

Technical Memorandum

To: Nick Tomczik
District Administrator, RCWD

Cc: Tom Schmidt, RCWD
John Kolb, Rinke-Noonan

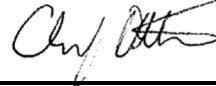
From: Chris Otterness, PE

Subject: ACD 46 Petition for Partial Abandonment at
Potomac Wetland Bank -- Engineer's Findings

Date: September 15, 2026

HEI Project #: R005555-0082.013

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



9/15/2026

Chris Otterness
Reg. No. 41961

Date

BACKGROUND

On August 12, 2026, the Rice Creek Watershed District (RCWD) Board of Managers accepted for filing a petition submitted by Lake Drive Properties L.P. for the partial abandonment and impoundment of Anoka County Ditch (ACD) 46. The purpose of the drainage system partial abandonment is to facilitate development of a wetland bank (Potomac Wetland Bank) on the petitioner's property. The RCWD Board of Managers appointed Houston Engineering, Inc. (HEI) to investigate the effects of the proposed modification to the public drainage system under MS 103E.227 and 103E.806 and file a report of findings. This memorandum documents the engineer's findings.

The petitioners have provided a narrative description of the project with associated figures and drainage system rerouting plans. The following is a summary of the proposed modifications.

- Abandon the portion of ACD 46 Branch 5 that is south of 153rd Ave. NE (approximately 2,250 feet); and
- Impounding (filling) the ACD 46 open channel level at varying depths.

The proposed impoundment & abandonment is shown in **Figure 1**. All proposed modifications are within the property of the petitioners.

UTILITY OF SYSTEM

In reviewing the utility of the system, we consider whether the petitioned modification will result in a decrease of capacity / outlet function for upstream landowners and whether the project has the potential to affect the use of the system downstream.

The current ACD 46 primarily serves as a drainage outlet for agricultural land on the petitioner's property. The petitioner is proposing to convert the lower and wetter portions of their property into a wetland bank. The partial filling of the ACD 46 ditch will enable water to be impounded within the wetland bank areas, restoring hydrology. The petitioner's engineer has submitted plans that indicate partial filling of the ACD 46 ditch on their property; the remaining ditch will be shallow (~ 0 to 1.5 feet deep). Following the development of the wetland bank and filling of the ditch, the remaining ditch on the petitioner's property will no longer serve its original purpose (an outlet for agricultural lands) or provide significant benefit to the lands currently receiving benefit. Thus, it is appropriate to partially abandon the ditch on this property in conjunction with the impoundment.

It is important to note that ACD 46 on the petitioner's property follows natural (pre-ditch establishment) flowpaths which will drain water from the property to the north into ACD 46 following the proposed project. I.e. the land drained by this portion of ACD 46 (as shown in **Figure 1**) will continue to drain in that direction. Land within this drainage area that is outside of the petitioner's property does not currently derive direct benefit from the drainage system (though land use / improvements have placed additional burden on the drainage system).

On behalf of the petitioner, Stantec prepared hydrologic and hydraulic modeling of the site under current and proposed conditions using the RCWD's District Wide Model. Potential for impact on properties upstream of the petitioners was specifically reviewed at three locations:

1. The northern (~1150') section of the ditch will be filled to an elevation of 901.5. This is at least 2.5 feet lower than any upstream landowner property and thus will not impact those properties. The one exception is the Potomac Street right-of-way, which has a culvert slightly lower (901.3) than the proposed fill elevation. However, this area cannot currently gravity drain lower than an elevation of 902.0 to the elevation of the next downstream culvert in the private ditch, so the impoundment will not affect normal water levels in this area. Per Stantec's modeling, water levels for the 10- and 100-year rainfall events will increase less than 0.1'.
2. A new ditch block will be constructed approximately 1150' south of 153rd Avenue, to an elevation of 902.0. There are three properties not owned by the petitioner that upstream of the proposed ditch block and are partially below the elevation of the ditch block. For each of these properties, the land below the 902.0 elevation is already wetland and the use of the land will not be negatively affected by the elimination of the ditch.

