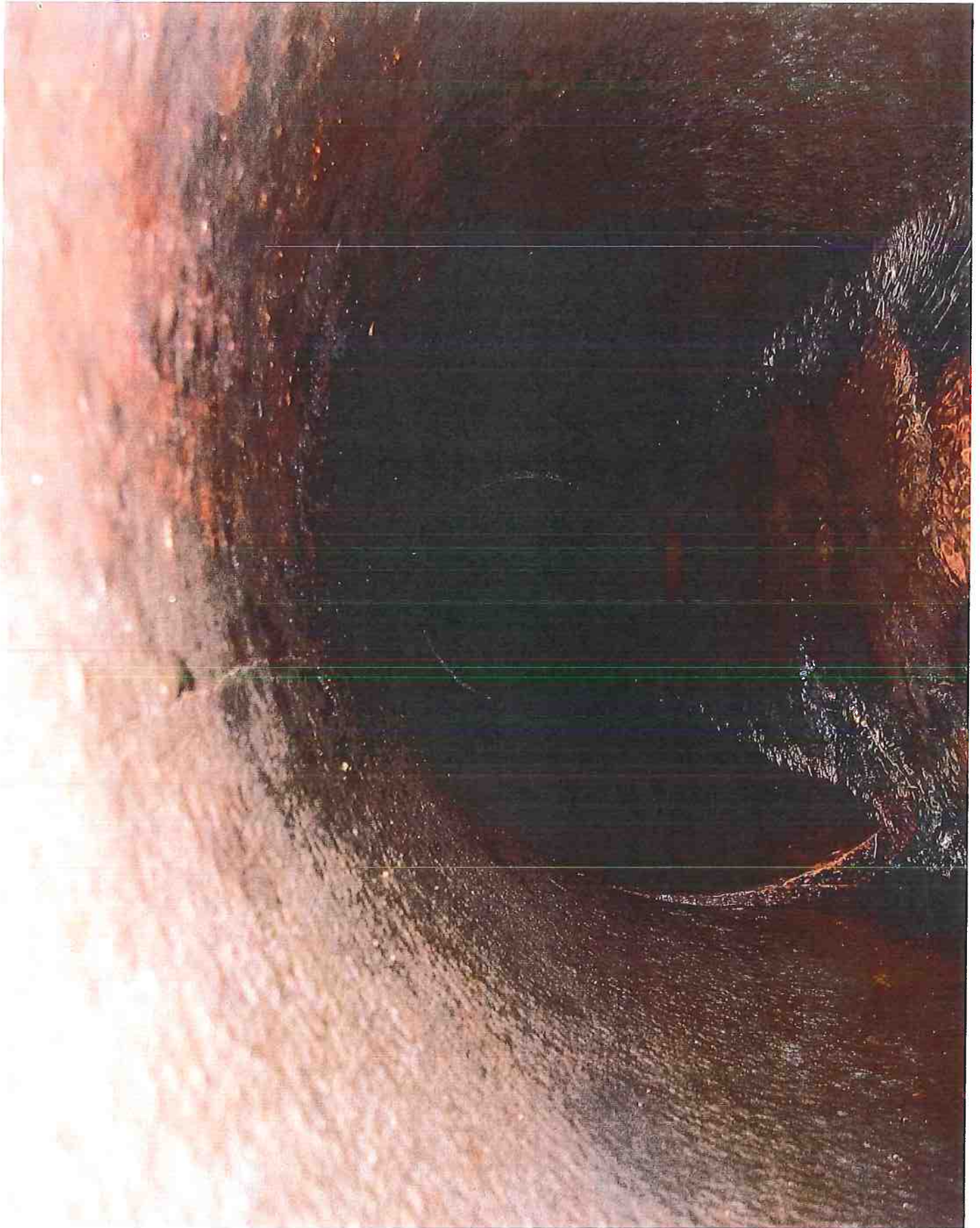
11/16/18, 11/19/18

Reviewed by:

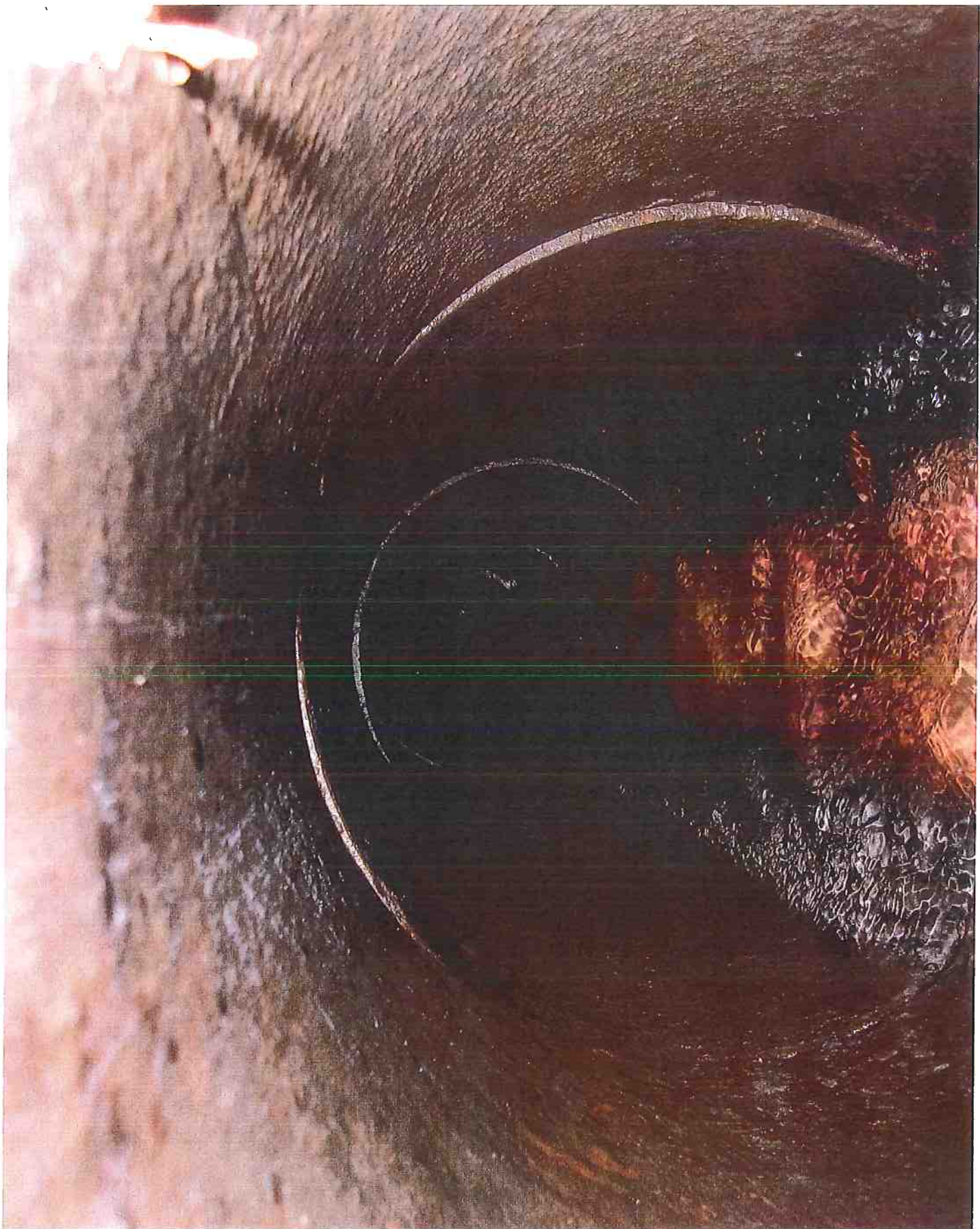
Engineer

Date Reviewed

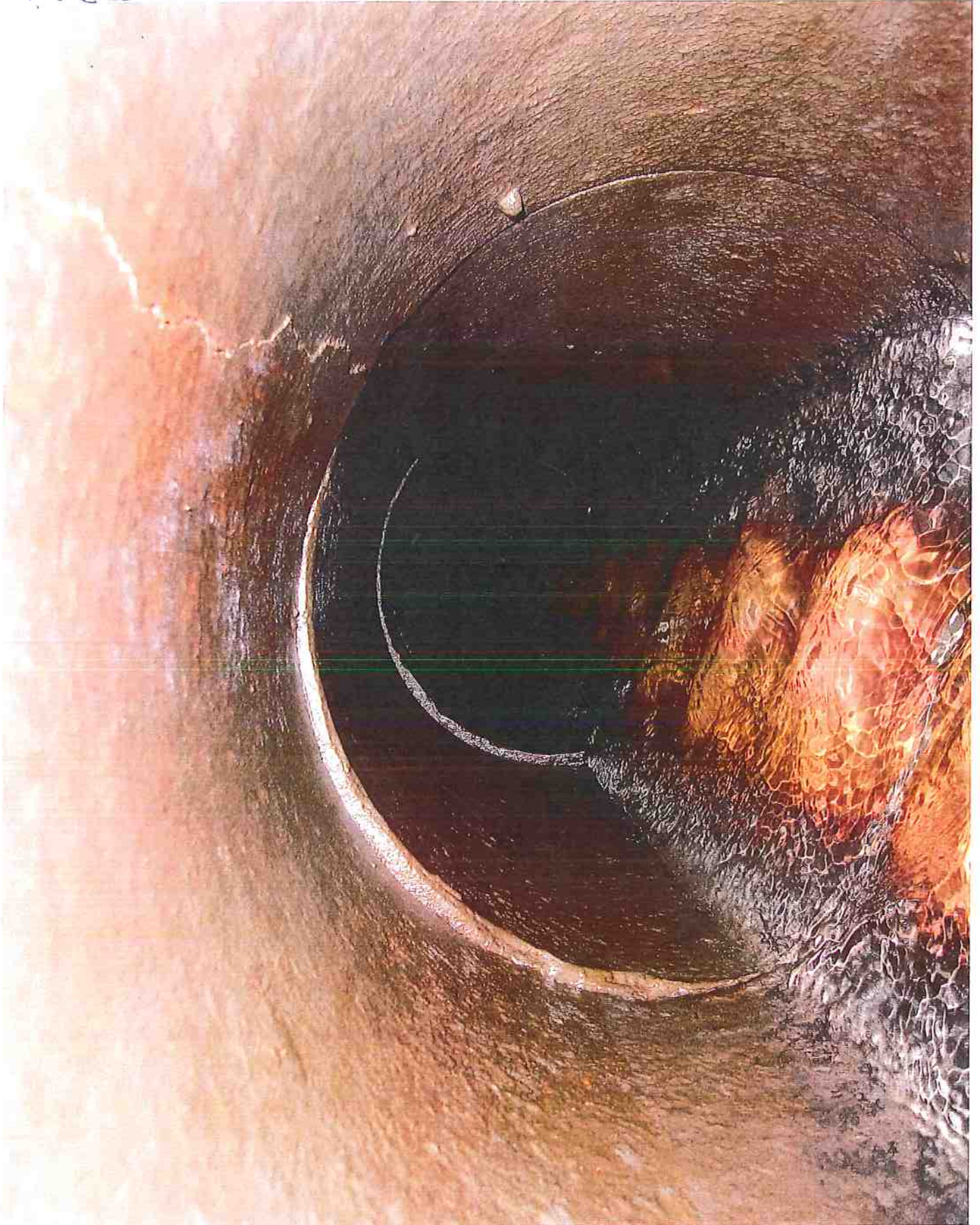
Tide @ 331



TILE © 331



TUE @ 330



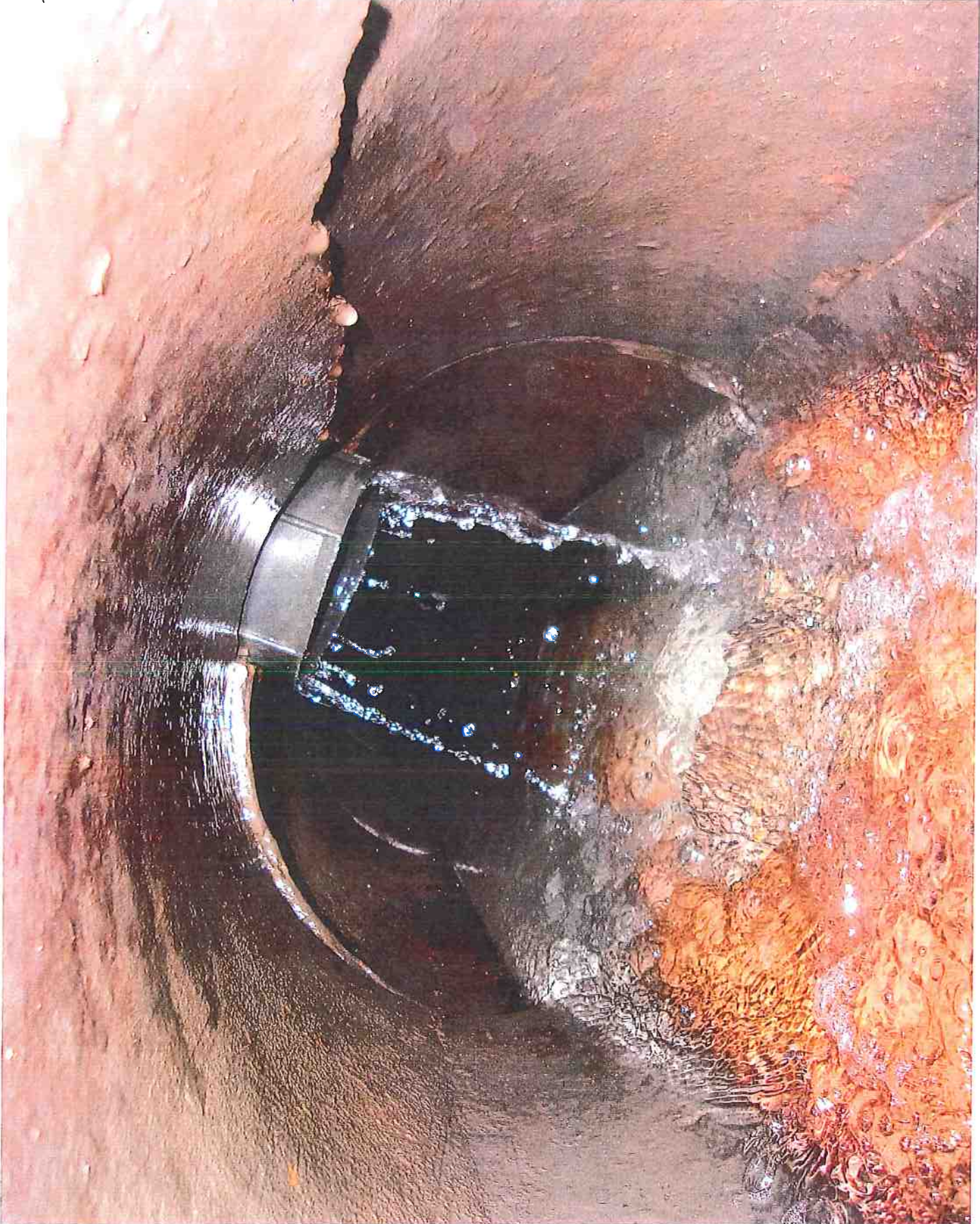
TUR @ 330



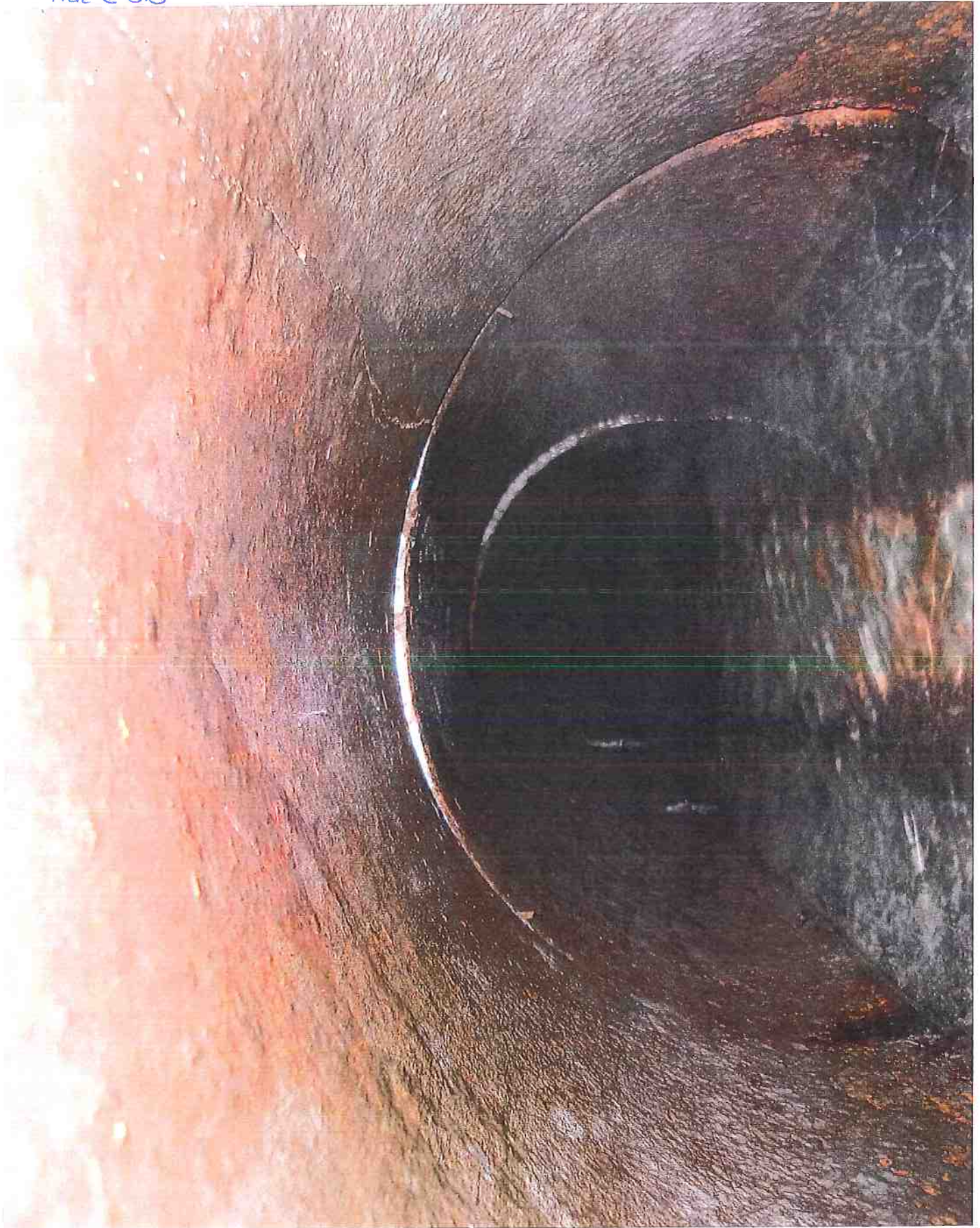
downstream From 321



UPSTREAM FROM #321, HOOKED 4" PE WITH BUCKET, REPAIR WITH SNAP COUPLER



Tue @ 313



Tile @ #313



TREES DOWNSTREAM FROM #313



009 HARDIN

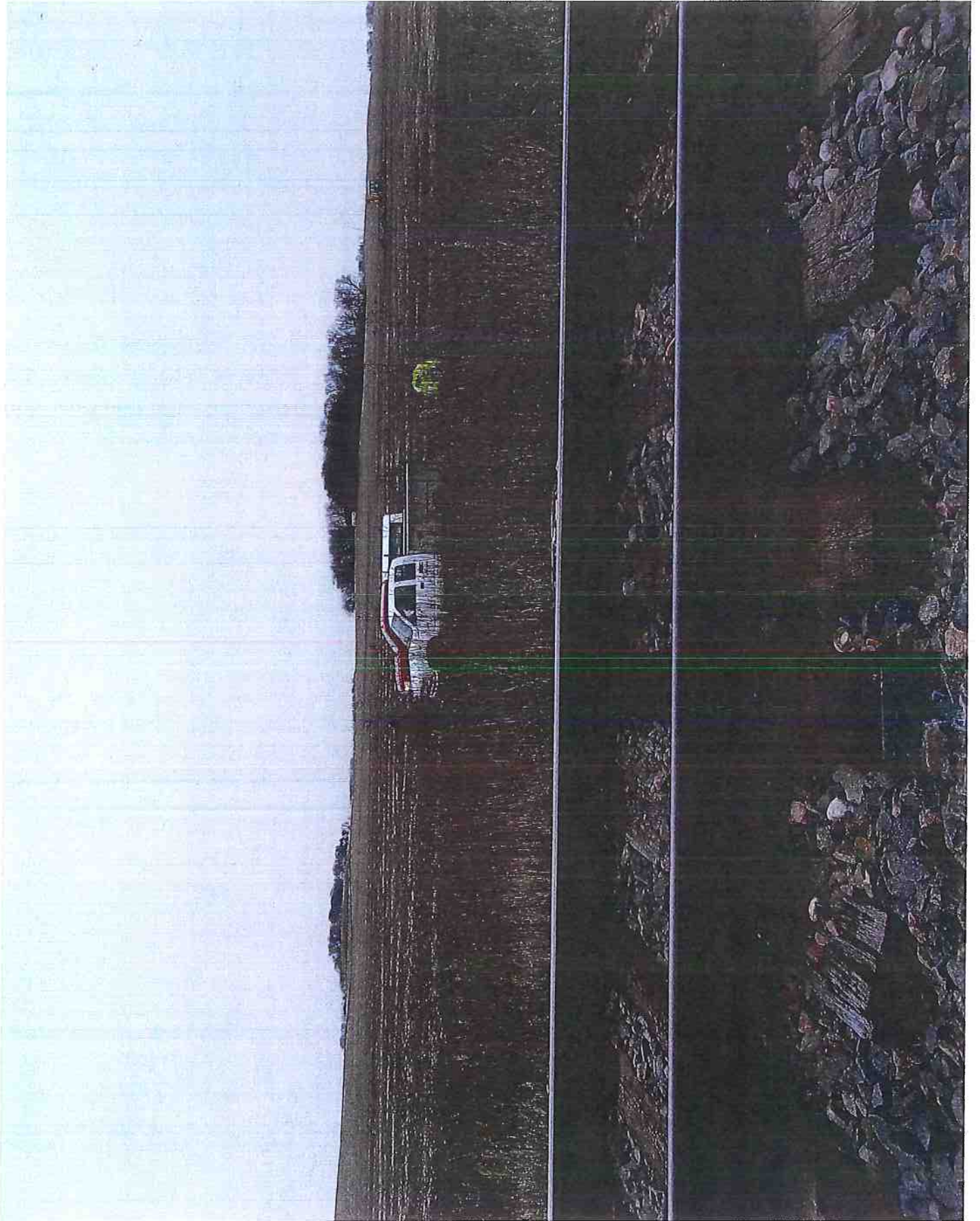






Blow-out Hole @ #340





CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

11-21-18

DAYS OF WEEK:

S M T W T F S

SHEET NO.

1 OF 1

PROJECT NUMBER:

6735

COUNTY, ROUTE, ROAD:

DD9 CATS^{MAIN}

LOCATION:

SE 1/4 SEC 6 - 88 - 21

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

9:30 SET UP BASE AT 87 ✓ 1000

9:45 ARRIVED ON SITE 1 MAN IN BACKHOE

10:00 OPENED HOLE #350 3"-4" CLEAN WATER FLOWING THROUGH PIPE.

