

DITCH REPAIR PLAN

CD25

STEARNS COUNTY MINNESOTA

April 25, 2017

Amended June 2, 2017

Approved by Board of Commissioners acting as Drainage Authority on 6/20/17

Authored by: Martini, Chad

DITCH REPAIR PLAN

CD25

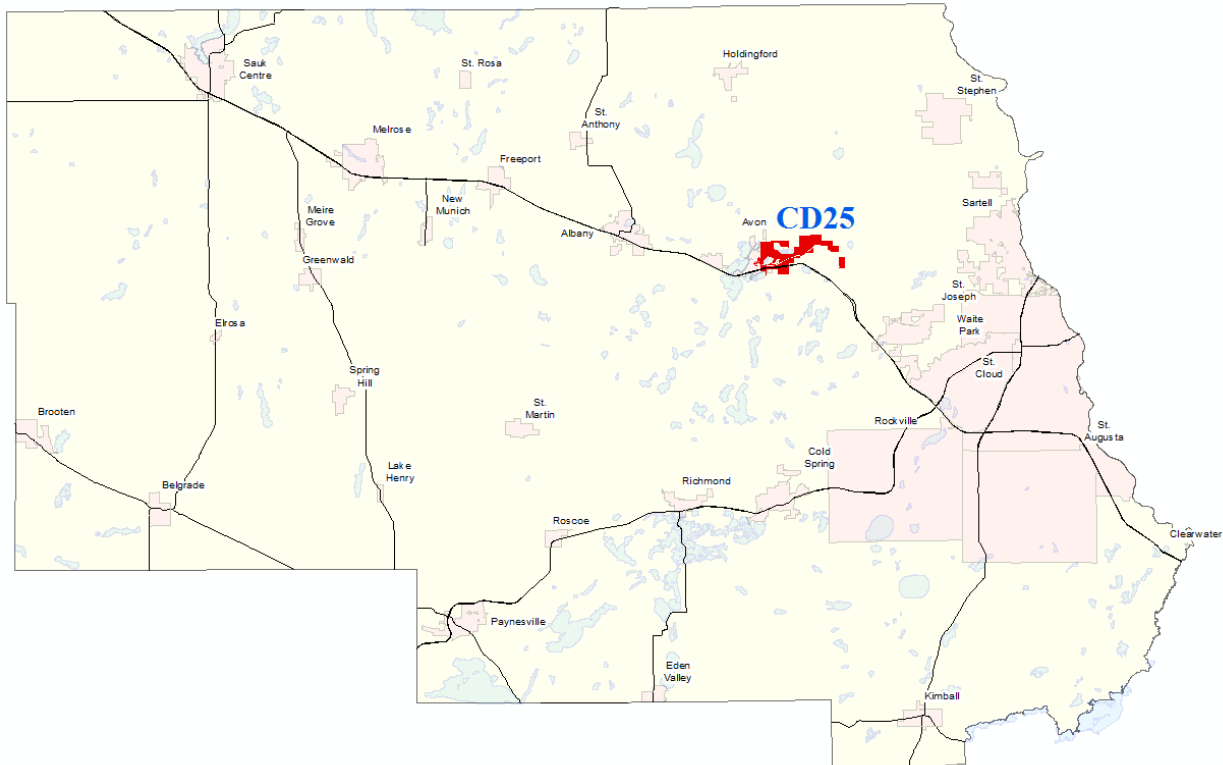
Introduction

Stearns County Ditch 25 was established in 1905. The ditch is 3.1 miles in length and contains roughly 1,681 benefitted acres.

Past history of CD25 shows that in 1945 a clean out was requested and completed. A clean out occurred on the eastern portion of the ditch in 2007. Current county staff began working with property owners and inspecting the ditch in 2015.

This document references CD25 Ditch Inspection document dated April 12, 2017 and Stearns County Ditch 25 Profile Elevation engineer report dated 4/25/2017. These documents contain elevations, photos, and stationing references.