3. Approximately 2,300' south of 153rd Avenue, at the upstream end of Branch 5, an additional berm is proposed that extends above and beyond the ditch elevation. This is at the end of a large wetland complex that historically utilized either Branch 2 or Branch 5 of ACD 46 as an outlet for large rainfall events depending on vegetation growth, rodent activity, and conditions within the ditch branches. The berm will have the effect of redirecting flow west into the connected wetland system located along Branch 2 of ACD 46, for large storm events and will not affect standing water levels on the property. This berm will not affect the utility of either branch of the drainage system.

BENEFITS

The proposed abandonment and impoundment is necessary for the development of a wetland restoration and banking project. The project will provide economic benefit to the petitioner in the form of salable wetland bank credits. The project also provides multiple public benefits via environmental restoration, including water quality improvement and habitat.

ENVIRONMENTAL IMPACTS AND PERMITTING

The petitioned partial abandonment and impoundment includes work within several wetlands. The project requires a joint wetland application to the RCWD and the Army Corps of Engineers (COE). RCWD will review compliance with RCWD's Rule F for work within wetlands and Rule D for Erosion and Sediment Control. Additional RCWD permit requirements may be applicable. The petitioner shall provide record drawings of the public drainage system modifications, which include, but are not limited to, elevations of the impoundments

The project may require approvals from other agencies, including but not limited to:

- An NPDES Stormwater Permit for Construction from the Minnesota Pollution Control Agency; and
- A ROW Permit from Anoka County

Note: This is not intended to be an exhaustive list of required permits/permissions. It is the petitioner's responsibility to confirm permit requirements with the regulatory authorities having jurisdiction over the work.

CONCLUSION

Minnesota Statute 103E.227, Subpart 3, requires the proposed project to provide public or private benefit and not impair the utility of the ditch or deprive affected landowners of its benefit. MS 103E.806 requires that the proposed partial abandonment not serve a substantial useful purpose and is not of a substantial public benefit and utility.

The proposed partial abandonment and impoundment of portions of ACD 46 will not impair the utility of the remaining drainage system or deprive the affected landowners of its benefit. The only property affected by the abandonments is the property of the petitioners. An identical level of service will be provided to upstream landowners compared to the originally constructed condition.

The proposed modifications, as a component of the Potomac Wetland Bank, will not result in an adverse environmental impact. The project is to be contingent upon implementing banking instruments with BWSR and the COE.

Note that this report is only intended to review the proposed modifications to the public drainage system and is not intended to evaluate the effects of the wetland bank as a whole on adjacent properties or its overall public utility.

The petitioners have met the requirements of Minnesota Statute 103E.227 and 103E.806. We recommend the RCWD Board of Managers notice and hold a public hearing on the partial abandonment and impoundment of ACD 46. We further recommend the Board adopt a findings and resolution to partially abandon and impound ACD 46, with the following conditions:

- Petitioner shall notify District staff prior to start of construction within the abandoned portion of ACD 46.
- Petitioner shall provide a as-built drawing of the work in the current ACD 46 once it is completed.

ATTACHMENTS

Petition from Lake Drive Properties, L.P.
Figure 1 – Realignment



ATTACHMENT A – PETITION FROM LAKE DRIVE PROPERTIES, L.P.





Stantec Consulting Services Inc.
733 Marquette Avenue Suite 1000, Minneapolis MN 55402-2309

July 10, 2026

File: 193806943

Attention: Public Ditch Authority
c/o Patrick Hughes, Rice Creek Watershed District
4325 Pheasant Ridge Drive
Blaine, MN 55449

Reference: Potomac Wetland Bank Petition for Partial Abandonment of Branch 5 of County Ditch
46

Dear Mr. Hughs:

With this letter and supporting documentation, Jake Jensen the petitioner and property owner formally petitions the Rice Creek Watershed District (RCWD) as the drainage authority for drainage ditch systems, for permission to partially abandon the upstream portion of Branch 5 of Ditch 46 (See Attached Figure 1). This petition is made pursuant to Minnesota Statutes, Section 103E and RCWD Rule I.