INTAKE #341 CONC INTAKE IN GOOD CONDITION W/ 6" CLAY RUNNING NW DRY BEEHIVE ON TOP IS BROKEN

10:45 OPENED HOLE #354 CONTRACTOR BROKE 1 PIECE OF TILE W/ BACK HOE BOTH TILE UP & DOWN STREAM HAVE MULTIPLE LATERAL CRACKS TILE IS FLOWING 3"-4" CLEAN WATER LOCATED TO THE OPEN TILE @ #344

11:00 HOLE 344 DOWN STREAM IS HALF FULL OF DIRT UPSTREAM IS 3/4 FULL ROCK W/ A TRICKLE OF WATER, WATER AT THIS SPOT IS SLOW MOVING @ 7" DEEP

11:45 PICKED UP BASE + LEFT SITE

LEE SAID TO TEMPORARILY PATCH POTHOLES AND FILL THE HOLES IN. RANDY SAID HE WOULD DO IT FRIDAY

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Chris [Signature]

Date Prepared:

11-21-18

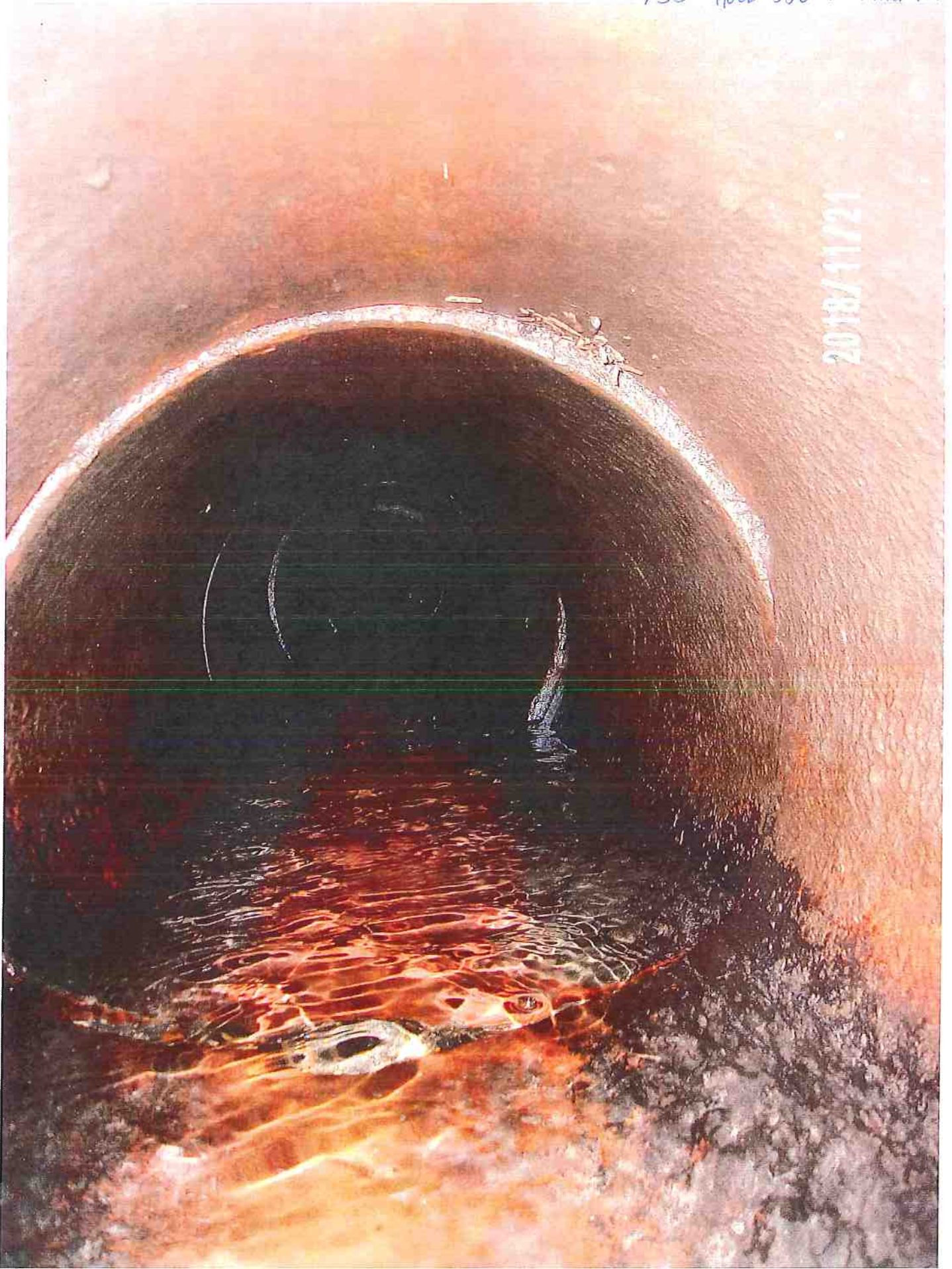
Reviewed by:

Engineer

Date Reviewed

6735 HOLE 350 LOOKING N.

2018/11/21



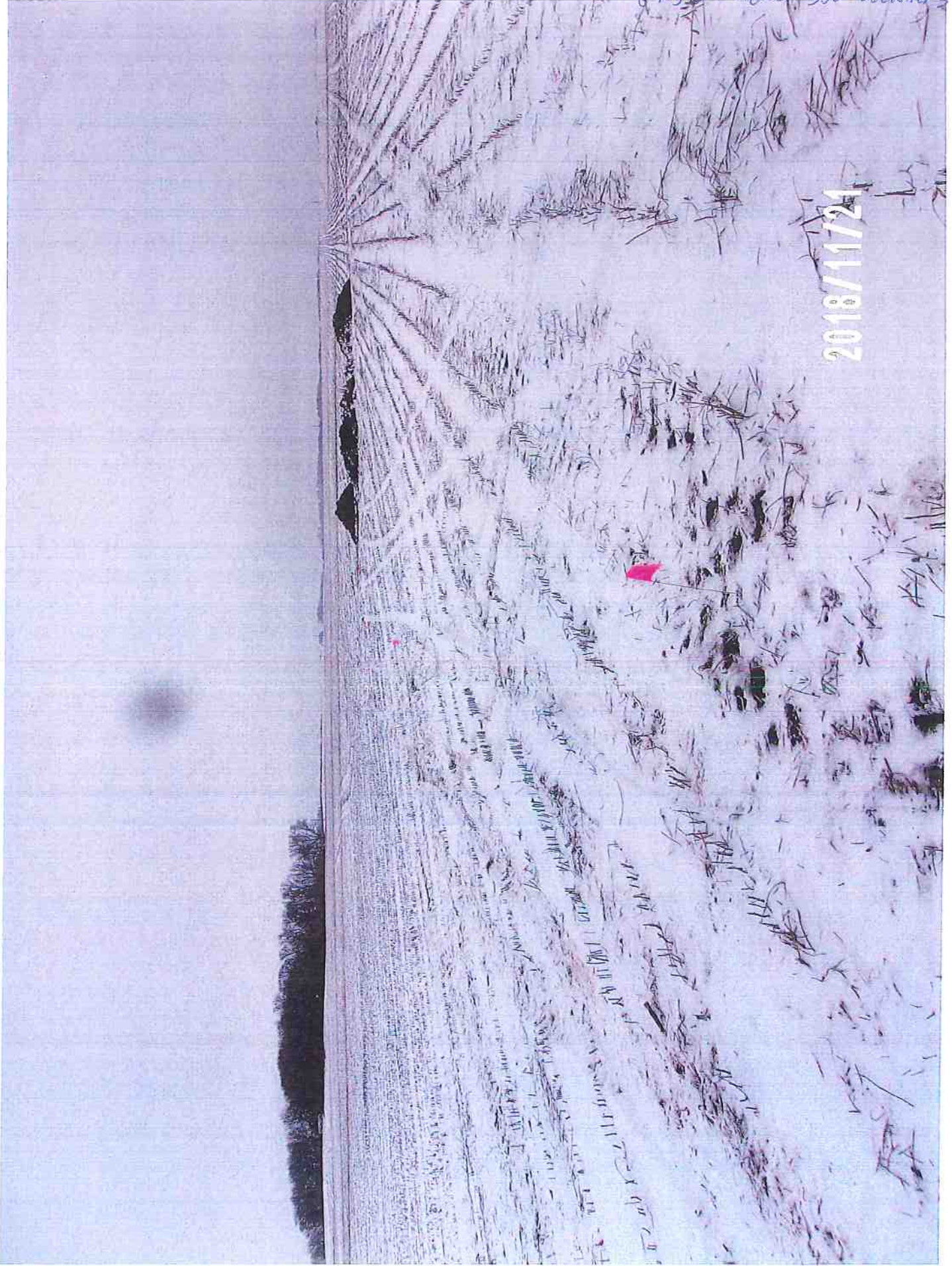
6735 Hole 350 Looking S.

2018/11/21

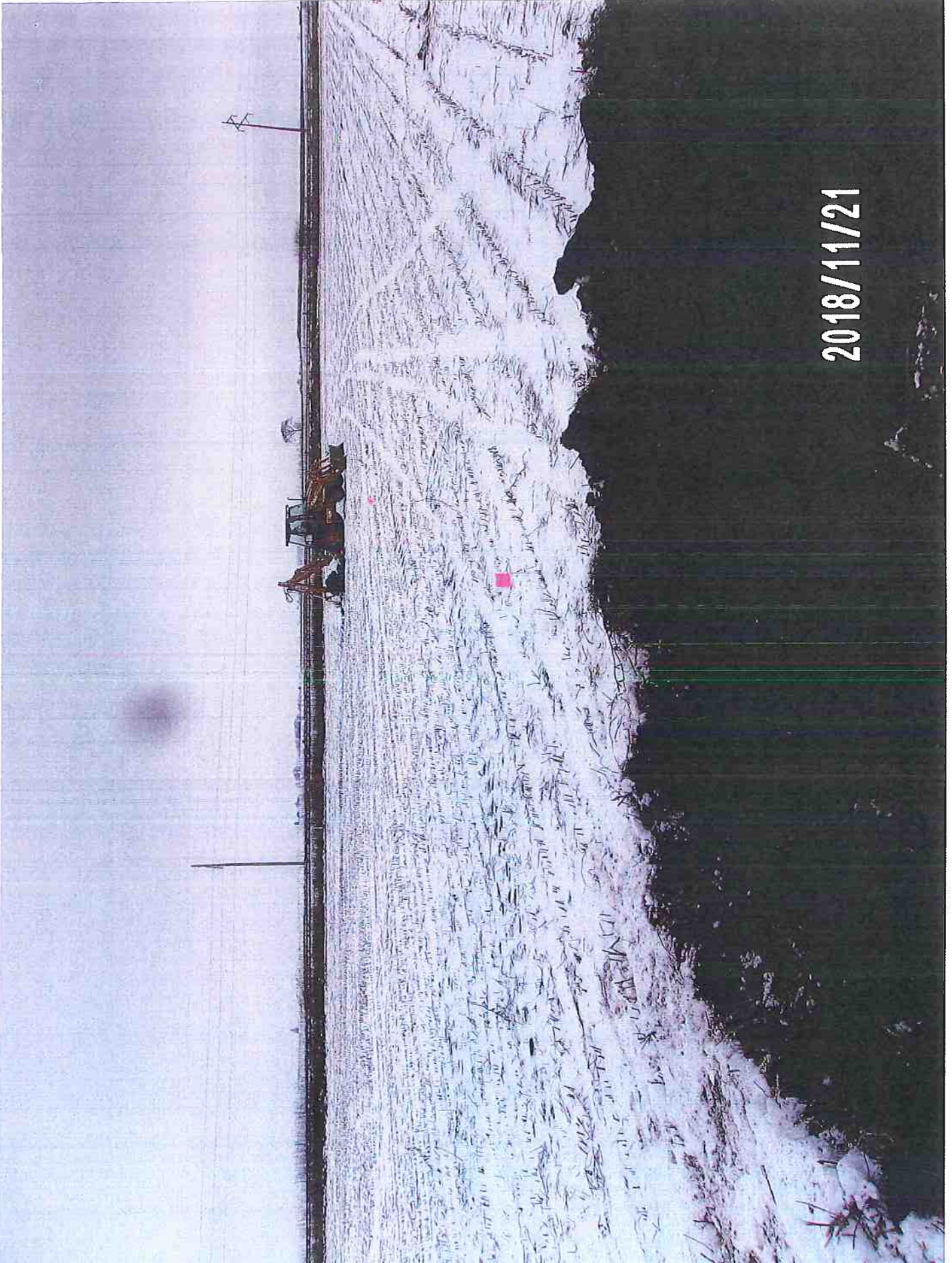


6735 HOUG 350 LOOKING S

2018/11/21



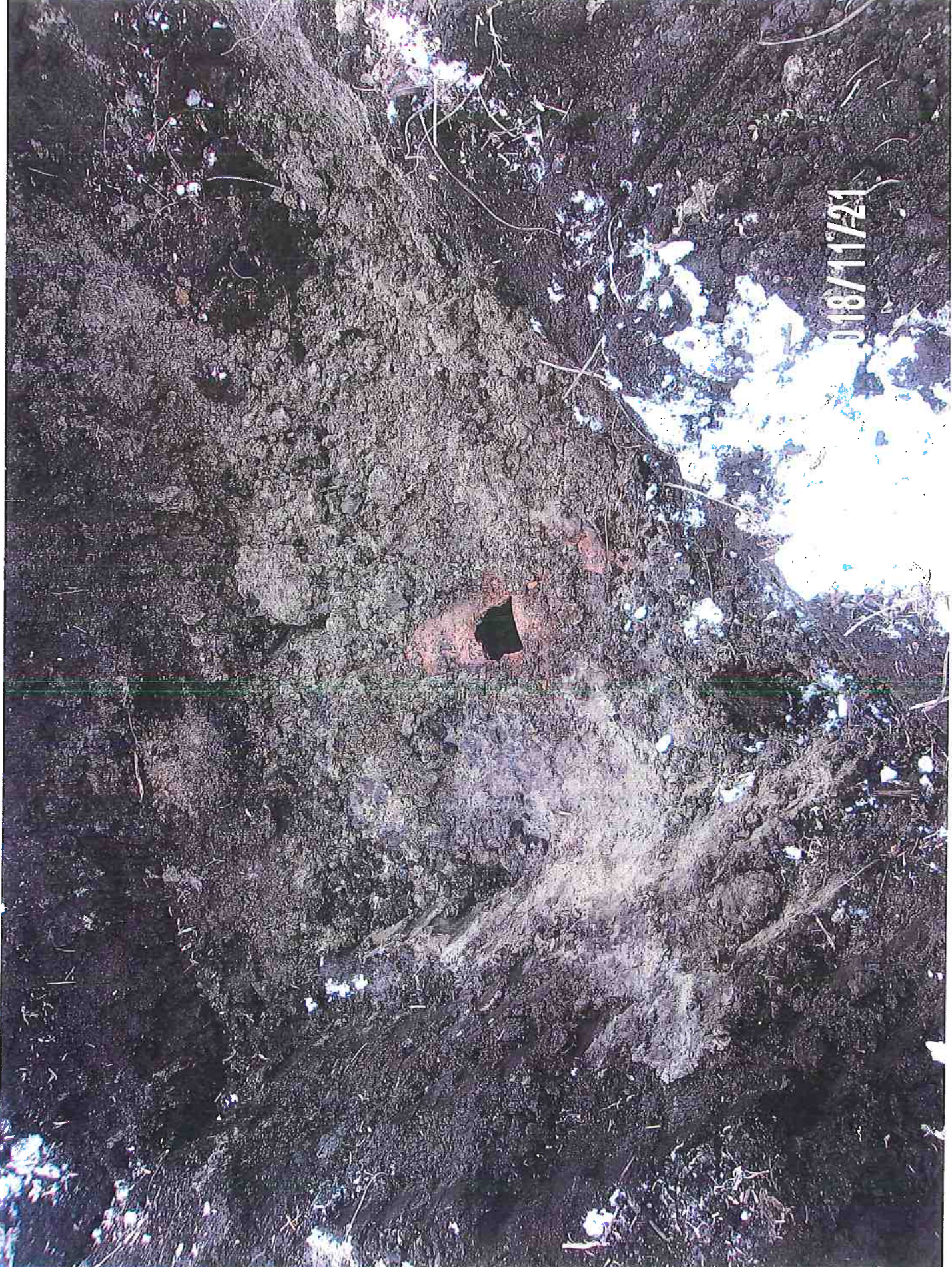
6735 HOLE 350 LOOKING N



2018/11/21

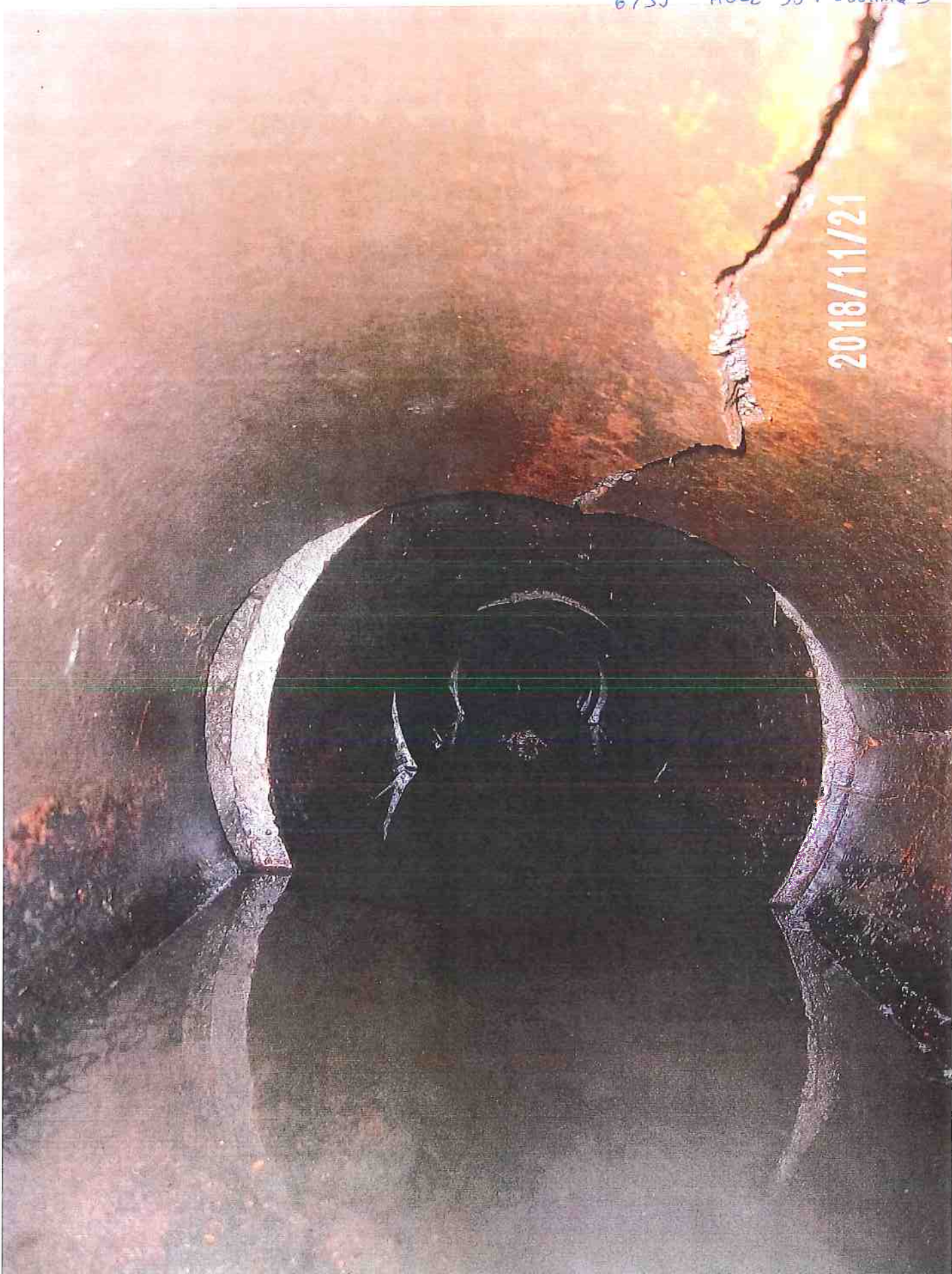
6735 HOLE 380

018/11/21



6735 HOLE 354 LOOKING S

2018/11/21



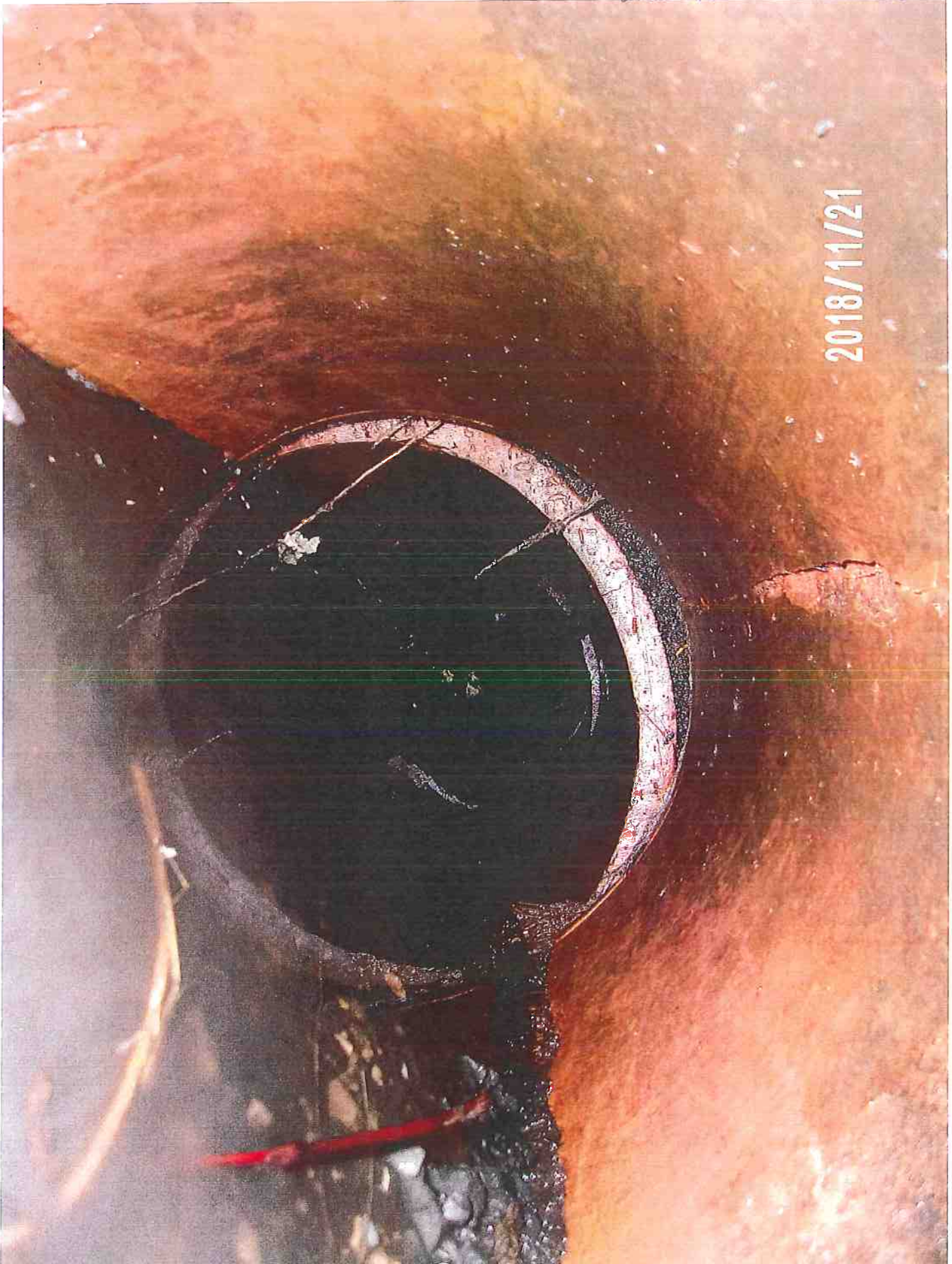
6735 HOLE 354 LOOKING N.

2018/11/21



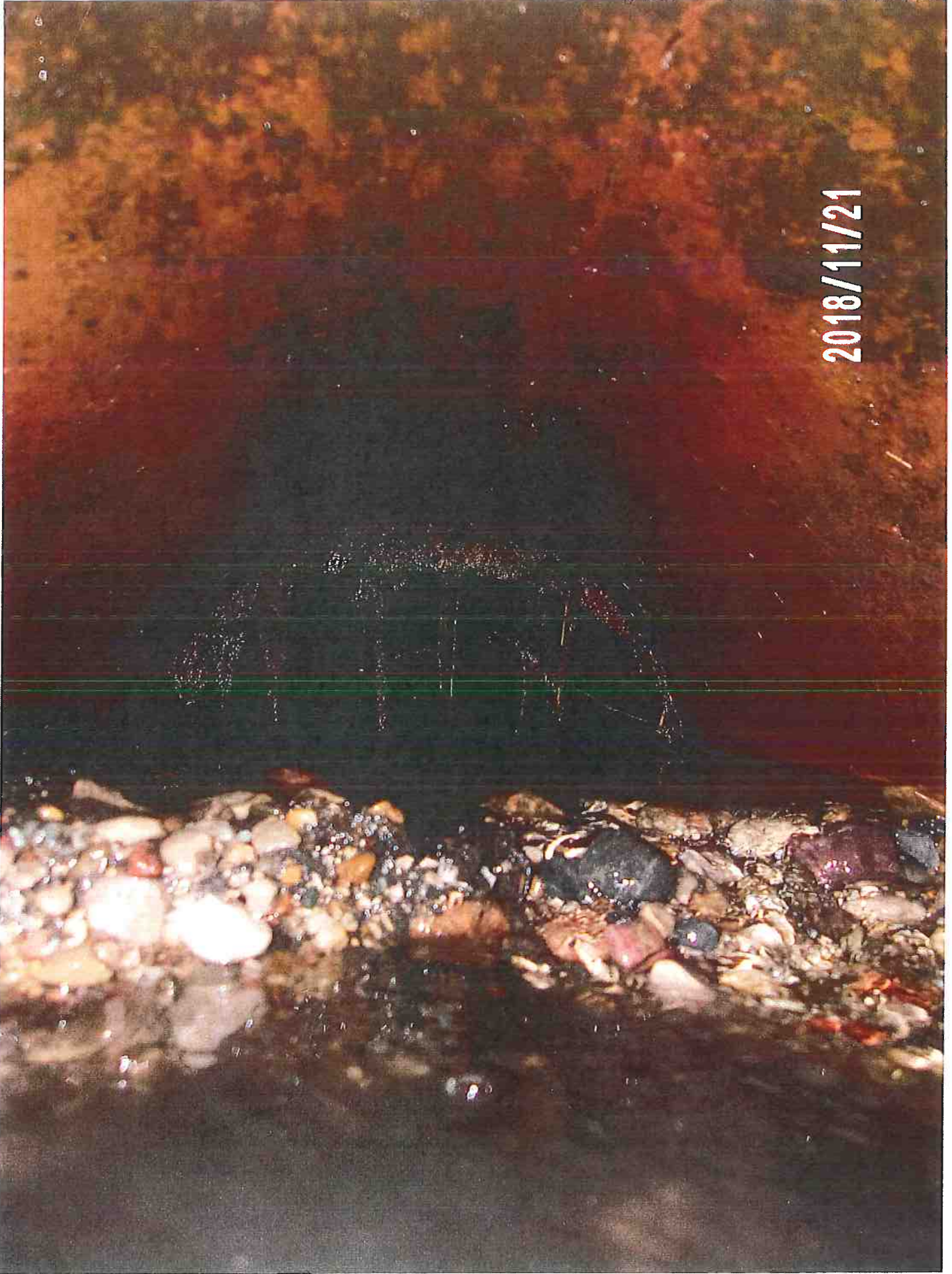
6735 HOLE 344 LOGGING

2018/11/21



6735 HOLE 344 LOOKING N.

2018/11/21



CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

11/23/18

DAYS OF WEEK:

S | M | T | W | T | F | S

SHEET NO.

1 OF 1

PROJECT NUMBER:

6735

COUNTY, ROUTE, ROAD:

DD9

LOCATION:

Repairs From, N. of D25

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

Cloudy, SCATTERED SHOWERS, 35°, BREEZY FROM S.E.

ARRIVED @ JOB @ 9:30, NO CREW ON SITE.

2 MAN CREW ARRIVED @ 10:00 A.M. STARTED TEMP. REPAIRS ON ACCESS INSPECTION

6" x 6" HOLES IN TILE BY LAYING A 12" x 12" PIECE OF DUM WALL AND FABRIC
OVER HOLE AND BACKFILLING WITH NO COMPACTION, MINIMAL BUCKET COMPACTION

TRAVY BREWER SAID HE WOULD NOT DO THE LONGER 20' REPAIR WHERE
TILE IS FULL OF DIRT, HE COULDN'T GET ANY PIPE TODAY.

LEFT JOB @ 10:30 FOR DD125.W

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Date Prepared:

11/23/18

Reviewed by:

Engineer

Date Reviewed

RANDY BROWN AND BACKHOE TO DO TEMP FIXS ON DD 9

11/23/18



REPAIRING Temp Fix's



CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

11/26/2018

DAYS OF WEEK:

S M T W T F S

PROJECT NUMBER:

6735

HARDIN COUNTY
DRAINAGE
WO# 229

COUNTY, ROUTE, ROAD:

DD#9

SHEET NO.

1 OF 1

LOCATION:

NORTH OF HWY DD25 & HAVE INTERSECTION
"RACINE" SE OF UPRR

MID TEENS TO LOW 20'S - OVERCAST
& WINDY WITH LIGHT FLURRIES.

JOB# 6735 DD9 H. SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

8:50 A.M. RANDY FROM OUR OFFICE INFORMED ME THAT LEE RECEIVED AN EMAIL FROM RANDY BROWN THAT THEY WILL BE MAKING TEMPORARY TILE REPAIRS FOR 6735/DD#9 TODAY AND WILL BE ON SITE AROUND 10:00 A.M.