CD25 is both a legal county ditch and public waters. The DNR requires review of drainage projects and may also require a permit for work in the ditch or a letter of permission.



This plan was created using survey elevation data collected by Stearns County, Engineering analysis, and field inspections.

The following data has been collected:

- Survey As Built of the current ditch
- Engineer's Report that reestablishes the original elevation profile
- Photos of the condition of the ditch
- Firsthand accounts by staff performing inspection onsite

Observations from CD25 Inspection Report dated April 12, 2017

The ditch should be free of wood and earth piles. Reestablishing a 4 foot ditch bottom as designed will increase capacity of the ditch. Exact impacts to benefitted property from any repair are unknown without further engineering review.

The physical condition of the land surrounding the ditch does create obstacles to performing any repair. The entire region is saturated with water. The water table is very near to the top of soil which makes the ground extremely soft and muddy. Any repair using heavy equipment may require the work to be completed in frozen conditions for the purpose of access.

Any repair will require permission from the DNR and approval by the Stearns County Drainage Authority.

Repair Plan

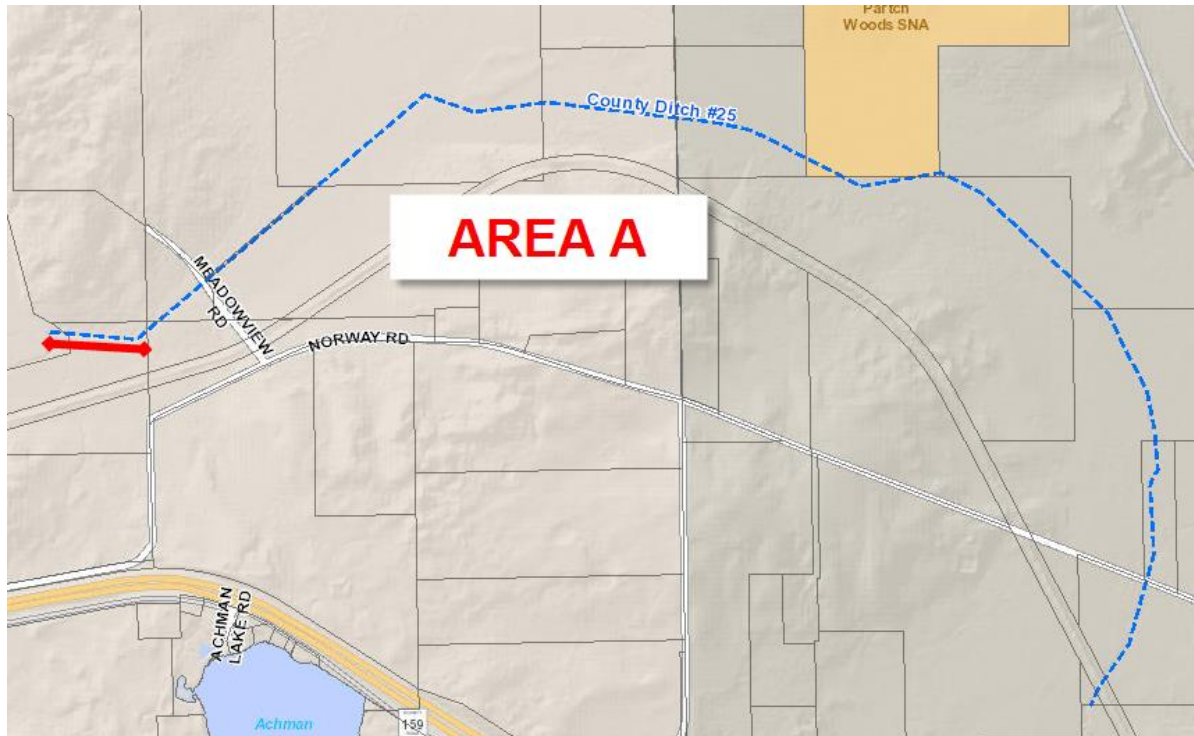
Locatoins in the repair plan will reference stationing from beginning to end of CD25. The stationing and related profile elevation information can be found in the document Stearns County Ditch 25 Profile Evaluation dated December 13, 2016 and prepared by Civil Methods, Inc.

