



Le Sueur County, MN

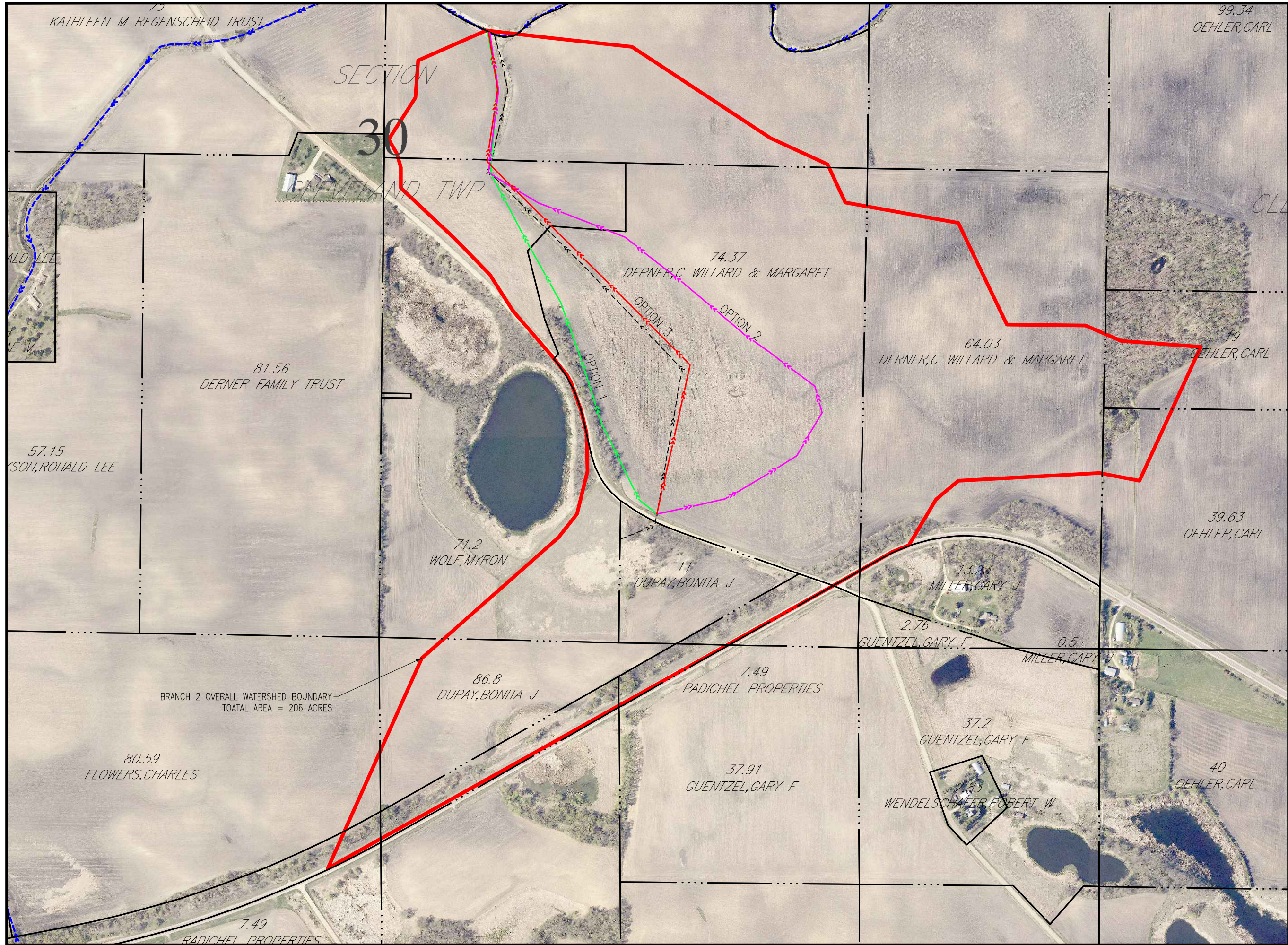
Tuesday, May 19, 2015


Board Meeting

Item 5

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

Staff Contact:






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CHARLES J. BRANDEL

DATE _____ LIC. NO. 43359

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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 WATERSHED

DRAWN BY ASB/KDS

DESIGNED BY CJB/KDS/ASB

REVIEWED BY CJB

ISSUE DATE 03/24/2015

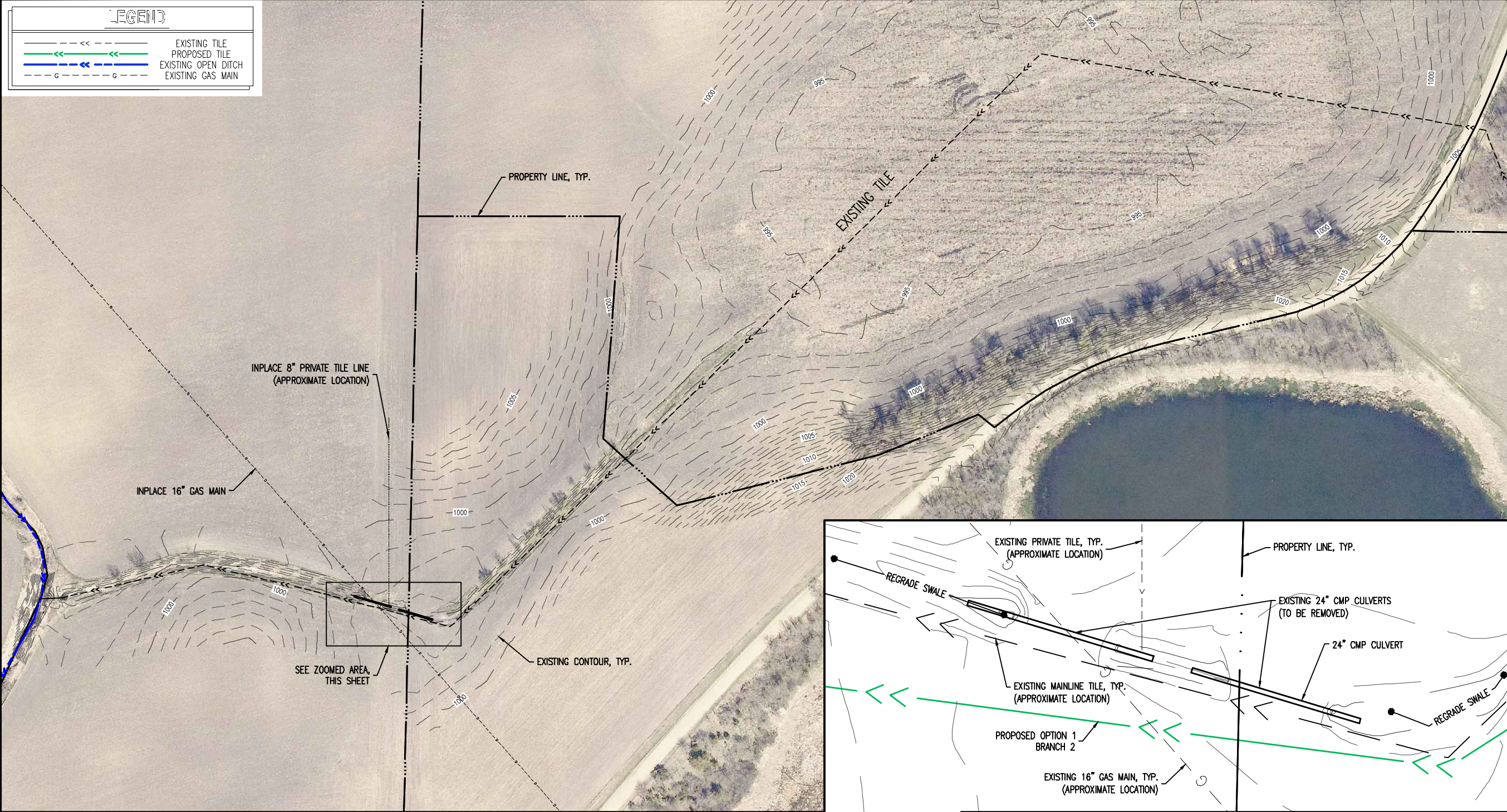
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TITLE

