JACOBSON-WESTERGARD & ASSOCIATES, INC.
Consulting Engineers & Land Surveyors

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Estherville IA 51334
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ENGINEER'S REPORT

DRAINAGE DISTRICT NO. 51
POCAHONTAS COUNTY, IOWA

PROJECT NO: E23062

LICENSED PROFESSIONAL ENGINEER
COLLIN J. KLINGBEIL
24741
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.

Collin Klingbeil Date 9/6/24

Collin J. Klingbeil, P.E.
License number 24741
My license renewal date is December 31, 2025
Pages or sheets covered by this seal: ALL

I. INTRODUCTION/HISTORY

A. Scope

A petition for drainage improvements in Drainage District No. 51 (DD51) of Pocahontas County, Iowa was filed with the Board of Supervisors on May 18, 2023, and is enclosed. The Pocahontas County Board of Supervisors, acting as trustees for DD51, appointed Jacobson-Westergard & Associates, Inc. to complete the necessary survey, study, plan, and report.

DD51 is located in Sections 5 and 8 of Garfield Township (T-92-N, R-31-W) of Pocahontas County. A majority of the land area in DD51 is located within the corporate limits of the City of Rolfe.

B. History

- August 31, 1908 – petition filed
- April 15, 1909 – Engineer's Report filed by F.A. Malcolm recommending construction of a drainage system including a Main 1, Main 2, Branch A, Branch B, Branch B-1, and Branch D ranging in size from 20" to 6" in diameter at an estimated cost of $3,406.
    - *"…I have recommended 20" tile for the main which is about three times as large as would be needed for farm drainage. The large size is necessary on account of the thorough drainage desirable for town property."*
- August 30, 1909 – hearing on establishment held, district established
- March 10, 1910 – bid letting, all bids were rejected. Subsequently the contract completion dates were changed, and project was rebid.
- July 29, 1910 – second bid letting was held, awarded contract to G.S. Robinson for $5,595.
- November 28, 1910 – construction completed
- January 26, 1911 – commissioners (classification) report filed
- March 22, 1911 – classification hearing held, continued six (6) times before classification rejected and other commissioners were appointed.
- July 8, 1911 – subsequent commissioners report filed
- August 28, 1911 – classification hearing held and report approved
- July 16, 1968 – District entered into a "Permit Agreement" with the town of Rolfe giving the town the right to construct and maintain gas pipelines across the drainage district facilities.
- August 2, 1983 – contractor hired to clean out the outlet to the main tile of DD51.
- June 14, 1994 – approved crossing of district tile with proposed sanitary sewer at Oak Street and Elm Street in Rolfe.
- August 12, 2016 – City of Rolfe requested repair to the open ditch of DD51. Work was done in the fall of 2016.
- August 15, 2018 – video inspection of portions of Main 1 tile completed, tree roots observed in tile.
- May 2023 – outlet channel cleaned again between tile outlets and railroad tracks.
- May 18, 2023 – Petition filed for improvements following rain events resulting in significant ponding in the City of Rolfe
- June 2023 – Rehab Services hired to remove roots from Main 1 tile.

II. EXISTING TILE STARTING POINT, ROUTE AND TERMINUS

See also the enclosed map showing existing tile systems and their approximate locations.

Main 1 begins in the NE ¼ NW ¼ of Section 5 of Garfield Township (T-92-N, R-31-W) on the west side of the Union Pacific Railroad as a short open channel approximately 100 ft in length in a southwesterly direction. From the upstream end of the open ditch Main 1 runs generally south and east through and south of the City of Rolfe with tile ranging in size from 20 inches to 8 inches in diameter. The tile system crosses two railroad tracks and also 470th St, a gravel road. The entire system is approximately 5,030 feet in length.

Branch A Tile outlets into Main 1, where it crosses Broad St (Hwy 15). Branch A extends generally southeast with tile ranging from 10 inches to 8 inches in diameter. It crosses a railroad track and ends near the intersection of Railroad St. and Garfield St. The tile is approximately 1,200 ft in length.

Branch B Tile outlets into Main 1, on the south side of railroad tracks in what is currently elevator property. Branch B extends generally east and is approximately 1,010 feet of 10-inch and 8-inch diameter tile. It crosses two railroad tracks and ends south of the intersection of Railroad St. and Garfield St.

Branch B-1 Tile outlets into Branch B tile in the NE ¼ SE ¼ of Section 5 of Garfield Township (T-92-N, R-31-W) and extends approximately 400 feet south with 8-inch diameter tile.

Main 2 Tile starts in the NE ¼ NW ¼ of Section 5 of Garfield Township (T-92-N, R-31-W) where it outlets into the Main 1 open channel. It extends generally south and west to the intersection of Oak St. and 1st St. where it turns southward and follows 1st St. The tile system is approximately 1,400 feet in total length and includes tile ranging in size from 12 inches to 10 inches in diameter. It ends near the intersection of 1st St. and Walnut St. in the town of Rolfe. It appears as though at some point in time Main 2 was supplemented, upgraded, or replaced possibly with 18 and 21-inch diameter pipe. We unfortunately were not able to locate any drainage district or City records describing what was done, or by whom.

Branch D Tile outlets into Main 2 Tile in the intersection of Elm St. and 1st St. in the town of Rolfe. It extends approximately 400 feet eastward along Elm St. with 8-inch diameter tile.