No excavation is assumed unless specifically mentioned. Stearns County shall be onsite to manage all work and use survey grade GPS to ensure elevations meet the desired targets. No vendor work shall be done without Stearns County staff onsite.

Stearns County Survey Field Crew will be onsite to aid in locating stations.

AREA A

Station 0+00 to 10+00

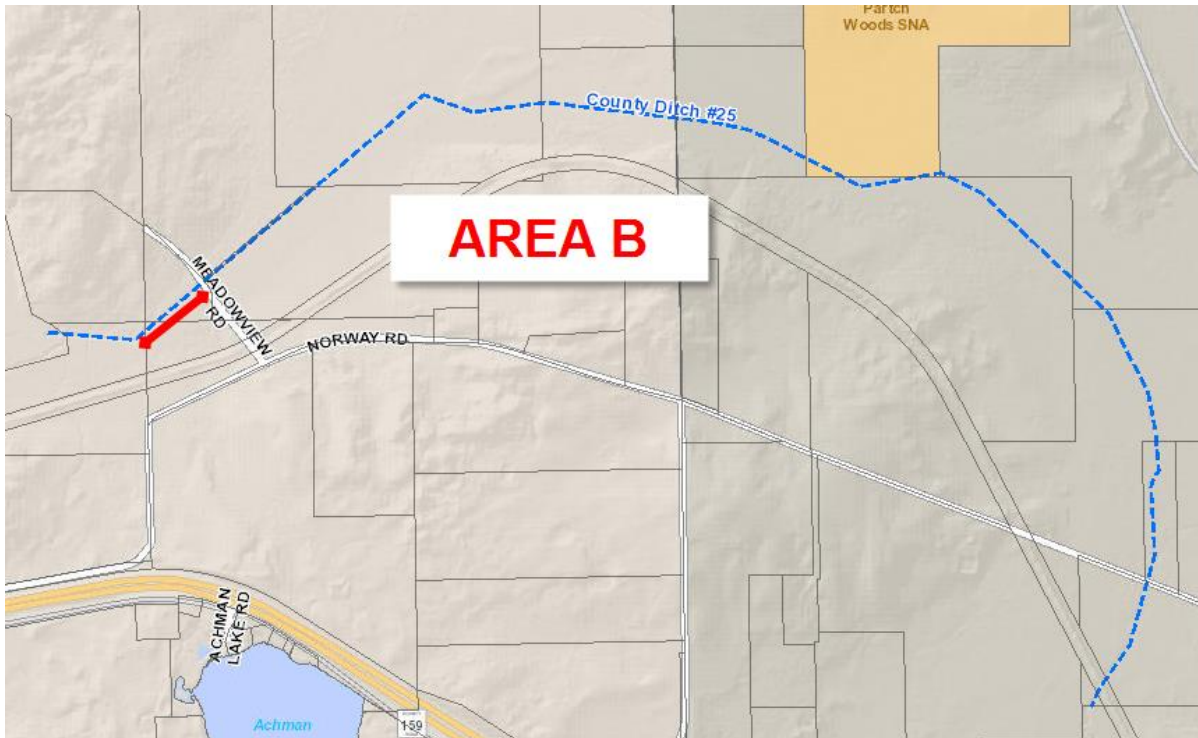


Restore entire extent of ditch to form a 4 foot bottom and 7-9 foot top of ditch width. Spot excavations are required to restore ditch to design.

- Excavate the beginning point of the ditch (station 0+00 to 1+00) to 1119.6 and reshape ditch to designed 4 foot bottom width. Ditch is currently clear of wood, but some grass bog slumps remain to be removed. Area to the south is meadow and free of obstructions to equipment.