8:55 A.M. RANDY GAVE ME THE WORK FILE FOR 6735/DD#9 AND ALSO GAVE ME THE WORK FILE FOR 6952, DD#148 IF THEY DID GET TO THAT REPAIR TOO

9:00 A.M. OBSERVER TRIED CELL PHONE NUMBER FOR RANDY BROWN TO VERIFY IF HE WAS STILL PLANNING ON BEING @ JOB SITE AROUND 10:00 A.M. BUT MESSAGE CAME UP THAT THIS NUMBER WAS NO LONGER IN SERVICE. TRIED PHONE NUMBER THAT RANDY RECEIVED A CALL FROM RANDY BROWN ON 11/23/2018 BUT WENT TO VOICEMAIL. LEFT MESSAGE ON THAT CELL PHONE TO VERIFY IF RANDY WOULD BE ON SITE AROUND 10 A.M.

9:20 A.M. OBSERVER LEFT OFFICE ENROUTE TO SITE.

9:50 A.M. OBSERVER ARRIVED ON SITE WITH NO ACTIVITY ON SITE.

10:25 A.M. RANDY AND NICK ARRIVED ON SITE WITH CASE 580 SUBERM BACK HOE ALREADY IN FIELD. CREW SAID THEY WERE RUNNING LATE SINCE PICKUP WOULD NOT START THIS MORNING AND HAD TO JUMP START IT. CREW PLUGGED ENGINE BLOCK HEATER INTO GENERATOR.

10:44 A.M. CREW HAD BACK HOE RUNNING

11:00 A.M. CREW FOUND FROZEN SOIL AROUND CLAY TILE REPAIR. CREW THOUGHT THEY WOULD DO MORE DAMAGE THEN GOOD WHILE TRYING TO REMOVE FROZEN SOIL SO THEY WILL WAIT TILL ABOUT WEDNESDAY TO FINISH REPAIRS WHEN TEMPERATURES ARE WARMER.

11:00 A.M. OBSERVER LEFT SITE. CREW WAS MEASURING UP PIPE NEEDED FOR TEMPORARY REPAIRS

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Penning

Date Prepared:

11/26/2018

Reviewed by:

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

11/29/18

DAYS OF WEEK:

S M T W T F S

SHEET NO.

1 OF 1

PROJECT NUMBER:

6735

COUNTY, ROUTE, ROAD:

DD9 HARDIN

LOCATION:

D25 and H. Ave. North, upRR

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

Partly Sunny, 30°, CALM,

ARRIVED @ JOB SITE @ 10:00 AM, RANDY BROWN CALLED SAID HE WON'T BE THERE TIL 12:00 NOON. LEFT FOR DDGR H. @ DAGO LAKE.

ARRIVED BACK @ JOB DD9 @ 11:45, NO CREW YET.

12:15 P.M., RANDY AND NICK SHOWS UP WITH PARTS TO REPAIR 4" PLASTIC TILE ACCIDENTALLY HOOKED DURING EXPLORATION DIG @ #321. BUT IT'S A 5", RANDY WENT BACK TO GET PARTS FOR A 5", CAN'T FIND ANY. USED A 2" PIECE OF 6" DUAL WALL SLIP OVER THE 5" SINGLE WALL TIGHT FIT WITH FABRIC OVER. THEY ALSO PUT A CHUNK OF DUAL WALL AND FABRIC OVER INSPECTION HOLE AND BACKFILLED. PILES OF DIRT ARE FROZEN, 1' THICK. HARD TO BACKFILL.

1:30 P.M. WENT TO HOLE #354 WITH BROKEN CLAY TILE. TOOK OUT 75" OF BROKEN CLAY TILE AND REPAIRED IT WITH 15" DUAL WALL HDPE AND FABRIC JOINTS (6'3")

3:00, CREW IS DOWN WITH REPAIRS FOR TODAY. RANDY BROWN SAID HOPEFULLY THEY WILL ROCK AND PIPE TOMORROW.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Date Prepared:

11/29/18

Reviewed by:

Engineer

Date Reviewed

6' 3" Repair Temp



6'3" Repair Temp.



PRIVATE TIE REPAIR ● 5" IPE WITH 6" HOPE OVER TOP



009, 6'3" REPAIR



CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 3/8/19

PROJECT NUMBER: 6735

DAYS OF WEEK: S M T W T F S

COUNTY, ROUTE, ROAD: DD 9 HARDIN

SHEET NO. 1 OF 1

LOCATION: _____

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUE NAME, ITEM NO. AND LOCATION

Cloudy, Foggy, 25°, Wind From S.E., RAIN PREDICTED FOR TOMORROW. 1/2' OF SNOW ON GROUND, LOTS OF ICE. 2' OF FROZEN EARTH IN FIELDS

8:30 ARRIVED @ JOB SITE @ "RACINE" GHOST TOWN. CONTRACTOR "McDOWELL'S" ARE ON SITE 3 MEN + RUBBER TIRE BACKHOE. PLAN IS TO REMOVE BROKEN 14" CLAY TILE (ALREADY EXPOSED BY RANDY BROWN), AND REPAIR PERMANENTLY WITH 15" HOPE OVAL WALL / ROCK / CONC. COLLARS. BARE MINIMUM IS TO GET HOPE IN PLACE WITH ROCK AND FABRIC OVER CONNECTIONS. BACK FILL MATERIAL ON SITE MAY BE TO FROZEN. WOULD HAVE TO POUR COLLARS @ A LATER DATE. 1" OF RAIN IS PREDICTED TOMORROW AND THIS COULD WASH MORE DIRT IN TILE.

EXISTING HOLE FROM RANDY BROWN #340 IS FULL OF SNOW, LEVEL FULL!

11:30 A.M., BEDDING ROCK @ F IS IN PLACE. 18'4" BETWEEN ENDS ON CLAY TILE.

TIM IS BRINGING 20' STICK OF 15", 5 TON ROCK, FABRIC, 12 BAGS CONC., WIRE MESH.

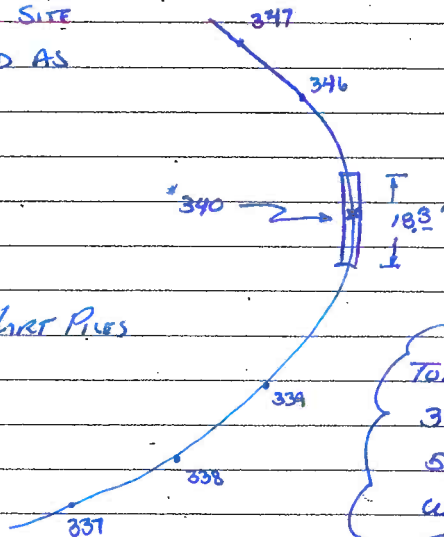
1 TON ± OF ROCK WAS EXISTING ON SITE

FROM RANDY BROWN. IT WAS USED AS BASE ROCK IN F.

1:30, TILE IN PLACE, BACK FILLED WITH ROCK.

WILL NEED TO PUSH FROZEN DIRT PILES IN WHEN THAWED OUT.

FURTHER ACTION NEEDED



TOTAL FOR TODAY 3/8/19
3 MEN + BACKHOE = 5 HRS.
5 TON 1" CLEAN ROCK
WIRE MESH
FABRIC
18.3' OF OVAL WALL 15" HOPE
12 BAGS CONC.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [Signature]

Date Prepared: 3/8/19

Reviewed by: _____

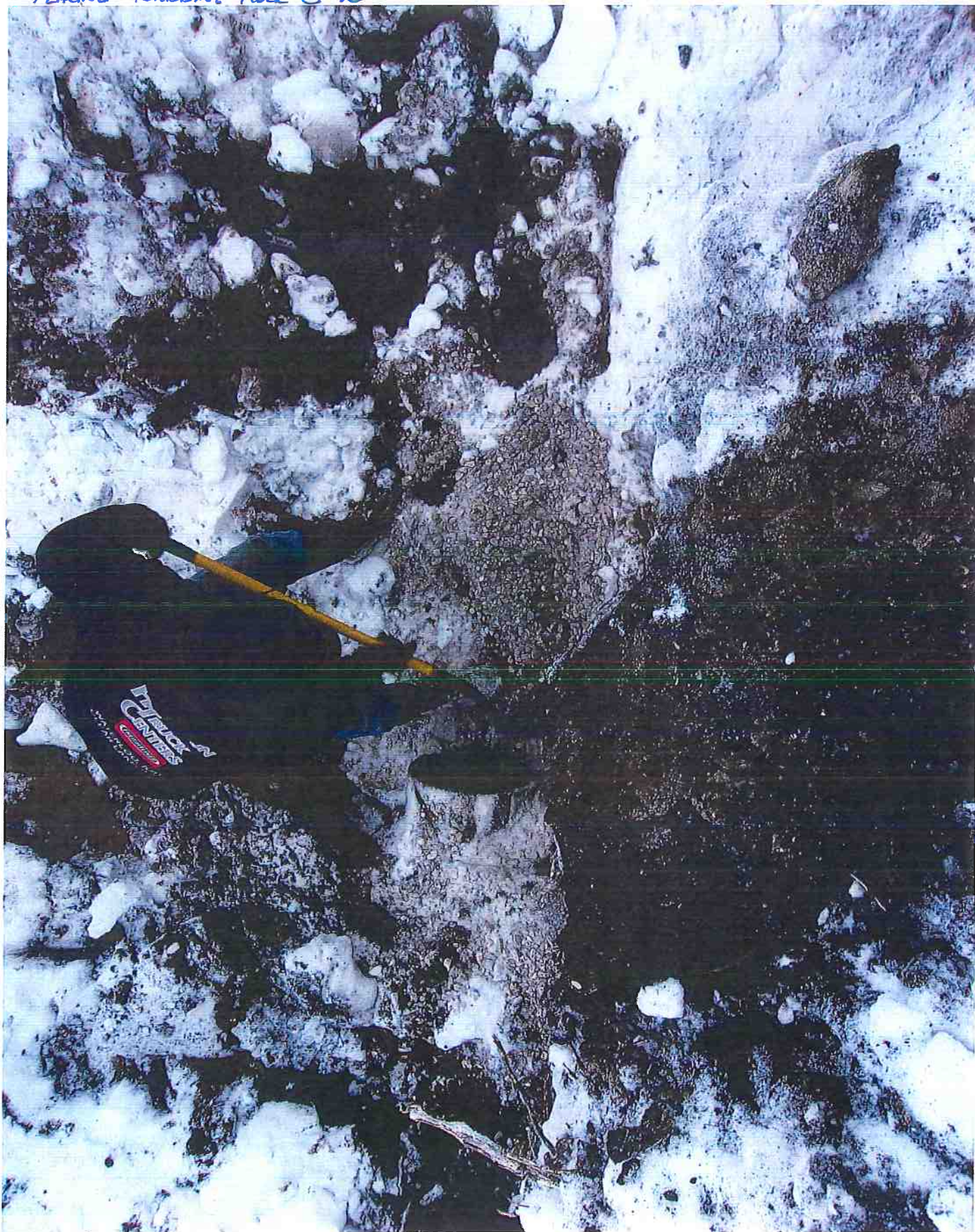
Engineer

Date Reviewed: _____

REMOVING SNOW FROM EXISTING HOLE @ #340



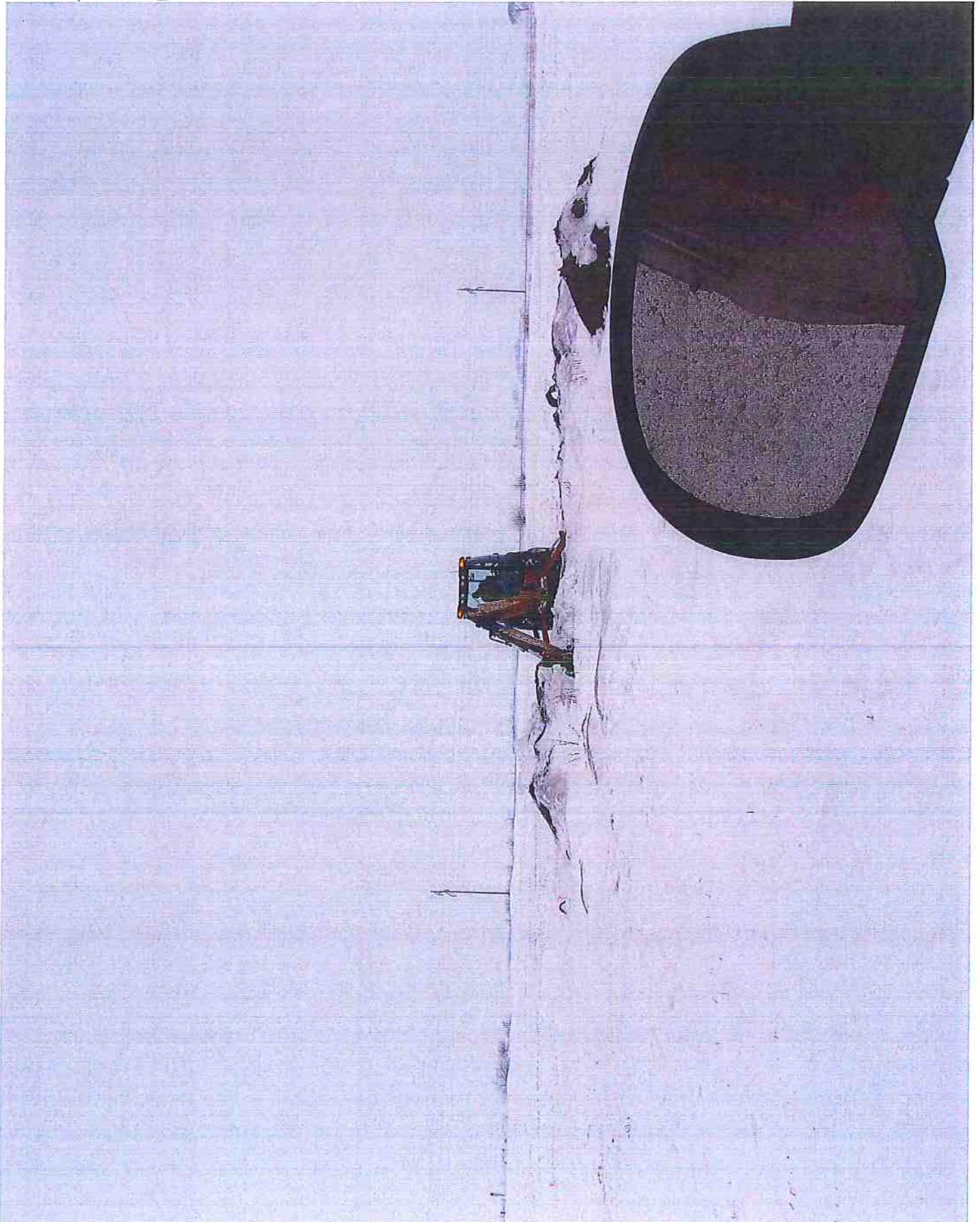
PEAKING BROODING ROCK @ FK



CONDITIONS @ JOB SITE



CONDITIONS @ JOB SITE #340



LOADING UP 12 BAGS CONC. FOR 3/4 CURBS



6 TON BRIDGING ROCK USED



PLACING ROCK AROUND 15" HDPE



18.3' OF 15" HDPE DUAL WALL



CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

4/3/19

PROJECT NUMBER: _____
COUNTY, ROUTE, ROAD: 6735
LOCATION: 009 H.

DAYS OF WEEK:

S | M | T | W | T | F | S

SHEET NO.

1 OF 1

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

Cloudy, LIGHT RAIN

DROVE IN OFF Co. Hwy @ 009, TO muddy To drive To Hole,
Pile OF dirt IS GONE, Hole MUST BE Filled, Hopefully THEY HAD ENOUGH dirt.
Jim McDougal Sawed Russ AND CONFIRMED THAT Hole WAS Filled AND No
imported dirt NEEDED.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Date Prepared:

4/3/19

Reviewed by:

Engineer

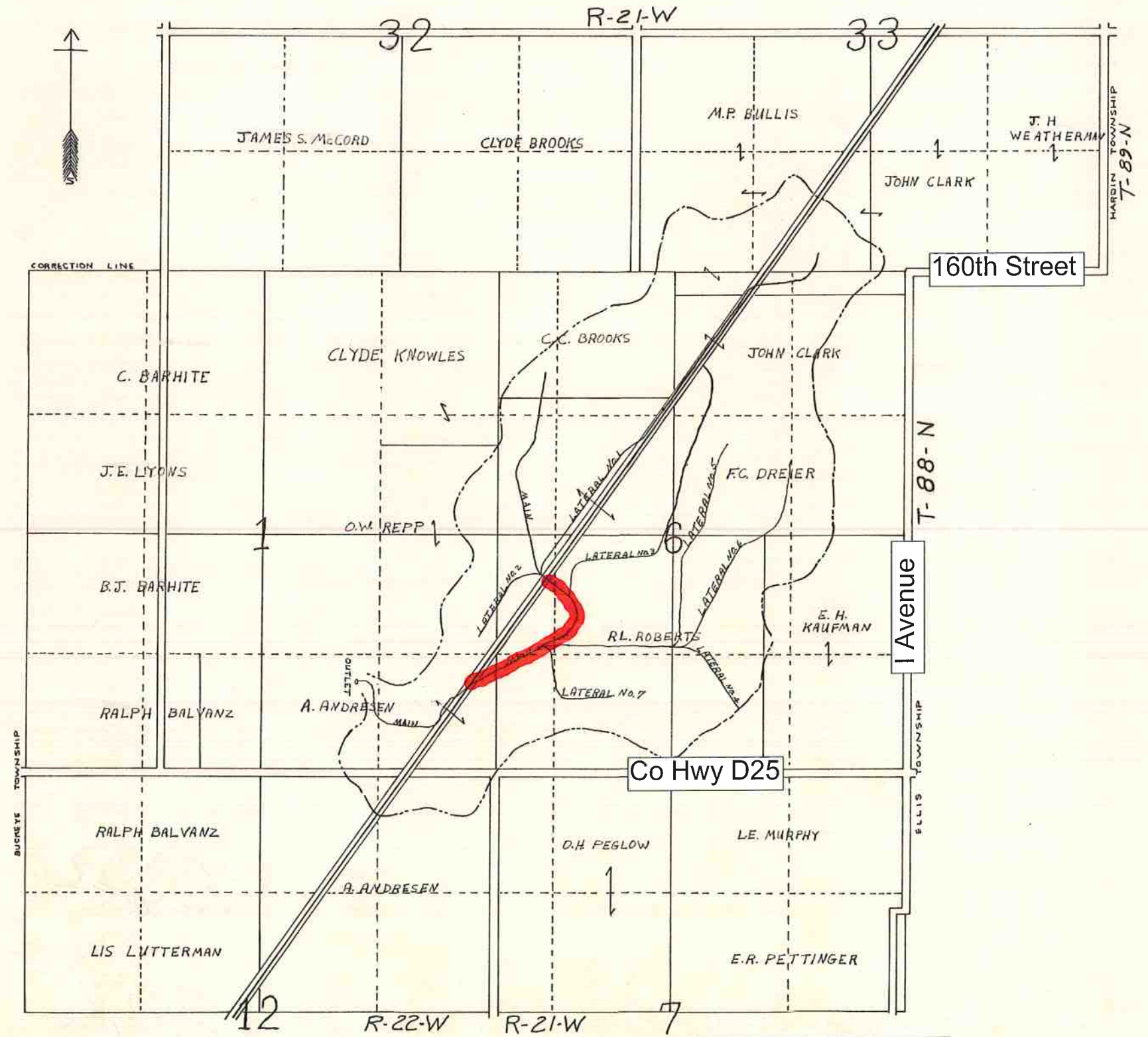
Date Reviewed

3,3618723.499,4931323.978,1161.577,COMMON 8005
4,3624567.908,4967262.956,1167.807,CP 3/4 .5DOWN
300,3629737.028,4962244.618,1146.788,GS FO
301,3629822.903,4962308.404,1146.891,FNL RR
302,3629791.707,4962284.913,1147.160,FNL RR
303,3629758.052,4962260.329,1146.995,FNL RR
304,3629753.034,4962225.981,1147.279,GS TILELOCATE
305,3629774.811,4962248.609,1146.216,GS TILELOCATE
306,3629802.148,4962282.548,1146.295,GS TILELOCATE
307,3629810.400,4962298.964,1147.030,GS TILELOCATE
308,3629822.735,4962312.159,1147.277,GS TILELOCATE
309,3629859.081,4962343.846,1146.943,GS TILELOCATE
310,3629870.624,4962355.908,1146.838,GS TILELOCATE
311,3629891.427,4962375.437,1146.813,GS TILELOCATE
312,3629925.863,4962404.629,1146.573,GS TILELOCATE
313,3629938.454,4962416.585,1137.943,FL 18"CLAYTILE
314,3629966.977,4962450.914,1146.365,GS TILELOCATE
315,3630000.822,4962485.614,1146.076,GS TILELOCATE
316,3630032.434,4962523.364,1146.174,GS TILELOCATE
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318,3630086.093,4962598.790,1146.213,GS TILELOCATE
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320,3630134.112,4962679.895,1146.022,GS TILELOCATE
321,3630145.419,4962699.671,1138.867,FL 15"CLAYTILE
322,3630165.561,4962736.783,1146.293,GS TILELOCATE
323,3630184.950,4962772.002,1146.211,GS TILELOCATE
324,3630209.546,4962815.860,1146.642,GS TILELOCATE
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329,3630329.428,4963029.441,1147.266,GS TILELOCATE
330,3630340.493,4963046.219,1139.845,FL 15"CLAYTILE
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336,3630485.395,4963300.163,1146.670,GS TILELOCATE
337,3630507.477,4963337.687,1146.238,GS TILELOCATE
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340,3630555.208,4963401.223,1140.781,FL 15"CLAY@BLOWOUT
341,3630929.429,4963280.734,1143.344,FL INTAKE BEEHIVE
342,3630928.602,4963282.665,1145.920,GS
343,3631016.362,4963171.872,1146.759,FNL RR
344,3631020.255,4963167.827,1142.396,FL 15"CLAYTILE
345,3630999.195,4963158.235,1146.570,GS FO
346,3630614.913,4963420.609,1145.835,GS TILE LOCATE
347,3630650.646,4963417.231,1146.017,GS TILE LOCATE
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355,3630925.850,4963277.378,1145.963,GS TILE LOCATE
356,3630967.858,4963229.027,1146.672,GS TILE LOCATE
357,3631010.898,4963176.712,1146.134,GS TILE LOCATE
358,3631028.257,4963156.684,1146.702,GS TILE LOCATE
359,3631042.449,4963139.401,1150.590,GS TILE LOCATE
8016,3618659.060,4946889.650,1169.720,GPS MON
8016_GNSS,3618659.060,4946889.650,1169.720,Autonomous Setup

Traced by: Reigles Eng'g. Co.
Feb. 1956

PLAT
of
D.D. No. 9
Total Acs. 550
Scale
1" = 600 ft.

Ellis



Investigation Limits

No. 9

Traced by: Reigles Eng'g. Co.
Feb. 1956

PLAT
of
D.D. No. 9
Total Acs. 550
Scale
1" = 600 ft.