WATERSHED

SHEET

2 OF 9

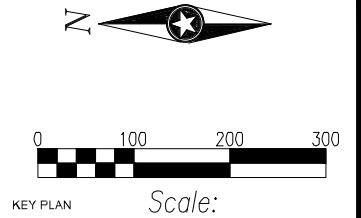


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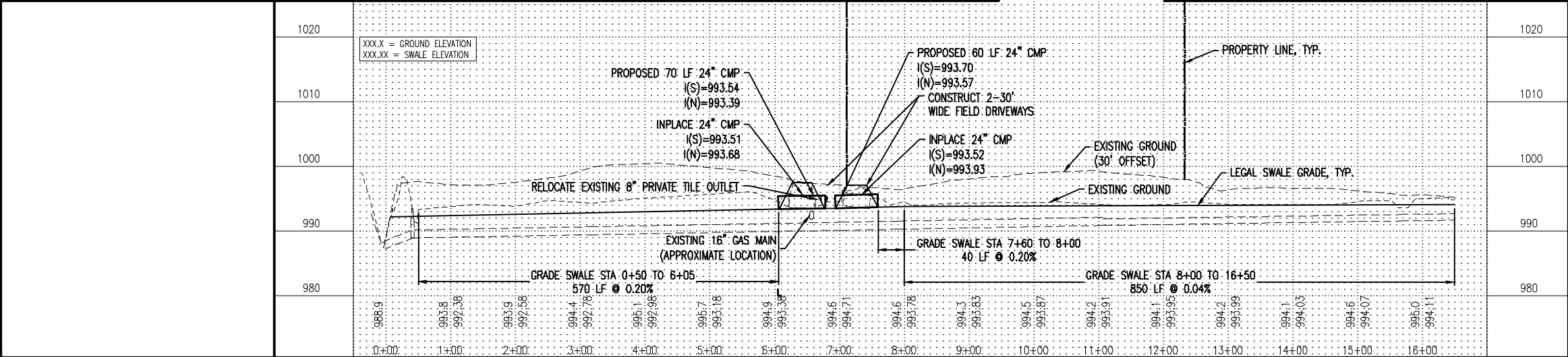
LE SUEUR COUNTY

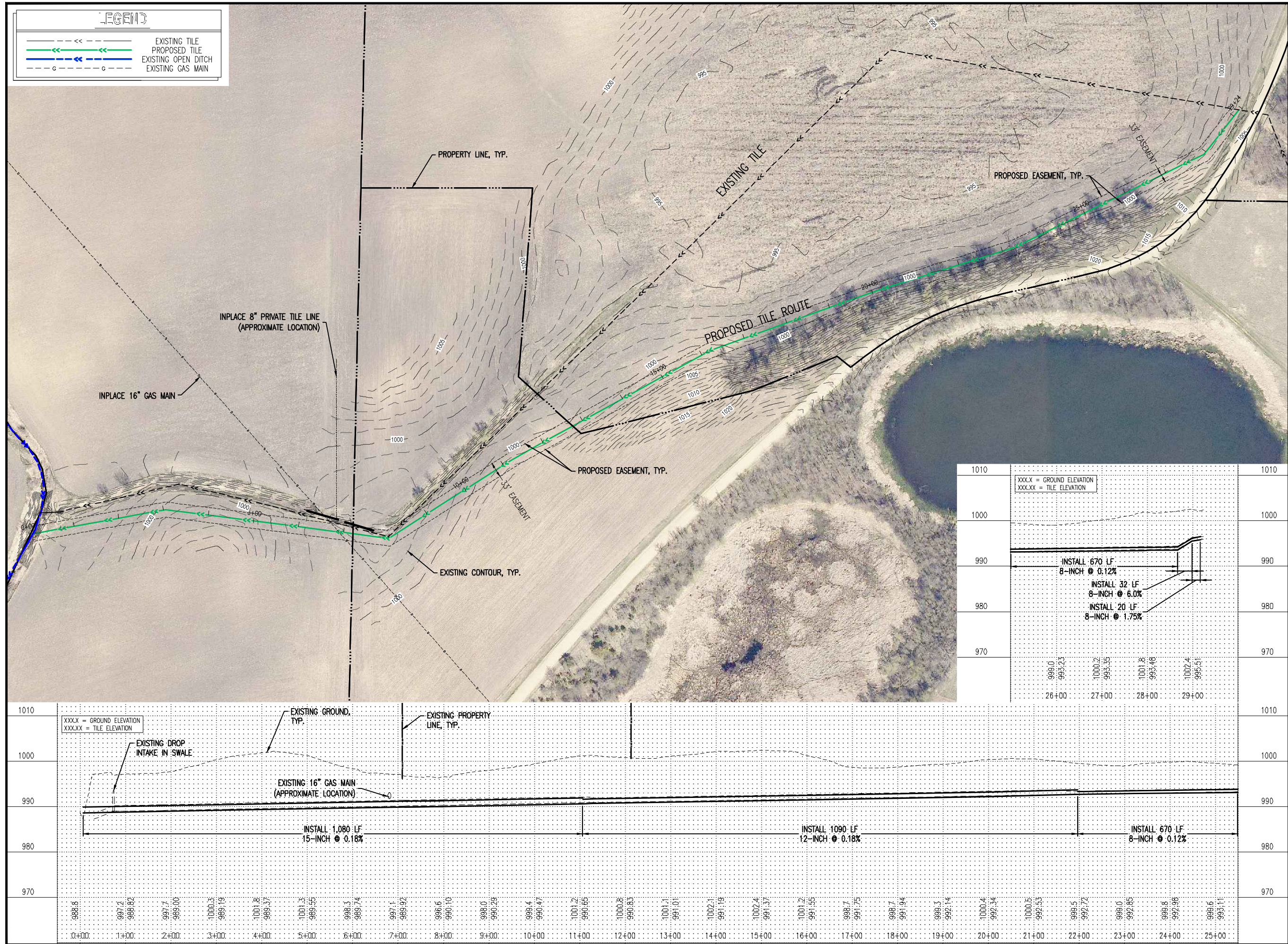
COUNTY DITCH NO. 58 REPAIRS

CLEVELAND TWP. MINNESOTA

REVISION SCHEDULE	
NO	DESCRIPTION

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DRAWN BY	ASB/KDS
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REVIEWED BY	CJB
ISSUE DATE	03/24/2015
CLIENT PROJECT NO.	---
TITLE	
EXISTING SWALE PROFILE	
SHEET	
3 OF 9	





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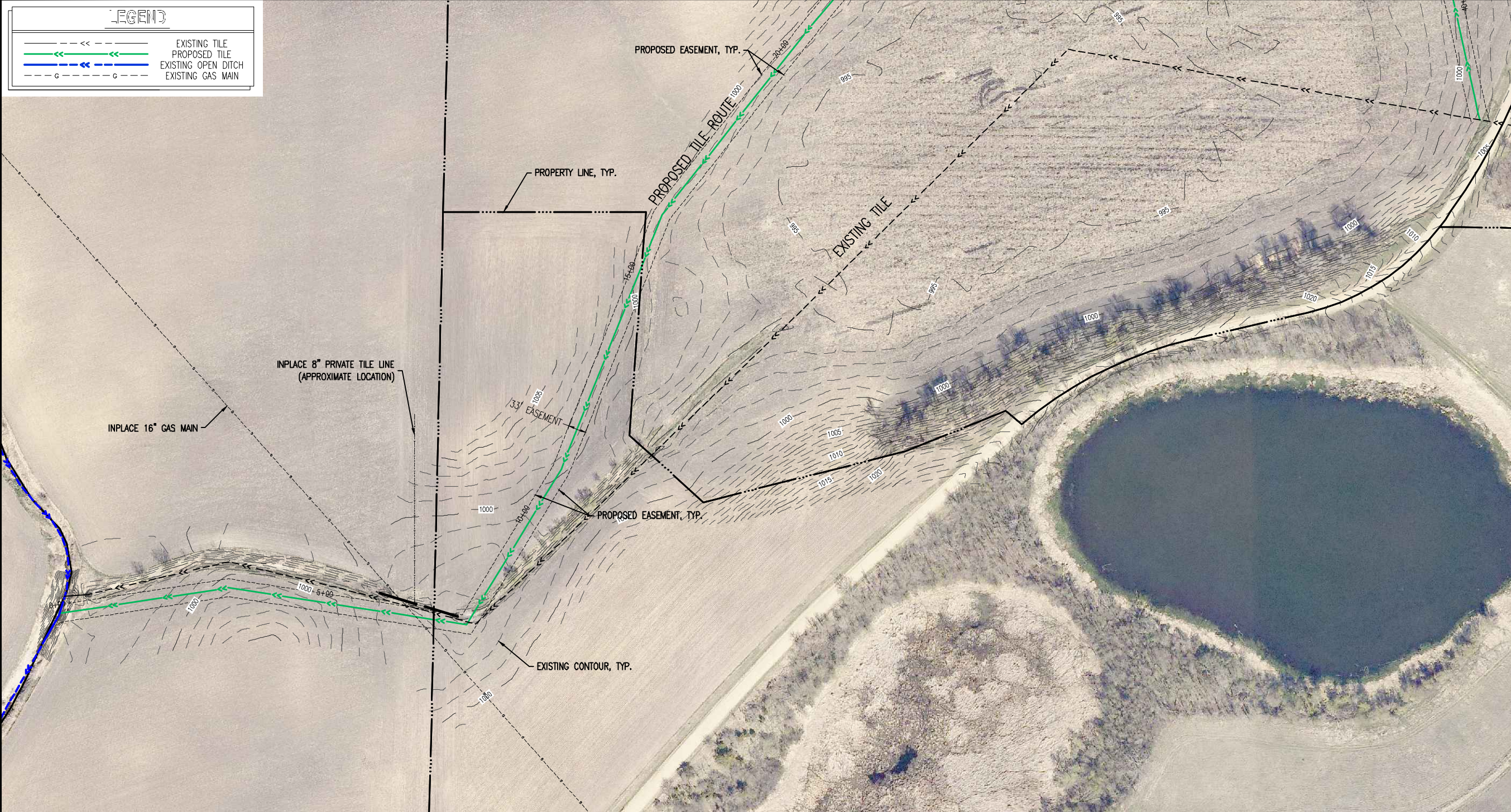
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OPTION 1 PROFILES