AREA B

Station 10+00 to 18+00



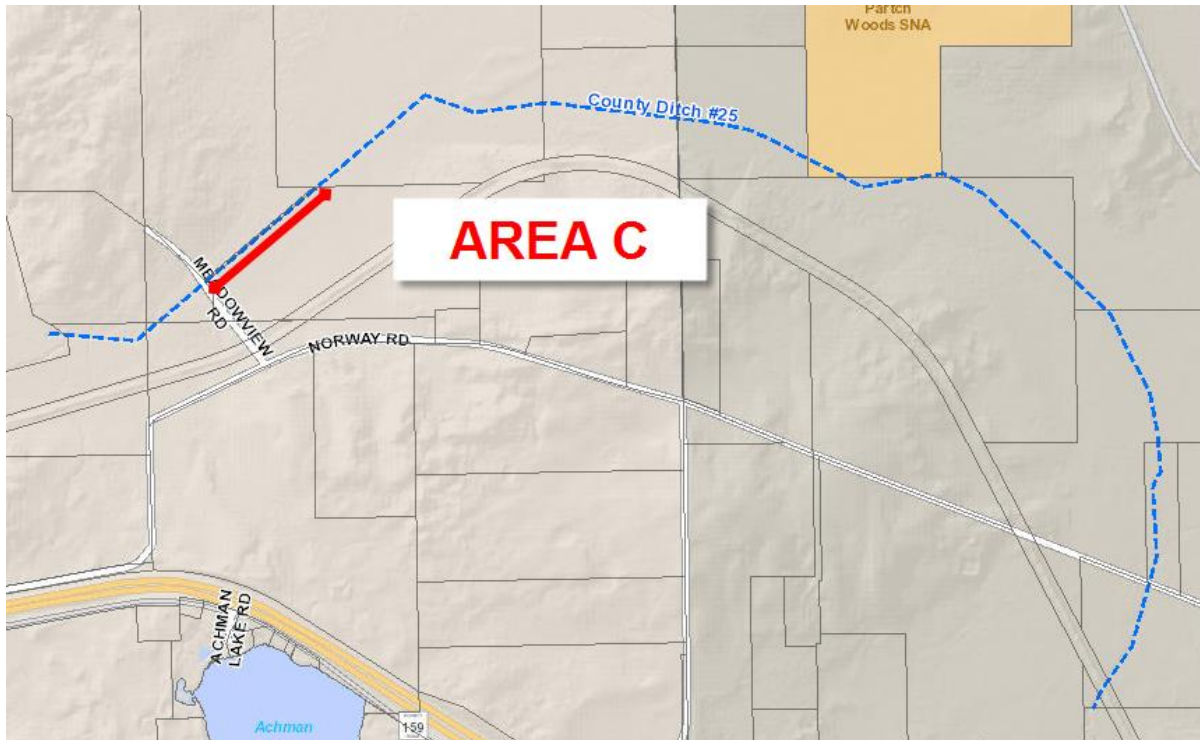
Clear trees and brush from within water or interfering with water to leave an open channel.

- **Station 18+00**

- Clear slumped portion of ditch to form a clear channel to culverts. It is believed this is actually a downed tree that has collected debris to form the mound we see on page 8 of the CD25 Inspection Report. **(COMPLETE)**
- Stearns County removed most of the debris but some trees and grass vegetation remain to be removed.
- Sediment pile immediately west of Meadowview Rd culvert to be removed

