



Le Sueur County, MN

Tuesday, June 16, 2015

Board Meeting

Item 6

10:30 am Reconvene Ditch 58 Public Hearing (45 min)

Staff Contact:

June 10, 2015

Le Sueur County Drainage Authority
88 South Park Avenue
Le Center, MN 56057



Re: Amendment to the Le Sueur County Ditch No. 58 Repair Report

Members of the Le Sueur County Drainage Authority:

At the previous hearing for Le Sueur County Ditch No. 58 (CD 58) ISG was asked to look into different options to repair Branch 2 of CD 58 in a cost effective and feasible way. ISG has looked into multiple options and has presented the best option as referenced herein.

The most cost effective way to repair Branch 2 is for the proposed tile to closely follow the alignment of the existing Branch 2 tile. This requires the least amount of tile needed for the repair. The problem with following the existing tile alignment is that the soils have subsided after the original Branch 2 was installed and there is no longer adequate cover over the pipe. ISG has proposed to repair the first 1,100 linear feet of Branch 2 with a larger tile that will be installed at a flatter grade. This will restore the amount of cover above the tile without increasing capacity of the system.

The original profile drawings of Branch 2 show the tile having between four to six feet of cover above the pipe at the upper end of the Branch. Installing the larger tile at a flatter grade will restore close to the original amount of cover above the pipe. This can be seen in the profile drawing attached to this amendment.

It is proposed that the original 14-inch tile be replaced with an 18-inch tile. The 14-inch tile was installed at a 0.18% slope. Using Manning's equation, the original tile has a capacity of 2.29 cfs. The proposed 18-inch tile will be installed at a 0.04% slope; this gives the proposed tile a capacity of 2.11 cfs.

The cost to repair Branch 2 with this option is \$109,200. This amount is for the repair of the tile system and does not include the costs to repair the existing swale, when the swale is added the total cost for the repair is 161,443. A detailed cost estimate is attached.

Based on the request to look into different options for repairing Branch 2, the amendment has been made to the CD 58 Repair Report. ISG feels that this option is both cost effective and feasible. It should be noted that even though a larger tile is being proposed it has been shown that this will not increase the capacity of the system and therefore is still considered as a repair and not an improvement. It is our recommendation that the Drainage Authority move ahead with this option at the continuance of the repair hearing.

115 East Hickory Street, Suite 300 + Mankato, MN 56001

info@is-grp.com + www.is-grp.com

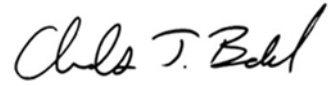
P: 507.387.6651

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Please contact us with any questions or comments.

Sincerely,

A handwritten signature in black ink that reads "Chuck J. Brandel". The signature is written in a cursive style with a large initial 'C'.

Chuck J. Brandel, PE
Civil Engineer/Principal



REPAIR COSTS

BRANCH 2

Item No.	Item	Unit	Quantity	Unit Price	Amount
001	Mobilization	LS	1	\$ 2,709.20	\$ 2,709.20
002	18" Tile Outlet (Riprap & Geotextile Fabric)	LS	1	\$ 600.00	\$ 600.00
003	18-Inch Agricultural Tile (Original 14-inch)	LF	1,100	\$ 28.00	\$ 30,800.00
004	12-Inch Agricultural Tile	LF	1,200	\$ 22.00	\$ 26,400.00
005	8-Inch Agricultural Tile	LF	810	\$ 16.00	\$ 12,960.00
006	Drop Intake	EA	3	\$ 1,300.00	\$ 4,043.00
007	Tile Connections	EA	8	\$ 325.00	\$ 2,600.00
Total					\$ 80,200.00
10% Unforeseen					\$ 8,020.00
Subtotal					\$ 88,220.00
Temporary Damages		AC	7.2	\$ 800.00	\$ 5,760.00
County Administration Costs					\$ 3,088.00
Topographic Survey					\$ 2,427.00
Repair Plans, and Specifications					\$ 3,970.00
Construction Staking & Administration					\$ 5,735.00
Total Tile Repair Cost					\$ 109,200.00