III. INVESTIGATION

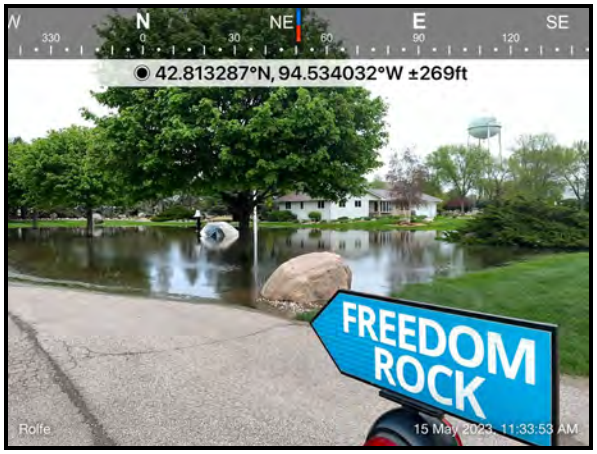
Survey data was collected. In addition, engineer's reports and plats, plans, and profiles of district facilities were reviewed. An informational meeting was held on September 6, 2023.

A. Tree Roots:

Video inspection was completed in 2018 on several reaches of the Main 1 Tile. The videos show varying degrees of tree root intrusion into the tile, from none to near complete blockage. The videos can be viewed on the county website at: https://pocahontascounty.iowa.gov/drainage/drainagevideos/. Below are pictures taken from the video inspection showing tree roots in the tile.

The tree roots have easy access through the joints between the tiles. Root intrusion tends to accelerate more rapidly in dry years when tree roots are following the water in search of moisture. The video inspection was completed six years ago, and especially due to the last few dry years tree root intrusion is expected to be more extensive today.

After a rainfall event in May 2023 the Main 1 tile was backed up and flooding occurred. See pictures below taken along Broad St. (Hwy 15) between 1st Street and the railroad tracks. The primary cause was blockage due to tree roots. Even if the roots themselves do not cause full blockage, a partial blockage can cause a buildup of leaves, grass clippings, and other debris that may enter the system via intakes and exacerbate the issue. We understand that tile repair, outlet channel cleanout, and jetting of tree roots in the tile were completed in the summer of 2023, for a cost of **$13,129.75**.



At the September 6, 2023 informational meeting a question was asked about a potential “illegal tap” into the tile, restricting flow. See picture below. It has been determined that the vertical pipe was used by the pipe televising contractor to temporarily pump water out of the tile in order to allow for video inspection. This is a non-issue.

We note that in several areas trees are located in close proximity to the drainage district tile system. There are several options for dealing with roots in the tile system, but unfortunately there is no perfect solution. Options are discussed below:

1. Periodic Inspection & Maintenance:
   With this option a maintenance plan would be in place to periodically inspect the district tile system and mechanically remove tree roots on an as needed basis. The goal would be to do this as preventative maintenance in order to prevent flooding. We do not recommend chemical treatment, as it would be impractical and expensive for pipe this large.

2. Lining the Tile:
   Installing an inner plastic liner in the tile may seem like a logical method of blocking roots from entering the system. However, it’s important to note that the same tile joints that the tree roots grow through allow drainage of excess subsurface water. There may be unintended consequences (saturated soils, more water in basements, etc.) if subsurface drainage is inhibited. For a pipe of this size lining the tile would also be very expensive. We therefore do not recommend pursuing this option.

3. Tree Removal:
   With this option trees growing in close proximity to the tile system would be cleared and stumps removed. We understand that this may be undesirable to some landowners, however it is the only option that does not require ongoing maintenance of some kind. We note that many of the trees growing close to the tile are ash trees and have visible signs of succumbing

to the emerald ash borer. The ash trees are expected to be dead in the next 5 years regardless.

See below a table of trees counted along and within 50 feet of the Main 1 Tile. See also enclosed map showing the locations of the trees. Ideally, we would like to see these trees removed. If a landowner wants to keep a specific tree, we are open to looking at the situation to determine the risk of root intrusion into the tile. There may be cases where an individual tree would pose minimal risk to the tile (based on tree species, distance from the tile, and depth of the tile in that area, etc.) and could be left in place.

Main 1 Tile Tree Count		
Size Category	50' from tile	30' from tile
Less than 6 in.	3	2
Over 6 in. to 9 in. incl.	6	5
Over 9 in. to 12 in. incl.	4	3
Over 12 in. to 15 in. incl.	4	2
Over 15 in. to 18 in. incl.	2	2
Over 18 in. to 24 in. incl.	6	2
Over 24 in. to 30 in. incl.	5	3
Over 30 in. to 36 in. incl.	2	2
Over 36 in. to 42 in. incl.	3	3
Over 42 in. to 48 in. incl.	0	0
Over 48 in. to 60 in. incl.	1	1
Total Number of Trees	36	25
Clearing & Grubbing Units	892	716

The Iowa Drainage Guide states the following regarding trees and tile lines:

> *"Where possible, water-loving trees such as willow, elm, soft maple, and cottonwood should be removed for a distance of approximately 100 feet on either side of a sub-surface drain line. A clearance of at least 50 feet should be maintained for other species of trees. If the trees cannot be removed or the line rerouted, the lines should be constructed with sealed, watertight joints or nonperforated tubing throughout the tree root zone."*

B. Design Capacity of Existing Tile System:

The design of the existing tile system has been analyzed and is shown in the tables below. Note that the capacities shown assume the tile is in good working condition. The lands in the district are comprised of farmland, a golf course, an elevator, residential neighborhoods, streets, railroad, etc. All have different needs when it comes to drainage.