SHEET

4

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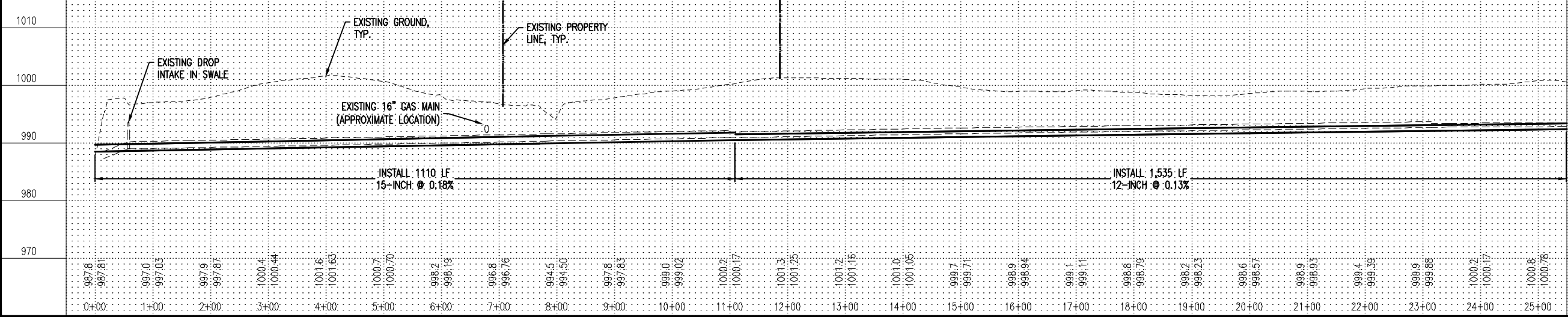
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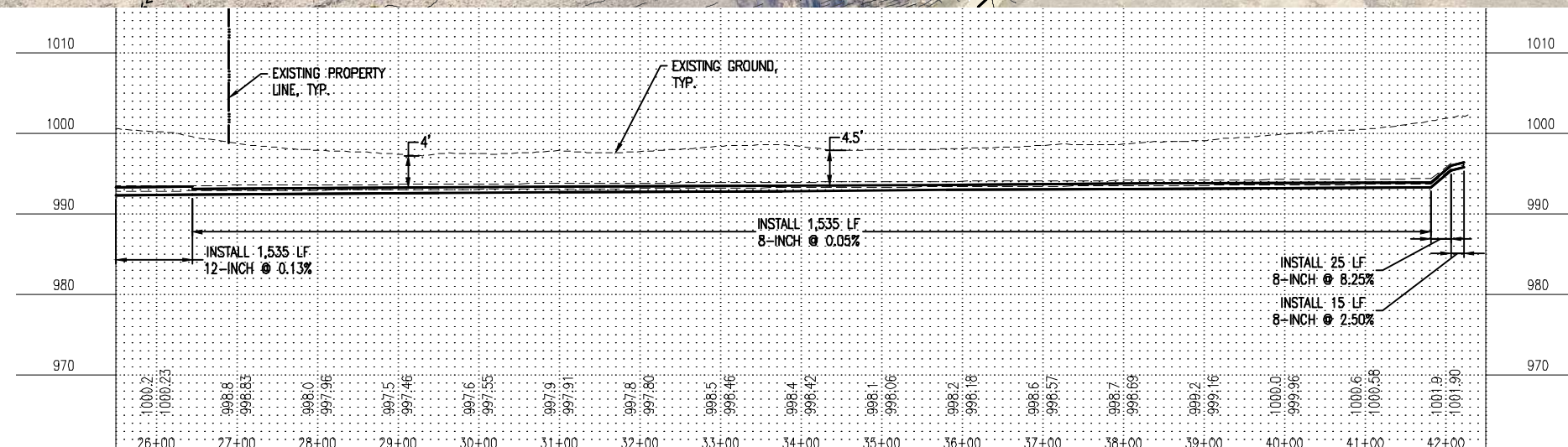
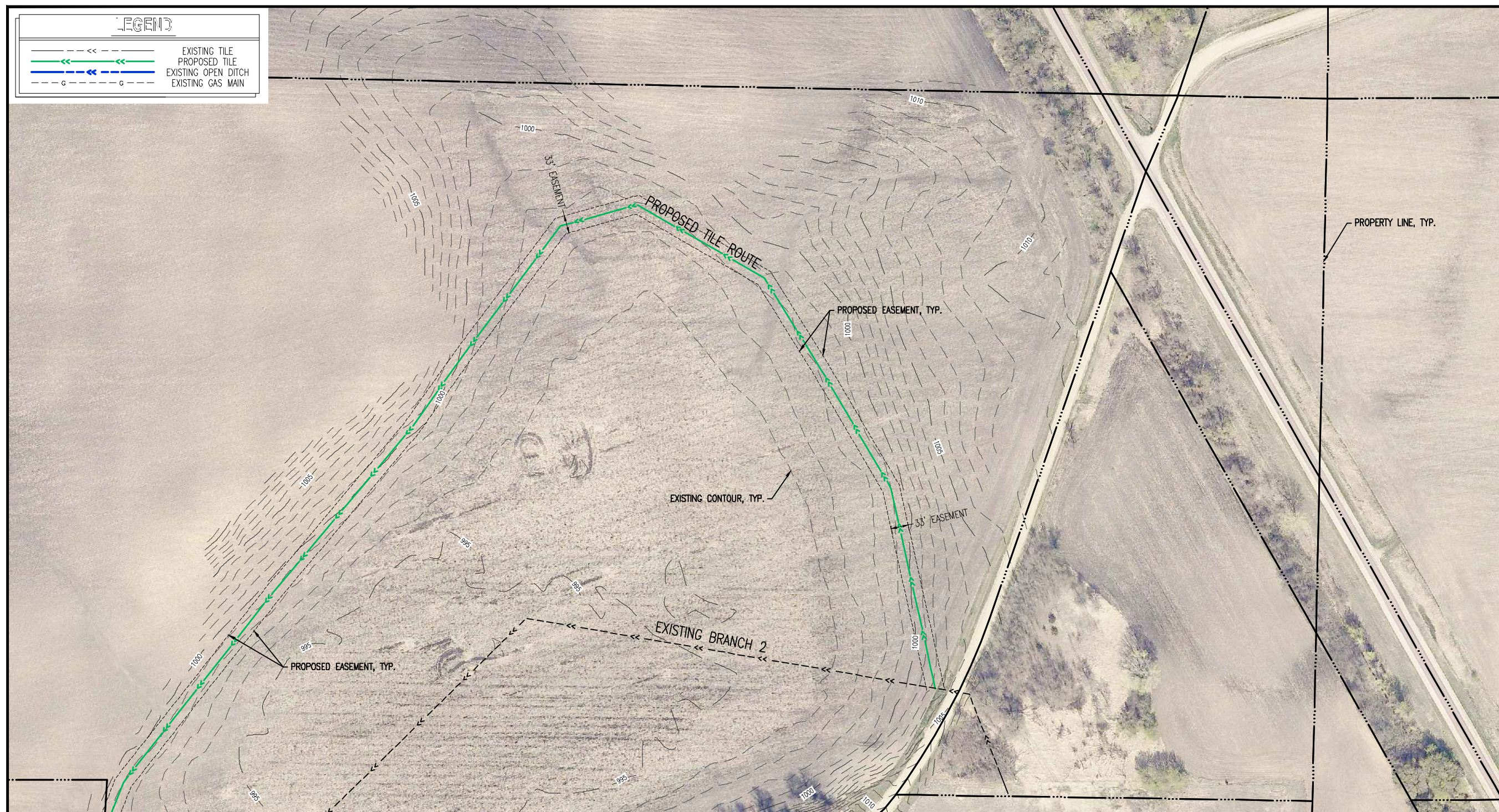
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PROFILE**