Ellis



 Repair Locations

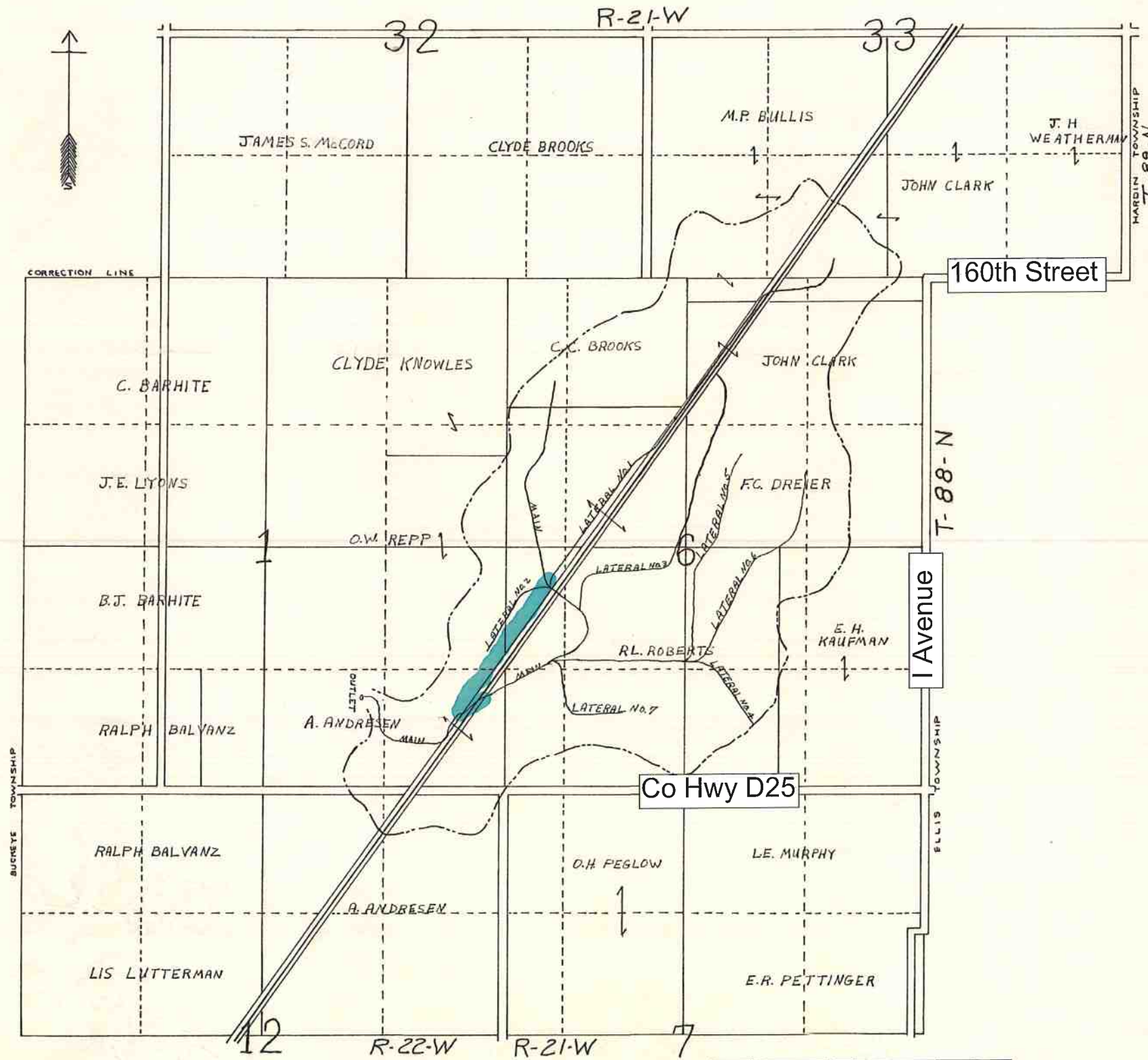
No. 9

Traced by:- Reigles Eng'r. Co.
Feb. 1956

PLAT
of
D.D. No. 9

Total Acs. 550

Scale
1" = 600 ft. F/115



Improvement Locations

No. 9



By: L.O.G.
 Date: 4/30/2019
 Checked By: L.O.G.
 Date: 4/30/2019

Engineer's Opinion of Probable Construction Cost

Project: Main tile **Repair** for D.D. #9

Location: Section 6, T88N, R21W and Section 1, T88N, R22W Hardin County, Iowa

TILE REPLACEMENT	ITEM #	DESCRIPTION	Unit Cost	Units	Quantity	Units	Total Cost	
	CONSTRUCTION COSTS							
	1	15" DIP TILE	\$ 80.00	LF	120	LF	\$ 9,600.00	
	2	30" JACK AND BORE TILE (RAILROAD CROSSING)	\$ 600.00	LF	110	LF	\$ 66,000.00	
	3	INTAKE JUNCTION STRUCTURE	\$ 4,000.00	EA	2	EA	\$ 8,000.00	
	4	CONCRETE COLLARS	\$ 300.00	EA	2	EA	\$ 600.00	
	5	TILE REMOVAL	\$ 10.00	LF	10	LF	\$ 100.00	
	6	ABANDON EXISTING TILE (RAILROAD CROSSING)	\$ 30.00	LF	110	LF	\$ 3,300.00	
	7	RAILROAD REQUIREMENTS	\$ 20,000.00	LS	1	LS	\$ 20,000.00	
	8	LOCATE EXISTING DISTRICT TILE	\$ 1,000.00	LOC	2	LOC	\$ 2,000.00	
	9	TILE JET CLEANING	\$ 50.00	LF	200	LF	\$ 10,000.00	
	10	TILE CCTV	\$ 4.00	LF	200	LF	\$ 800.00	
11	TREE REMOVAL	\$ 10,000.00	LS	1	LS	\$ 10,000.00		
		CONSTRUCTION SUBTOTAL				\$ 130,400.00		
		Contingency (20%)				\$ 26,080.00		
		CONSTRUCTION TOTAL				\$ 156,480.00		
		Engr. & Const. Observation (25%)				\$ 39,120.00		
		TOTAL COST				\$ 195,600.00		



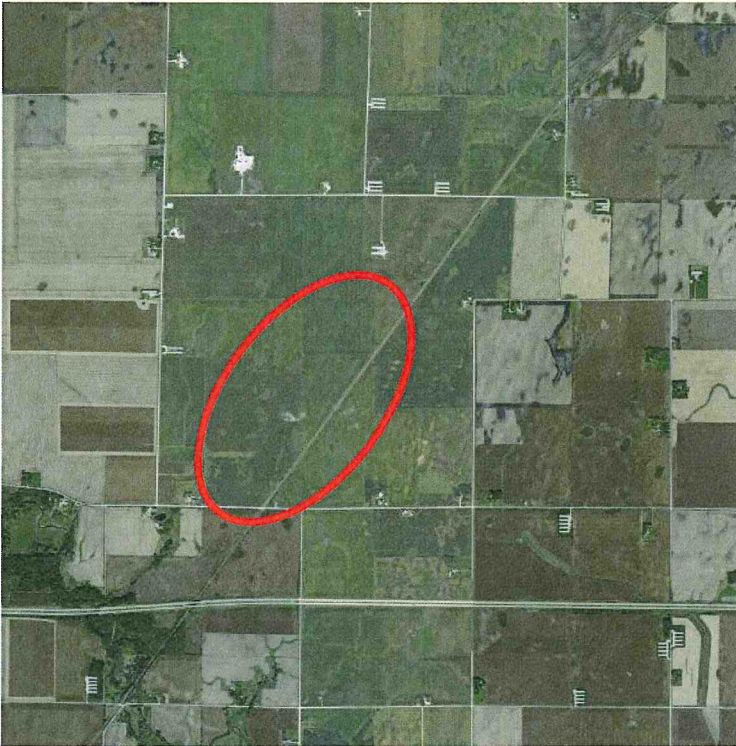
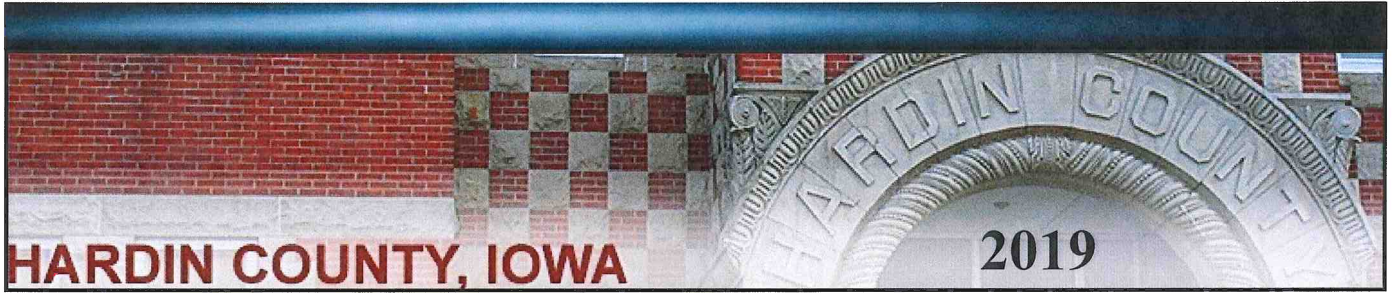
By: L.O.G.
 Date: 4/30/2019
 Checked By: L.O.G.
 Date: 4/30/2019

Engineer's Opinion of Probable Construction Cost

Project: Main tile **Improvement** for D.D. #9

Location: Section 6, T88N, R21W and Section 1, T88N, R22W Hardin County, Iowa

TILE REROUTE	ITEM #	DESCRIPTION	Unit Cost	Units	Quantity	Units	Total Cost	
	CONSTRUCTION COSTS							
	101	15" RCP OR DUAL WALL TILE	\$ 30.00	LF	1900	LF	\$ 57,000.00	
	102	INTAKE JUNCTION STRUCTURE	\$ 4,000.00	EA	2	EA	\$ 8,000.00	
	103	CONCRETE COLLARS	\$ 300.00	EA	2	EA	\$ 600.00	
	104	TILE REMOVAL	\$ 10.00	LF	10	LF	\$ 100.00	
	105	ABANDON EXISTING TILE (RAILROAD CROSSING)	\$ 30.00	LF	110	LF	\$ 3,300.00	
	106	RAILROAD REQUIREMENTS	\$ 10,000.00	LS	1	LS	\$ 10,000.00	
	107	LOCATE EXISTING DISTRICT TILE	\$ 1,000.00	LOC	3	LOC	\$ 3,000.00	
	108	TILE JET CLEANING	\$ 50.00	LF	200	LF	\$ 10,000.00	
	109	TILE CCTV	\$ 4.00	LF	200	LF	\$ 800.00	
110	TREE REMOVAL	\$ 10,000.00	LS	1	LS	\$ 10,000.00		
		CONSTRUCTION SUBTOTAL				\$ 102,800.00		
		Contingency (20%)				\$ 20,560.00		
		CONSTRUCTION TOTAL				\$ 123,360.00		
		Engr. & Const. Observation (25%)				\$ 30,840.00		
		TOTAL COST				\$ 154,200.00		



**SUPPLEMENT TO
ENGINEER'S REPORT
ON REPAIRS OR
IMPROVEMENTS TO
MAIN TILE
DRAINAGE DISTRICT
NO. 9
HARDIN COUNTY,**



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA

Lee O. Gallentine, P.E. June 3, 2019
LEE O. GALLENTINE, P.E. DATE

LICENSE NUMBER: 15745
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2020
PAGES OR SHEETS COVERED BY THIS SEAL:
SHOWN ON TABLE OF CONTENTS



CLAPSADDLE-GARBER ASSOCIATES OFFICE LOCATIONS

16 East Main Street, PO Box 754 | Marshalltown, IA 50158
1523 S. Bell Avenue, Suite 101 | Ames, IA 50010
5106 Nordic Drive | Cedar Falls, IA 50613
739 Park Avenue | Ackley, IA 50601
511 Bank Street | Webster City, IA 50595

Project Office
739 Park Avenue
Ackley, IA. 50601
Phone: 641-847-3273
Fax: 641-847-2303

**Supplement to Engineer's Report
on Repairs or Improvements
to Main Tile, Drainage District No. 9
Hardin County, Iowa**

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Opinion of Probable Construction Costs – Tile Sever – Improvement	App. I

Supplement to Engineer's Report on Repairs or Improvements to Main Tile, Drainage District No. 9 Hardin County, Iowa

1.0 INTRODUCTION

- SCOPE OF WORK – The Hardin County Board of Supervisors, acting as District Trustees, requested Clapsaddle-Garber Associates to investigate and report concerning repair or improvements to the Main tile of Drainage District No. 9. At the regular drainage meeting held on May 22, 2019, the original Engineer's Report along with the options that it contains were discussed by the District Trustees. As a result, the District Trustees requested Clapsaddle-Garber Associates to move ahead with this supplement to explore an additional option requested by one of the landowners.

- ## 2.0 IMPROVEMENT METHOD – To improve the drainage capacity for the existing Main tile, the following option is an additional option available:

Tile Sever

- Sever the existing Main tile upstream of the upstream railroad crossing and plug the downstream end on northwest side of the railroad right of way.
- Abandon existing Main tile at said upstream railroad crossing under the railroad tracks.
- Install a new separate Main tile from the location of severing west and southwest to a new separate outlet in the existing water course (approximately 1/8 mile downstream of the outlet of the existing main tile).
- For the portion of the Main tile in the railroad right of way at the downstream limits of investigation, jet clean the existing Main tile, CCTV inspect the existing Main tile to verify its condition and remove the trees inside the railroad right of way.
- For reference, the locations of proposed work are shown on the map included in Appendix H.

With the above-mentioned improvement method, the following should be noted:

- The condition of the Main tile at the downstream railroad crossing is unknown.
- For the above option, the current railroad crossing would not be removed, but would be abandoned as dictated by railroad standards.
- For the above option, trees within 50' of the locations of the existing Main tile inside railroad right of way would be removed to stop infiltration of tree roots.
- The pipe sizes used are those that are currently manufactured that most closely meet the current Main tile size.
- The above option would only remove soil and debris in the existing Main tile at the areas of work.
- The above work is for the identified portions of the Main tile only. No work is proposed for the remainder of the existing Main tile.

- The above work would turn the drainage area upstream of the upstream railroad crossing into a separate Drainage District.
- The proposed tile on the above work would be installed at some depths slightly larger than the Tile Reroute Method from the original report.
- The above work may require annexation to extend the district boundary to the West and Southwest to allow for installation of the proposed tile.
- Improvements have historically been viewed as having an impact on jurisdictional wetlands. As such, individual landowners should consult with applicable staff at the Hardin County NRCS office to determine the existence of said jurisdictional wetlands and what said impact may be on them.

Per Iowa Code Chapter 468.126, the above actions would be considered an improvement. As such, Subsection 4, paragraph c of Chapter 468.126 states “If the estimated cost of the improvement does not exceed fifty thousand dollars, the board may order the work done without conducting a hearing on the matter. Otherwise, the board shall set a date for a hearing on whether to construct the proposed improvement and whether there shall be a reclassification of benefits for the cost of the proposed improvement.” The opinion of probable construction cost contained in the next section of this report exceeds said \$50,000 limit. Therefore, a hearing will be required. Per Iowa Code Chapter 468.126.4.e, the right of remonstrance may apply to the proposed improvements.

3.0 **OPINION OF PROBABLE CONSTRUCTION COSTS** – Using the above method of improvement, an itemized list of project quantities and associated opinion of probable construction costs was compiled and is included in Appendix I of this report. A summary of said costs are as follows:

METHOD	TOTAL COST
Tile Sever - Improvement	\$187,800

It should be noted that said costs include materials, labor, and equipment supplied by the contractor to complete the necessary repair and includes applicable engineering, construction observation, and project administration fees by Clapsaddle-Garber Associates. However, said costs do not include any interest, legal fees, county administrative fees, crop damages, other damages, previous repairs, engineering fees to date, or reclassification fees (if applicable). As always, all costs shown are opinions of Clapsaddle-Garber Associates based on previous lettings on other projects. Said costs are just a guideline and are not a guarantee of actual costs.

4.0 **RECOMMENDATIONS** – There is a definite need to perform the above-mentioned action or one of those mentioned in the original Engineer’s report. The actions would remove the current restrictions in the Main tile and extend the lifespan of the same. Therefore, it is recommended that the District Trustees should take the actions stated in the original report.

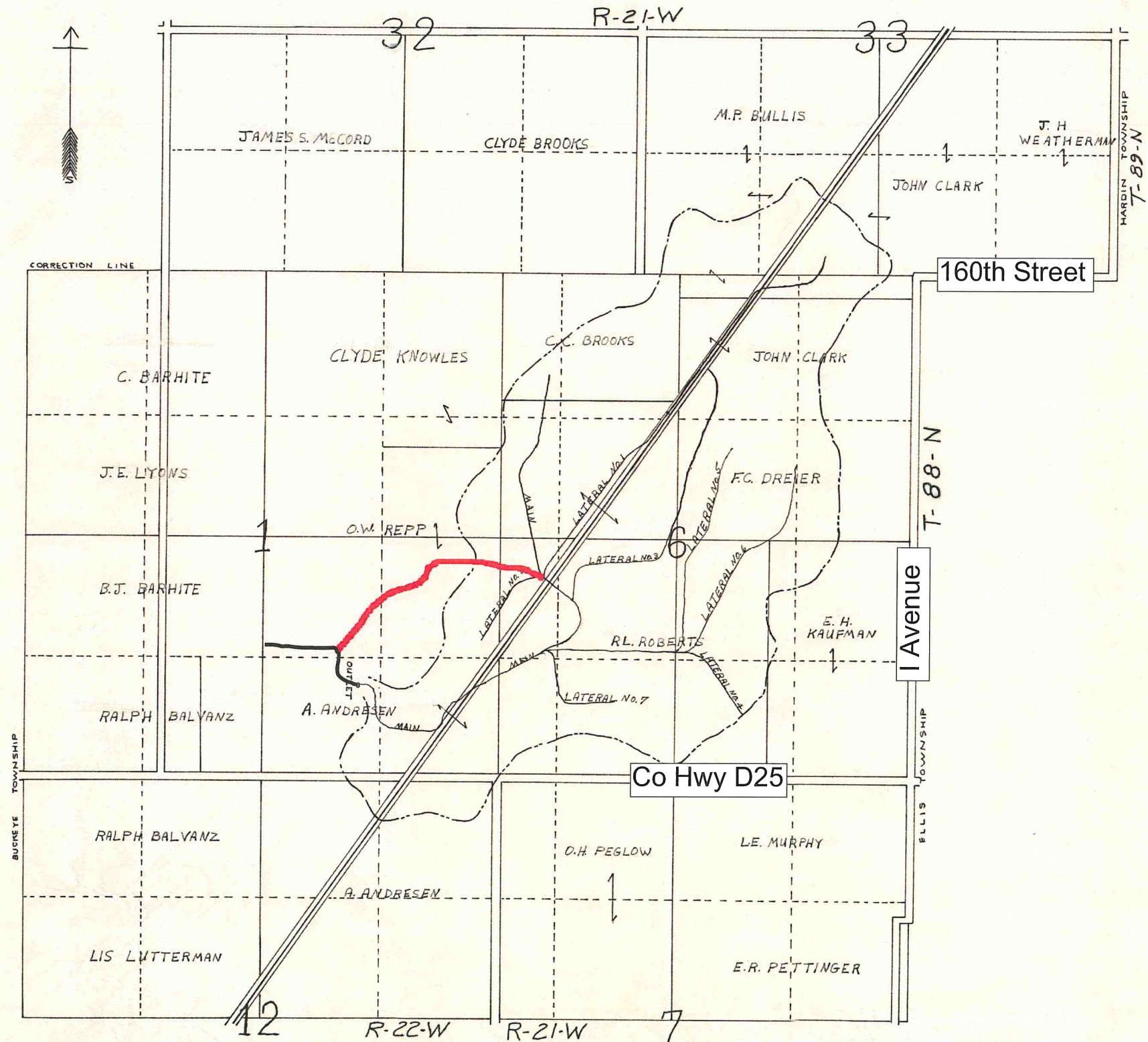
It should be noted that if the Tile Sever option from this supplement is selected, the following additional recommendations apply:

- Confirm that Drainage District 9 should be split into two separate districts.
- Confirm if annexation is necessary to the West and Southwest.

Traced by:- Reigles Eng'g Co.
Feb. 1956

PLAT
D.D. No. 9
Total Acs. 550
Scale
1" = 600 ft.

Ellis



— Severed Main Tile Route
— Existing Water Course



By: Z.J.S.
 Date: 5/30/2019
 Checked By: L.O.G.
 Date: 6/3/2019

Engineer's Opinion of Probable Construction Cost

Project: Main tile Improvement for D.D. #9

Location: Section 6, T88N, R21W and Section 1, T88N, R22W Hardin County, Iowa

ITEM #	DESCRIPTION	Unit Cost	Units	Quantity	Units	Total Cost
CONSTRUCTION COSTS						
201	15" RCP OR DUAL WALL TILE	\$ 30.00	LF	2640	LF	\$ 79,200.00
202	18" CMP OUTLET	\$ 30.00	LF	40	LF	\$ 1,200.00
203	REVTMENT	\$ 40.00	TN	50	TN	\$ 2,000.00
204	INTAKE JUNCTION STRUCTURE	\$ 4,000.00	EA	1	EA	\$ 4,000.00
205	CONCRETE COLLARS	\$ 300.00	EA	2	EA	\$ 600.00
206	TILE REMOVAL	\$ 10.00	LF	10	LF	\$ 100.00
207	SEEDING	\$ 1,000.00	LS	1	LS	\$ 1,000.00
208	ABANDON EXISTING TILE (RAILROAD CROSSING)	\$ 30.00	LF	110	LF	\$ 3,300.00
209	RAILROAD REQUIREMENTS	\$ 10,000.00	LS	1	LS	\$ 10,000.00
210	LOCATE EXISTING DISTRICT TILE	\$ 1,000.00	LOC	3	LOC	\$ 3,000.00
211	TILE JET CLEANING	\$ 50.00	LF	200	LF	\$ 10,000.00
212	TILE CCTV	\$ 4.00	LF	200	LF	\$ 800.00
213	TREE REMOVAL	\$ 10,000.00	LS	1	LS	\$ 10,000.00
CONSTRUCTION SUBTOTAL						\$ 125,200.00
Contingency (20%)						\$ 25,040.00
CONSTRUCTION TOTAL						\$ 150,240.00
Engr. & Const. Observation (25%)						\$ 37,560.00
TOTAL COST						\$ 187,800.00

TILE SEVER



AUDIT 293470

CONSENT LETTER

June 10, 2019
Folder: 03141-19

FILED
JUN 14 2019
HARDIN COUNTY AUDITOR

Tina Schlemme
Deputy Auditor / Payroll
Hardin County Board of Supervisors
1215 Edgington Avenue, Suite 1
Eldora, Iowa 50627

Ms. Schlemme:

Please refer to Hardin County Board Of Supervisors, (hereinafter the "Utility") application for a maintenance on a drainage tile at Mile Post 128.84, on the Mason City Subdivision, at or near Radcliff, Hardin County, Iowa requesting approval from Union Pacific Railroad Company (hereinafter the "Railroad Company) to inspect, root clean, and jet the existing lateral tile. Attached hereto is a Railroad Location Print marked **EXHIBIT A**, each attached hereto and hereby made a part hereof, which illustrate the location and specifications of the subject project.

This letter will serve as notification that the Railroad Company approves of your above stated intentions.

It is understood and acknowledged that the Utility shall reimburse the Railroad Company for all expenses incurred by the Railroad Company for employment of flagmen, inspectors and other employees required to protect the right of way and property of the Railroad Company from damage arising out of and/or from the work on the utility line. The Utility shall reimburse the Railroad Company for such expenses within thirty (30) days after presentation of bill for such expenses.

This consent for work will expire one (1) year from the date hereof. If the work is not completed by the date herein you must contact the Railroad Company and request an extension of this Consent Letter.

If a contractor is to do any of the work performed on or about the Railroad Company's property, then Utility shall require its contractor to execute the Railroad Company's form Contractor's Right of Entry Agreement, **EXHIBIT B**. Utility acknowledges receipt of a copy of Contractor's Right of Entry Agreement and understanding its term, provisions and requirements, and will inform its contractor of the need to execute the Agreement. Under no circumstances will Utility's contractor be allowed on or about the Railroad Company's property without first executing the Contractor's Right of Entry Agreement.

In order to protect the operations of the Railroad Company as well as for safety reasons, it is imperative that the Utility notify our field representatives at the following offices:

<p>Railpros Flagging up.info@railpros.com (877) 315-0513 x 116</p>	<p>Zachery L. Chaney MGR I SIGNAL MNTCE Phone: 402-690-8287 zlchaney@up.com</p>
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no less than ten (10) days in advance of any construction on, along, or across the Railroad Company's right of way and/or tracks.

The Railroad Company has authorized the installation of fiber optics cable facilities on its property in certain areas. Prior to using the Railroad Company's property covered herein, you must contact the Railroad Company at **1-800-336-9193** to determine if a fiber optic cable is buried on the subject property. When you or your representative enters the Railroad Company's property, a copy of this letter must be available at the site to be shown on request to any Railroad Company employee or official.

If you have any questions or concerns pertaining to this permit, feel free to contact Norma Reynolds at (402) 544-8571 or njreynolds@up.com.

Sincerely,



Norma J. Reynolds
Mgr II Real Estate Contracts

RAILROAD LOCATION PRINT

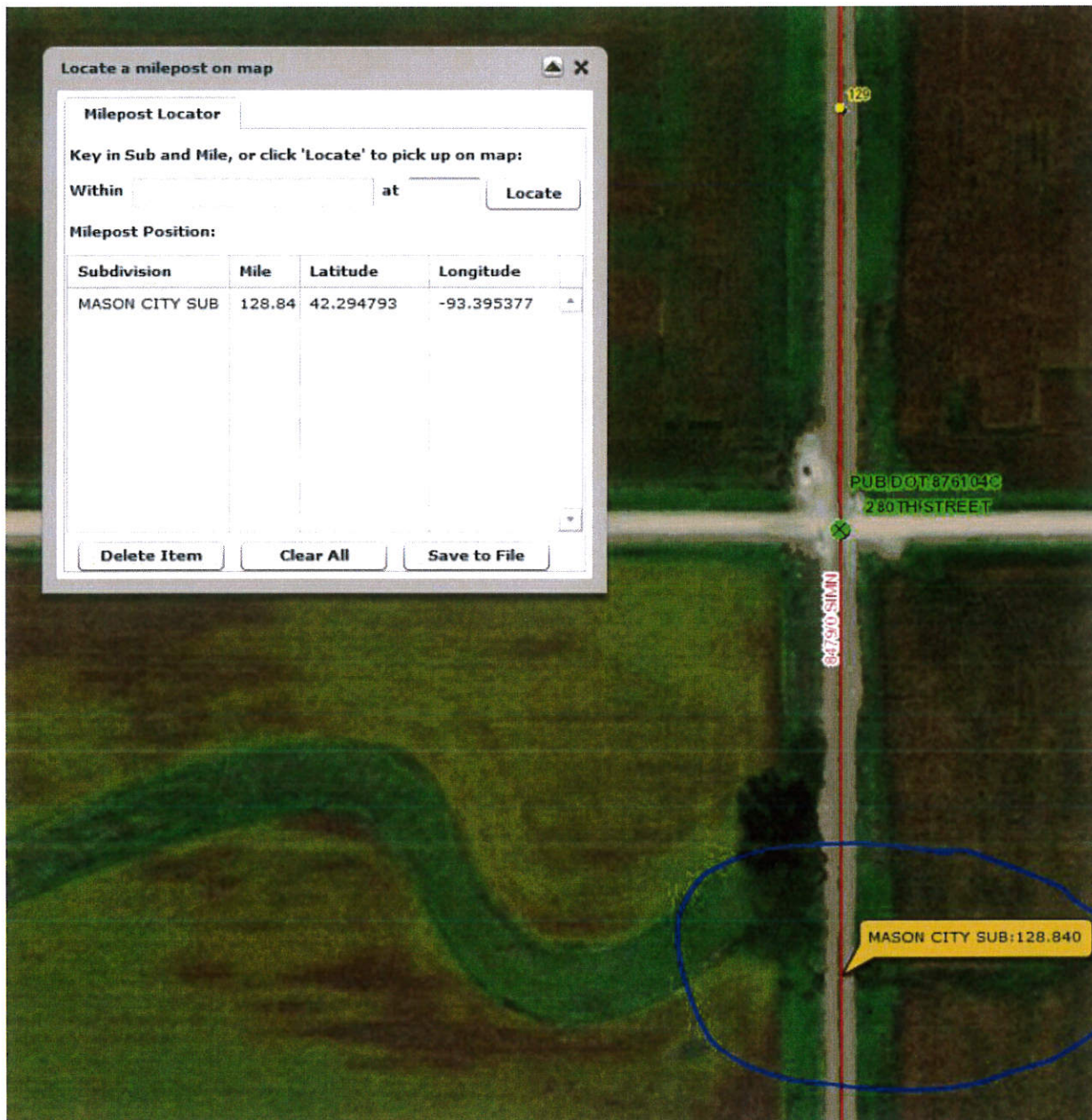
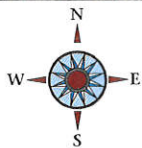


EXHIBIT "A"

UNION PACIFIC RAILROAD COMPANY

MASON CITY SUBDIVISION
RAILROAD MILE POST 128.840
RADCLIFFE, HARDIN COUNTY, IOWA

Folder No. 3141-19

Date: June 10, 2019

WARNING

IN ALL OCCASIONS, U.P. COMMUNICATIONS DEPARTMENT MUST BE CONTACTED IN ADVANCE OF ANY WORK TO DETERMINE EXISTENCE AND LOCATION OF FIBER OPTIC CABLE.
PHONE: 1-(800) 336-9193

EXHIBIT B
TO
CONSENT LETTER

PL X&E ROE 940201
Form Approved, AVP-Law
08/25/2006

Folder No. 03141-19

CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

THIS AGREEMENT is made and entered into as of the _____ by and between UNION PACIFIC RAILROAD COMPANY, a Delaware corporation, ("Railroad") and _____, a _____ corporation ("Contractor"), to be addressed at _____.

RECITALS:

The Contractor has been hired by **Hardin County Board Of Supervisors** to inspect, root clean, and jet the existing lateral tile (the "work"), with all or a portion of such work to be performed on property of Railroad at Mile Post 128.84, on the Mason City Subdivision at or near Radcliffe, Hardin County, Iowa, pursuant to a Consent Letter between Railroad and Hardin County Board Of Supervisors dated June 10, 2019, at such location as shown on the print marked **Exhibit A** attached hereto and hereby made a part hereof.