The design parameter commonly used for drainage tile is known as the *drainage coefficient (DC)*. According to the Iowa Drainage Guide, the drainage coefficient is the rate at which water can be removed from the land and is expressed as the equivalent depth of water covering the surface of the drained area that can be removed in 24 hours. Today, a design drainage coefficient of 1/2" – 1" per day is commonly used in Iowa for agricultural lands. In the early 1900's agricultural tile systems were commonly designed at a drainage coefficient of 1/4" to 1/8" or less. The impervious paved streets, sidewalks, driveways, roofs, etc. in the City of Rolfe generate more storm runoff than agricultural lands, necessitating larger tile to carry the extra water away during and following rainfall events and to protect buildings and homes from flood damages. This is reflected in the design drainage coefficient of the existing tile system. In the engineer's report for the original district establishment, it was noted that Main 1 was designed to be about three (3) times as large as would have been needed for farmland. However, in the over 100 years since the tile system was installed, land use within the district has changed. In comparing a 1939 aerial photo with a 2021 aerial photo of the area, we observe more homes have been built, an elevator was built on farmland, etc. This all has led to additional demand on the tile system.

Design of Existing Tile Systems							
Lateral	Starting Station	Dia. (in)	Grade (%)	Ex Capac. (cfs)	Approx. Length	Acres Drained	DC (in/day)
Main 1	1+00	20	0.20%	7.35	1,765	234	0.75
	18+65	18	0.20%	5.55	659	187	0.71
	25+24	14	0.20%	2.84	476	174	0.39
	30+00	14	0.14%	2.38	200	174	0.33
	32+00	12	0.14%	1.58	900	81	0.46
	41+00	10	0.14%	0.97	600	67	0.34
	47+00	8	0.52%	1.03	300	44	0.56
Branch A	0+00	10	0.25%	1.29	700	13	2.37
	7+00	8	0.25%	0.71	500	13	1.31
Branch B	0+00	10	0.20%	1.16	880	15	1.84
	8+80	8	0.20%	0.64	130	3	5.07
Branch B1	0+00	8	0.12%	0.49	400	6	1.96
Main 2[1]	0+00	12	0.35%	2.49	1,000	36	1.65
	10+00	10	0.35%	1.53	400	15	2.43
Branch D	0+00	8	0.25%	0.71	400	3	5.67

[1]: Design specified in drainage district records. Survey and City storm sewer map show much larger tile, 18" and 21" in diameter. Neither the City nor district have any records related to this. Assuming the same grades, the DC's would be 7.32 and 11.65 inches/day.

The northern reaches of Main 1, within the City of Rolfe, have a drainage coefficient that would be considered adequate if the entire contributing area was farmland. However, less than half the watershed is farmland. Considering the higher drainage needs of the lands in the City of Rolfe, the existing Main 1 tile is significantly undersized. We estimate that the system would need a pipe at least 48 inches in diameter from the outlet through Highway 15 which would be adequate for approximately a 2-year storm, however a detailed stormwater model and design have not been completed.

It appears as though at some point in time Main 2 was supplemented, upgraded, or replaced. We unfortunately were unable to locate any records describing what was done. In our opinion, because of the prior work done upgrades are not recommended at this time. We also do not recommend upgrades to any of the branch tile systems at this time.

C. Main 1 Open Ditch:

All tile in the district ultimately outlet to a small channel/ditch north of Oak Street and the ballfield. In addition to Main 1 and Main 2 tile, three (3) additional tile outlet into the open ditch.

Left to Right: 15", 24", 12", 21", 8" dia. corrugated metal pipe (CMP)

In the original Engineer's report filed in 1909, F.A. Malcolm called for a trapezoidal channel with a 4-ft bottom width, bank slopes of 1:1, and 0.20% grade resulting in an average depth of 2-ft. It also called for a 6-ft x 4-ft bulkhead at the start of the channel, which at some point in time must have been removed. The existing open ditch is approximately 15 – 20 feet wide. The channel likely was widened during cleanouts that have occurred over the years.

From the tile outlets the open ditch extends about 130 feet northward where it crosses railroad tracks via a single 24-inch diameter concrete culvert. This culvert was noted on the original plat and profile for the district, but we are unaware if it has ever been replaced. The culvert is only about 3 inches lower than the Main 1 tile outlet. During periods of high flow the water level in the ditch will back up water in the tile systems, decreasing their ability to drain. Due to the limited grade and wide channel bottom sand and gravel from the city streets silt in the channel, requiring cleanouts (recent cleanouts completed in 2016 and 2023).

On the east side of the railroad tracks there is another 24-inch diameter culvert under a lane, then a winding and overgrown channel that ultimately leads to Pilot Creek. There is approximately 14 feet of elevation drop (fall) from the railroad tracks to Pilot Creek. In looking at flood conditions of Pilot Creek, the highest expected flood elevation would still be more than 5 feet lower than the culvert through the railroad tracks, and the district tile systems.

In our opinion, ideally the open ditch should be lowered (dug deeper). This would require the culvert through the railroad tracks and lane to be lowered, and additional excavation be done on the east side of the railroad tracks. The channel should be designed in such a way that would facilitate possible future improvements to the Main 1 and Main 2 tile systems and their laterals.

D. Railroad Culvert

If a tile improvement project is pursued, in our opinion the outlet channel should be lowered and the railroad culvert would need to be lowered as well. A larger culvert would be needed. According to Iowa Code 468.109, the railroad is responsible for construction costs of drainage improvements across railroad right-of-way.

IV. OPTIONS

A preliminary list of options was presented at the September 6, 2023 informational meeting held in Rolfe. It is understood that a major improvement project, at great cost, is not desired.

We therefore present the following options. Repairs are required, at a minimum. Improvements are optional.

Option #1 – Tree Removal Repair

Trees growing in close proximity to the Main 1 tile system would be cleared, and stumps either removed or treated with herbicide. This is necessary to prevent the continued growth of tree roots into the tile system. This would be considered a repair. We are limiting the trees considered for removal to the Main 1 tile system as that is the tile that serves the lands owned by the petitioner, and the cause of the petition being filed.