AREA C

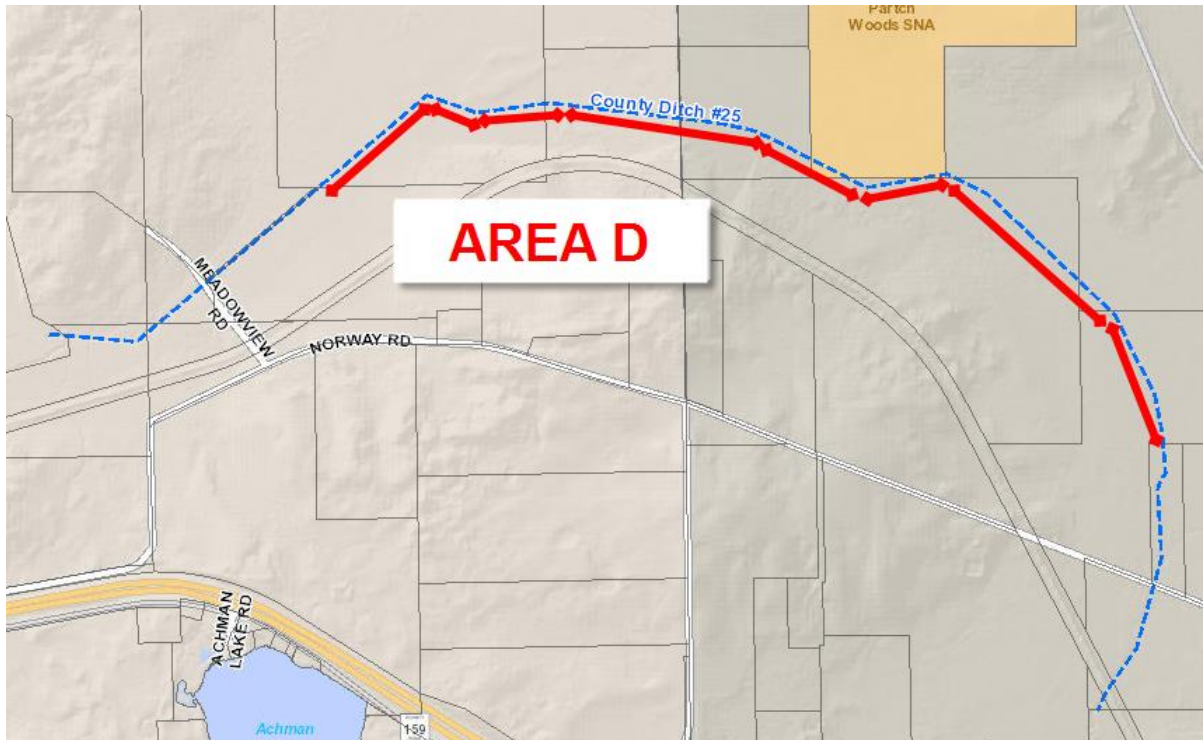
Station 18+00 to 32+00



- Clear trees and brush from within water or interfering with water to leave an open channel. Vendor bids for this work will be collected by Stearns County, but local property owners have indicated a willingness to volunteer to remove trees on their own property.