Railroad is willing to permit Contractor to perform the work described above at the location describe above subject to the terms and conditions contained in this Agreement.

AGREEMENT:

NOW, THEREFORE, it is mutually agreed by and between the Railroad and Contractor, as follows:

Article I. DEFINITION OF CONTRACTOR.

For purposes of this Agreement, all references in this Agreement to the Contractor shall include Contractor's contractors, subcontractors, officers, agents and employees, and others acting under its or their authority.

Article II. RIGHT GRANTED; PURPOSE.

Railroad hereby grants to Contractor the right, during the term hereinafter stated and upon and subject to each and all of the terms, provisions and conditions herein contained, to enter upon and have ingress to and egress from the property described in the Recitals for the purpose of performing any work described in the Recitals above. The right herein granted to Contractor is limited to those portions of Railroad's property specifically described herein, or as designated by the Railroad Representative named in Article IV, and is strictly limited to the scope of work identified to the Railroad, as determined by the Railroad in its sole discretion, and for no other purpose.

Article III. TERMS AND CONDITIONS CONTAINED IN EXHIBITS B AND C.

The terms and conditions contained in **Exhibit B** and **C**, attached hereto, are hereby made a part of this Agreement.

Article IV. ALL EXPENSES TO BE BORNE BY CONTRACTOR; RAILROAD REPRESENTATIVE.

A. Contractor shall bear any and all costs and expenses associated with any work performed by Contractor, or any costs or expenses incurred by Railroad relating to this Agreement.

B. Contractor shall coordinate all of its work with the following Railroad representatives or his or her duly authorized representative (the "Railroad Representative"):

Railpros Flagging up.info@railpros.com (877) 315-0513 x 116	Zachery L. Chaney MGR I SIGNAL MNTCE Phone: 402-690-8287 zlchaney@up.com
--	---

C. Contractor, at its own expense, shall adequately police and supervise all work to be performed by Contractor and shall ensure that such work is performed in a safe manner as set forth in Section 7 of **Exhibit B**. The responsibility of Contractor for safe conduct and adequate policing and supervision of Contractor's work shall not be lessened or otherwise affected by Railroad's approval of plans and specifications involving the work, or by Railroad's collaboration in performance of any work, or by the presence at the work site of a Railroad Representative, or by compliance by Contractor with any requests or recommendations made by Railroad Representative.

Article V. TERM; TERMINATION.

A. The grant of right herein made to Contractor shall commence on the date of this Agreement, and continue for one (1) year from June 10, 2019, unless sooner terminated as herein provided, or at such time as Contractor has completed its work on Railroad's property, whichever is earlier. Contractor agrees to notify the Railroad Representative in writing when it has completed its work on Railroad's property.

B. This Agreement may be terminated by either party on ten (10) days written notice to the other party.

Article VI. CERTIFICATE OF INSURANCE.

A. Only upon request Contractor will provide Railroad with the insurance binders, policies, certificates and/or endorsements set forth in **Exhibit C** of this Agreement.

B. All insurance correspondence, binders, policies, certificates and/or endorsements shall be sent to:

Folder No: 03141-19
Union Pacific Railroad Company
1400 Douglas Street STOP 1690
Omaha, Nebraska 68179-1690

Article VII. CHOICE OF FORUM.

Litigation arising out of or connected with this Agreement may be instituted and maintained in the courts of the State of Iowa only, and the parties consent to jurisdiction over their person and over the subject matter of any such litigation, in those courts, and consent to service of process issued by such courts.

Article VIII. DISMISSAL OF CONTRACTOR'S EMPLOYEE.

At the request of Railroad, Contractor shall remove from Railroad's property any employee of Contractor who fails to conform to the instructions of the Railroad Representative in connection with the work on Railroad's property, and any right of Contractor shall be suspended until such removal has occurred. Contractor shall indemnify Railroad against any claims arising from the removal of any such employee from Railroad's property.

Article IX. ADMINISTRATIVE FEE.

Upon the execution and delivery of this Agreement, Contractor shall pay to Railroad **One Thousand Dollars (\$1,000.00)** as reimbursement for clerical, administrative and handling expenses in connection with the processing of this Agreement.

Article X. CROSSINGS.

No additional vehicular crossings (including temporary haul roads) or pedestrian crossings over Railroad's trackage shall be installed or used by Contractor without the prior written permission of Railroad.

Article XI. EXPLOSIVES.

Explosives or other highly flammable substances shall not be stored on Railroad's property without the prior written approval of Railroad.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed in duplicate as of the date first herein written.

UNION PACIFIC RAILROAD COMPANY

By: _____

Norma J. Reynolds
Mgr II Real Estate Contracts

(Contractor Name)

By _____

Name: _____

Title: _____

Telephone: _____

Email: _____

RAILROAD LOCATION PRINT

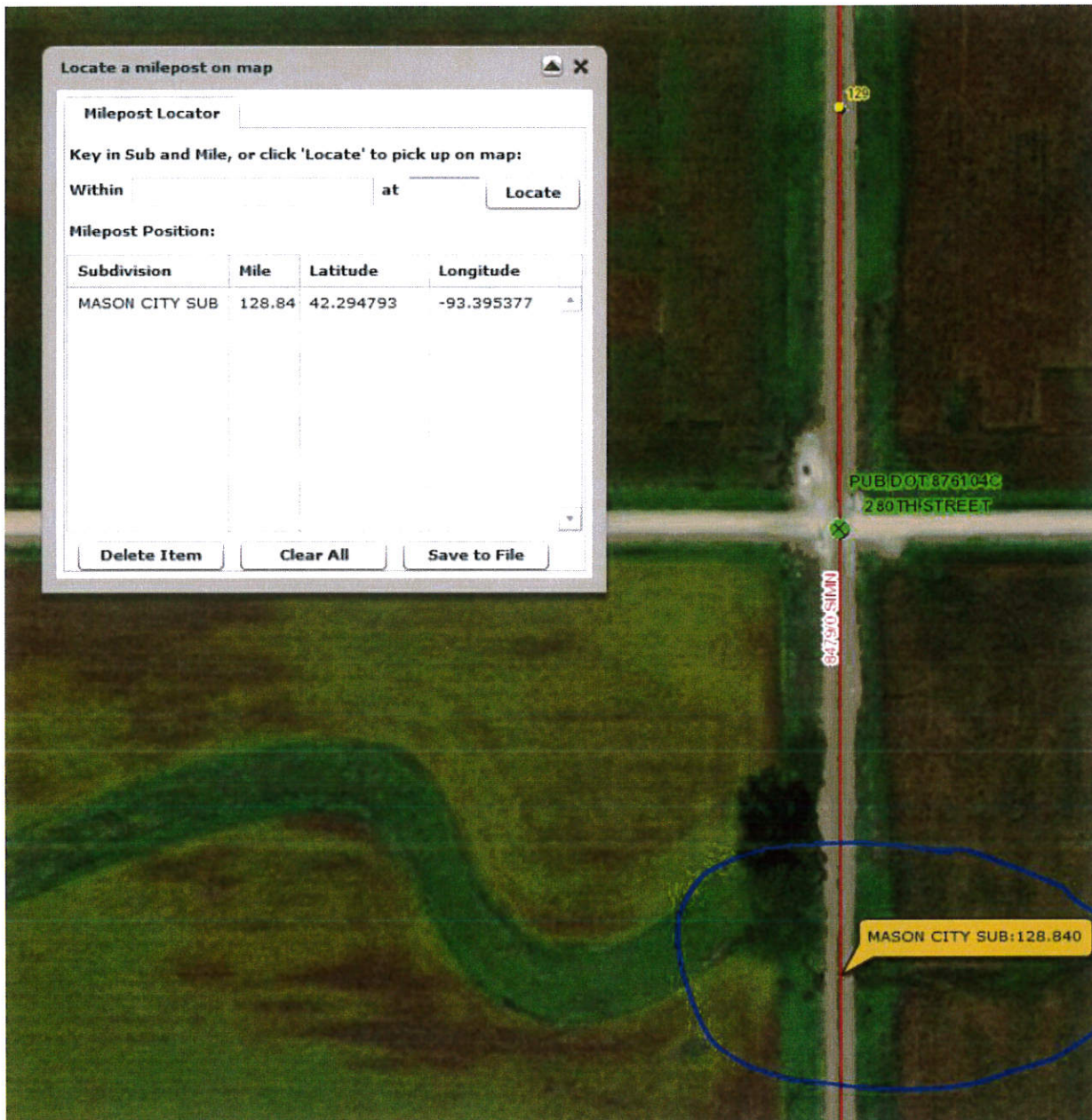
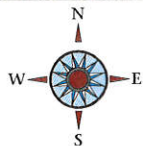


EXHIBIT "A"

UNION PACIFIC RAILROAD COMPANY

MASON CITY SUBDIVISION
RAILROAD MILE POST 128.840
RADCLIFFE, HARDIN COUNTY, IOWA

Folder No. 3141-19

Date: June 10, 2019

WARNING

IN ALL OCCASIONS, U.P. COMMUNICATIONS DEPARTMENT MUST BE CONTACTED IN ADVANCE OF ANY WORK TO DETERMINE EXISTENCE AND LOCATION OF FIBER OPTIC CABLE.
PHONE: 1-(800) 336-9193

EXHIBIT B
To
CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

Section 1. NOTICE OF COMMENCEMENT OF WORK - FLAGGING.

A. Contractor agrees to notify the Railroad Representative at least ten (10) working days in advance of Contractor commencing its work and at least ten (10) working days in advance of proposed performance of any work by Contractor in which any person or equipment will be within twenty-five (25) feet of any track, or will be near enough to any track that any equipment extension (such as, but not limited to, a crane boom) will reach to within twenty-five (25) feet of any track. No work of any kind shall be performed, and no person, equipment, machinery, tool(s), material(s), vehicle(s), or thing(s) shall be located, operated, placed, or stored within twenty-five (25) feet of any of Railroad's track(s) at any time, for any reason, unless and until a Railroad flagman is provided to watch for trains. Upon receipt of such ten (10)-day notice, the Railroad Representative will determine and inform Contractor whether a flagman need be present and whether Contractor needs to implement any special protective or safety measures. If flagging or other special protective or safety measures are performed by Railroad, Railroad will bill Contractor for such expenses incurred by Railroad, unless Railroad and a federal, state or local governmental entity have agreed that Railroad is to bill such expenses to the federal, state or local governmental entity. If Railroad will be sending the bills to Contractor, Contractor shall pay such bills within thirty (30) days of Contractor's receipt of billing. If Railroad performs any flagging, or other special protective or safety measures are performed by Railroad, Contractor agrees that Contractor is not relieved of any of its responsibilities or liabilities set forth in this Agreement.

B. The rate of pay per hour for each flagman will be the prevailing hourly rate in effect for an eight-hour day for the class of flagmen used during regularly assigned hours and overtime in accordance with Labor Agreements and Schedules in effect at the time the work is performed. In addition to the cost of such labor, a composite charge for vacation, holiday, health and welfare, supplemental sickness, Railroad Retirement and unemployment compensation, supplemental pension, Employees Liability and Property Damage and Administration will be included, computed on actual payroll. The composite charge will be the prevailing composite charge in effect at the time the work is performed. One and one-half times the current hourly rate is paid for overtime, Saturdays and Sundays, and two and one-half times current hourly rate for holidays. Wage rates are subject to change, at any time, by law or by agreement between Railroad and its employees, and may be retroactive as a result of negotiations or a ruling of an authorized governmental agency. Additional charges on labor are also subject to change. If the wage rate or additional charges are changed, Contractor (or the governmental entity, as applicable) shall pay on the basis of the new rates and charges.

C. Reimbursement to Railroad will be required covering the full eight-hour day during which any flagman is furnished, unless the flagman can be assigned to other Railroad work during a portion of such day, in which event reimbursement will not be required for the portion of the day during which the flagman is engaged in other Railroad work. Reimbursement will also be required for any day not actually worked by the flagman following the flagman's assignment to work on the project for which Railroad is required to pay the flagman and which could not reasonably be avoided by Railroad by assignment of such flagman to other work, even though Contractor may not be working during such time. When it becomes necessary for Railroad to bulletin and assign an employee to a flagging position in compliance with union collective bargaining agreements, Contractor must provide Railroad a minimum of

five (5) days notice prior to the cessation of the need for a flagman. If five (5) days notice of cessation is not given, Contractor will still be required to pay flagging charges for the five (5) day notice period required by union agreement to be given to the employee, even though flagging is not required for that period. An additional ten (10) days notice must then be given to Railroad if flagging services are needed again after such five day cessation notice has been given to Railroad.

Section 2. LIMITATION AND SUBORDINATION OF RIGHTS GRANTED

A. The foregoing grant of right is subject and subordinate to the prior and continuing right and obligation of the Railroad to use and maintain its entire property including the right and power of Railroad to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, roadways, signal, communication, fiber optics, or other wirelines, pipelines and other facilities upon, along or across any or all parts of its property, all or any of which may be freely done at any time or times by Railroad without liability to Contractor or to any other party for compensation or damages.

B. The foregoing grant is also subject to all outstanding superior rights (including those in favor of licensees and lessees of Railroad's property, and others) and the right of Railroad to renew and extend the same, and is made without covenant of title or for quiet enjoyment.

Section 3. NO INTERFERENCE WITH OPERATIONS OF RAILROAD AND ITS TENANTS.

A. Contractor shall conduct its operations so as not to interfere with the continuous and uninterrupted use and operation of the railroad tracks and property of Railroad, including without limitation, the operations of Railroad's lessees, licensees or others, unless specifically authorized in advance by the Railroad Representative. Nothing shall be done or permitted to be done by Contractor at any time that would in any manner impair the safety of such operations. When not in use, Contractor's machinery and materials shall be kept at least fifty (50) feet from the centerline of Railroad's nearest track, and there shall be no vehicular crossings of Railroads tracks except at existing open public crossings.

B. Operations of Railroad and work performed by Railroad personnel and delays in the work to be performed by Contractor caused by such railroad operations and work are expected by Contractor, and Contractor agrees that Railroad shall have no liability to Contractor, or any other person or entity for any such delays. The Contractor shall coordinate its activities with those of Railroad and third parties so as to avoid interference with railroad operations. The safe operation of Railroad train movements and other activities by Railroad takes precedence over any work to be performed by Contractor.

Section 4. LIENS.

Contractor shall pay in full all persons who perform labor or provide materials for the work to be performed by Contractor. Contractor shall not create, permit or suffer any mechanic's or materialmen's liens of any kind or nature to be created or enforced against any property of Railroad for any such work performed. Contractor shall indemnify and hold harmless Railroad from and against any and all liens, claims, demands, costs or expenses of whatsoever nature in any way connected with or growing out of such work done, labor performed, or materials furnished. If Contractor fails to promptly cause any lien to be released of record, Railroad may, at its election, discharge the lien or claim of lien at Contractor's expense.

Section 5. PROTECTION OF FIBER OPTIC CABLE SYSTEMS.

A. Fiber optic cable systems may be buried on Railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Contractor shall telephone Railroad during normal business hours (7:00 a.m. to 9:00 p.m. Central Time, Monday through Friday, except holidays) at 1-800-336-9193 (also a 24-hour, 7-day number for emergency calls) to determine if fiber optic cable is buried anywhere on Railroad's property to be used by Contractor. If it is, Contractor will telephone the telecommunications company(ies) involved, make arrangements for a cable locator and, if applicable, for relocation or other protection of the fiber optic cable. Contractor shall not commence any work until all such protection or relocation (if applicable) has been accomplished.

B. In addition to other indemnity provisions in this Agreement, Contractor shall indemnify, defend and hold Railroad harmless from and against all costs, liability and expense whatsoever (including, without limitation, attorneys' fees, court costs and expenses) arising out of any act or omission of Contractor, its agents and/or employees, that causes or contributes to (1) any damage to or destruction of any telecommunications system on Railroad's property, and/or (2) any injury to or death of any person employed by or on behalf of any telecommunications company, and/or its contractor, agents and/or employees, on Railroad's property. Contractor shall not have or seek recourse against Railroad for any claim or cause of action for alleged loss of profits or revenue or loss of service or other consequential damage to a telecommunication company using Railroad's property or a customer or user of services of the fiber optic cable on Railroad's property.

Section 6. PERMITS - COMPLIANCE WITH LAWS.

In the prosecution of the work covered by this Agreement, Contractor shall secure any and all necessary permits and shall comply with all applicable federal, state and local laws, regulations and enactments affecting the work including, without limitation, all applicable Federal Railroad Administration regulations.

Section 7. SAFETY.

A. Safety of personnel, property, rail operations and the public is of paramount importance in the prosecution of the work performed by Licensee or its contractor. Licensee shall be responsible for initiating, maintaining and supervising all safety, operations and programs in connection with the work. Licensee and its contractor shall at a minimum comply with Licensor's then current safety standards located at the following linke UP Safety Standards to ensure uniformity with the safety standards followed by Licensor's own forces. As a part of Licensee's safety responsibilities, Licensee shall notify Licensor if it determines that any of Licensor's safety standards are contrary to good safety practices. Licensee and its contractor shall furnish copies of each of its employees before they enter the job site.

B. Without limitation of the provisions of paragraph A above, Contractor shall keep the job site free from safety and health hazards and ensure that its employees are competent and adequately trained in all safety and health aspects of the job.

C. Contractor shall have proper first aid supplies available on the job site so that prompt first aid services may be provided to any person injured on the job site. Contractor shall promptly notify Railroad of any U.S. Occupational Safety and Health Administration reportable injuries. Contractor shall have a nondelegable duty to control its employees while they are on the job site or any other property of Railroad, and to be certain they do not use, be under the influence of, or have in their possession any alcoholic beverage, drug or other substance that may inhibit the safe performance of any work.

D. If and when requested by Railroad, Contractor shall deliver to Railroad a copy of Contractor's safety plan for conducting the work (the "Safety Plan"). Railroad shall have the right, but not the obligation, to require Contractor to correct any deficiencies in the Safety Plan. The terms of this Agreement shall control if there are any inconsistencies between this Agreement and the Safety Plan.

Section 8. INDEMNITY.

A. To the extent not prohibited by applicable statute, Contractor shall indemnify, defend and hold harmless Railroad, its affiliates, and its and their officers, agents and employees ("Indemnified Parties") from and against any and all loss, damage, injury, liability, claim, demand, cost or expense (including, without limitation, attorney's, consultant's and expert's fees, and court costs), fine or penalty (collectively, "Loss") incurred by any person (including, without limitation, any Indemnified Party, Contractor, or any employee of Contractor or of any Indemnified Party) arising out of or in any manner connected with (i) any work performed by Contractor, or (ii) any act or omission of Contractor, its officers, agents or employees, or (iii) any breach of this agreement by Contractor.

B. The right to indemnity under this Section 8 shall accrue upon occurrence of the event giving rise to the Loss, and shall apply regardless of any negligence or strict liability of any Indemnified Party, except where the Loss is caused by the sole active negligence of an Indemnified Party as established by the final judgment of a court of competent jurisdiction. The sole active negligence of any Indemnified Party shall not bar the recovery of any other Indemnified Party.

C. Contractor expressly and specifically assumes potential liability under this Section 8 for claims or actions brought by Contractor's own employees. Contractor waives any immunity it may have under worker's compensation or industrial insurance acts to indemnify Railroad under this Section 8. Contractor acknowledges that this waiver was mutually negotiated by the parties hereto.

D. No court or jury findings in any employee's suit pursuant to any worker's compensation act or the Federal Employers' Liability Act against a party to this Agreement may be relied upon or used by Contractor in any attempt to assert liability against Railroad.

E. The provisions of this Section 8 shall survive the completion of any work performed by Contractor or the termination or expiration of this Agreement. In no event shall this Section 8 or any other provision of this Agreement be deemed to limit any liability Contractor may have to any Indemnified Party by statute or under common law.

Section 9. RESTORATION OF PROPERTY.

In the event Railroad authorizes Contractor to take down any fence of Railroad or in any manner move or disturb any of the other property of Railroad in connection with the work to be performed by Contractor, then in that event Contractor shall, as soon as possible and at Contractor's sole expense, restore such fence and other property to the same condition as the same were in before such fence was taken down or such other property was moved or disturbed. Contractor shall remove all of Contractor's tools, equipment, rubbish and other materials from Railroad's property promptly upon completion of the work, restoring Railroad's property to the same state and condition as when Contractor entered thereon.

Section 10. WAIVER OF DEFAULT.

Waiver by Railroad of any breach or default of any condition, covenant or agreement herein contained to be kept, observed and performed by Contractor shall in no way impair the right of Railroad to avail itself of any remedy for any subsequent breach or default.

Section 11. MODIFICATION - ENTIRE AGREEMENT.

No modification of this Agreement shall be effective unless made in writing and signed by Contractor and Railroad. This Agreement and the exhibits attached hereto and made a part hereof constitute the entire understanding between Contractor and Railroad and cancel and supersede any prior negotiations, understandings or agreements, whether written or oral, with respect to the work to be performed by Contractor.

Section 12. ASSIGNMENT - SUBCONTRACTING.

Contractor shall not assign or subcontract this Agreement, or any interest therein, without the written consent of the Railroad. Contractor shall be responsible for the acts and omissions of all subcontractors, and shall require all subcontractors to maintain the insurance coverage required to be maintained by Contractor as provided in this Agreement, and to indemnify Contractor and Railroad to the same extent as Railroad is indemnified by Contractor under this Agreement.

EXHIBIT C

Union Pacific Railroad Company Insurance Provisions For Contractor's Right of Entry Agreement

Contractor shall, at its sole cost and expense, procure and maintain during the course of the Project and until all Project work on Railroad's property has been completed and the Contractor has removed all equipment and materials from the Railroad's property and has cleaned and restored Railroad's property to Railroad's satisfaction, the following insurance coverage:

- A. Commercial General Liability insurance.** Commercial general liability (CGL) with a limit of not less than \$2,000,000 each occurrence and an aggregate limit of not less than \$4,000,000. CGL insurance must be written on ISO occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage).

The policy must also contain the following endorsement, which must be stated on the certificate of insurance:

- Contractual Liability Railroads ISO form CG 24 17 10 01 (or a substitute form providing equivalent coverage) showing "Union Pacific Railroad Company Property" as the Designated Job Site.

- B. Business Automobile Coverage insurance.** Business auto coverage written on ISO form CA 00 01 (or a substitute form providing equivalent liability coverage) with a combined single limit of not less \$2,000,000 for each accident.

The policy must contain the following endorsements, which must be stated on the certificate of insurance:

Coverage For Certain Operations In Connection With Railroads ISO form CA 20 70 10 01 (or substitute form providing equivalent coverage) showing "Union Pacific Property" as the Designated Job Site.
Motor Carrier Act Endorsement – Hazardous materials clean up (MCS-90) if required by law.

- C. Workers Compensation and Employers Liability insurance.** Coverage must include but not be limited to:

Contractor's statutory liability under the workers' compensation laws of the state(s) affected by this Agreement.

Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 disease policy limit \$500,000 each employee.

If Contractor is self-insured, evidence of state approval and excel workers compensation coverage must be provided. Coverage must include liability arising out of the U.S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable.

The policy must contain the following endorsement, which must be stated on the certificate of insurance:

Alternate Employer endorsement ISO form WC 00 03 01 A (or a substitute form providing equivalent coverage) showing Railroad in the schedule as the alternate employer (or a substitute form providing equivalent coverage).

- D. **Railroad Protective Liability** insurance. Contractor must maintain Railroad Protective Liability insurance written on ISO occurrence form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of Railroad as named insured, with a limit of not less than \$2,000,000 per occurrence and an aggregate of \$6,000,000. A binder stating the policy is in place must be submitted to Railroad before the work may be commenced and until the original policy is forwarded to Railroad.
- E. **Umbrella or Excess insurance**. If Contractor utilizes umbrella or excess policies, these policies must “follow form” and afford no less coverage than the primary policy.
- F. **Pollution Liability** insurance. Pollution Liability coverage must be included when the scope of the work as defined in the Agreement includes installation, temporary storage, or disposal of any “hazardous” material that is injurious in or upon land, the atmosphere, or any watercourses; or may cause bodily injury at any time.

Pollution liability coverage must be written on ISO form Pollution Liability Coverage Form Designated Sites CG 00 39 12 04 (or a substitute form providing equivalent liability coverage), with limits of at least \$5,000,000 per occurrence and an aggregate limit of \$10,000,000.

If the scope of work as defined in this Agreement includes the disposal of any hazardous or non-hazardous materials from the job site, Contractor must furnish to Railroad evidence of pollution legal liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting the materials, with coverage in minimum amounts of \$1,000,000 per loss, and an annual aggregate of \$2,000,000.

Other Requirements

- G. All policy(ies) required above (except worker’s compensation and employers liability) must include Railroad as “Additional Insured” using ISO Additional Insured Endorsements CG 20 26, and CA 20 48 (or substitute forms providing equivalent coverage). The coverage provided to Railroad as additional insured shall, to the extent provided under ISO Additional Insured Endorsement CG 20 26, and CA 20 48 provide coverage for Railroad’s negligence whether sole or partial, active or passive, and shall not be limited by Contractor’s liability under the indemnity provisions of this Agreement.
- H. Punitive damages exclusion, if any, must be deleted (and the deletion indicated on the certificate of insurance), unless the law governing this Agreement prohibits all punitive damages that might arise under this Agreement.
- I. Contractor waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against Railroad and its agents, officers, directors and employees. This waiver must be stated on the certificate of insurance.
- J. Prior to commencing the work, Contractor shall furnish Railroad with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements in this Agreement.

- K.** All insurance policies must be written by a reputable insurance company acceptable to Railroad or with a current Best's Insurance Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the work is to be performed.

- L.** The fact that insurance is obtained by Contractor or by Railroad on behalf of Contractor will not be deemed to release or diminish the liability of Contractor, including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad from Contractor or any third party will not be limited by the amount of the required insurance coverage.

Becca Junker

From: Matt Mahler <mmahler@irua.net>
Sent: Thursday, June 13, 2019 3:07 PM
To: Becca Junker
Cc: Jim LaPlant; Lee Gallentine; Tina Schlemme
Subject: RE: IRUA 2nd Submittal

Good Afternoon Becca,

Before you started as Drainage Clerk, IRUA had been working with Tina, CGA and the Hardin County DD on a matter involving a handful of drainage district permits that IRUA had been working under. The situation involved IRUA completing district crossing record drawings and as-built information in-house in lieu of being obligated to employ and compensate the District's Designated Representative (CGA) to prepare the information. From January to March, IRUA made a series of submittals to the District with information that we collected completing work under our outstanding permits, with one submittal including a check for \$3,549.95. The check was submitted with the understanding that if the District Trustees approved of closing out the permits (based on the information in the IRUA submittals), that the District could cash the check and then remit payment to CGA for work that the firm completed working on IRUA's projects.

At the last meeting attended by IRUA (March 27), it was our understanding that the Trustees planned to develop a punch-list of close-out items identifying what is needed for them to approve of the work. We have not heard back from the District since that meeting, and assume that the list is still being developed.