Background

The request is made to accommodate the restoration of the wetland within the petitioner's property. This is being done for the purposes of developing a Wetland Bank on the property. A wetland bank application has been through agency review and partial abandonment of the upstream end of Branch 5 of Ditch 46 is one of the requirements before the application can be approved.

Existing Conditions

The upstream end of Branch 5 of Ditch 46 terminates in a wetland that is located within the project site and property (Figure 1). It is located on Anoka County Parcel Identification Numbers 21-32-22-41-0001, 21-32-22-43-0001, and 21-32-22-42-0001 in Section 21, Township 32 North Range 21 West. These parcels are owned by the Wetland Bank Sponsor and petitioner for this abandonment.

The Potomac Wetland Bank project is located in Rice Creek Watershed District (RCWD) and will restore historic wetland areas within the project site by impounding approximately 2,250 feet of Anoka County Ditch 46, Branch 5 at its most upstream end. The project site is located at the headwaters to Branch 5, which begins at a low-lying wetland area at the far south end of the site, within the proposed Bank Site easement boundary. There are also low-lying areas east and west of Branch 5 at the north end of the site that are drained via swale into the ditch. Branch 5 has four (4)



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outflow points within the project area, including the primary ditch outlet at a 36" CMP culvert at 153rd Ave NE and three "overflow" locations. One of the overflows occurs at a roadside ditch east of the site and two occur at low points along the southernmost end of Branch 5 (see attached Outfall Locations Map, Figure 2).

The existing Potomac Bank Site receives drainage from 91.7 acres (0.14 square miles) of primarily row crop agricultural land cover, with small areas of forested land along its southerly boundary. Existing drainage is directed towards Anoka County Ditch 46, Branch 5 (Branch 5) running south to north through the center of the site. Existing drainage is conveyed to Branch 5 via four smaller "feeder" ditches on the site, as well as an existing culvert under Potomac St NE collecting drainage from a single residential lot east of the roadway. The mainline of Branch 5 is conveyed through a 24" CMP field road crossing in the center of the site before reaching the 36" project site outlet culvert. Existing drainage conditions are depicted on the attached Existing Conditions Drainage Map (Figure 3). Existing site hydraulics are summarized in Tables 1 and 2, below.

Table 1: Existing Ditch System High-Water Levels (HWLs)

Location	Description	XP Node	HWL (ft)			
			2yr	10yr	25yr	100yr
Mainline Ditch	153rd Ave Culvert (Primary Outfall)	AC46B5_005	900.14	900.84	901.09	901.50
	Ditch (Site 1A)	AC46B5_006	900.15	900.84	901.09	901.50
	Ditch (Site 1A)	AC46B5_007.1	900.16	900.85	901.09	901.48
	Ditch (Site 1A)	AC46B5_007.2	900.17	900.86	901.10	901.48
	24" Field Road Culvert Outlet	AC46B5_008	900.18	900.86	901.10	901.49
	24" Field Road Culvert Inlet	AC46B5_009	900.83	901.41	901.65	901.91
	Ditch (Site 1B)	AC46B5_010	900.83	901.41	901.65	901.91
	Ditch (Site 1B)	AC46B5_011	900.83	901.41	901.65	901.91
	Ditch (Site 1B)	AC46B5_012.1	900.83	901.41	901.65	901.91
	Ditch (Site 1B)	AC46B5_012.2	900.83	901.41	901.65	901.91
	Ditch (Site 1B)	AC46B5_013.1	900.83	901.41	901.65	901.91
	Ditch Headwater Wetland (Site 1C)	AC46B5_014.1	900.83	901.41	901.65	901.88
Feeder Ditch	Ditch #4 (Site 1A)	AC46B5_007.3	902.16	902.21	902.23	902.27
Upland Low Areas	Site 4	AC46B5_006.3A	902.40	902.45	902.49	902.54
	Site 2	AC46B5_006.3B	900.34	901.12	901.31	901.66