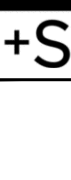


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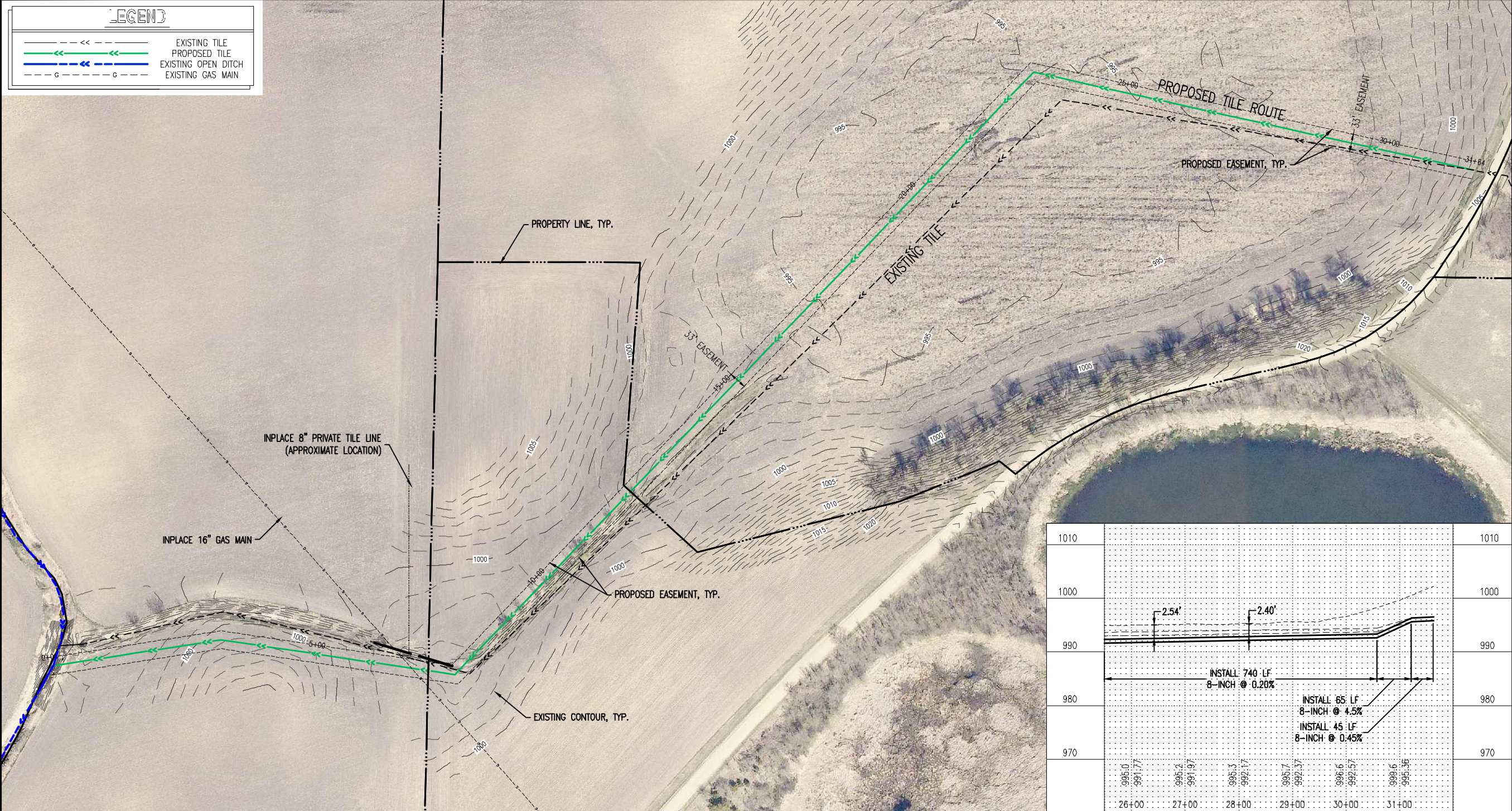




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PROJECT		
<div style="font-size: 24pt; font-weight: bold; margin-bottom: 10px;">LE SUEUR COUNTY</div> <div style="font-size: 24pt; font-weight: bold; margin-bottom: 10px;">COUNTY DITCH NO</div> <div style="font-size: 24pt; font-weight: bold;">58 REPAIRS</div>		
CLEVELAND TWP. MINNESOTA		
REVISION SCHEDULE		
NO	DATE	DESCRIPTION
PROJECT NO. 17265		
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DRAWN BY ASB/KDS		
DESIGNED BY ASB/KDS/CJB		
REVIEWED BY CJB		
ISSUE DATE 03/24/2015		
CLIENT PROJECT NO. ---		
TITLE		
<div style="font-size: 24pt; font-weight: bold; margin-bottom: 10px;">OPTION 2</div> <div style="font-size: 24pt; font-weight: bold;">PROFILE</div>		
SHEET		
<div style="font-size: 36pt; font-weight: bold; margin-bottom: 10px;">6</div> <div style="font-size: 18pt; font-weight: bold;">OF</div>		

LEGEND

- EXISTING TILE
- PROPOSED TILE
- EXISTING OPEN DITCH
- EXISTING GAS MAIN






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PROJECT

LE SUEUR COUNTY

COUNTY DITCH NO. 58 REPAIRS

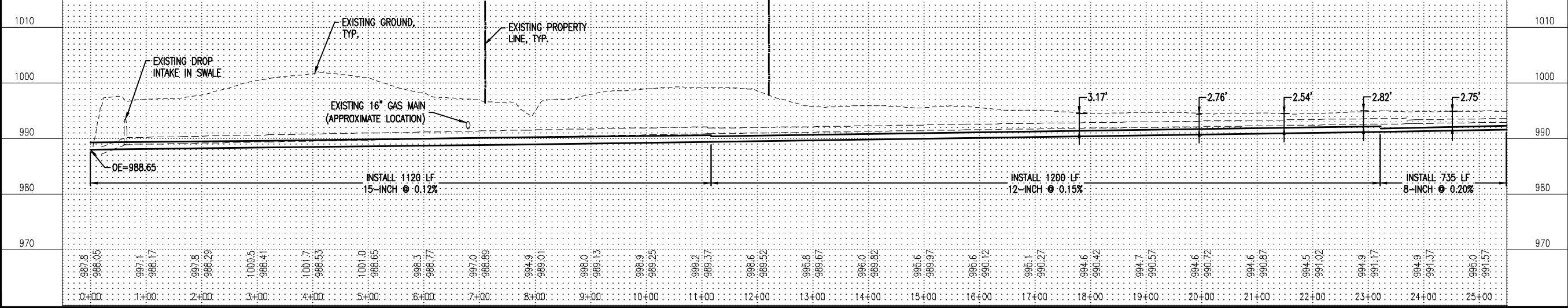
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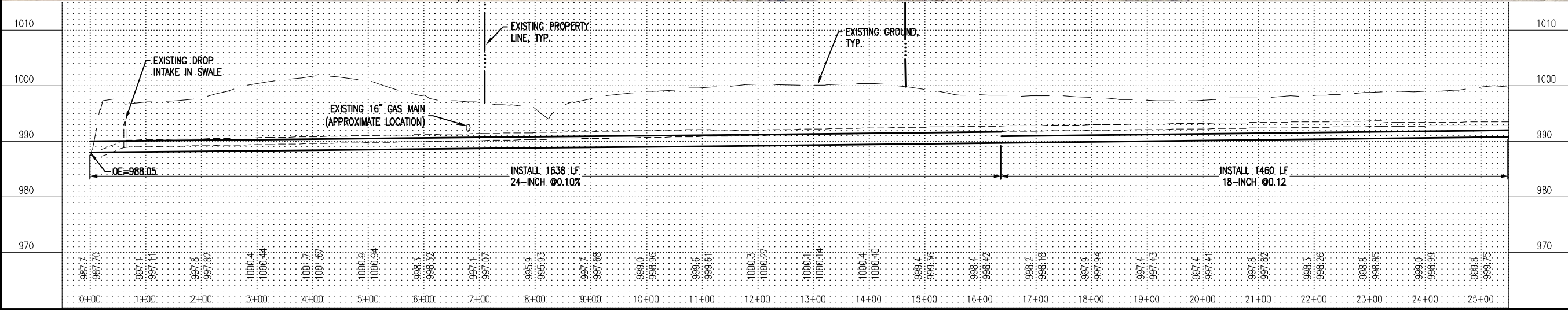
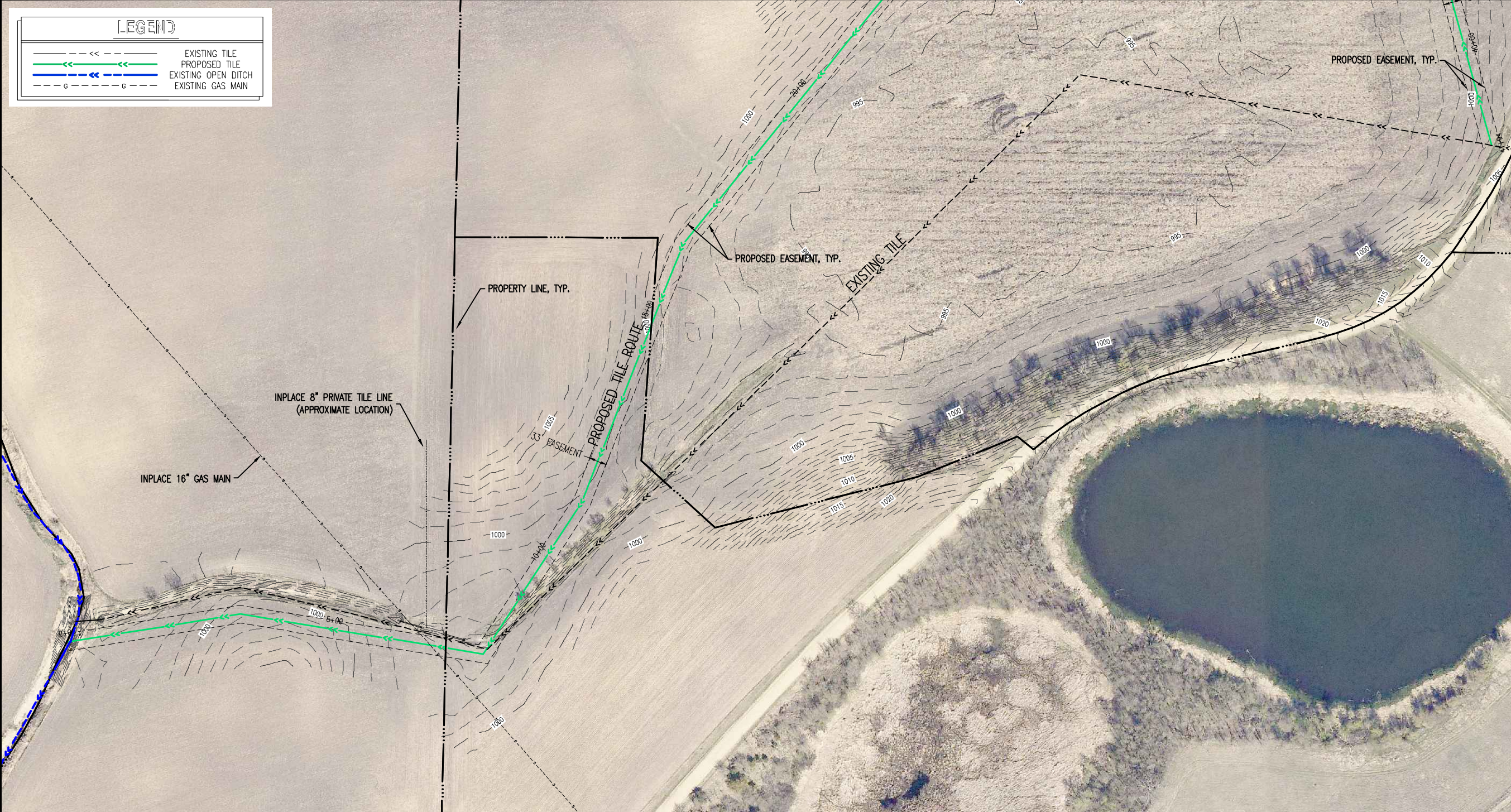
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TITLE