We had hoped to have this issue settled by this point in the year. In an effort to continue to move this towards a win-win-win resolution, IRUA would like to inform the Trustees that it may proceed with cashing the \$3,549.95 check it is currently holding, and remit the balance to CGA as payment for the work invoiced to date.

We hope to be very close to an understanding with the Trustees that will allow all parties to move forward together, and that eliminating CGA's amount outstanding will bring us even closer to an amicable resolution.

Please advise of the Trustee's decision regarding development of a close-out punch-list at your earliest convenience.

I understand you are coming into this new, so feel free to contact myself, or any other party I mentioned with questions or comments.

Thank you,

Matt Mahler, P.E.

Iowa Regional Utilities Association
Office: 641-792-7011 | mmahler@irua.net
1351 Iowa Speedway Drive | Newton, IA 50208

From: Matt Mahler
Sent: Tuesday, March 26, 2019 9:19 AM
To: 'Tina Schlemme' <TSchlemme@hardincountyia.gov>
Cc: Jim LaPlant <jlplant@irua.net>; Dan McGinnis <dmcginnis@irua.net>; 'Lee Gallentine' <LGallentine@cgaconsultants.com>
Subject: RE: IRUA 2nd Submittal

Drainage District:

#22

Repair Summary:

- Per the District Trustees at the regular Drainage Meeting on January 10, 2018, severed the supplemental main tile at the location specified by the landowner (20'± south of existing intake) in the NE¼ Section 17, Township 88 North, Range 22 West.
- Removed 2' of 8" Single Wall HDPE tile (egg-shaped), covered both ends with fabric, crushed both ends, and covered them with 4 bags of concrete.
- Removed intake risers connected to said supplemental main tile in the north and south road ditches of 180th Street. Covered each intake tee with fabric and backfilled with available on-site soil.

Contractor Time and Materials (spent while CGA was on-site):

- See attached Tabulated Contractor Time and Materials (expense to be paid by Ryken Engineering and not district).

Additional Actions Recommended:

- None



Tabulated Contractor Time and Materials

Date	Totals	5/1/2019
Workman (hrs)	4.00	4
Mini Excavator (hrs)	2.00	2
Concrete Bag (ea.)	4.00	4

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

5/1/19

DAYS OF WEEK:

S | M | T | W | T | F | S

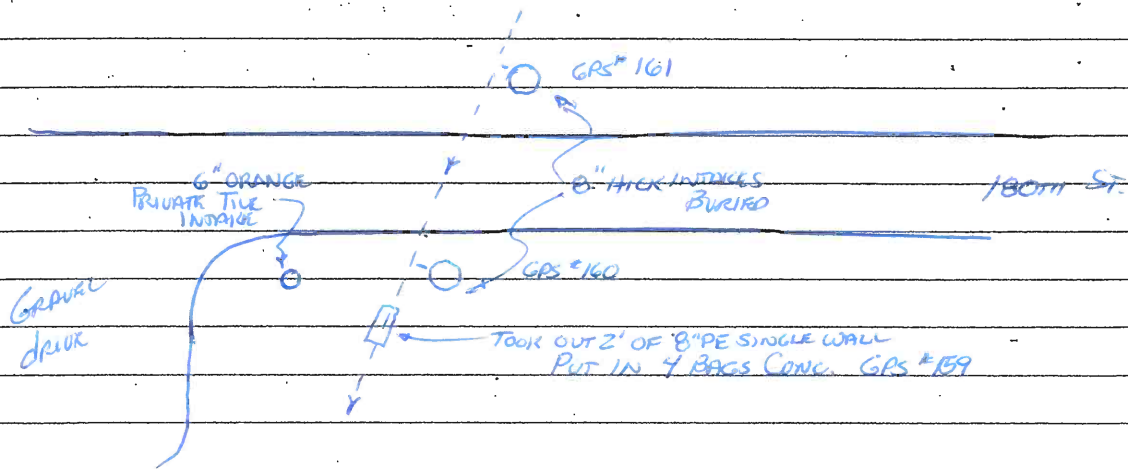
SHEET NO.

1 OF 1

PROJECT NUMBER: 6532.3
 COUNTY, ROUTE, ROAD: DD 22
 LOCATION: 180TH St.

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

Cloudy, misty RAIN, 45°, CALM, VERY MUDDY CONDITIONS
 ARRIVED @ 8" DD22 ON 180TH ST. @ 8:30, WILLIAMS CREW ON SITE 2 MEN AND MINI EXCAV. CALLED RANDY MADDEN, LAND OWNER TO SEE WHERE HE WANTS 8" DD22 EXTENSION DISCONNECTED. HE SAID 20'± SOUTH OF BIG BROKEN BULK INTAKE ON S. SIDE OF 180TH ST. EAST OF 6" INTAKE (PRIVATE)
 FOUND 8" SINGLE WALL WITH BLUE HIVE PE TILE @ GPS #159, TOOK OUT 2' OF EGGSHAPED 8" TILE AND COVERED BOTH ENDS WITH FABRIC, THEN SMASHED DOWN BOTH ENDS AND COVERED WITH 4 BAGS CONC. TILE IS VERY BRITTLE AND TILE BOTTOM WAS CRACKED, FLAT. 2" WATER IN EX NOT MOVING. TOOK RISERS OFF INTAKES 8" ON NORTH AND SOUTH SIDE OF 180TH ST. YELLED DOWN INTAKES TO MAKE SURE WE FOUND THE CORRECT TILE (BEFORE PLUGGING. SHOT INTAKES 160, 161, ~~162~~ PUT FABRIC OVER INTAKE "T" AND COVERED WITH DIRT. ~~160~~ GPS #1 (GPS MON 8016)



HOG HOUSE

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [Signature]
 Reviewed by: _____

Date Prepared: 5/1/19
 Engineer:

Date Reviewed: _____

LINED UP ON 8" INTAKES ON N+S SIDE 180TH AND FOUND TILE.



8" PE SINGLE WALL / BLUE LINE



Mix 4 BAGS CONC in Ditch WATER FOR PLOG



Looking downstream on 8th DD 22 Route



Back Filling



6532 DD22 5-1-19RB

159,3623826.350,4939357.881,1154.281,GS CONCPLUG
160,3623852.107,4939376.393,1153.576,INTK BURIED
161,3623895.745,4939396.194,1153.555,INTK BURIED
8005,3618706.090,4931325.380,1161.460,ALUM DISK CONC
8005_GNSS,3618706.090,4931325.380,1161.460,Autonomous Setup



Drainage Work Order Request For Repair Hardin County

Date: 10/29/2018

Work Order #: WO00000231

Drainage District: Drainage Districts \DD 38 (51063)

Sec-Twp-Rge: 15-89-22 Qtr Sec: NE

Location/GIS: 89-22-15-200-004

Requested By: Justin Huebner

Contact Phone: (641) 780-1423

Contact Email: _____

Landowner (if different): _____

Description:

DD 38 Lat 4 - Water standing SW of hog buildings in SE NE 15-89-22. All crops are out except 15 acres under water. Would love to have it fixed right away to finish harvesting & could have a contractor out there in 2 days. Please call when going to be out.

Repair labor, materials and equipment: _____

Repaired By: _____ Date: _____

Please reference work order # and send statement for services to:
Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

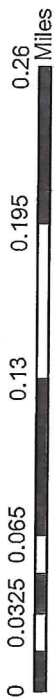
Approved: _____ Date: _____



Hardin County Auditor's Office



Date: 10/29/2018



15

The Data is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining accuracy, timeliness, merchantability and fitness for use rests solely on the requester. Hardin County makes no warranties, express or implied is to the use of the Data. There are no implied warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update. Cadastral Data represents land ownership, but does not define it. This Data does not replace a legal survey.

Drainage District:

#38 Lat 4

Repair Summary:

- Per the recommendations of the previous investigation summary:
 - Excavated Lateral 4 tile in road ditch of 120th Street and jet cleaned tile upstream to remove sand/silt. Continued jet cleaning until reaching sinkhole/blowout. Removed approximately 3 tons of sand/silt that was restricting drainage in Lateral 4 tile.
 - During initial investigation, holes were cut into existing 15-inch VCP tile to gain access. Most of these were repaired with partial 15-inch dual wall HDPE collar and engineering fabric patches. 1 required a full repair of cracked/broken 15-inch VCP tile with 15-inch dual wall HDPE, 1-inch bedding/backfill rock, and concrete collars at connections. 1 inspection hole did not require repair, as 15-inch VCP tile was originally rolled out intact. So, rolled original VCP tile back into place and wrapped joints with engineering fabric. All inspection excavations were backfilled with on-site soil.
 - Blowout/sinkhole had saturated sandy base which required installing 3-inch rock for a subbase before starting repair. Repaired tile with 15-inch dual wall HDPE, 1-inch bedding/backfill rock, and concrete collars at connections. Backfilled with on-site soil and 3 tons of sand/silt removed by jet cleaning.
- During work to the Lateral 4 tile, upstream landowner (to south) reported a wet spot on the south side of the fenceline. Located Lateral 4 tile (12-inch VCP with 1" of sand in flowline) and determined that it is approximately 50' to 75' away from wet spot. Repaired with 15-inch dual wall HDPE, 1-inch bedding/backfill rock, and wrapped joints with engineering fabric.
- After work to Lateral 4 tile, upstream landowner (to south) reported additional wet spots in field on the south side of the fenceline. Visually observed site and found that there are wet spots in field, but none of them appear to be directly over assumed Lateral 4 tile route, there are no intakes in field at issue, and fields to south which are lower and have intakes appear to be dry.

Contractor Time and Materials (spent while CGA was on-site):

See attached Tabulated Contractor Time and Materials Sheet.

Additional Actions Recommended:

The Lateral 4 tile appears to be draining at this time. If poor drainage is reported along the Lateral 4 tile route again, it may need to be excavated at intervals to verify the cause. If restricted drainage is due to plugging by sand/silt again, it is recommended to investigate replacing portions of the tile with dual wall HDPE or dual wall polypropylene wrapped in a fabric sock with rock bedding/backfill to prevent sand/silt infiltration.



Tabulated Contractor Time and Materials

Date	Totals	3/28/2019	3/29/2019	4/26/2019	4/30/2019
Workman (hrs.)	57.25	20.25	9	21	7
Mini Excavator (hrs.)	20.25	6.75	3	7	3.5
Jet Truck (hrs.)	9.75	6.75	3		
Water Tank Truck (hrs.)	9.75	6.75	3		
15" Dual Wall HDPE (ft.)	24			24	
3" Bedding Rock (loads)	1			1	
1" Bedding Rock (loads)	3			3	
Concrete Collar (ea.)	4			4	
Skid Loader (hrs.)	3.50				3.5





HARDIN COUNTY

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

HARDIN COUNTY DRAINAGE DISTRICT UTILITY PERMIT APPLICATION

Applicant: Midland Power Coop
 Company Name
1005 E. Lincoln Way
 Address
Jefferson IA 5029
 City State Zip
 Applicant Contact: Chad Reinhardt (515) 370-1485
 Name Phone
C.reinhardt@midlandpower.coop
 Email
 Utility Type: Electric

Drainage District(s) Crossed: _____

Facilities Crossed (specific tile, open ditch): open Ditch

Description of Work: Setting new poles along D25 going west
from Hwy 65 approx 1.89 miles
 (Location plan of proposed utility must be attached.)

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.

Chad Reinhardt
 Applicant Signature Date 5/9/18

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

For Office Use Only

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

Drainage District:
#64

Utility Investigation Summary:

- Utility company (Midland Power Coop) requested to place new power poles in the vicinity of the Lateral 3 and 4 tiles on the south side of County Highway D25 (just west of intersection of Hwy 65 and Hwy D25) in the NE¼ NW¼ Section 11, Township 88 North, Range 21 West.
- Utility company located/exposed the existing VCP Lateral 3 and 4 tiles and left the excavations open for CGA to survey their location.
- CGA was not on-site to observe the excavations or installation of power poles, but after power poles were installed, CGA surveyed their locations.
- Comparing the surveyed locations of the Lateral 3 and 4 tiles with the surveyed locations of the power poles, the nearest that any power pole is to Lateral 3 or 4 is approximately 35'.

Contractor Time and Materials (spent while CGA was on-site):

None recorded. All work was completed by Midland Power Coop and CGA was not on-site while work was being completed.

Additional Actions Recommended:

None.





LAT 2

US HWY 65

882-1112-00001

LAT 3

2

882-1023-000041

D.D. No. 3

LAT 4

10

882-1110-00002

LAT 5

Co Hwy D25



HARDIN COUNTY

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

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.



HARDIN COUNTY

1215 EDGINGTON AVE., SUITE 1
ELDORA, IA 50627
(541) 939-8108

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 as 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 forth-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.



HARDIN COUNTY

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

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.



HARDIN COUNTY UTILITY PERMIT APPLICATION

Permit No: _____

Underground
 Aerial

Permanent Installation
 Temporary Installation

This is a Utility Permit Application for telecommunications, electric, gas, water and sewer utilities. The applicant agrees to comply with the following permit requirements. Compliance shall be determined by the sole discretion of the County Engineer as deemed necessary to promote public health, safety, and general welfare. These requirements shall apply unless waived in writing by the County Engineer prior to installation.

APPLICANT NAME: Chad Reinholdt of Midland Power Cooperative

STREET ADDRESS: 1005 E. Lincoln Way

CITY: Jefferson STATE: IA ZIP: 50129

PHONE: 515-370-1485 FAX: CONTACT PERSON: Chad Reinholdt

TYPE OF WORK: We will be Replacing poles along D25 going West from Hwy 65 approx 1.89 Mile

1. LOCATION PLAN

An applicant shall file a completed location plan as an attachment to this Utility Permit Application. The location plan shall set forth the location of the proposed line on the secondary road system and include a description of the proposed installation.

2. WRITTEN NOTICE

At least five (5) working days prior to the proposed installation, an applicant shall file with the County Engineer a written notice stating the time, date, location, and nature of the proposed installation.

3. INSPECTION

The County Engineer may provide a full-time inspector during the installation of all lines to ensure compliance with this Utility Permit. The inspector shall have the right, during reasonable hours and after showing proper identification, to enter any installation site in the discharge of the inspector's official duties, and to make any inspection or test that is reasonably necessary to protect the public health, safety, and welfare.

4. INSPECTION FEES

The applicant shall pay actual costs directly attributable to the installation inspection conducted by the County Engineer. Within thirty (30) days after completion of the installation, the County Engineer shall submit a statement for inspection services rendered. The applicant agrees to reimburse the county within thirty (30) days of billing.

5. REQUIREMENTS

The installation inspector shall assure that the following requirements have been met:

- A. Construction signing shall comply with the Manual on Uniform Traffic Control Devices
B. Depth -- (Add additional depth if ditch has silted to the thickness of the deposited silt.) The minimum depth of cover shall be as follows:
Telecommunications.... 36" Electric.....48"
Gas.....48" Water.....60"
Sewer.....60"
C. Minimum roadway overhead clearance for utility lines shall be 20 feet.
D. The applicant shall use reference markers in the right-of-way (ROW) boundary to locate line and changes in alignment as required by the County Engineer. A permanent warning tape shall be placed one (1) foot above all underground utility lines.
E. All tie line locations shall be marked with references located in the ROW line.
F. No underground utility lines shall cross over a crossroad drainage structure without approval from the County Engineer.
G. Residents along the utility route shall have uninterrupted access to the public roads. An all weather access shall be maintained for residents adjacent to the project.
H. After construction, granular surfacing shall be added to the road by the applicant to restore the road to its original condition. After surfacing has been applied, the road surface shall be reviewed by the County Engineer once the road has been saturated, to determine if additional surfacing on the roadway by the applicant is necessary.
I. All damaged areas within the ROW shall be repaired and restored to at least their former condition by the applicant or the cost of any repair work caused to be performed by the county will be assessed against the applicant.
J. Areas disturbed during construction which present an erosion problem shall be solved by the applicant in a manner approved by the County Engineer.
K. All trenches, excavations, and utilities that are knifed shall be properly tamped.
L. All utilities shall be located between the bottom of the backslope and the bottom of the foreslope, unless otherwise approved in writing by the County Engineer prior to installation.
M. Road crossing shall be bored. The depth below the road surface shall match the minimum depth of cover for the respective utility.

6. NON-CONFORMING WORK

The County Engineer may halt the installation at any time if the applicant's work does not meet the requirements set forth in this Utility Permit Application.

7. COUNTY INFRACTION

Violation of this permit is a county infraction under Iowa Code Section 331.307, punishable by a civil penalty of \$100 for each violation. Each day that a violation occurs or is permitted to exist by the applicant constitutes a separate offense.

8. HOLD HARMLESS

The utility company shall save this county harmless of any damages resulting from the applicant's operations. A copy of a certificate of insurance naming this county as an additional insured for the permit work shall be filed in the County Engineer's Office prior to installation. The minimum limits of liability under the insurance policy shall be \$1,000,000.

9. PERMIT REQUIRED

No applicant shall install any lines unless such applicant has obtained a Utility Permit from the County Engineer and has agreed in writing that said installation will comply with all ordinances and requirements of the county for such work. Applicants agree to hold the county free from liability for all damage to applicant's property which occurs proximately as a result of the applicant's failure to comply with said ordinances or requirements.

10. RELOCATION

The applicant shall, at any time subsequent to installation of utility lines, at the applicant's own expense, relocate or remove such lines as may become necessary to conform to new grades, alignment or widening of ROW resulting from maintenance or construction operations for highway improvements.

DATE: 4/16/2018 COMPANY: Midland Power Cooperative
SIGNATURE: *Chad Reinholdt*

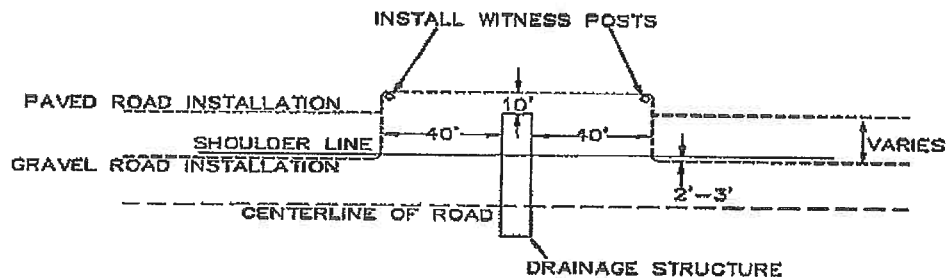
RECOMMENDED FOR APPROVAL:

DATE: _____ COUNTY ENGINEER _____

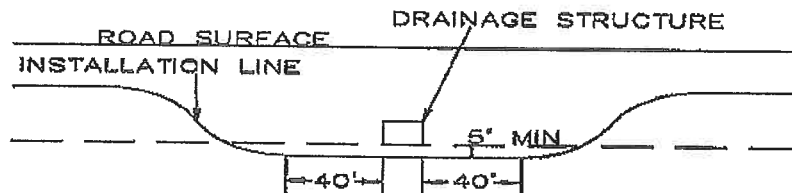
APPROVAL:

DATE: _____ CHAIRMAN, BOARD OF SUPERVISORS _____

NON-BORED INSTALLATION DETAIL



BORED INSTALLATION DETAIL



IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

Name: Midland Line Rebar
 Location: Line 1250 Rebar
 Address: HWY D25
 Phone: _____

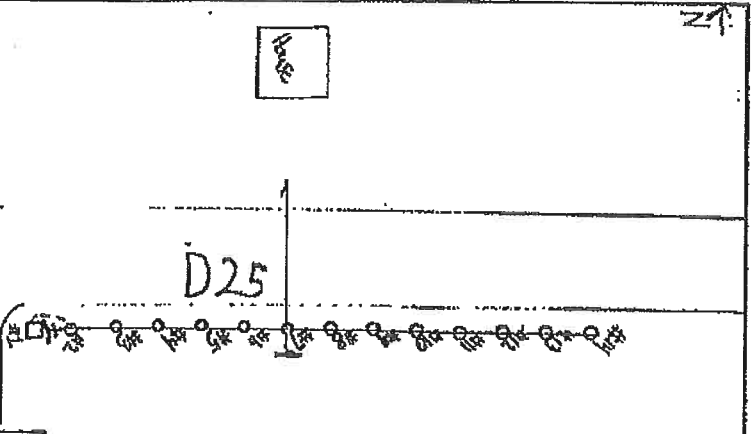
Sub: 50
 Feeder: ABC
 Phase: _____
 Line Sec: _____

County: Hardin
 Township: Elvis
 School Dist: _____

WORK ORDER NO. 12622
 74029 300
 Stated By: CR Date: _____
 Sheet No. 1 of 5
 Computed By: _____ Date: _____

SKETCH OF WORK: Map Reference 74 Twp. 88N R. 21W Sec. 910 Wire _____ Size _____ Kind _____

Pole No.	Pole Ht. & C	Pole Ht. Unit	Line Angle	Trans. "g"	Ground "142" Qm	Qty	Lead	Anchor "4"	SECONDARY		Misc. & Remarks	Unit	No.
									Unit	Backl Span			
#1	225'	35-3	CLM	5.1	5.1	3						H5.1	7
#2	225'	35-3	CLM	5.1	5.1	3						H1.1	5
#3	225'	35-3	CLM	5.1	5.1	3						H0.3	1
#4	225'	35-3	CLM	5.1	5.1	3						H1.1	12
#5	225'	35-3	CLM	5.1	5.1	3						H1.1	1
#6	225'	35-3	CLM	5.1	5.1	3						H1.2	1
#7	225'	35-3	CLM	5.1	5.1	3						H2.3	1
#8	225'	35-3	CLM	5.1	5.1	3							
#9	225'	35-3	CLM	5.1	5.1	3							
#10	225'	35-3	CLM	5.1	5.1	3							
#11	225'	35-3	CLM	5.1	5.1	3							
#12	225'	35-3	CLM	5.1	5.1	3							
#13	225'	35-3	CLM	5.1	5.1	3							
#14	225'	35-3	CLM	5.1	5.1	3							



JOB BRIEFING

Neutral Voltage _____
 Fault Current Available _____
 Hazardous Induced Volt _____
 Resistance Protective Grids _____
 Equipment Grounds _____
 2016 Condition _____
 Environmental Condition _____

Use of Line Protective Device _____
 Other Utilities in Area _____
 Personal Protective Equip _____
 Traffic Control _____
 Job Procedure _____
 Individual Job Duties _____
 Other Hazards _____

Crew Inhibit 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____

CONSTRUCTION

Conductor	Pole Sec	Q.H.	URD	Pole Line Ft.	No. of Wires	Total Feet
10 AWG	X	X		2689	2	5539
TOTALS	X	X				

RETIREMENT

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

500 BH 9-00

IOWA 93 MIDLAND POWER COOPERATIVE

STAKING SHEET

Name: Midland Line Repair
 Location #: Line 1250 Repair
 Address: Hwy D25
 Phone #: 515-370-1485-Cool

Sub: 50
 Feeder: ABC
 Phase: ABC
 Line Sec: _____

County: Wadena
 Township: Ellis
 School Dist.: _____

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

WORK ORDER NO. 12620
 7400# 300
 Scaled By: CR Date: _____
 Sheet No. 2 of 5
 Compiled By: _____ Date: _____

SKETCH OF WORK

Map Reference: 74

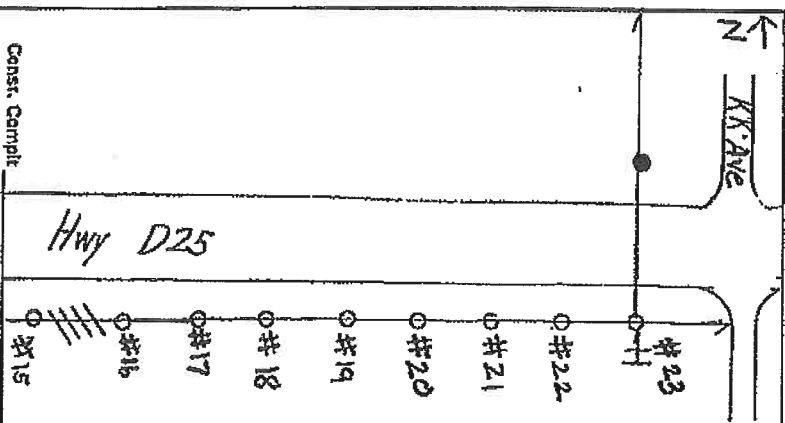
Twp. 88N R 21W

Sec. 9, 10

Wire 4

Size 1/0

Kind ACSR



Pole No.	Ph. (Base) Span.	Poles H & C		Ph. Unit	Line Angle	Trans. "G"	Ground		GLY		Anchor No. Jork	SECONDARY		Misc. & Remarks	Unit	No. CONSTR. RET.
		Misc.	Misc.				M2	Ohm	No.	Unit		Lead	Unit			
#15	225'	35-3		C111		5.1										
#16	225'	35-3		C111		5.1										
#17	225'	35-3		C111		1.1			3	PL1						
#18	225'	35-3		C111		5.1										
#19	225'	35-3		C111		5.1										
#20	225'	35-3		C111		1.1			3	PL1						
#21	225'	35-3		C111		5.1										
#22	225'	35-3		C111		5.1										
#23	225'	40-3		C111		1.1			2	PL1						

JOB BRIEFING	
Non-poll Vegetation	_____
Fault Current Available	_____
Handedness of Poles	_____
Grounding System	_____
Equipment Grounding	_____
Soil Conditions	_____
Environmental Conditions	_____
Constr. Complete	_____
Retire. Complete	_____
Material Ticket Complete	_____

CONSTRUCTION			
Conductor	Ph. Sec.	D.H. U/RD	Pole Line Ft.
1/0 ACSR	X		1023
			2
			4167
TOTALS			

RETIREMENT			
Conductor	Ph. Sec.	D.H. U/RD	Pole Line Ft.
TOTALS			

500 BH 9-00

IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

Name: Midland Line Repair Sub: 12
 Location #: Line 1250 Repair Feeder: 50
 Address: Hwy D25 Press: ABC
 Phone#: 515-320-1485-Cord Line Sec: _____

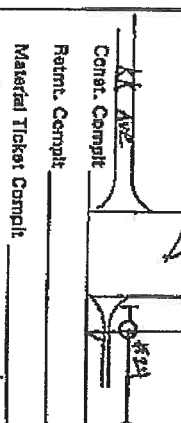
County: Hood
 Township: Ellis
 School Dist: _____

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

WORK ORDER NO. 12620 740# 300
 Scaled By: CR Date: _____
 Sheet No. 3 of 5
 Compiled By: _____ Date: _____

SKETCH OF WORK Map Reference 74 Twp. 88N R. 2W Sec. 9, 10 Wire 4 Size 1/0 Kind ACSR