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	Site 3	AC46B5_010.3	902.45	902.62	902.72	902.88
	Site 5	AC46B5_012.4	902.19	902.44	902.60	902.83
Offsite Areas	Potomac St NE Culvert Outlet	AC46B5_007.4	902.79	902.99	903.08	903.19
	Potomac St NE Culvert Inlet	AC46B5_007.5	902.84	903.07	903.18	903.32

Table 2: Site Outfalls and Existing Discharge Rates

Name	Type	Elevation (ft)	Discharge Rate (cfs)			
			2yr	10yr	25yr	100yr
Outfall 1	Primary	896.53	29.9	36.3	37.5	38.8
Outfall 2	Secondary Overflow	902.84	0.0	0.8	1.9	4.1
Outfall 3A	Secondary Overflow	901.27	0.0	0.1	1.4	5.2
Outfall 3B	Secondary Overflow	901.39	0.0	0.0	3.6	19.0

Proposed Conditions

Wetland hydrology will be re-established in the project area through partial filling and/or impoundment of the onsite feeder ditches via ditch blocks, filling of Branch 5 and construction of an armored spillway at the primary site outfall culvert, and construction of a separating berm at the south end of the project site (see attached Credit Allocation and Proposed Community Map - Figure 4). Additionally, a new field road/driveway is proposed along the south edge of Wetland Site 3 to provide access to upland areas outside of the proposed wetland easement and will also serve as a barrier between wetland HWLs and an adjacent property to the southeast. The proposed activities will foster wetland hydrology by mitigating the lateral scope and effect of the current drainage ditch system and will lead to the creation of six (6) distinct wetland basins, which are summarized in Table 3 below. Proposed site modeling results for HWL and peak discharge rate are summarized in Table 4 and 5 below and the proposed drainage map is provided as Figure 5.

Table 3: Proposed Wetland Basins/Sites

Wetland Basin	XPSWMM Node	Direct Drainage Area (ac)	Total Drainage Area (ac)	Outlet Elevation (ft)
Site 1A	AC46B5_005.W	25.4	77.3	901.5
Site 1B	AC46B5_009	29.6	43.0	902.0



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Site 1C	AC46B5_014.1	14.3	14.3	901.3
Site 2	AC46B5_006.3B	7.5	7.5	903.0
Site 3	AC46B5_010.3	9.1	9.1	902.5
Site 4	AC46B5_006.3A	1.4	1.4	903.0
Site 5	AC46B5_012.4	4.3	4.3	905.0

Table 4: Proposed Potomac Bank Site High-Water Levels (HWLs)