OPTION 3 PROFILE





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COUNTY DITCH NO. 58 REPAIRS

CLEVELAND TWP. MINNESOTA

REVISION SCHEDULE	
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FILE NAME 17265 CD 58 PROFILES

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TITLE

OPTION 4 PROFILE

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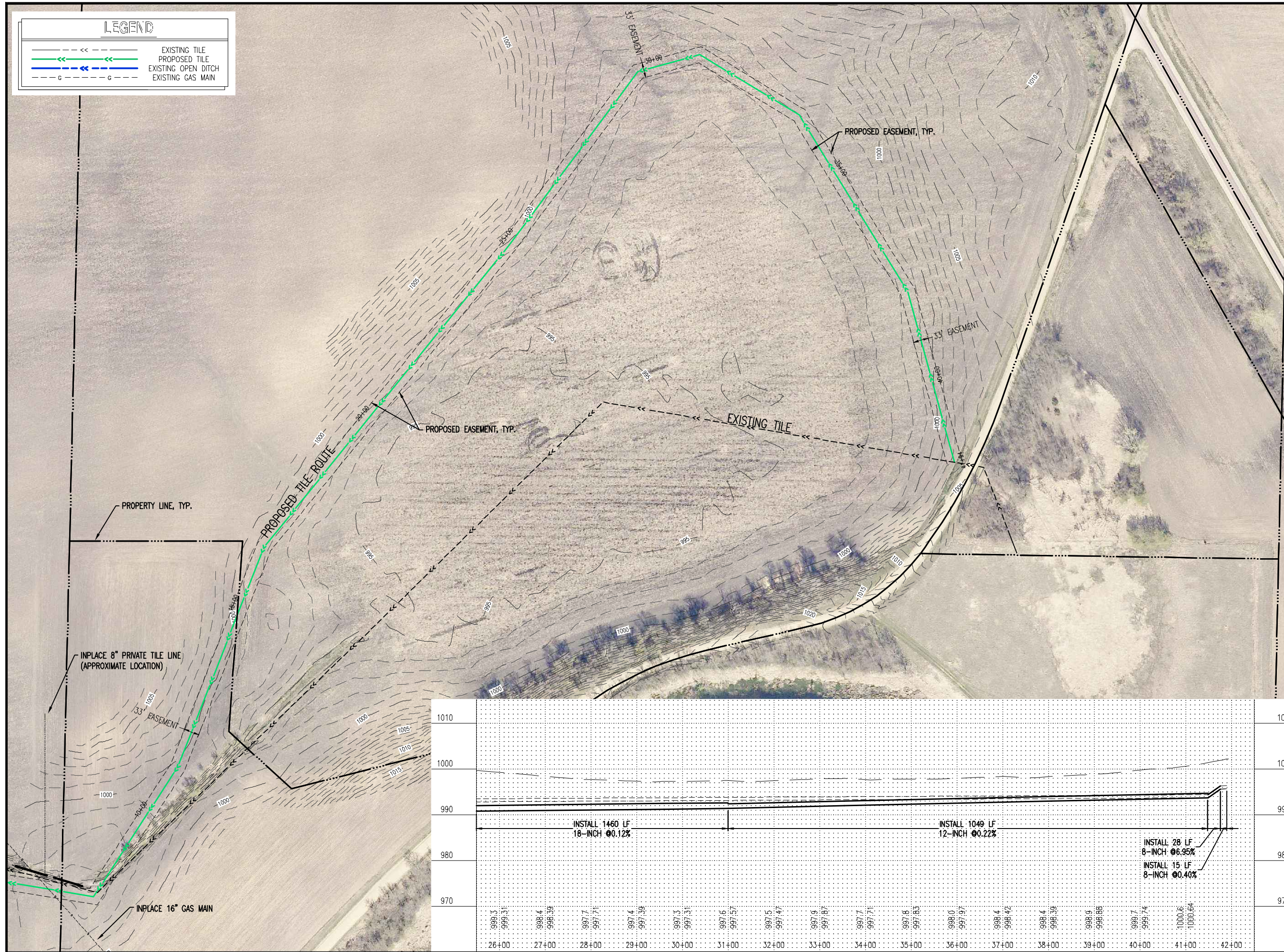
8


OF 9

Le Sueur County

Board Meeting - 5/19/2015

Page 9 / 31







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PROJECT

LE SUEUR COUNTY

COUNTY DITCH NO. 58 REPAIRS

CLEVELAND TWP. MINNESOTA

REVISION SCHEDULE		
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OPTION 4 PROFILE

SHEET

9

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LE SUEUR COUNTY DITCH No. 58 REPAIR REPORT

LE SUEUR COUNTY CLEVELAND TOWNSHIP, MINNESOTA

APRIL 13, 2015
Project No. 14-17265

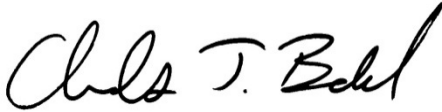


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Signature Sheet

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Charles J. Brandel, PE
Project Engineer
Reg. No. 43359

I+S Group, Inc.
115 East Hickory Street, Suite 300
Mankato, Minnesota 56001-3785

**Le Sueur County Ditch No. 58 Repairs
Cleveland, Minnesota**

Engineer's Project Number: 14-17265

Dated this 13th day of April, 2015

Table of Contents	Page #
Location	1
Watershed	1
Present Condition and Investigation.....	1
Existing Swale Repair	1
Option 1	2
Option 2	2
Option 3	2
Abandonment of Existing Tile.....	2
Practicability and Feasibility.....	2
Recommendation	2
Preliminary Repair Plans	Appendix A
Cost Estimates	Appendix B

Location

Branch 2 of Le Sueur County Ditch No. 58 (CD 58) lies in sections 29, 30, and 31 of Cleveland Township in Le Sueur County, Minnesota. It is situated near the intersection of CSAH 18 (Dog Creek Road) and County Road 106. The tile is crossed by a gas main owned by Northern Natural Gas approximately 700 feet from the CD 58 open ditch. The exact depth of the gas main is unknown, however it is assumed to be below the swale elevation and above the top of the existing tile elevation.

Watershed

The total watershed of Branch 2 is approximately 200 acres. The Branch 2 watershed primarily consists of a large basin with steeper hills that drain to. In addition to Branch 2 there is also a system of private tile lines that help to convey storm water run-off to CD 58. Branch 2 flows to the north into the CD 58 mainline; where the CD 58 flows to the west and outlets to Shanaska Creek and eventually drains to the Minnesota River. The entire ditch system provides drainage for an area of approximately 6,855 total acres. A map outlining the Branch 2 watershed can be found in Appendix A.