Pole No.	Pole (Branch) Spans	Poles H & C		Line Angle	Trans. S	Ground	GUY		Anchor	SECONDARY		Misc. & Remarks	Unit	No.
		Misc.	Pr. Unit				Unit	Lead		Unit (Bar)	Size			
#34	67'	40-3	C111		1.1	1.1	3	1.1	1.12				P1.1	9
#33		35-3	C111		5.1								FL12	1
#32		35-3	C111		5.1								H5.1	2
#27		35-3	C111		5.1								H1.1	3
#28		35-3	C111		1.1		3	P1.1					C111	11
#29		35-3	C111		5.1								A5.1	1
#30		40-3	C111		5.1								40-3	3
#31		40-3	C111		5.1								35-3	8
#32		35-3	C111		1.1		3	P1.1						
#33		35-3	C111		5.1									
#34		35-3	C111		5.1									



JOB BRIEFING

<input type="checkbox"/> Nominal Voltage	<input type="checkbox"/> Lot of Line Protective Dev
<input type="checkbox"/> Fault Current Available	<input type="checkbox"/> Other Utilities in Area
<input type="checkbox"/> Hazardous Induced Volt	<input type="checkbox"/> Personal Protective Equip
<input type="checkbox"/> Prescribed Protective Voids	<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	Pole	Sec.	Q.H.	U.M.D.	Pole Line	No. of	Total Feet
					Fe.	Wires	
10/45	X				2337	4	9629
TOTALS	X	X	X	X			

RETIREMENT

Conductor	Pole	Sec.	Q.H.	U.M.D.	Pole Line	No. of	Total Feet
					Fe.	Wires	
TOTALS	X	X	X	X			

500 B19 9-00

IOWA 93 MIDLAND POWER COOPERATIVE STAKING SHEET

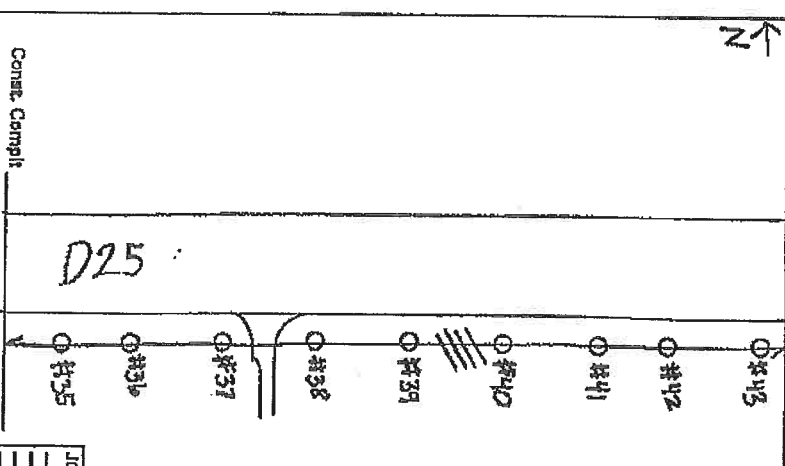
Name: Midland Line Repair
 Location #: Line 1250 Repair
 Address: Hwy D25
 Phone #: 515-370-1485-Cred

County: Madison
 Township: Ellis
 School Dist: _____

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

WORK ORDER NO. 12620
 74001 300
 Staked By: CR Date: _____
 Street No. 4 of 5
 Compiled By: _____ Date: _____

SKETCH OF WORK Map Reference 74 Twp. 88N R. 21W Sec. 9, 10 Wire 4 Size 1/0 Kind ACSR



Pole No.	Pole H & C	Pri. Unit	Line Angle	Tension	Ground	Qty	Anchor	SECONDARY		Misc. & Remarks	No.	
								Unit (ft)	Spn		CONSTR.	RET.
#35	227'	35-3	C111	5.1								
#36	227'	35-3	C111	5.1	3 P.I.							
#37	227'	40-3	C111	5.1								
#38	227'	40-3	C111	5.1								
#39	227'	35-3	C111	5.1								
#40	227'	35-3	C111	1.1	3 P.I.							
#41	227'	35-3	C111	5.1								
#42	227'	35-3	C111	5.1								
#43	227'	35-3	C111	5.1								

JOB BRIEFING

Nonfatal Voltage	Loa of Line Prevs Dvc
Fault Current Available	Other Utilities in Area
Hazardous Induced Voltg	Personal Protective Equip
Presence Prevs Voltage	Traffic Control
Equipment Prevs Grounds	Job Procedures
Pole Condition	Individual Job Duties
Environmental Condition	Other Hazards

Crew Initials 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____

CONSTRUCTION

Conductor Pk. Sec.	Ch. I. UNCD	Pole Line Pt.	No. of Wires	Total Feet
1/0 ACSR	X	2043	4	8418
TOTALS	X			

RETIREMENT

Conductor Pk. Sec.	Ch. I. UNCD	Pole Line Pt.	No. of Wires	Total Feet
TOTALS				

Const. Complt _____
 Retrn. Complt _____
 Material Tickets Complt _____
 500 BH 9-00

**IOWA 93 MIDLAND POWER COOPERATIVE
STAKING SHEET**

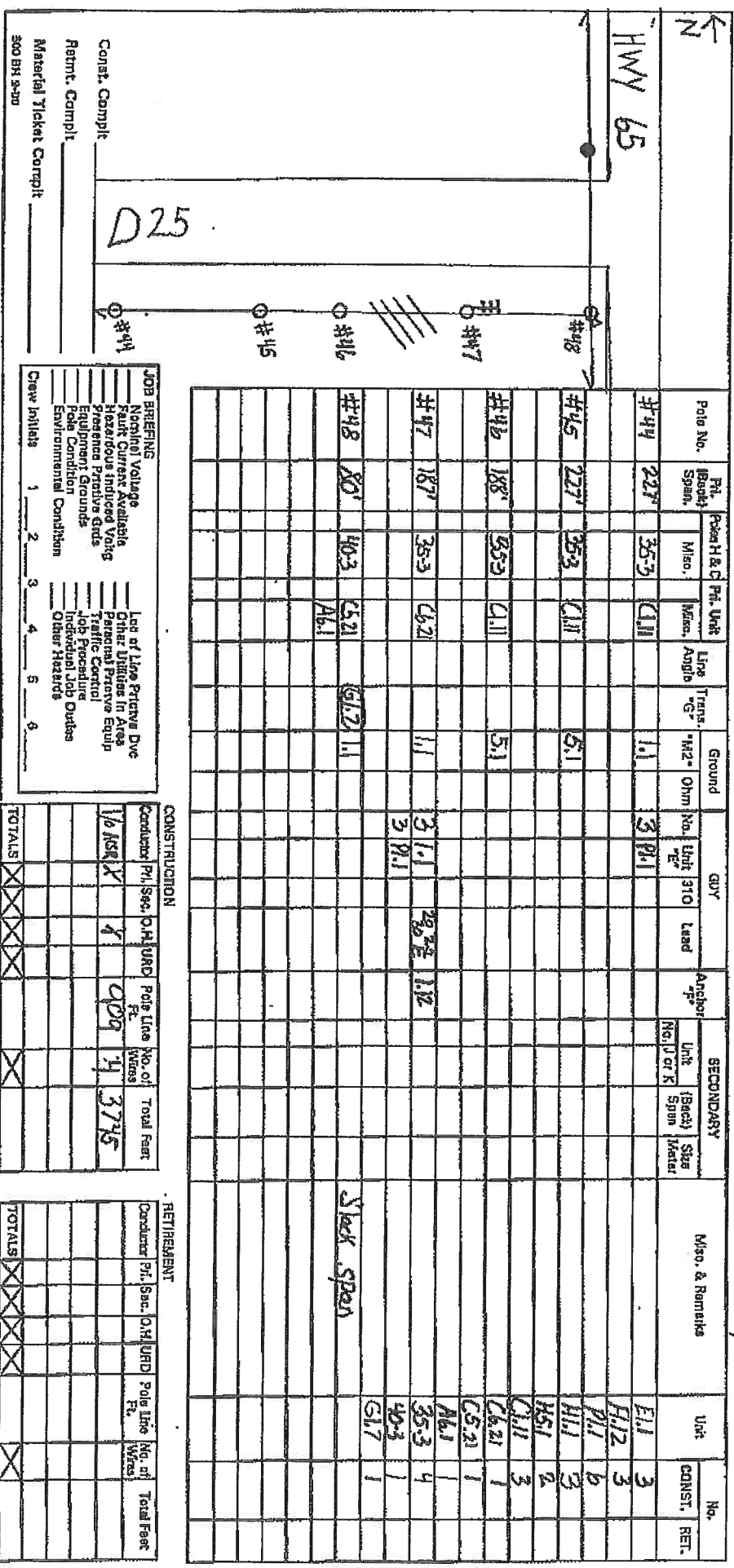
Name Midland Line Repair Sub 12
 Location # Line 1250 Repair Feeder 50
 Address Hwy D25 Phase ABC
 Phone # 515-370-1485-Cell Line Sec. _____

County Hardin
 Township Ellis
 School Dist. _____

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

WORK ORDER NO. 12620
 7400# 300
 Stated By CR Date _____
 Sheet No. 5 of 5
 Compiled By _____ Date _____

SKETCH OF WORK Map Reference 74 Twp. 88N R. 2W Sec. 9, 10 Wire 4 Size 1/0 Kind ACSR



Pole No.	Pole Span	Pole H & C		Line Angle	Trans. °	Ground		GUY	Lead	Anchor	SECONDARY		Misc. & Remarks	Unit	No.
		Misc.	Pr. Unit			Misc.	Unit				Back Span	Size			
#44	227'	35-3	C11		1.1		3 PL.1							E11	3
#45	227'	35-3	C11		5.1									H12	3
#46	188'	35-3	C11		5.1									P11	3
#47	187'	35-3	C6.2		1.1		3 PL.1							H11	3
#48	20'	40-3	C5.2		61.2									A6.1	1
			A6.1											C5.2	1
														C6.2	1
														A6.1	1
														C5.3	4
														40-3	1
														G17	1
Stack spans															

JOB BRIEFING

Noopline Voltage	1
Fault Current Available	2
Hazardous Induced Volts	3
Presence Praline Gids	4
Equipment Grounds	5
Peak Condition	6
Environmental Condition	6

Let at Line Protective Dve
 Other Utilities in Area
 Parcel Private Equip
 Traffic Control
 Job Proceedure
 Individual Job Duties
 Other Hazards

CONSTRUCTION

Conductor	Pole	Spec.	O.H.	Used	Pole Line	No. of	Total Feet
1/0 ACSR	X		4		400	4	3745
TOTALS							

RETIREMENT

Conductor	Pole	Spec.	O.H.	Used	Pole Line	No. of	Total Feet
TOTALS							

Const. Complt _____
 Remt. Complt _____
 Material Ticket Complt _____
 500 BR 5-20

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

4/12/19

DAYS OF WEEK:

S | M | T | W | T | **F** | S

PROJECT NUMBER:

6831.1

COUNTY, ROUTE, ROAD:

D25

SHEET NO.

OF

LOCATION:

W. OF Hwy 65

DD 64, LAT 3+4

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

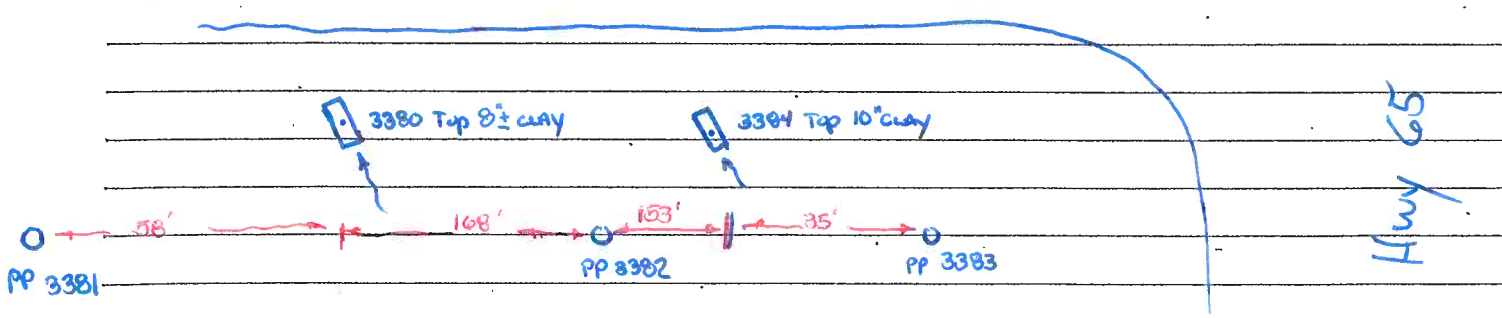
Cloudy, 34°, Windy 30mph.

SET \downarrow ON 34 ✓ OK, DRAIN TO D25 AND LAT 3+4 OF DD 64

FOUND NEW PPS SET AND TILE POT HOLES EXPOSED, SHOT TIPS OF CLAY TILES LOOKS LIKE 8"-10" CLAY TILE RUNNING TO NW ON BOTH HOLES. SHOT POWER Poles WITH 1' OFFSET TO NORTH. POWER Poles HAVE LOTS OF CLEARANCE (E-W) TO MISS TILE.



D25



I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: *[Signature]*

Date Prepared: 4/12/19

Reviewed by: _____

Engineer

Date Reviewed: _____

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 6/12/18

PROJECT NUMBER: 6831-
COUNTY, ROUTE, ROAD: DD 64, LAT 3+4
LOCATION: Cathy D25

DAYS OF WEEK:

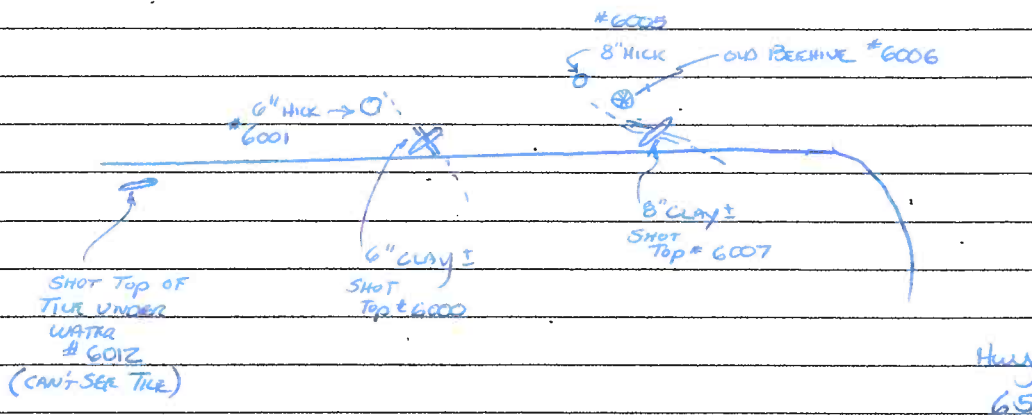
S	M	T	W	T	F	S
---	---	----------	---	---	---	---

SHEET NO. 1 OF 1

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION Cloudy, 70°, calm RAIN ON SAT. 6/9

DRIVE TO KK AVE IN DISTRICT #3, SET X ON #34, SHOT 3 POT HOLES WITH TILE EXPOSED. COULD NOT SEE TILE ON MOST WESTERLY HOLE BECAUSE OF WATER USED TOP # 6490 DD3, BUT RENAMED "6831 DD64"

D 25



LOOKS LIKE THEY WOULD BE PUTTING IN NEW POWER PIPES

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [Signature]

Date Prepared: _____

Reviewed by: _____

Engineer

Date Reviewed: _____

BOST WASTEWATER POT HOLE # 0012



LOOKING EAST FROM WEST PORTHOLE



6831 DD64 6-13-18RB

6000,3628968.276,4985009.230,1139.577, TOP CLAYTILE6"
6001,3628978.806,4984989.073,1140.492,HICK INTK6"
6002,3628970.214,4985006.447,1142.014,GS TILELOCATE
6003,3628966.689,4985011.746,1142.787,GS TILELOCATE
6004,3628968.890,4985008.672,1142.216,GS TILELOCATE
6005,3628983.380,4985320.334,1140.359,HICK INTK 8"
6006,3628973.537,4985329.827,1138.743,FL BEEHIVEINTK
6007,3628968.115,4985330.470,1139.069, TOP CLAY8"TILE
6008,3628970.044,4985329.431,1141.870,GS TILELOCATE
6009,3628965.642,4985331.803,1143.246,GS TILELOCATE
6010,3629003.115,4985323.221,1147.807,EOA
6011,3629025.260,4985322.934,1147.756,EOA
6012,3628960.537,4984643.862,1141.378, TOP TILE?
6013,3628959.467,4984643.420,1146.742,GS



Drainage Work Order Request For Repair Hardin County

Date: 4/17/2019

Work Order #: WO00000246

Drainage District: DDs\DD 78 (51107)

Sec-Twp-Rge: 35-88-20 Qtr Sec: NE SW

Location/GIS: 88-20-35-300-002

Requested By: Richard Gehrke

Contact Phone: (641) 373-0015

Contact Email: 641-640-5487 Craig Stowe (tenant)

Landowner (if different): _____

Description:

DD 78 Ponding problems at center of section. Worse since repaired tile to the North.

Repair labor, materials and equipment: _____

Repaired By: _____ Date: _____

Please reference work order # and send statement for services to:
Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

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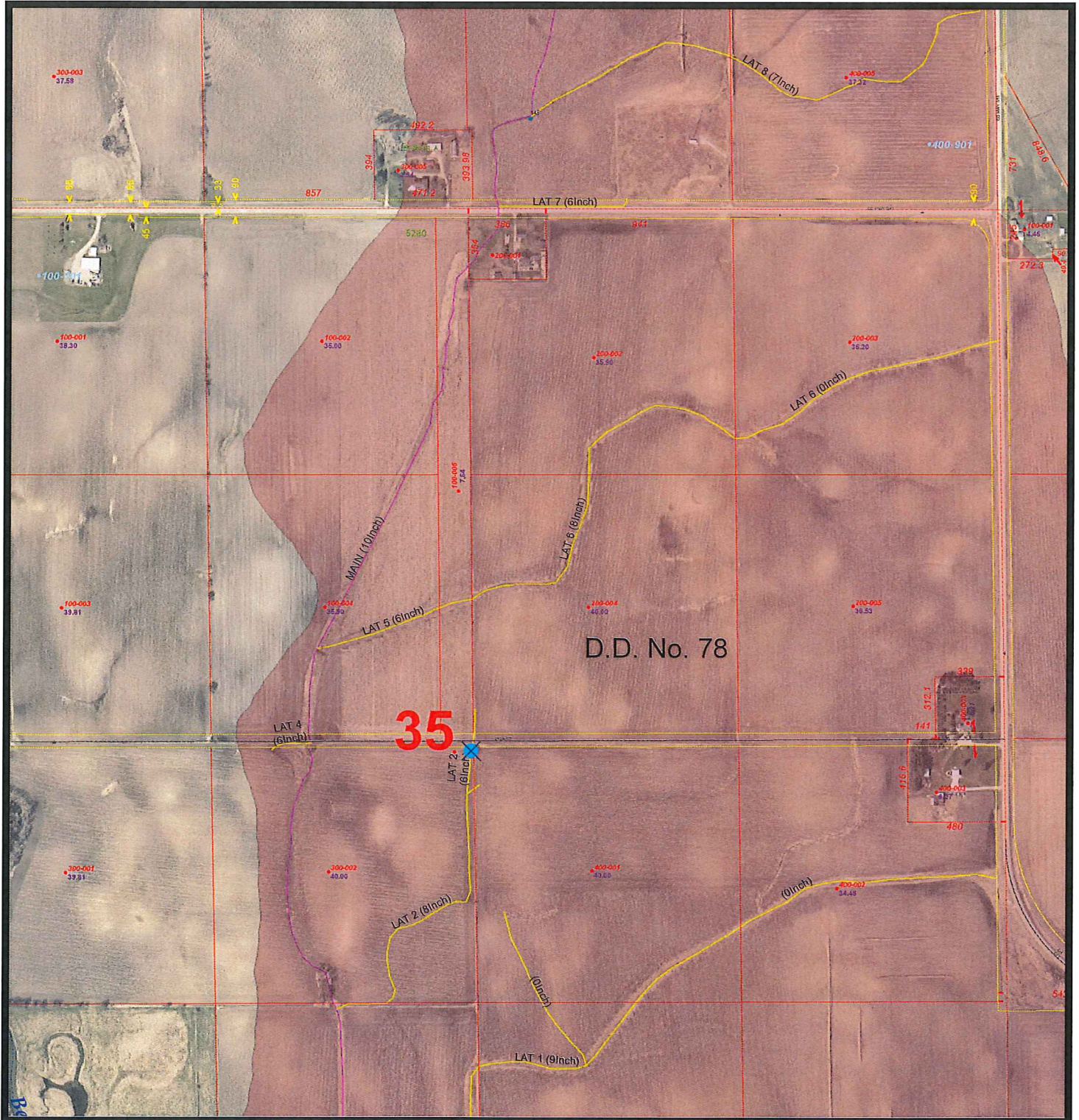
Approved: _____ Date: _____



Hardin County Auditor's Office



Date: 4/17/2019



The Data is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining accuracy, completeness, timeliness, merchantability and fitness for or the appropriateness for use rests solely on the requester. Hardin County makes no warranties, express or implied is to the use of the Data. There are no implied warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update. Cadastral Data represents land ownership, but does not define it. This Data does not replace a legal survey.

Drainage District:

#78

Investigation Summary:

- Landowner reported ponding surface water in the NE¼ SW¼ Section 35 Township 88 North, Range 20 West.
- Visual observation found tile water at surface above the assumed Main tile route between the S½ and N½ of Section 35 near the assumed junction with Lateral 4 tile. In the same area, mulberry trees and woody vegetation were found growing.
- Visual observation farther east also found two wet areas with standing water above the assumed Lateral 2 tile route.

Contractor Time and Materials (spent while CGA was on-site):

None recorded as only visual observation was performed.

Additional Actions Recommended:

- Remove mulberry trees and woody vegetation and verify the condition/capacity of the Main tile. If Main tile is found to be restricted with tree roots, remove them and repair the Main tile as needed.
- Since no sinkholes were obvious on the Lateral 2 tile, excavate it at regular intervals to see if any differential flow may be found as an indication of possible restrictions.
- Total estimated cost of these repairs and investigation are anticipated to be \$7,000 to 12,000 depending on the extent of repairs that need to be conducted on the Main tile.



CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

4/29/19

DAYS OF WEEK:

S M T W T F S

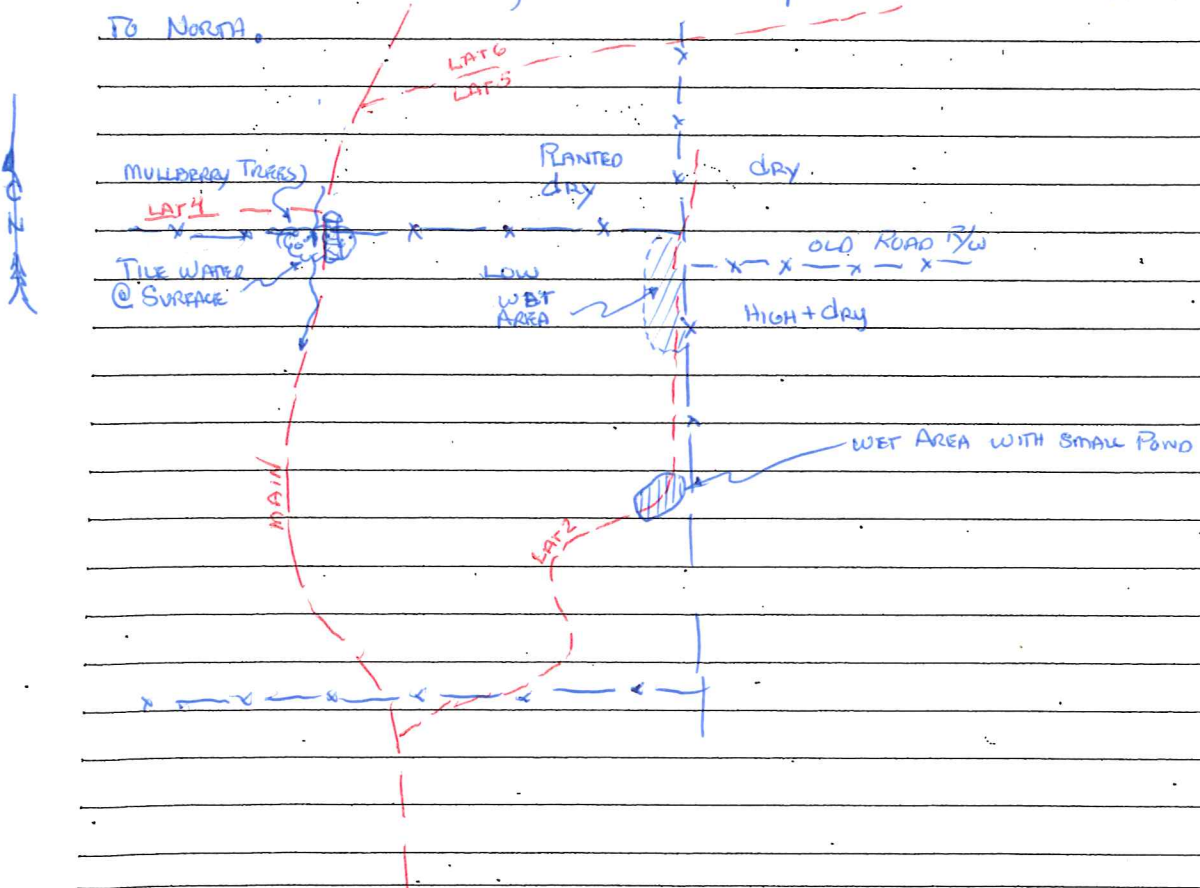
SHEET NO.

1 OF 1

PROJECT NUMBER: 66088.3
 COUNTY, ROUTE, ROAD: DD78
 LOCATION: Sec. 35, NE 1/4, SW 1/4

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

Cloudy, 50°, Muddy Conditions, Rain Sat, Sun, 3/4"
 Drove in from D41 Curve, down Lat 1 Swale to Main @ Lat 2.
 Pile of trees from last repair on main, looks good. Drove Lat 2 route from main to center of Sec. 35. Found wet area where Lat 2 turn and G's North Alomic Fence (N-S) to center. Also found wet area @ SW 1/4 of 4 way intersection of fences @ center. Drove north to Lat 6 then west to main, then S. along main to Lat 4 @ 1/4 line (E-W) water running on top of ground here @ old road (E-W) current with mulberry trees on S. side of fence. Main has a problem @ Lat 4, but Lat 2 is slow draining, could do inspection from wet area @ curve by fence to north.