Iowa Code 468.138 states that the board shall remove trees and the roots which interfere with the flow of water. Trees located in close proximity to the Main 1 tile have already been a problem, plugging the tile and causing flooding. The code section also specifies that the work is to be paid for by the drainage district.

Option #2 Main 1 Open Ditch and Tile Improvement (Plus Option #1)

This option includes an improvement to the outlet ditch north of Oak Ave. Improvements would include deepening the existing ditch. The existing culvert under the railroad tracks would be lowered and increased in size. Excavation on the east side of the railroad tracks would be needed as well to reach an outlet for the lowered ditch channel.

A tile improvement would include upsizing the existing Main 1 tile from its outlet southward to at least the south side of Highway 15, if not further. This would include crossing and/or potential conflicts with streets, sidewalks, utilities, driveways, buildings, etc. There does not appear to be a good alternative route available to avoid major conflicts. Addressing these conflicts would be very costly.

Although we recognize that the Main 1 tile is undersized, due to cost considerations we do not recommend it be improved at this time. In our opinion, the most pressing issue facing this tile system are obstruction and damage caused by tree root intrusion. We believe this is currently where money would be most efficiently spent.

V. RIGHT-OF-WAY

Iowa Code grants drainage districts a permanent right of egress and ingress, and right of access for maintenance, repair, improvement, and inspection of drainage district facilities.

Iowa Code 468.146(1) allows a drainage district the ability to extend outside its boundaries in order to secure an adequate/improved outlet. This includes the authority to purchase right-of-way, and to construct and maintain the outlet. If the Main 1 Open Ditch is improved/lowered, work will be required downstream of its current extent (ends at the railroad tracks). If an improvement is pursued, we recommend the drainage district acquire right-of-way to facilitate construction and future maintenance of the ditch. This would involve the appointment of appraisers who to the best of their ability will recommend fair compensation for the right-of-way to be acquired. The appraisers recommendations are presented in a report and considered by the affected landowners and the Board, acting as trustees for the district. A public hearing is held prior to approval.

We note that under Iowa Code 427.2 drainage district right-of-way is exempt from real estate taxes, and under Iowa Code 468.49 it is also exempt from drainage assessments.

VI. COST ESTIMATES

Option #1 – Tree Removal Repair

SECTION 1: CONSTRUCTION ASSESSABLE TO PRIVATE LANDS

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
1	CLEARING & GRUBBING	892	UNITS	$30.00	$26,760.00
2	SEED AND FERTILIZE DISTURBED	1	LS	$1,000.00	$1,000.00
3	MOBILIZATION	1	LS	$1,000.00	$1,000.00
ESTIMATED SUBTOTAL CONSTRUCTION COST:					$29,000
CONSTRUCTION CONTINGENCIES					**$3,000**
ESTIMATED TOTAL ASSESSABLE CONSTRUCTION COST					**$32,000**
NON-CONSTRUCTION COSTS					
ENGINEERING					$35,000
LEGAL, PUBLICATIONS, MAILINGS, ETC.					$3,000
ANNEXATION					$2,500
RE-CLASSIFICATION					$7,500
INTEREST					$5,000
ESTIMATED TOTAL DISTRICT COST FOR OPTION #1					**$85,000**

AVG COST PER ACRE (BASED ON 234 ACRES, MAIN 1 WATERSHED):	$363
AVERAGE COST PER ACRE PER YEAR AT 5% INTEREST FOR 10 YEARS:	$47
AVERAGE COST PER ACRE PER YEAR AT 5% INTEREST FOR 20 YEARS:	$29

Option #2 Main 1 Open Ditch and Tile Improvement

We estimate that an Open Ditch and tile improvement through Highway 15 cost in excess of $1 million dollars. A $1 million project would result in an average of about $4,275 per acre.

VII. ASSESSMENT SCHEDULE REVIEW

Benefited Lands:
There are numerous parcels/lots that are materially benefited by district facilities that are not included in the existing assessment schedule. We recommend annexing these lands into Drainage District No. 51, which would require further analysis, a separate report, and a public hearing. The estimated cost of annexation is $2,500. We recommend it be done regardless of whether improvements are pursued.

Existing Classification:
This district is still under its original assessment schedule from when it was established in 1909. All drainage district facilities are included in this single assessment schedule. Under this schedule all lands are assessed for work done on **any** tile in the district, regardless of whether the lands benefit from it. Lands that utilize Main 1 do not use Main 2, but under the current schedule they would help pay for work on Main 2, and vice versa. The remedy for this is to develop separate assessment schedules for each district facility, to make the cost of improvements and future repairs more equitable. This process is called re-classification, and we recommend it be done regardless of whether improvements are pursued. Re-classification is done by a classification commission which includes an engineer and two Pocahontas County landowners who neither own nor have any interest in the lands being re-classified. A report would be filed, and a public hearing would be held. The estimated cost of re-classification is $7,500.

Pre-Classification:
At the September 6, 2023 informational meeting we were directed to complete a pre-classification. However, since our recommendation is only to proceed with tree removal in our opinion a pre-classification is not necessary in this case.

VIII. FARM PROGRAM WETLAND COMPLIANCE

We have mailed letters to owners of lands that would receive benefits from the potential improvements and are potentially in the USDA Farm Program, requesting certified wetland determinations from the Natural Resources Conservation Service (NRCS). We cannot directly obtain wetland determinations from the NRCS. Only landowners or their authorized agents may request the determination.