Present Condition and Investigation

I+S Group, Inc. (ISG) was asked to investigate potential repair options for Branch 2 of CD 58. The existing tile consists of 3,320 feet of 15-inch, 12-inch, and 8-inch tile. It is presently very shallow through the main basin of its watershed. Between stations 18+00 and 29+00 the Branch 2 mainline averages approximately 1 foot of cover. This small amount of cover, believed to be the result of soil subsidence, has created instances of tile failure and encounters with field machinery.

A survey of the existing ground elevations in the location of both the existing, and the three proposed tile locations was conducted. In addition to the existing ground data, the inverts of the culverts immediately upstream and immediately downstream of the tile outlet were surveyed, as well as the ditch centerline between the two culverts. This information was used to get an estimate of the legal ditch grade of the CD 58 open ditch. Survey information on the existing tile outlet, the existing drop structure, and the top of the pipe in two exposed areas, was also gathered. Using this data, along with the original tile profiles, new profiles were created for the existing tile line as well as the three proposed lines. From this information, it has been found that the existing tile was constructed much shallower than the original profiles depict.

The first proposed option is to construct the new tile along the west side of the basin, the second proposed option is to construct the new tile around the basin on the east side, and the third proposed option is to offset the new tile from the existing tile and construct it through the basin, while placing the tile as deep as is allowed; as the original plans dictate. All existing and proposed tile alignments can be found in Appendix A.

Existing Swale Repair

Included with each option described below, the existing swale will be repaired to the condition as shown in the 1984 drawing provided by Le Sueur County. The first 800 feet of swale will be graded at a 0.20% slope with the remainder graded to 0.04%. Any trees will be cut and grubbed, a 4 foot bottom constructed with 5:1 side slopes, and re seeded with native grasses. The two existing culverts for the field crossings will be removed and replaced with one new field crossing. The new field crossing will be constructed on the property line with approximately 100 feet of 24-inch CMP and a 60 foot crossing top. With the construction of this new crossing, the existing private tile outlet in this location will be rerouted to downstream of the proposed crossing.

Option 1

Option 1 will replace the existing line with a new tile to the west. Moving the tile to the west allows the tile to be constructed with greater depth than the existing tile, take a more direct route, and therefore save money. The more direct route reduces the cost by reducing the amount of tile needed for construction. It also enables the tile to be run at steeper grades in areas, improving capacity. The downside to this option is that the majority of the private tiles connecting into Branch 2 come from the east, which means those tiles would need to be laid both very flat, and very shallow through the basin in order to reach the new tile.

Option 2

Option 2 proposes to replace the existing Branch 2 tile with a new tile constructed along the east edge of the basin. Based on the topography of the area, the only way to construct the tile with enough depth for protection involves utilizing a longer route. Because of this, Option 2 will be more expensive than Option 1. However, Option 2 provides better depth and protection for the private tiles that flow into Branch 2.

Option 3

Option 3 would involve the tile being replaced by a new tile that follows approximately the same route as the existing tile. However, if the outlet is placed 2.5 feet off of the CD 58 open ditch bottom and the tile is constructed at the grades originally planned, this option would average approximately 2.75 feet of cover through the low basin. This option does not involve lowering the outlet, however, by reducing the grade of the last 40 feet of pipe from the drop structure to the outlet, the tile will gain some depth. The expected cost of this option is similar to that of Option 1 as well. This option is not as favorable because the tile isn't as deep as it preferred, however, it would be noticeably deeper than the existing conditions.

Abandonment of Existing Tile

The proposed repair described above will be replacing the existing tile along the mainline. With the proposed tile being a repair of the existing, the existing tile lines being repaired will be abandoned. This abandonment will make them all private tile lines, and therefore they will no longer be a part of the County Ditch 58 system.

Practicability and Feasibility

The watershed benefits from an unobstructed flow through the tile, which will provide more capacity for stormwater run-off during rainfall events. The total Option 1 proposed repair cost for Branch 2 of CD 58 is estimated to be \$148,274 with the swale repair; the total Option 2 proposed repair cost is estimated to be \$183,950 with the swale repair; and the proposed Option 3 repair cost is estimated to be \$154,816 with the swale repair. Private land owners will benefit by restoring the tile to its original design. There will also be increased capacity from its current state of disrepair to the system's original design capacity. This will result in no land use change throughout the system.

Recommendation

It is known that Branch 2 of CD 58 is in need of repair. The three repair options being considered will each replace the majority of Branch 2, but they all come with their own benefits and drawbacks. Options 1 and 3 are less costly because they take more direct routes and require less pipe to be installed, but Option 1 is in a poor location for receiving the existing private tiles and Option 3, although considerably deeper than the existing tile, is still not quite as deep as it is preferred it would be. Option 2, on the other hand, is in a better location to receive the existing private tile lines that flow into Branch 2, but is more expensive than the other options because it takes a longer route. We recommend choosing Option 2. It is believed that this option will best provide the protection that is desired for the tile, and the accessibility that is required by the existing tiles. However, we recommend calling a meeting to discuss these options and which will be more beneficial to the land owners.

Appendix A: Preliminary Repair Plans

LE SUEUR COUNTY COUNTY DITCH NO. 58

CLEVELAND TWP, MINNESOTA

CONSTRUCTION PLANS FOR: BRANCH NO. 2 REPAIRS

ISG PROJECT # 17265

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LEGEND

EXISTING

--- --

CITY LIMITS

--- --

SECTION LINE

--- --

QUARTER SECTION LINE

--- --

RIGHT OF WAY LINE

--- --

PROPERTY / LOTLINE

--- --

EASEMENT LINE

--- --

ACCESS CONTROL

--- W ---

WATER EDGE

--- WET ---

WETLAND BOUNDARY

--- --

WETLAND / MARSH

--- X ---

FENCE LINE

--- > < ---

CULVERT

--- < < ---

OPEN DITCH

--- < ---

TILE

--- < II ---

SANITARY SEWER

--- I ---

SANITARY SEWER FORCEMAIN

--- U ---

WATER

--- UT ---

UNDERGROUND TELEPHONE

--- OE ---

OVERHEAD ELECTRIC

--- UE ---

UNDERGROUND ELECTRIC

--- UTV ---

UNDERGROUND TV

--- G ---

GAS

--- FBO ---

UNDERGROUND FIBER OPTIC

--- 990 ---

CONTOUR (MAJOR)

--- 989 ---

CONTOUR (MINOR)

--- --

DECIDUOUS TREE

--- --

CONIFEROUS TREE

--- --

TREE LINE

--- --

MANHOLE

--- --

CATCH BASIN

--- --

HYDRANT

--- --

VALVE

--- --

CURB STOP

--- --

POWER POLE

--- --

UTILITY PEDESTAL / CABINET

PROPOSED

--- --

LOT LINE

--- --

RIGHT OF WAY

--- --

EASEMENT

--- --

CULVERT

--- --

TILE

--- --

STORM SEWER (PIPE WIDTH)

--- --

SANITARY SEWER

--- --

SANITARY SEWER (PIPE WIDTH)

--- I ---

WATER

--- OE ---

OVERHEAD ELECTRIC

--- UE ---

UNDERGROUND ELECTRIC

--- UTV ---

UNDERGROUND TV

--- G ---

GAS

--- 1015 ---

CONTOUR

--- --

MANHOLE

--- --

CATCH BASIN

--- --

HYDRANT

--- --

VALVE

LOCATION MAP

SHEET INDEX

- 1 TITLE
- 2 WATERSHED
- 3 EXISTING SWALE PROFILE
- 4 OPTION 1 PROFILES
- 5 OPTION 2 PROFILE
- 6 OPTION 2 PROFILE
- 7 IMPROVEMENT PROFILE

PROJECT GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS, WHICH INCLUDE, BUT ARE NOT LIMITED TO, THE OWNER - CONTRACTOR AGREEMENT, THE PROJECT MANUAL (WHICH INCLUDES GENERAL SUPPLEMENTARY CONDITIONS AND SPECIFICATIONS), DRAWINGS OF ALL DISCIPLINES AND ALL ADDENDA, MODIFICATIONS AND CLARIFICATIONS ISSUED BY THE ARCHITECT/ENGINEER.
2. CONTRACT DOCUMENTS SHALL BE ISSUED TO ALL SUBCONTRACTORS BY THE GENERAL CONTRACTOR IN COMPLETE SETS IN ORDER TO ACHIEVE THE FULL EXTENT AND COMPLETE COORDINATION OF ALL WORK.
3. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
4. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
5. DETAILS SHOWN ARE INTENDED TO BE INDICATIVE OF THE PROFILES AND TYPE OF DETAILING REQUIRED THROUGHOUT THE WORK. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO DETAILS SHOWN, WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
6. ALL MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, CLEANED AND CONDITIONED ACCORDING TO MANUFACTURERS' INSTRUCTIONS. IN CASE OF DISCREPANCIES BETWEEN MANUFACTURERS' INSTRUCTIONS AND THE CONTRACT DOCUMENTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
7. ALL DISSIMILAR METALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO AVOID GALVANIC CORROSION.
8. THE LOCATION AND TYPE OF ALL INPLACE UTILITIES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY AND ARE ACCURATE AND COMPLETE TO THE BEST OF THE KNOWLEDGE OF I+S GROUP (ISG). NO WARRANTY OR GUARANTEE IS IMPLIED. THE CONTRACTOR SHALL VERIFY THE SIZES, LOCATIONS AND ELEVATIONS OF ALL INPLACE UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM PLAN.
9. THE CONTRACTOR IS TO CONTACT "GOPHER STATE ONE CALL" FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO EXCAVATION / CONSTRUCTION (1-800-252-1166). A "GOPHER STATE ONE CALL" WAS NOT PERFORMED AT THE TIME OF THE TOPOGRAPHIC SURVEY.

