



PO Box 44
1124 Willis Ave
Perry, IA 50220

March 12, 2026

Subject: Failing Tile in Railroad ROW

Dear Trustees of Drainage District No. 101,

Dear Drainage District No. 101 Trustees,

The Greene County Board of Supervisors, acting as Trustees for Drainage District No. 101, appointed our firm as engineer to investigate the condition of the district tile and to study and recommend any necessary repairs to the drainage district tile system pursuant to Iowa Code §468.126.

We have completed our field investigation and evaluation of the reported tile failure. This letter constitutes our Engineer's Report outlining our findings and recommendations.

Findings

This report focuses on the existing 18-inch district drain tile located in Section 10, Scranton Township, Greene County, Iowa, on the south side of the Union Pacific Railroad right-of-way.

A request was submitted by Steve Fey reporting that the tile appeared to be failing and causing ponding upstream. Our investigation confirmed that the tile is experiencing failure in this location. Based on site observations, it is likely that tree root intrusion has obstructed the tile and contributed significantly to the current failures.

Recommendations

The Iowa Drainage Guide, published by Iowa State University Extension, provides guidance for addressing tile failures caused by tree roots. Relevant recommendations include:

- **Control Tree Roots:** Water-loving trees such as willow, elm, soft maple, and cottonwood within approximately 100 feet of a drain should be removed. A 50-foot clearance is recommended for other species. Where removal is not feasible, or rerouting is not possible, a closed tile with sealed joints should be installed through the root zone.

Due to the substantial tree growth located within the Union Pacific Railroad right-of-way directly above the existing tile, repairing the tile in its current location is not considered feasible or cost-effective. Any repair within the root zone would likely experience recurring intrusion and blockage.

Therefore, rerouting the tile outside of the affected area is the most practical and long-term solution to prevent ongoing maintenance issues.

We recommend constructing approximately 1,100 feet of new 18-inch HDPE dual-wall pipe along a new alignment that avoids the root-impacted area. A plan sheet showing the proposed reroute alignment is enclosed.

The estimated construction cost for this work is approximately \$55,000.

Given the risk of continued silting, blockage, and upstream drainage issues, we recommend that this repair be completed as soon as practicable, consistent with guidance provided in the Iowa Drainage Guide.

Although this recommendation involves constructing a new alignment, this work qualifies as a repair under Iowa Code §468.126, which states:

“If in maintaining and repairing tile lines the board finds from an engineer’s report it is more economical to construct a new line than to repair the existing line, the new line may be considered to be a repair.”

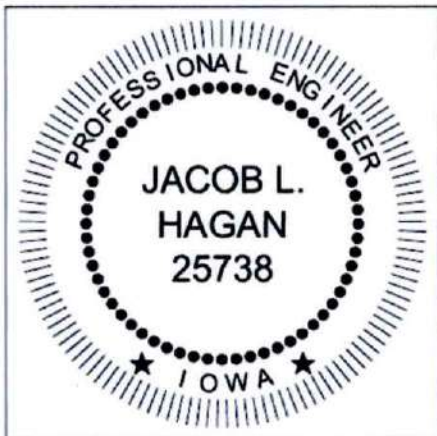
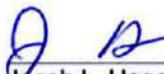
Because the estimated construction cost exceeds \$50,000, the Board is required to hold a public hearing and provide notice to all landowners within Drainage District No. 101.

Upon approval by the Board, we recommend the work be let through a public quotation process and completed during the spring or summer construction season. If construction occurs during the cropping season, the drainage district will be responsible for paying crop damages for any crops destroyed during the work.

Because the existing tile is located within the Union Pacific Railroad right-of-way, proper legal notice must also be provided to the railroad. We recommend the Board consult with legal counsel to ensure appropriate notice and compliance with any applicable railroad requirements.

Sincerely,

AgriVia PLLC

	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.  <u>3/13/26</u> Jacob L. Hagan, P.E. (date) License No. 25738 My license renewal date is December 31, 2026. Pages or sheets covered by this seal: <u>All</u>
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Appendix A- Cost Estimate

Estimated Construction Costs					
Tile Repairs					
Drainage District No. 101					
Greene County, IA					
Tile Construction Cost					
Item No.	Bid Item	Est. Units	Unit	Est. Unit Price	Est. Amount
101	DRAIN TILE, TRENCHED, HDPE DUAL WALL, 18"	1,100	LF	\$42	\$46,200
102	TILE CONNECTIONS, 10" AND SMALLER	5	EA	\$450	\$2,250
103	EXCAVATION, EXPLORATORY	2	HR	\$270	\$540
104	MOBILIZATION	1	LS	\$2,500	\$2,500
5% Construction Contingency					\$3,000
Total Construction Cost					\$54,490.00