If any farmed wetlands exist on your property within Drainage District No. 51, the construction of drainage improvements may be considered by the NRCS to be a conversion and place you in jeopardy of being in violation of farm program rules and may be required to forfeit and/or refund farm program payments received after the work commences.

If improvements are constructed and you have farmed wetlands that are converted, your options are to either cease farming the wetland acres or purchase mitigation credits through a wetland mitigation bank. The current fee is approximately $20,000 per acre. If you believe the wetland determination to be in error, you may request a review by the NRCS.

It is solely the responsibility of the landowner to keep themselves in farm program compliance, but because of the potential impacts to landowners within the district, we ask that you provide a certified wetland determination prior to the improvement hearing for the Board to consider.

At this time we are not aware of any farmed wetlands located on the agricultural lands within the DD51 watershed.

IX. CONTROL OF THE DRAINAGE DISTRICT

By Iowa Code, when a drainage district is initially established it falls under the control of the county Board of Supervisors. In other words, the presently serving Board of Supervisors acts as trustees for the district and generally manages its affairs. However, Iowa Code Chapter 468.322-326 makes provision for transfer of control of a drainage district to a City Council if certain criteria are met. If this happened the drainage district would still exist, but the trustees for the district would be the City Council rather than the county Board of Supervisors. In order for the control of a district to be eligible to be transferred to the City Council, at least 25% of its land area must fall within City limits, the district

cannot have any outstanding debts, and the Board must agree to relinquish control. We can confirm that in excess of 25% of the land in DD51 falls within Rolfe City limits. The district has debts, so it is not eligible to be transferred to the City of Rolfe at the present time, but could be once the debts are paid off.

X. CONCLUSION/RECOMMENDATIONS

Our conclusion is that although technically an improvement would be beneficial to the Main 1 Open Ditch and Tile system of Drainage District No. 51, the cost would be in excess of the benefits derived. In other words, we do not believe an improvement to be feasible at this time.

Tree root intrusion is the most pressing issue facing the Main 1 Tile system. We believe that the removal of trees in close proximity to the tile is how money would be most efficiently spent. We therefore recommend that a repair be completed consisting of the removal of trees within 50 feet of the Main 1 Tile. Individual trees could be looked at on a case-by-case basis to determine whether they could be left in place. Species, depth of tile, and lateral distance from the tile are all factors that could be considered.

We are aware that the City of Rolfe is working on a general obligation bond to remove all ash trees within city limits, including on private property. This should be discussed at the hearing, and the ash tree removal along the Main 1 Tile should be coordinated with the City.

We do expect that additional tree removal in the future may be necessary. We also expect that the outlet ditch and the over 100-year-old tile system will continue to require ongoing maintenance.

We considered the possibility of developing a resolution to be adopted by the drainage district to restrict the planting of trees near the district tile. One intent of the resolution would have been to make individual landowners responsible for the cost of removing their trees and the cost of repairing any damage they may cause to district tile. However, Iowa Code makes it clear that the drainage district is to pay the cost of removing trees causing issues with a district tile. Therefore, we are not proposing a resolution be adopted regarding this issue. However, we encourage the City of Rolfe and landowners in DD51 to be prudent in planting trees near the tile system. Ideally keep trees at least 50 feet from the tile, and water loving trees at least 100 feet from the tile. If tree roots plug or damage the tile, it will only result in expense to the landowners in the drainage district.

There are many tracts of land that appear to benefit from the proposed facilities that are not on the existing assessment schedule. We recommend these lands be annexed into Drainage District No. 51.

The existing assessment schedule of Drainage District No. 51 is inequitable, and re-classification is recommended, regardless of what work is done.

The Board of Supervisors, as trustees, for Drainage District No. 51, should tentatively approve this report and set a date for a public hearing. At the hearing, the trustees should seek input from landowners. Once modifications to the report are made, if any, the proposed tree removal project should be approved and may proceed with or without our involvement. We would be happy to assist with soliciting competitive quotes, or anything else regarding the work.

Sincerely,

JACOBSON-WESTERGARD & ASSOCIATES INC.

Collin J. Klingbeil, P.E.

Encl. Petition
Drainage District Map
Tree Removal Maps

DRAINAGE PETITION

TO: THE BOARD OF SUPERVISORS OF POCAHONTAS COUNTY, IOWA, ACTING ON BEHALF OF DRAINAGE DISTRICT NO. 51 WHICH BENEFITS LANDS SOLEY IN POCAHONTAS COUNTY, IOWA.