Location	Description	XP Node	HWL (ft)			
			2yr	10yr	25yr	100yr
Mainline Ditch	153rd Ave NE Culvert (Primary Outfall)	AC46B5_005	899.27	899.62	900.53	902.82
	Primary Outlet Spillway	AC46B5_005.W	901.66	901.75	901.81	902.96
	Ditch (Site 1A)	AC46B5_006.1	901.77	901.93	902.07	902.70
	Ditch (Site 1A)	AC46B5_006.2	901.95	902.20	902.39	902.73
	Ditch (Site 1A)	AC46B5_007.1	901.95	902.20	902.39	902.73
	Ditch (Site 1A)	AC46B5_007.2	901.95	902.20	902.39	902.73
	24" Field Road Culvert Outlet	AC46B5_008	902.08	902.21	902.39	902.73
	24" Field Road Culvert Inlet	AC46B5_009	902.34	902.53	902.66	902.85
	Ditch (Site 1B)	AC46B5_011	902.34	902.53	902.66	902.86
	Ditch (Site 1B)	AC46B5_012.1	902.34	902.53	902.66	902.86
	Ditch (Site 1B)	AC46B5_012.2	902.34	902.53	902.67	902.86
	Ditch (Site 1B)	AC46B5_013.1	902.34	902.53	902.67	902.86
	Ditch Headwater Wetland (Site 1C)	AC46B5_014.1	901.63	901.77	901.86	902.00
Feeder Ditch	Ditch #4 (Site 1A)	AC46B5_007.3	902.40	902.52	902.58	902.73
	Ditch (Site 3 Outlet)	AC46B5_010.2A	902.35	902.57	902.70	902.91
	Ditch #1 (Site 5 Outlet)	AC46B5_012.3	903.00	903.29	903.58	904.02
Upland Low Areas	Site 4	AC46B5_006.3A	903.08	903.14	903.17	903.21
	Site 2	AC46B5_006.3B	902.94	903.09	903.17	903.31
	Site 3	AC46B5_010.3	902.63	902.70	902.74	902.91
	Site 5	AC46B5_012.4	904.99	905.15	905.26	905.46
Offsite Areas	Potomac St NE Culvert Outlet	AC46B5_007.4	902.85	903.05	903.13	903.22
	Potomac St NE Culvert Inlet	AC46B5_007.5	902.89	903.12	903.21	903.33



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Model results show increases in proposed HWLs along the mainline and feeder ditches of ACD46 Branch 5 at nodes within the proposed wetland easement (Sites 1A-1C), as well as at proposed upland area wetland pools (Sites 2-5). The modeled increases in HWL are contained entirely within the proposed project site parcels and will not impact adjacent structures or properties. Negligible increases in HWL of 0.06 feet or less are shown at offsite culverts to the east (Nodes 007.4-007.5), with 100-year event being less than 0.01 feet.

Table 5: Site Outfalls and Proposed Discharge Rates

Name	Type	Elevation (ft)	Discharge Rate (cfs)			
			2yr	10yr	25yr	100yr
Outfall 1	Primary	896.53	13.9	17.0	23.8	47.3
Outfall 2	Secondary Overflow	902.84	0.0	1.2	2.3	4.3
Outfall 3A	Secondary Overflow	901.27	1.3	3.1	4.7	8.1
Outfall 3B	Secondary Overflow	901.39	0.5	1.6	2.7	5.3

Modeling results show that peak discharge rate from the primary site outfall at 153rd Ave NE will be reduced for the 2-year, 10-year, and 25-year storm events, but will increase by 8.5 cfs for the 100-year event. This increased rate translates to a 0.1-foot increase in 100-year WSEL in ACD46, Branch 5 downstream of the existing 153rd Ave NE culvert down to its confluence with ACD46 Main Trunk, approximately 1,200 lineal feet downstream. This increase in downstream 100-year WSEL is contained within the existing downstream ditch channel and will not adversely impact downstream buildings, roadway crossings, or adjacent properties. Additionally, modeling results show negligible increase in secondary overflow to the east from Outfall 2 (0.2-0.4 cfs), and significant decrease in 100-year overflow to the south from Outfall 3A/3B (-10.8 cfs).

Proposed ponding elevations and corresponding volumes are given in Table 6, below. Note that stage-storage information was not developed or utilized for XPSWMM modeling of the two mainline ditch wetland basins (1A and 1B), which were modeled using natural channel links



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modified to match proposed grading conditions. For proposed conditions, a starting water level equal to each basins' respective outlet was modeled.