SWALE REPAIR COSTS

BRANCH 2

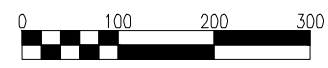
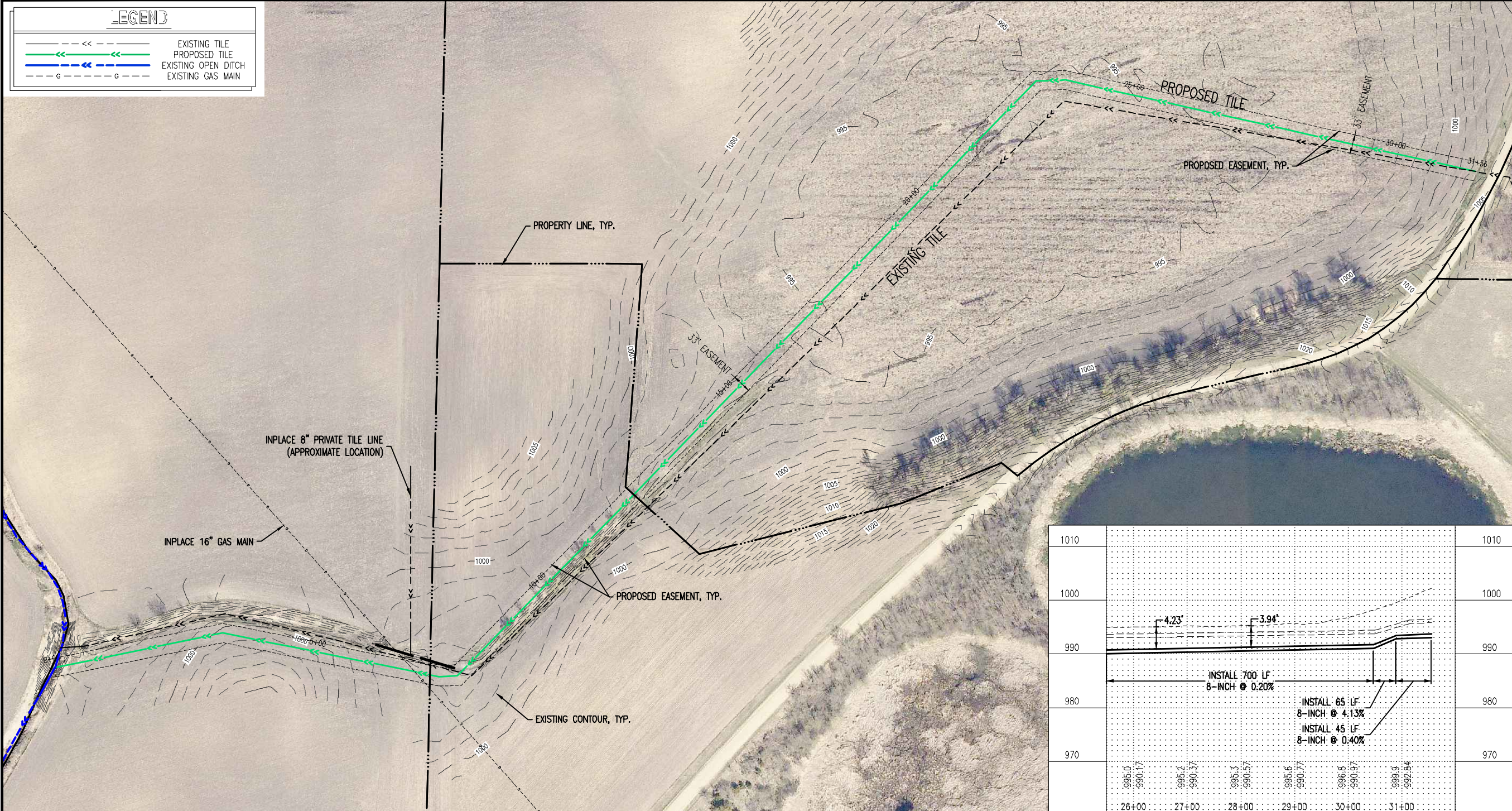
Item No.	Item	Unit	Quantity	Unit Price	Amount
001	Mobilization	LS	1	\$ 2,430.00	\$ 2,430.00
002	Clear & Grub Existing Trees	LS	1	\$ 3,200.00	\$ 3,200.00
003	24" Tile Outlet (Riprap & Geotextile Fabric)	LS	1	\$ 1,000.00	\$ 1,000.00
004	24-Inch Culvert Outlet	LF	40	\$ 34.00	\$ 1,360.00
005	24-Inch Drop Intake	EA	1	\$ 1,200.00	\$ 1,200.00
006	24-Inch CMP Culvert (Crossing)	LF	130	\$ 40.00	\$ 5,200.00
007	Clean & Regrade Swale	LF	1,500	\$ 5.00	\$ 7,500.00
008	Seed Disturbed Swale Area (Mix 34-261)	AC	1.50	\$ 2,000.00	\$ 3,000.00
009	Install MnDOT Category 4 Erosion Control Blanket	SY	1,500	\$ 7.25	\$ 10,875.00
010	Random Riprap Class III (On Type 4 Geotextile Fabric)	CY	50	\$ 80.00	\$ 4,000.00
Total					\$ 39,800.00
10% Unforeseen					\$ 3,980.00
Subtotal					\$ 43,780.00
Temporary Damages		AC	1.1	\$ 800.00	\$ 909.09
County Administration Costs					\$ 1,533.00
Topographic Survey					\$ 1,204.00
Repair Plans, and Specifications					\$ 1,971.00
Construction Staking & Administration					\$ 2,846.00
Total Swale Repair Cost					\$ 52,243.09
Total Repair Cost					\$ 161,443.09