KEY PLAN

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 DITCH NO. 58 REPAIRS

CLEVELAND TWP. MINNESOTA

REVISION SCHEDULE		
NO	DATE	DESCRIPTION

PROJECT NO. 17265

FILE NAME 17265 CD 58 TITLE

DRAWN BY ASB

DESIGNED BY CJB/ASB

REVIEWED BY CJB

ISSUE DATE 03/24/2015

CLIENT PROJECT NO. —

TITLE

TITLE

SHEET

1

OF 7

PROJECT INDEX:

OWNER:

LE SUEUR COUNTY
88 S PARK AVE.
LE CENTER, MN 56057
PH: 507-357-8246

PROJECT

ADDRESS / LOCATION:

SECTIONS 29, 30, AND 31
CLEVELAND TWP.
LE SUEUR COUNTY, MINNESOTA

MANAGING OFFICE:

MANKATO OFFICE
115 EAST HICKORY ST.
SUITE 300
MANKATO, MN 56001
PHONE: 507.387.6651
FAX: 507.387.3583

PROJECT MANAGER: CHUCK BRANDEL
EMAIL: CHUCK.BRANDEL@IS-GRP.COM

SPECIFICATIONS REFERENCE

ALL CONSTRUCTION SHALL COMPLY WITH THE COUNTY OF LE SUEUR REQUIREMENTS AND MnDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2014 EDITION, AND THE STANDARD SPECIFICATIONS FOR SANITARY SEWER, STORM DRAIN AND WATERMAIN AS PROPOSED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA 2013, UNLESS DIRECTED OTHERWISE.

PROJECT DATUM

HORIZONTAL COORDINATES HAVE BEEN REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), 1996 ADJUSTMENT (NAD83(1996)) ON THE LE SUEUR COUNTY COORDINATE SYSTEM, IN U.S. SURVEY FEET. ELEVATIONS HAVE BEEN REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). RTK GPS METHODS WERE USED TO ESTABLISH HORIZONTAL AND VERTICAL COORDINATES FOR THIS PROJECT.

B.M. ELEVATION=1024.342

1.7 MILES NW ON CR 18 FROM THE CR 18 & CR 15 INT, 0.4 MILES WEST ON CR 18, 49 FEET N OF CR 18, 12 FEET E OF FIELD ENTRANCE

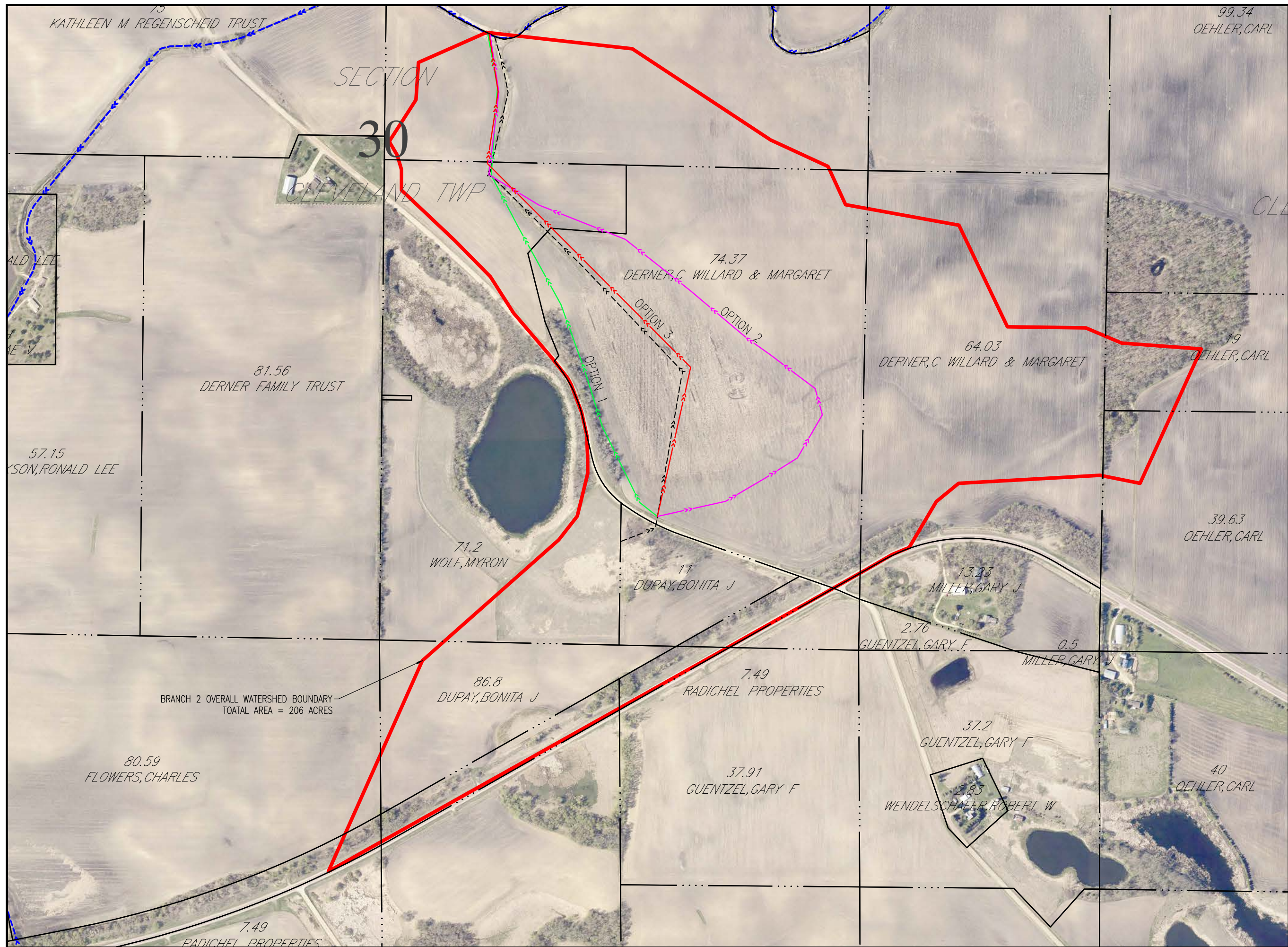
TOPOGRAPHIC SURVEY


THIS PROJECTS TOPOGRAPHIC SURVEY CONSISTS OF DATA COLLECTED BY ISG ON FEBRUARY 4, 2015, FEBRUARY 7, 2015, AND MARCH 12, 2015

Le Sueur County

Board Meeting - 5/19/2015

Page 17 / 31






Architecture
Engineering
Environmental
Planning

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0 250 500 750
Scale:

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CHARLES J. BRANDEL

DATE _____ LIC. NO. 43359

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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 WATERSHED
DRAWN BY	ASB
DESIGNED BY	CJB/ASB
REVIEWED BY	CJB
ISSUE DATE	03/24/2015
CLIENT PROJECT NO.	—