Table6: Modeled Stage-Storage Data

Ponding Elevation (ft)	Surface Area (ac)	Volume (ac-ft)
Site 1C (AC46B5_014.1)		
899.0	0.001	0.000
900.5	0.010	0.008
901.0	0.465	0.127
901.5	1.447	0.605
902.0	2.827	1.673
903.0	2.827	4.500
Site 2 (AC46B5_006.3B)		
901.0	0.051	0.000
902.0	0.369	0.210
903.0	2.412	1.601
904.0	4.804	5.209
Site 3 (AC46B5_010.3)		
902.0	0.000	0.000
902.5	1.245	0.311
903.0	3.539	1.507
903.5	5.140	3.677
Site 4 (AC46B5_006.3A)		
902.3	0.001	0.000
902.5	0.039	0.005
903.0	0.349	0.102
903.5	0.714	0.367
Site 5 (AC46B5_012.4)		
904.0	0.132	0.000
905.0	0.852	0.492



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905.5	1.265	1.021
906.0	1.701	1.763

In summary, no adverse upstream or downstream impacts are expected as a result of the proposed wetland bank project because ponded HWLs stay within the proposed easement boundary or discharge at current site outfalls, and proposed peak outflows are safely managed by in-place stormwater conveyance infrastructure.

Funding

Petitioner will provide 100% funding for design, construction, and oversight costs associated with the project. Petitioner is not requesting any funding from the RCWD or other public entities for this project.

Terms of Funds

The following language in the petition served as the "terms" of the funds. This is taken directly from state statute.

1. Accompanying this petition is the Petitioner's escrow deposit of \$10,000. Petitioner acknowledges and agrees that additional deposit may be required as additional costs are incurred in the proceedings. Petitioner agrees to pay all cost and expenses that may be incurred if the proceedings are dismissed.
2. Petitioner acknowledges that the costs incurred before the proposed drainage system modification is established may not exceed the amount of the Petitioner's deposit.
3. Petitioner acknowledges that a claim for expenses greater than the amount of the deposit may not be paid unless an additional deposit is filed.
4. Petitioner acknowledges that if the drainage authority determines that the cost of the proceedings will be greater than the Petitioner's deposit before the proposed drainage system modification is established, the drainage authority must require an additional deposit to cover all cost to be filed within a prescribed time.
5. Petitioner acknowledges that the proceeding will be stopped until the additional deposit prescribed by the drainage authority is filed.
6. Petitioner acknowledges that if the additional deposit is not filed within the time prescribed, the proceedings must be dismissed.
7. Petitioner acknowledges that the cost of the Rice Creek Watershed District in the proceeding will be paid from the deposit.



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Maintenance

The abandoned portion of the ditch within the project site will not require maintenance.

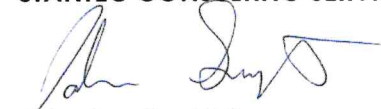
Request

We request that the RCWD set a time and location for a public hearing on this petition and give notice of the hearing by mail to owners of all property benefiting by the drainage system either in a newspaper of general circulation within the affected drainage area or by publication on the RCWD web site pursuant to Minnesota Statutes, Section 103E.806.

Please contact me at (651) 775-5104 or john.smyth@statnec.com if you have any questions or require additional information.

Sincerely,

STANTEC CONSULTING SERVICES INC.



John Smyth, CWD
Senior Associate

PETITIONER AND PROPERTY OWNER

Lake Drive Properties, L.P.