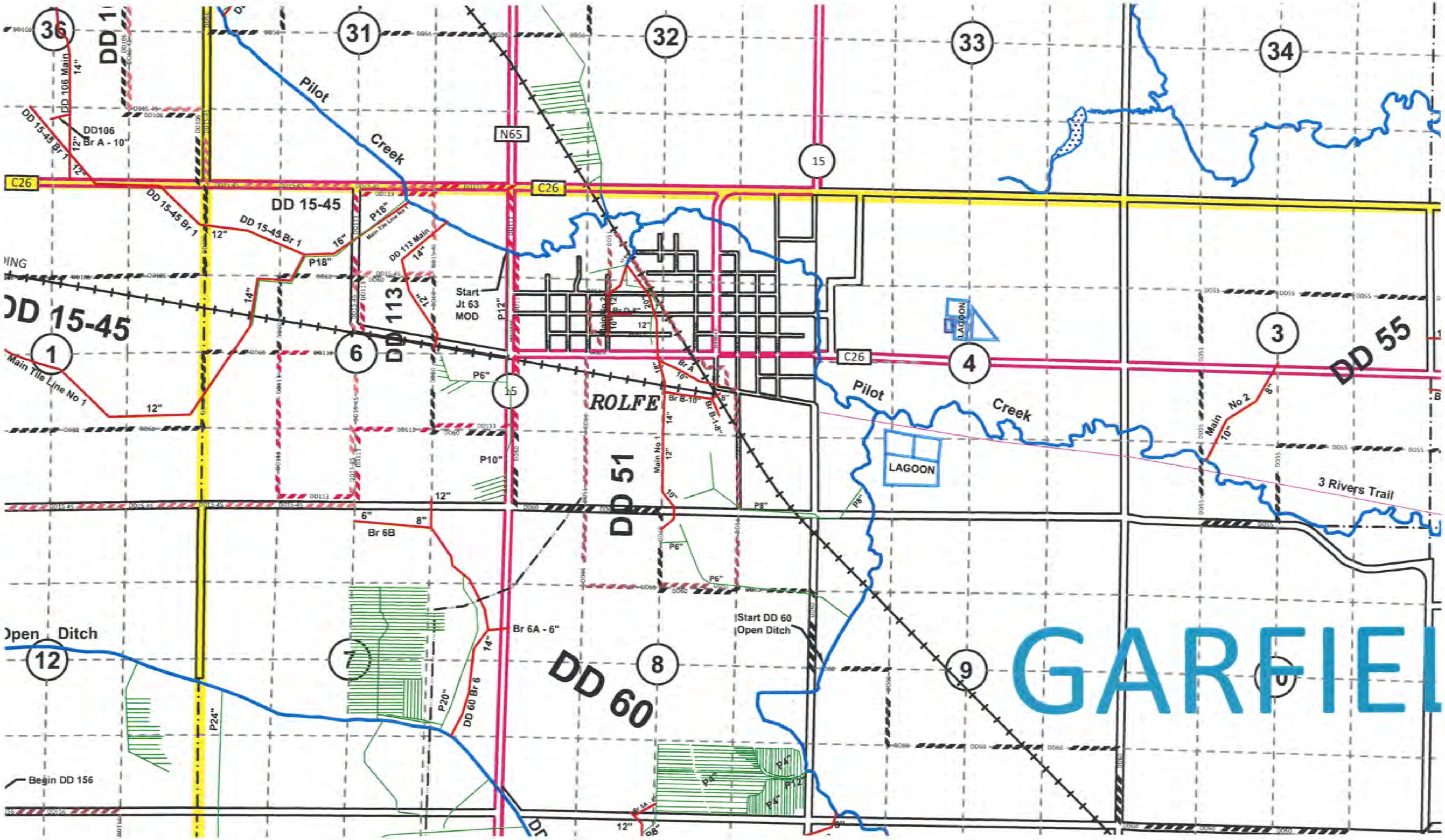
COMES NOW, the undersigned Petitioners, being owners of the real estate in this established drainage district and in making this petition for drainage relief for the drainage of said lands respectfully state to the Board of Supervisors of Pocahontas County, Iowa:

1. That the lands of these petitioners are a part of and are included in Drainage District No. 51 in Pocahontas County, Iowa, and that said lands are assessed for drainage tax by virtue of the improvements in said branch of the district.
2. That the drainage facilities of Drainage District No. 51 in their present condition in section 5-92-31 are not sufficient to properly drain the water from the lands of these petitioners as well as other lands; that such lands are too wet for timely cultivation, too wet to support good crop production, and are subject to erosion and flood danger; that if the original improvements in said drainage district were properly improved to correct the current situation, the public benefit, utility, health and welfare would be promoted.
3. That these petitioners do not have exact knowledge or information as to the exact nature of the work to be done to correct the situation, but that these petitioners are of the belief that an investigation of the situation by a qualified engineer would determine the exact nature of the work required to provide adequate drainage for the lands of these petitioners and adjoining lands.
4. That these petitioners, being the owners of lands which are part of the benefited area of Drainage District No. 51, are entitled to adequate drainage from improvements of the drainage district.
5. That these petitioners are signing this petition pursuant to Section 468.126 of the Code of Iowa.

WHEREFORE, these petitioners respectfully request that the Board of Supervisors of Pocahontas County, Iowa, acting on behalf of the owners of lands benefited by Drainage District No. 51 appoint an qualified engineer to investigate the drainage situation herein referred to with respect to petitioners land and other lands; and that the board order that district facilities be improved, to provide adequate drainage relief for the lands of these petitioners and adjoining lands as described above.

Dated this 18th day of May, 2023

LANDOWNERS	DESCRIPTION OF LAND
[signature]	Block 12



36
31
32
33
34
DD 15-45
DD 113
DD 51
DD 55
DD 60
Pilot Creek
N65
C26
15
ROLFE
LAGOON
3 Rivers Trail
Start Jt 63 MOD
DD106 Br A - 10"
DD 106 Main
DD 15-45 Br 1
Main Tile Line No 1
Main No 1
Main No 2
Br 6B
Br 6A - 6"
DD 60 Br 6
Start DD 60 Open Ditch
Open Ditch
Begin DD 156
1
6
4
3
12
7
8
9
GARFIEL