LEGEND

- <<---<< EXISTING TILE
- >>--->> PROPOSED TILE
- G---G EXISTING OPEN DITCH
- c---c EXISTING GAS MAIN

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Scale:

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.
CHARLES J. BRANDEL

DATE _____ LIC. NO. 43359

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.

DATE _____ LIC. NO. _____

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PROJECT
**LE SUEUR COUNTY
COUNTY DITCH NO.
58 REPAIRS**

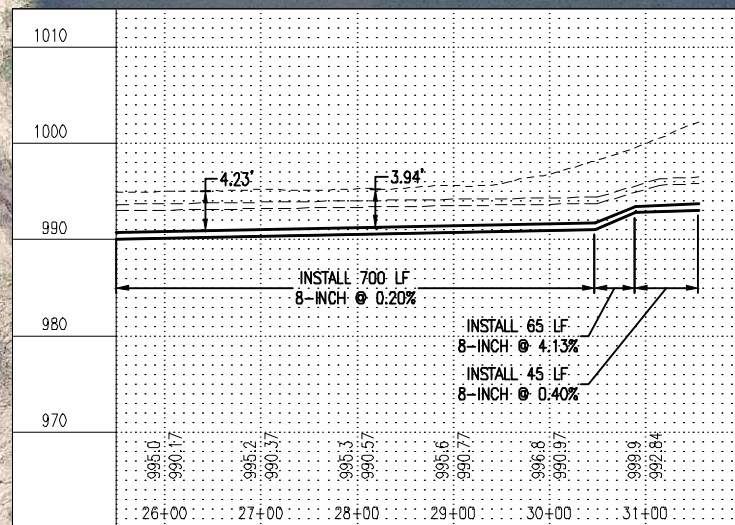
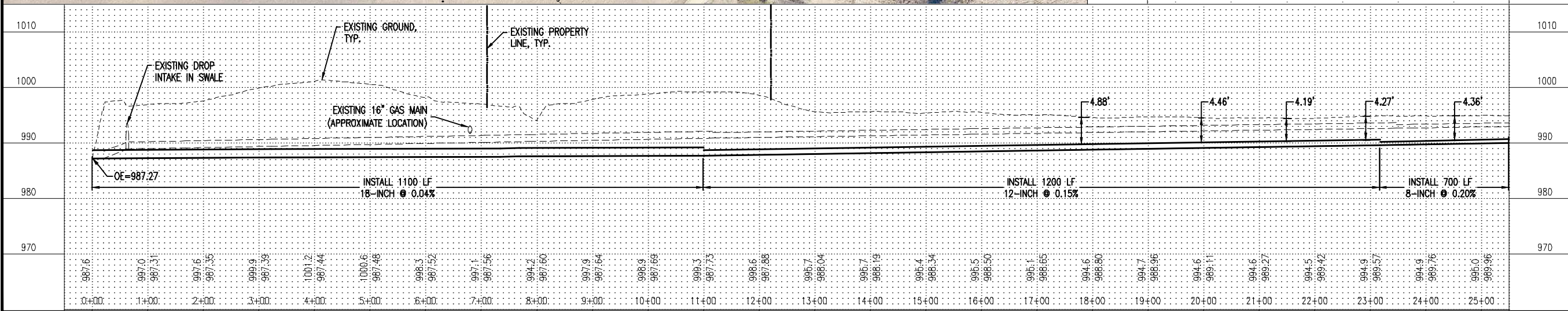
CLEVELAND TWP. MINNESOTA

REVISION SCHEDULE	
NO	DESCRIPTION

PROJECT NO. 17265
FILE NAME 17265 CD 58 PROFILES
DRAWN BY ASB/KDS
DESIGNED BY ASB/KDS,CJB
REVIEWED BY CJB
ISSUE DATE ---
CLIENT PROJECT NO. ---

TITLE
REPAIR PROFILE

SHEET



STATE OF MINNESOTA
LE SUEUR COUNTY BOARD OF COMMISSIONERS
SEATED AS DRAINAGE AUTHORITY UNDER STATUTES CHAPTER 103E
FOR LE SUEUR COUNTY DITCH 58