Jake Jensen

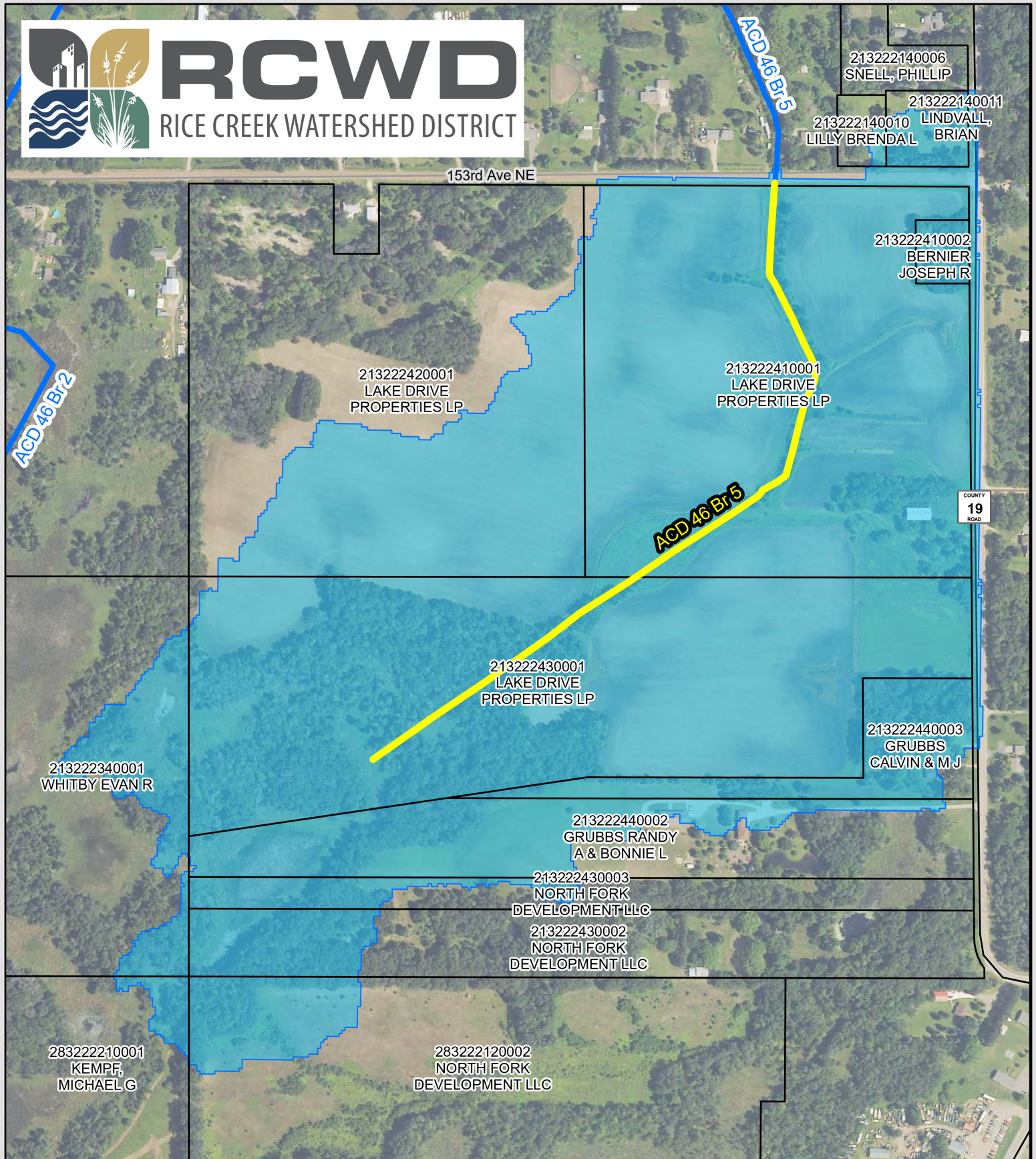
Encl.

FIGURE 1 –ACD 46 BRANCH 5 REALIGNMENT EXHIBIT



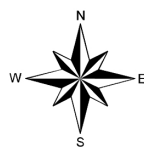
RCWD

RICE CREEK WATERSHED DISTRICT



Legend

- ACD 46 Ditch to Be Abandoned/Impounded
- ACD 46 Ditch Centerline
- Parcels
- Drainage Area



0 250 500 1,000 Feet

Figure 1: ACD 46 Branch 5 Proposed Impoundment/Abandonment

Scale: AS SHOWN	Drawn by: DRO	Checked by: CCO	Project No.: 5555-0082	Date: 9/1/2026	Sheet:
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 **HOUSTON**
engineering, inc.