Drainage District No. 51
Map of District

Pocahontas County, Iowa

JACOBSON-WESTERGARD
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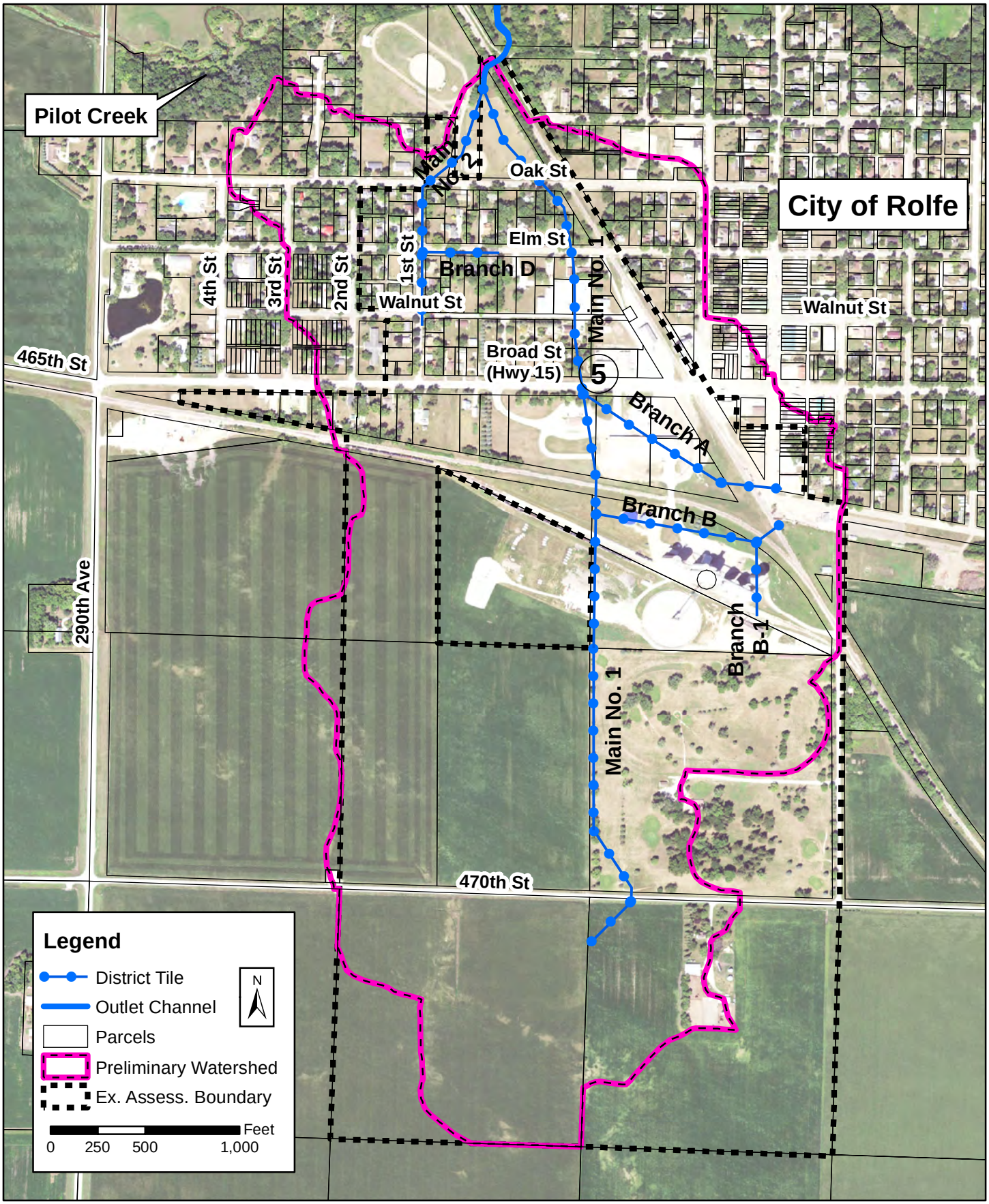

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Drainage District No. 51
Main 1 Tile Tree Clearing Map #1

Pocahontas County, Iowa

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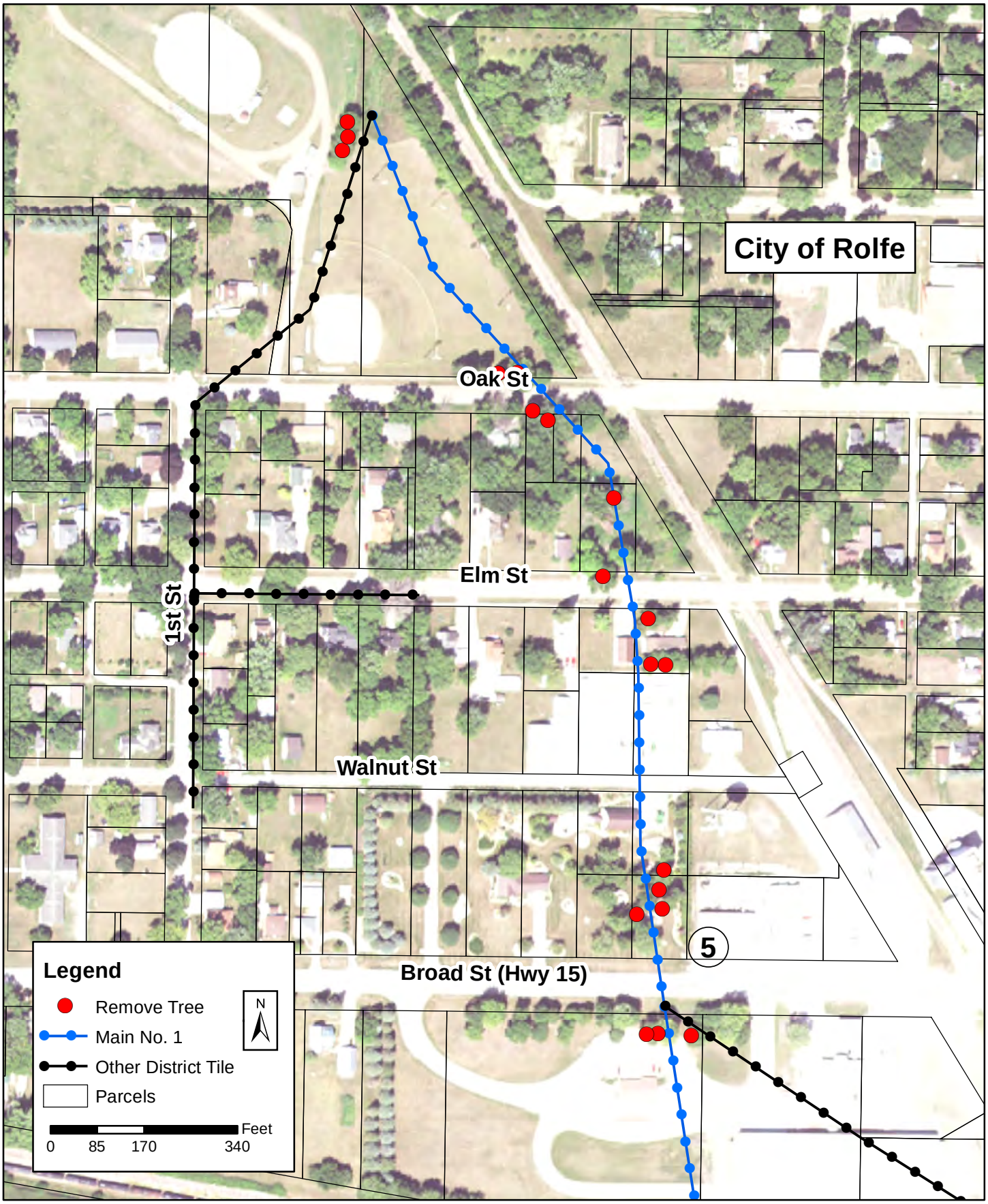