I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [Signature]

Date Prepared: 4/29/19

Reviewed by: _____

Engineer

Date Reviewed _____

MAIN @ .040 Co. ROAD R/W



TILE WATER FLOWING ABOVE GROUND @ LAT 4 AREA ON MAIN



Camp Remnants From Abandoned Co. Road. TREES ON MAIN ROUTE



LOOKING UPSTREAM @ MAIN ON OLD ROAD R/W



LOOKING DOWNSTREAM ON MAIN @ OLD ROAD R/W



LOOKING EAST @ CENTER OF SECTION



Drainage District:

86

Investigation Report:

- Friend of Monarch pond landowner reported erosion around Monarch pond outlet structure and siltation from adjoining properties located in NW¼ of Section 24, Township 89 North, Range 21 West.
- Met with friend, visually observed Monarch pond area, and found the following:
 - Erosion of Monarch pond outlet/district tile inlet appears to be solely affecting decorative field stone in area and does not appear to be endangering district facility.
 - Sand washing onto Monarch pond property is from surface water south of railroad tracks and from field to the west (both are within district boundaries).
- Visually searched area along Main tile route downstream (to end of mapped Main tile) and upstream (to Dago Lake) and found the following trees to be within approximately 50' of assumed Main tile route.
 - 20 - Maples (less than 6"Ø)
 - 1 - Maple (5'Ø or larger)
 - 40 - Box Elders and Mulberries (less than 12"Ø) in Railroad Right of way
 - 3 - Cottonwood (30"Ø or larger)
 - 1 - Elm (12"Ø)
 - 5 - Elms and Ash (less than 12"Ø)
 - 14 - Box Elders and Honeysuckle Brush (less than 15"Ø)
 - 31 - Box Elders (20"Ø)
 - 15 - Box Elders and Elderberry Brush (less than 6"Ø)
 - 24 - Box Elders and Ash (20"Ø)
 - 50 - Box Elders and Ash (less than 15"Ø)

Said trees appear to be impeding drainage as there are intakes downstream of Georgetown Road that are full of stagnant water and surrounded by siltation (evidence of overflow).

Contractor Time and Materials (spent while CGA was on-site):

None as only investigation was performed

Additional Actions Recommended:

All the trees listed above are the species that typically have major negative impacts on the capacity of district tile. It is CGA's opinion that they already have restricted the drainage the Main Tile and will fully plug it if allowed to continue to grow. Therefore, it is our recommendation that the Main tile route be verified, all trees within 50' of the Main tile downstream of Dago Lake be removed, and the drainage capacity of the Main tile reinstated. It is our opinion that the cost of verifying the Main tile route and removing these trees would be between \$25,000-\$40,000. This cost is low enough that neither a hearing nor an engineer's report would not be required. However, the extent of restriction in the Main tile and appropriate corrective actions cannot be identified until the trees are removed. Therefore, an opinion of probable construction cost cannot be generated for this portion of the recommended work.

Also based on the above, the siltation of concern is carried by surface water between private landowners and is not a district issue.





Drainage Work Order Request For Repair

Hardin County

Date: 4/29/2019

Work Order #: WO00000252

Drainage District: DDs\DD 86 (51114)

Sec-Twp-Rge: _____ Qtr Sec: _____

Location/GIS: _____

Requested By: Aaron Matthews

Contact Phone: _____

Contact Email: _____

Landowner (if different): _____

Description: DD 86 - Outlet structure on Matthews property is becoming washed out with ponding problems

Repair labor, materials and equipment: _____

Repaired By: _____ Date: _____

Please reference work order # and send statement for services to:
Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

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Approved: _____ Date: _____

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

DAYS OF WEEK:

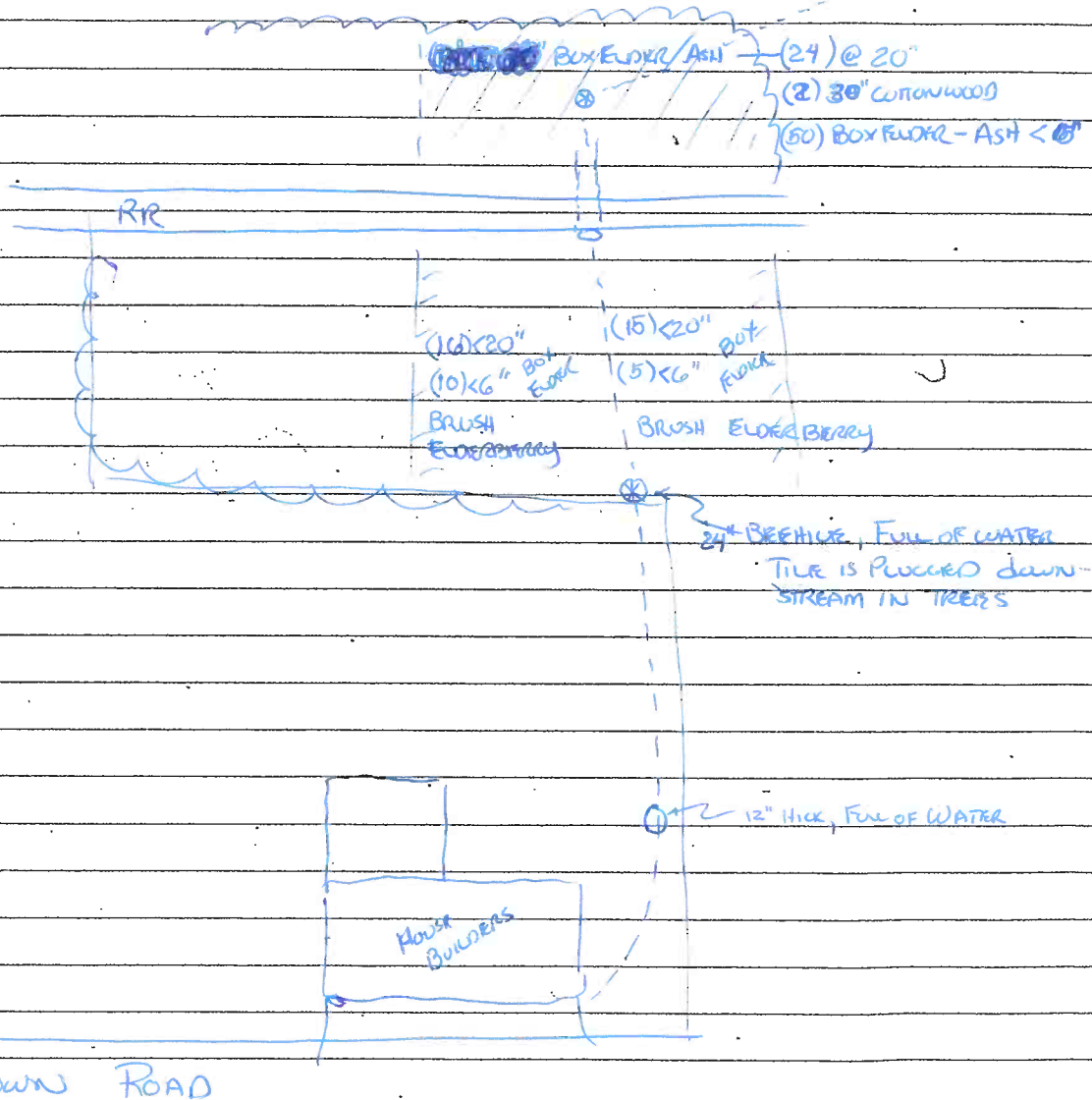
S M T W T F S

SHEET NO.

2 OF 2

PROJECT NUMBER: 67893
 COUNTY, ROUTE, ROAD: DD 86
 LOCATION: _____

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION



I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: [Signature]

Date Prepared: 4/25/19

Reviewed by: _____

Engineer

Date Reviewed: _____

DAGO LAKE INLET (DD86 OLD MAIN) (14) 15" BOX ELDER AND HONEYSUCKEE BRUSH NEEDS REMOVED



LOOKING WEST FROM MONARCH TO DAGO LAKE



Looking East @ Monarch Lake Tye Route (5) Trees Need Removed (Not Cedar Trees)



INTAKE ON TILE @ E. END OF MONARCH LAKE



LOOKING W. FROM INTAKE



SURFACE DRAINAGE From S. RR @ MONARCH LAKE



LOOKING E. ON N. R/W RR @ S. EDGE MONARCH PROP.



LOOKING UPSTREAM FROM GEORGETOWN ROAD



TILE ROUTE 1

Looking upstream From S. side RR To Georgetown Road



Looking downstream @ RR mainline, surface TurbE drains into DD86 tile



Looking upstream @ Tile Route towards Georgetown, Bee Hive is @ Tile Turn to East



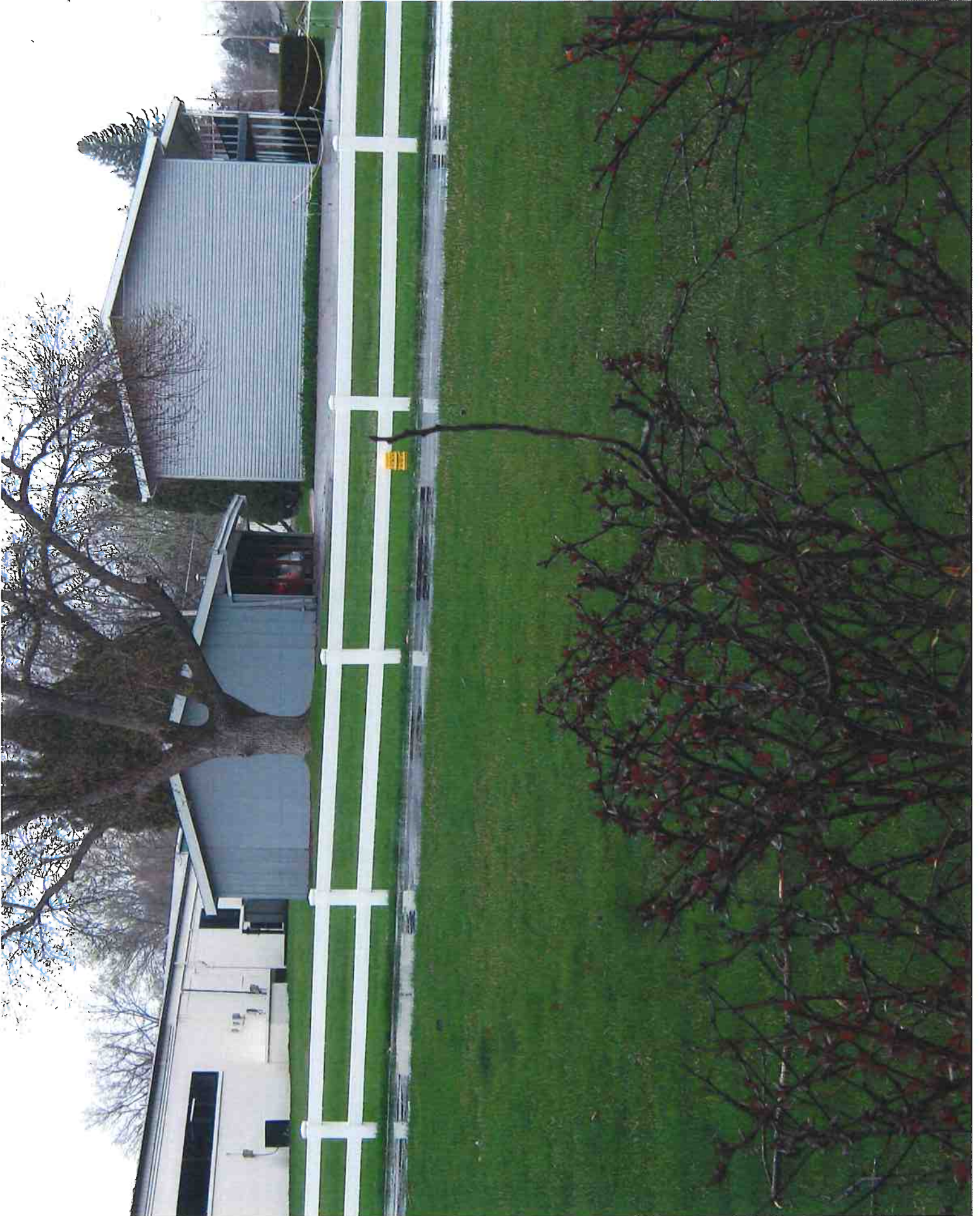
LOOKING EASTERLY FROM BEEHIVE TO OUTLET IN CITY STORM SEWER



City Storm Sewer Outlet



LOOKING UPSTREAM FROM CITY STORM SEWER OUTLET



BEEHIVE INTAKE IS IN TREES SOMEWHERE 90+ TREES IN THE R/W N. OF RR



LOOKING DOWNSTREAM FROM TREES

TILE ROUTE



Looking upstream From where surface water dumps into TIE (I'm standing on it)



Looking upstream towards Georgetown Rd.



Looking downstream From S R/w Spur RR



TILE ROUTE MARKED WITH BROKEN TILE



TILE ROUTE WITH CHARDS IN TREE ROOTS



TILE CHARDS THRU ELDERBERRY BRUSH



TILE REPAIR PIECES DISCARDED



BEEHIVE OVERFLOWING @ NE COR OF GEORGETOWN ADD.



TILE HAS BEEN PARTIALLY PLUGGED FOR SOME TIME
LOOKING DOWN STREAM, NOTE ALL SEDIMENT SAND BLOWN OUT OF INTAKE



LOOKING @ NEW TILE UPSTREAM TOWARDS GEORGETOWN RD.



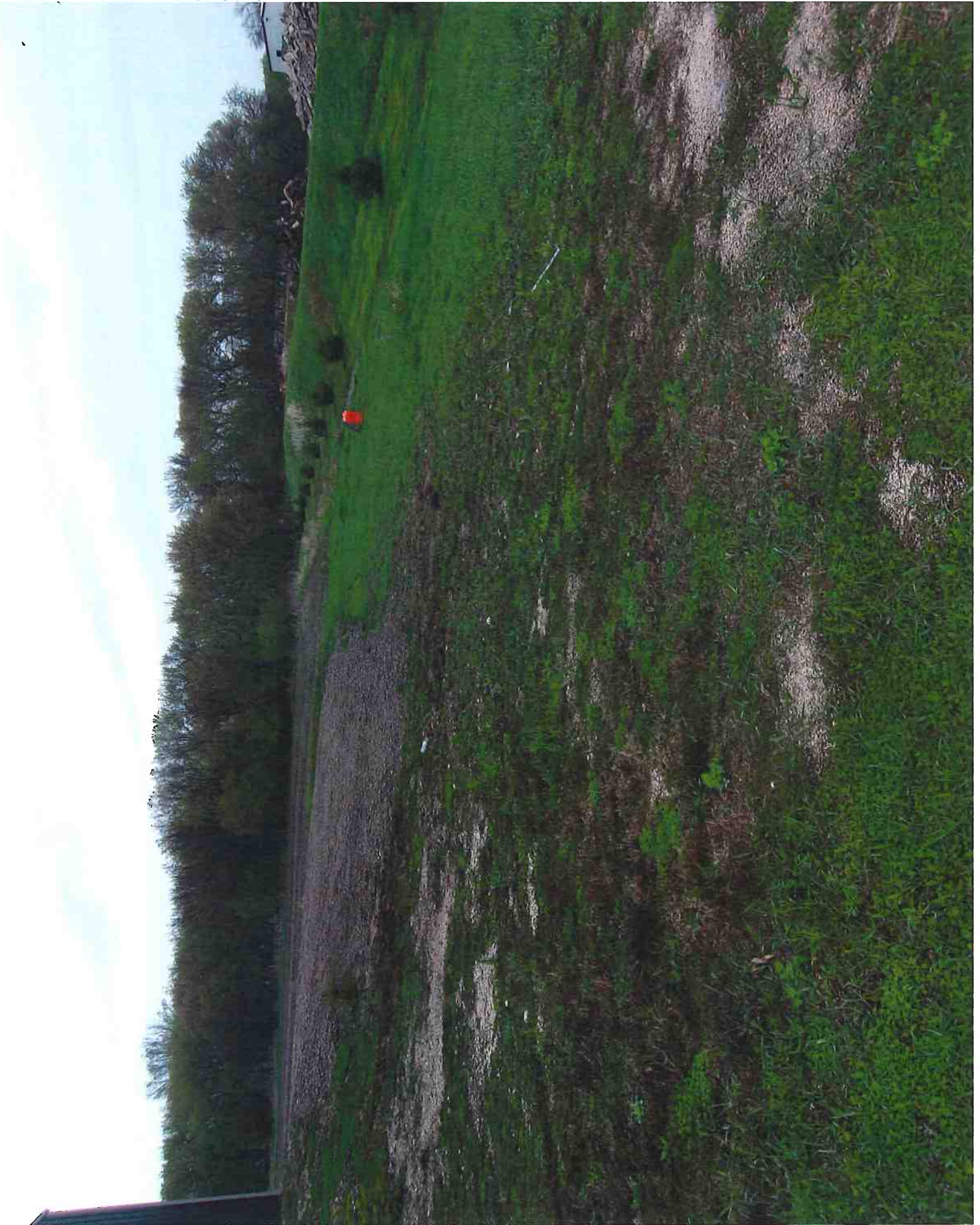
Looking downstream @ NE cor. of Georgetown AOD.



12" HICK INTAKE FULL OF WATER, SWIRLING



Looking downstream From SE Cor Georgetown AOD.



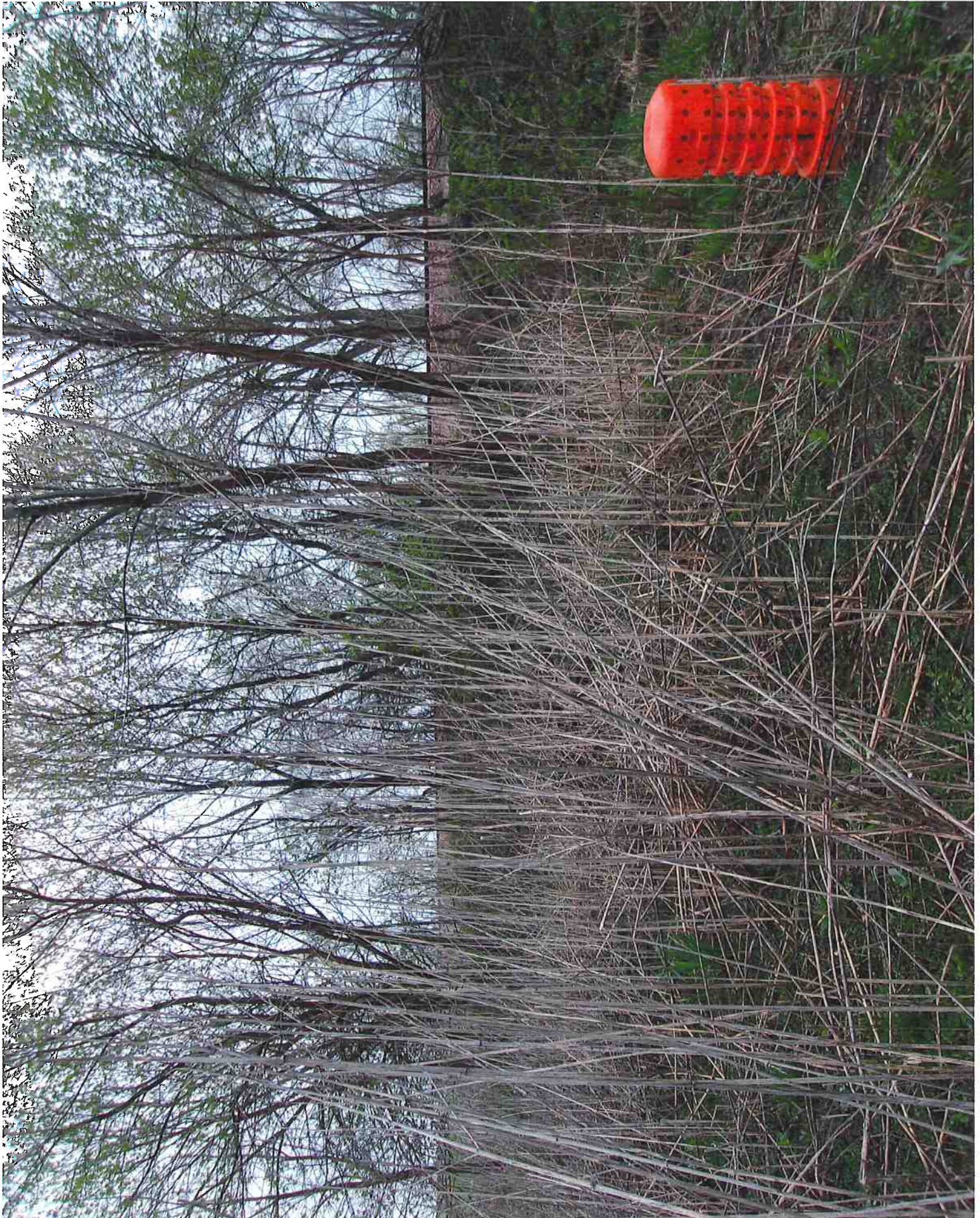
LOOKING W. @ TILE ROUTE ON N. SIDE GEORGETOWN RD.



LOOKING UPSTREAM @ RR @ N. SIDE MONARCH LAKE, 40+ <12" Ø TREES IN RR R/W



TREES IN RR R/W



Looking downstream with 5' ϕ maple that needs removed



Drainage District:

#143

Investigation Summary:

- At landowner meeting, landowner south of Hwy 175 reported that blowout/sinkhole in the Hwy 175 north road ditch in the SW¼ SW¼ Section 29 Township 87 North, Range 22 West hadn't been repaired.
- Visual observation found an approximately 6-foot by 10-foot sinkhole in the Hwy 175 north road ditch with an exposed telecommunication line conduit and broken Main tile in it. Soil was also observed to have eroded away in the immediate vicinity of the broken Main tile.
- Visual observation also found smaller sinkhole on IDOT tile line leading from Main tile to intake in road ditch.

Contractor Time and Materials (spent while CGA was on-site):

None, as only investigation was performed.

Additional Actions Recommended:

It is our opinion that the sinkhole on the Main tile was caused by the installation of the telecommunications line and the sinkhole definitely needs repaired. It is up to the District Trustees if the district should repair the Main tile or if the utility company should be determined and required to repair the Main tile. We also recommend that IDOT be notified about the smaller sinkhole on their tile line to the intake.



FIBER OPTIC CABLE IN TILE



LOOKING EAST @ CAROL ROUTE, NOTE BEEHIVE INTAKE SIGN





Drainage Work Order Request For Repair

Hardin County

Date: 6/17/2019

Work Order #: WO00000260

Drainage District: DDs\DD 167 (51191)

Sec-Twp-Rge: _____ **Qtr Sec:** _____

Location/GIS: _____

Requested By: David Bernard

Contact Phone: _____

Contact Email: drbernardconsulting@gci.net

Landowner (if different): _____

Description: DD 167 - Request for repairs to the Main Drainage Tile

Owner has discovered four sinkholes each approx 30 inches deep. Westen most opened in 2018, eastern most last weekend, other in Spring of 2019.

Repair labor, materials and equipment: _____

Repaired By: _____ **Date:** _____

Please reference work order # and send statement for services to:
Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

Approved: _____ **Date:** _____

Ms. Becca Junker
Hardin County Drainage Clerk
1215 Edgington Avenue
Suite 1
Eldora, IA 50627

Ms. Junker:

Re.: Request for Repairs to the Main Drainage Tiles in Drainage District 167

Please place this request before the Board of Supervisors for their consideration and action. Representatives of the owner of parcels 862004400003 and 862004400001 have discovered four sinkholes each approximately 30 inches deep near the location of the main drainage lines as noted in the diagram on the next page. The western most sinkhole opened in 2018, the eastern most last weekend, and the other two in spring of 2019. Representatives also found a half buried section of 8-inch ceramic tile along with ceramic shards near the location indicated in the diagram; the site has been marked (staked) for easy location. The broken/half-buried 8 foot section of tile on the surface is either refuse from an earlier repair of the main, or is evidence that the current main consists of at most only one 8-inch tile near that location. Also, a long ravine has been cut through a grassed waterway just east of the broken/half-buried tile. The ravine at viewing was 1 – 2 feet in depth and extended almost to the eastern boundaries of the parcels.

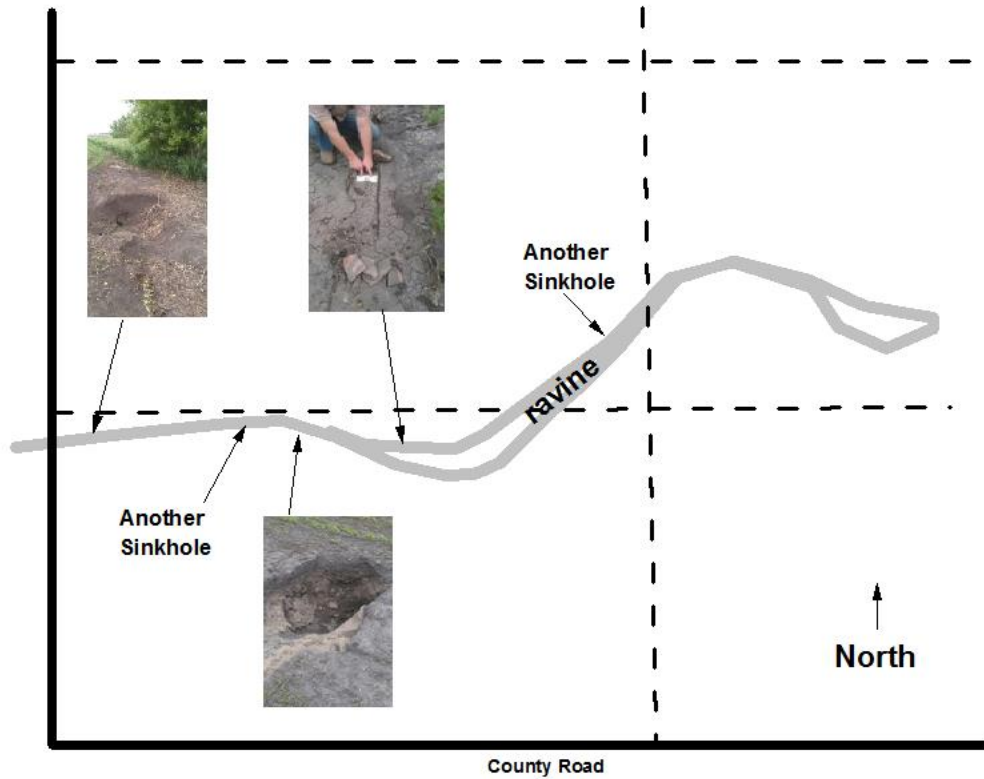
Thank you for your consideration and action. Please acknowledge receipt of this letter.

Respectfully,

A handwritten signature in black ink, appearing to read "D. R. Bernard". The signature is stylized and somewhat cursive.

David R. Bernard, representing Donna Bernard
2481 NW 87th Ave.
Ankeny, IA
1.515.965.6788
drbernardconsulting@gci.net

cc.: Donna Bernard
Curt Winter



Thick, black lines represent the southwest boundaries of Drainage District 167 in Harding County, IA. Thick gray lines represent the approximate location of the two 8-inch tiles that comprise the main drainage line for the district.