The matter of the Repair of Branch 2 of Le
Sueur County Ditch 58

Final Repair Order

At a hearing on the repair of Branch 2 of Le Sueur County Ditch (LCD) 58, on May 19, 2015, recessed and continued to June 16, 2015 in the Commissioner's room of the Le Sueur County Courthouse, 88 South Park Avenue, Le Center Minnesota, Commissioner _____ made a motion to adopt the following Findings and Order:

WHEREAS, the Le Sueur County Board of Commissioners, Drainage Authority for LCD 58, upon concerns expressed by owners of property benefited by the drainage system in the vicinity of Branch 2 of LCD 58, directed an inspection of a portion of the drainage system and preparation of a condition report along with recommendations for repair, if necessary to restore the drainage system as nearly as practicable to the same hydraulic capacity as originally constructed and subsequently improved; and

WHEREAS, the inspection was completed and the consulting engineer reported that Branch 2 of LCD 58 is failing and in need of repair; and

WHEREAS, the consulting engineer presented two options for repair that will restore the hydraulic capacity of the system and protect the system from further deterioration; and

WHEREAS, the Board, after making findings regarding the condition of the drainage system and the need for its repair, directed that the engineer evaluate a third repair option more closely following the original alignment of the drainage system; and

WHEREAS, the engineer filed a revised repair report dated April 13, 2015, detailing three repair options for the drainage system; and

[15741-0020/2035904/1]

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WHEREAS, on June 10, 2015, the engineer submitted a repair report addendum detailing a fourth repair option; and

WHEREAS, the four alternatives presented are feasible and consistent with the statutory definition of repair found in statutes section 103E.701 which includes restoring “all or a part of a drainage system as nearly as practicable to the same hydraulic capacity as originally constructed” and “realignment to original construction if necessary to restore the effectiveness of the drainage system;” and

WHEREAS, the Board noticed and held a hearing on the engineer’s repair report in order to take public comment regarding the repair alternatives, including the cost and functionality of the repair alternatives; and

WHEREAS, the engineer recommends repair option four, as detailed in the repair report addendum. The engineer’s recommendation is based on efficient restoration of drainage function, cost, protection of the drainage system and low, long term repair and maintenance costs; and

WHEREAS, the public concerns expressed at the hearing indicated a public preference for lower cost, increased functionality and long term protection of the function of the drainage system; and

WHEREAS, the public comments and the Board’s analysis of the alternatives provided by the engineer lead the Board to conclude that the engineer’s recommended alternative 4 (\$161,443), though not the least expensive alternative (alternative 1, \$148,274; alternative 2 (\$183,950); and alternative 3, \$154,816), will best provide the protection that is desired for the

tile, accessibility required by existing private drainage tile, and restoration of hydraulic capacity;
and

WHEREAS, alternative 1 may cause interference with the function of private tile connecting with the drainage system from the east and will require the acquisition of additional right of way and damage payment, alternative 2 is the most expensive alternative and will require the acquisition of additional right of way and damage payment, and alternative 3 will result in a shallow laid tile that will likely be prone to future damage and increase maintenance costs; and

WHEREAS, the Board restates its findings that Branch 2 of LCD 58 is failing and in need of repair and the repair of Branch 2 of LCD 58 is necessary to restore the hydraulic efficiency of the system and to protect the system from further deterioration; and

WHEREAS, the Board further finds, based on the repair report, the repair report addendum and the evidence presented, that the recommended repair is necessary for the best interests of the affected property owners.

THEREFOR, based upon findings above, the Board makes the following:

ORDER

1. That Branch 2 of LCD 58 be repaired according to the engineer's recommended repair alternative 4 as indicated in the engineer's repair report addendum dated June 10, 2015.
2. That the engineer prepare plans and specifications for the repair and bid the project.
3. That the drainage authority authorizes the engineer and staff proceed as provided in statutes sections 103E.501, et seq. and reserves to itself those actions required by the drainage code to be taken by the drainage authority.

4. That if a contract is awarded for the repair, the assessment for repair of Branch 2 of LCD 58 be divided over a period of at least 2 years in order to satisfy the requirements of statutes section 103E.705, subd. 6 which limits annual repair assessments to an amount less than \$100,000.

The motion was seconded by Commissioner _____, and after discussion, the motion _____ and the findings and order were _____ by a vote of ___ yes and ___ no.

Dated this ____ day of _____, 2015.

LE SUEUR COUNTY BOARD OF COMMISSIONERS
SEATED AS DRAINAGE AUTHORITY UNDER
STATUTES CHAPTER 103E FOR LE SUEUR COUNTY
DITCH 58

By _____
Chairperson