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Drainage District No. 51
Main 1 Tile Tree Clearing Map #2

Pocahontas County, Iowa

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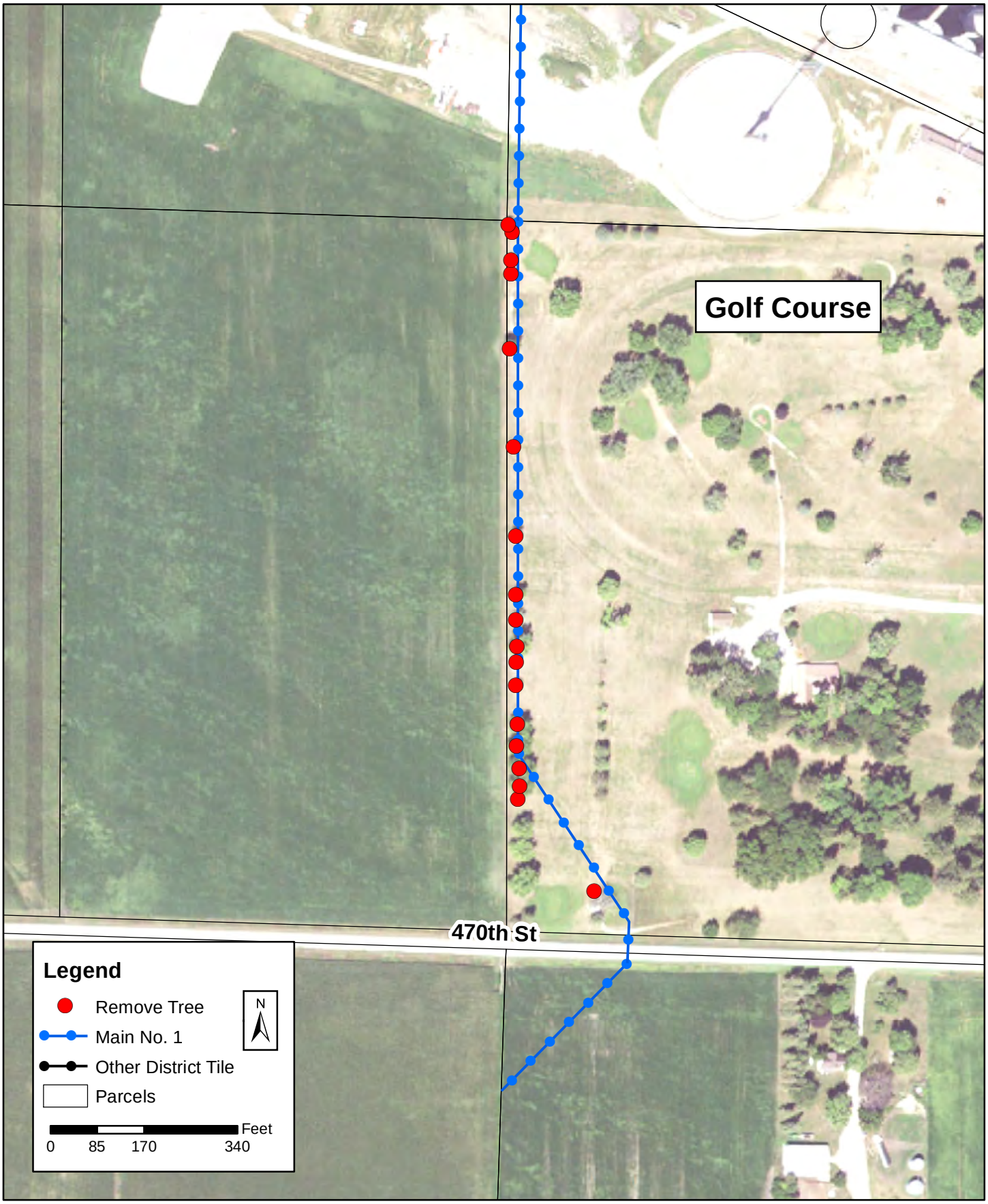

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