AREA D

Station 18+00 to 128+00

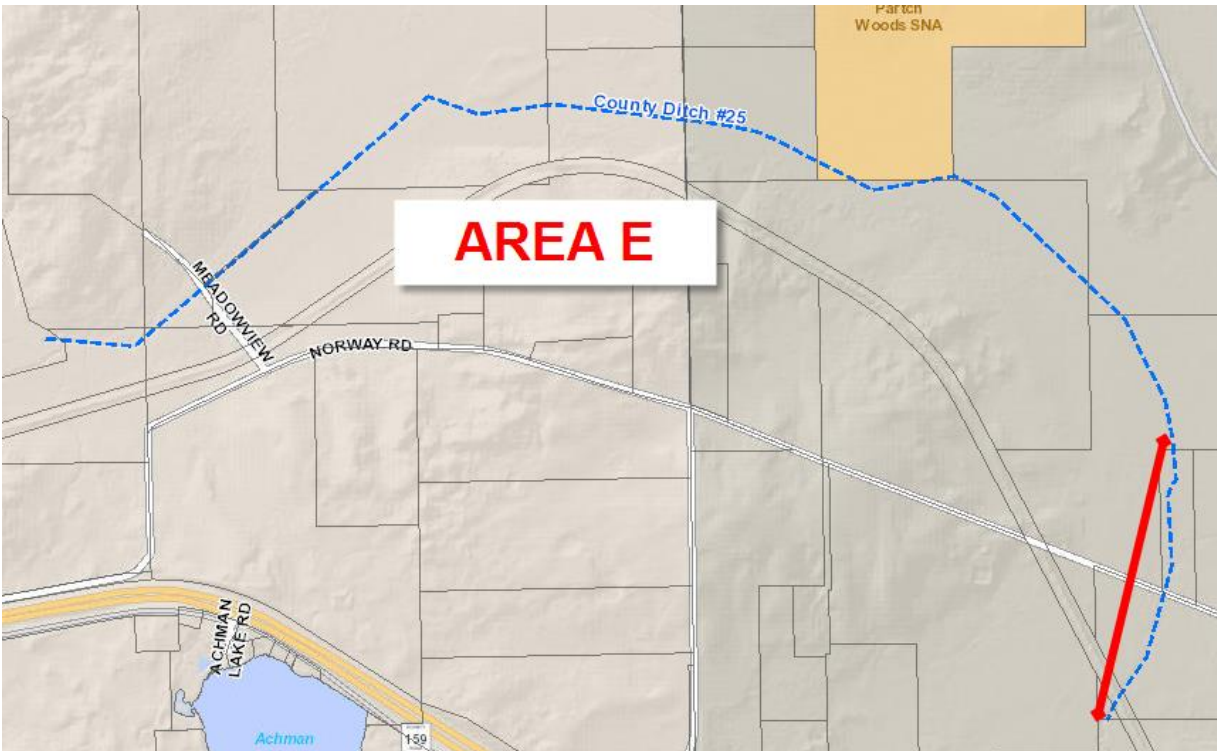


Restore entire extent of ditch to form a 4 foot bottom and 7-9 foot top of ditch width. Spot excavations are required to restore ditch to design.

- **Station 18+00 to 163+00**
 - Reshape ditch to form a 4 foot bottom and 7 - 9 foot top of ditch width
- **Station 66+00**
 - Straighten channel to restore original design alignment
- **Station 105+00**
 - Straighten channel to restore original design alignment
- **Station 108+50**
 - Straighten channel to restore original design alignment
- **Station 117+50**
 - Straighten channel to restore original design alignment

AREA E

Station 128+00 to Station 163+00



Reshape ditch to form a 4 foot bottom and 7 – 9 foot top of ditch width as well as spot excavations to restore ditch to design.

- **Station 128+00 to Station 136+00**
 - Straighten channel to restore original design as well as restore elevation (excavation) to design
- **Station 136+00 to 163+00**
 - In addition to reshaping, restore elevation to design (excavation) with special care to taper into natural channel after the ditch ends at station 163+00

Project Parameters

Spoils taken from the ditch channel can be dumped on site

Specifications of excavating bucket: straight edge

Spoils will need to be spread evenly and seeded with a fast growing cover crop after a drying period

Stearns County Survey Crew must be onsite during any work. Vendor is responsible for managing elevation of work with Stearns County Survey Crew spot checking elevation of work.

Timeline is dependent on weather conditions. Stearns County and vendor will need to coordinate regarding work during frozen or wet conditions is needed.

Contract will may expire March 31 2018 if work has not been completed.

Price Requirements Use RFQ Price Page

Timeline of work – To be determined based on weather conditions and site accessibility)

A single bid from Dullinger Excavating was submitted

	BASE COST	ADD ON COST FOR REMOVING TREES	EST# OF CY	EST# HOURS
Area A	\$1,030			1 day
Area B	\$3,824	\$2,500		3 days
Area C	\$4,442	\$2,500		3 days
Area D	\$11,3330			6 days
Area E	\$3,605			2 days