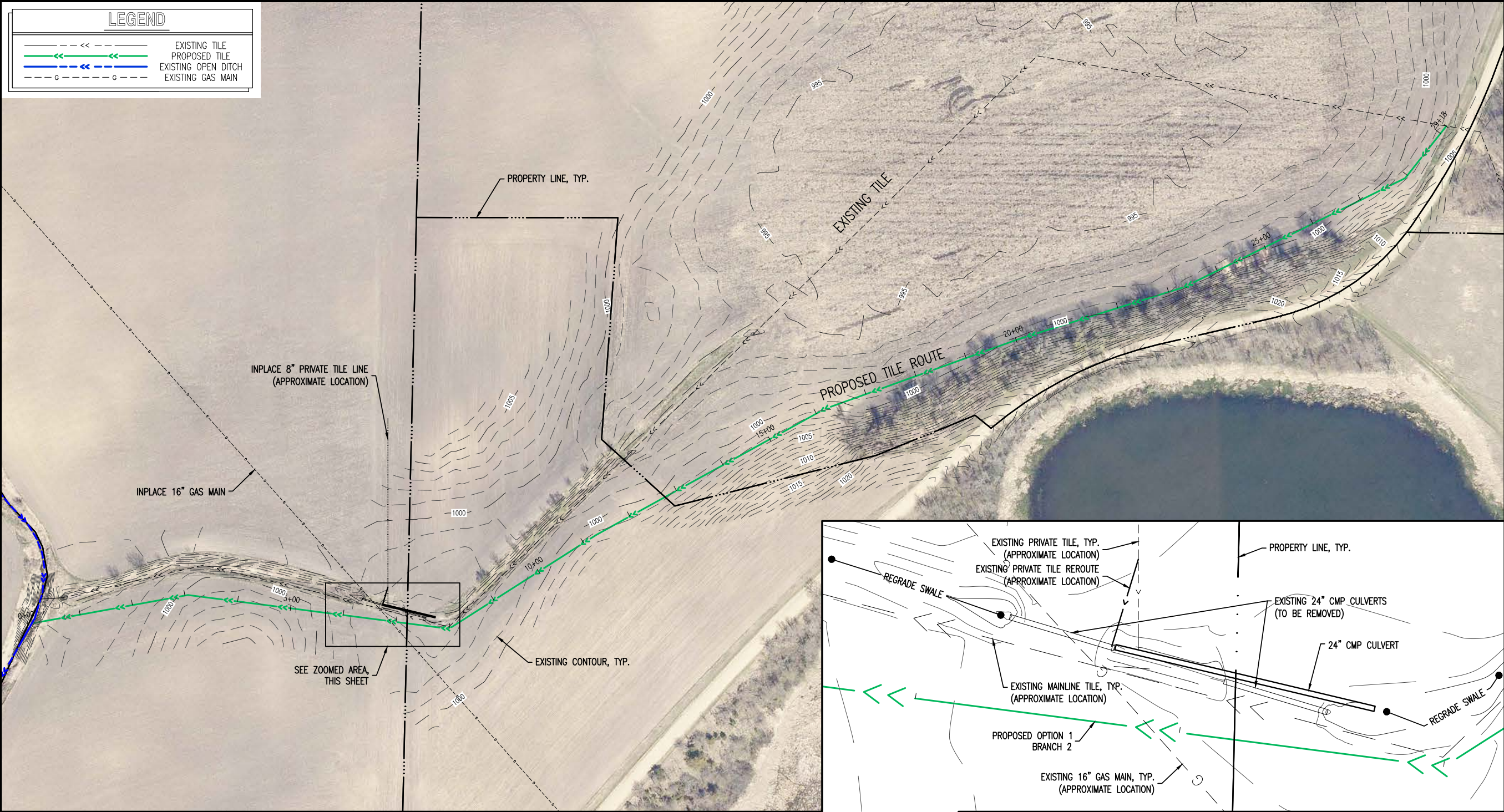
TITLE

WATERSHED

SHEET	2	OF 7
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LEGEND

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



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0 100 200 300

Scale:

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PROJECT

LE SUEUR COUNTY

COUNTY DITCH NO. 58 REPAIRS

CLEVELAND TWP. MINNESOTA

REVISION SCHEDULE	
NO	DATE

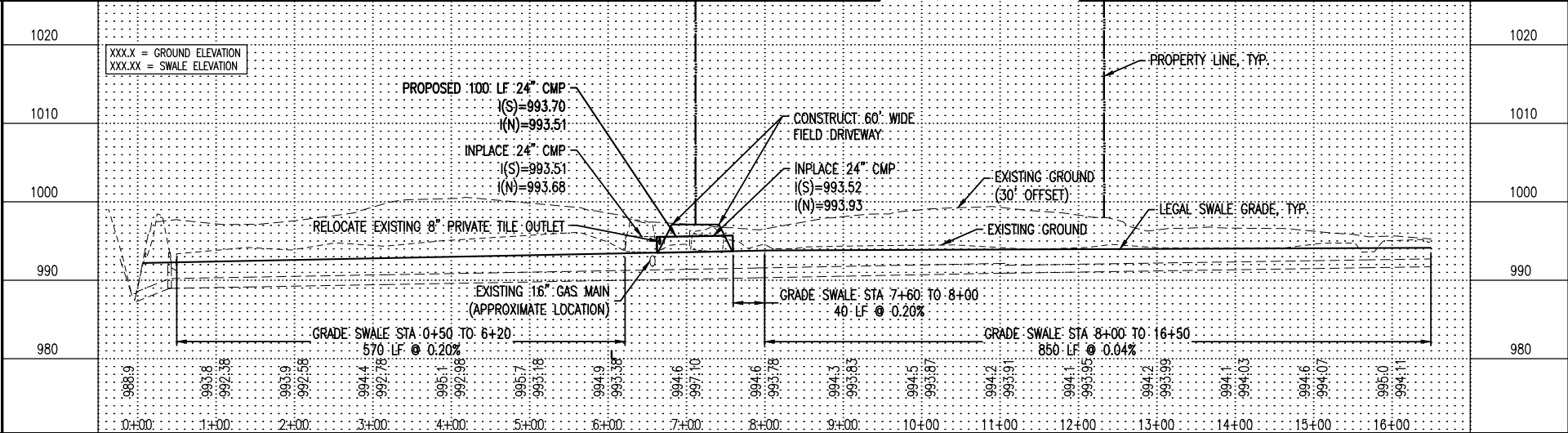
PROJECT NO.	17265
FILE NAME	17265 CD 58 PROFILES
DRAWN BY	ASB
DESIGNED BY	ASB/CJB
REVIEWED BY	CJB
ISSUE DATE	03/24/2015
CLIENT PROJECT NO.	—

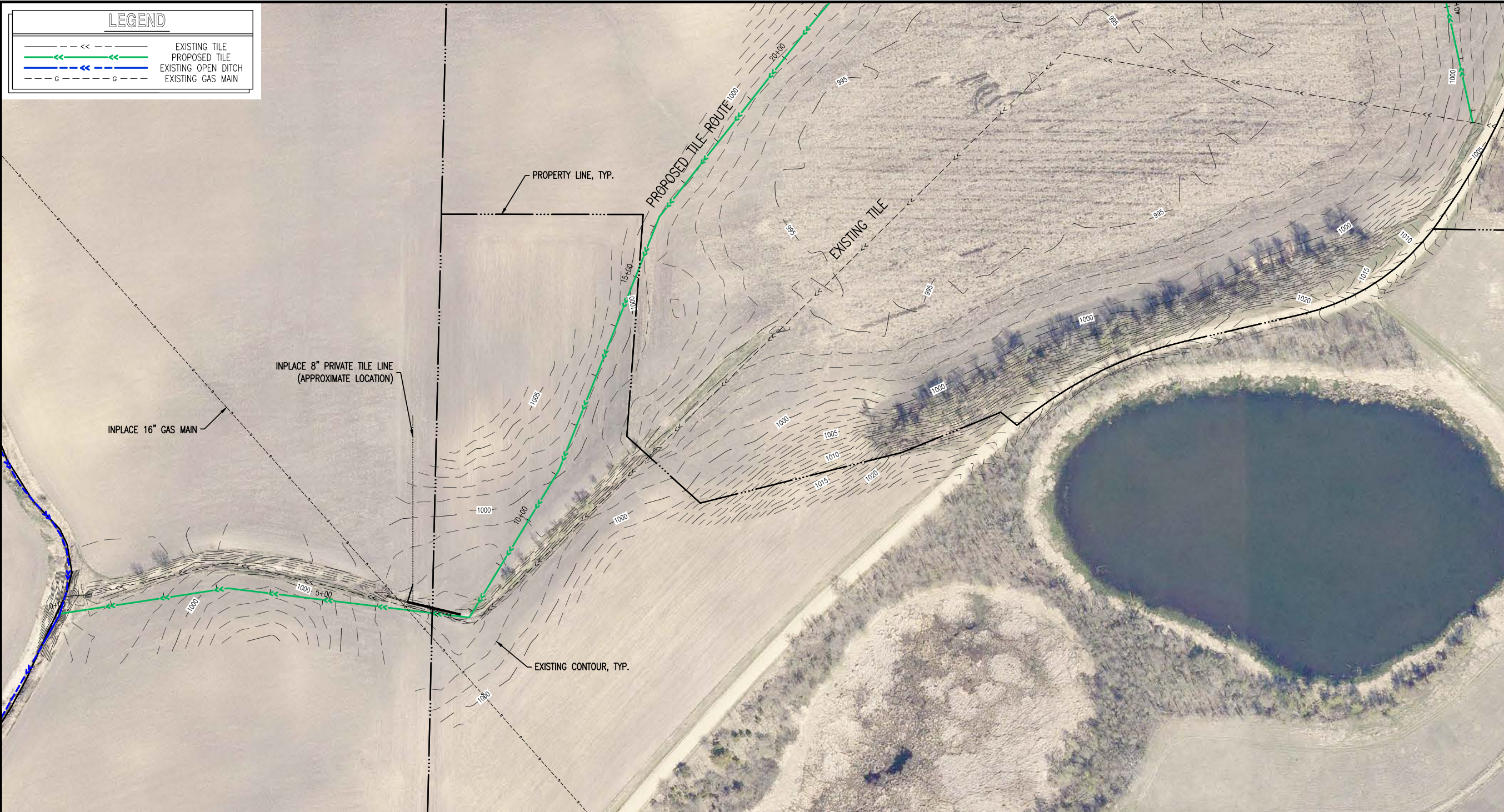
TITLE

EXISTING SWALE PROFILE

SHEET

3 OF 7





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Engineering
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0 100 200 300

KEY PLAN

Scale:

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CHARLES J. BRANDEL

DATE _____ LIC. NO. 43359

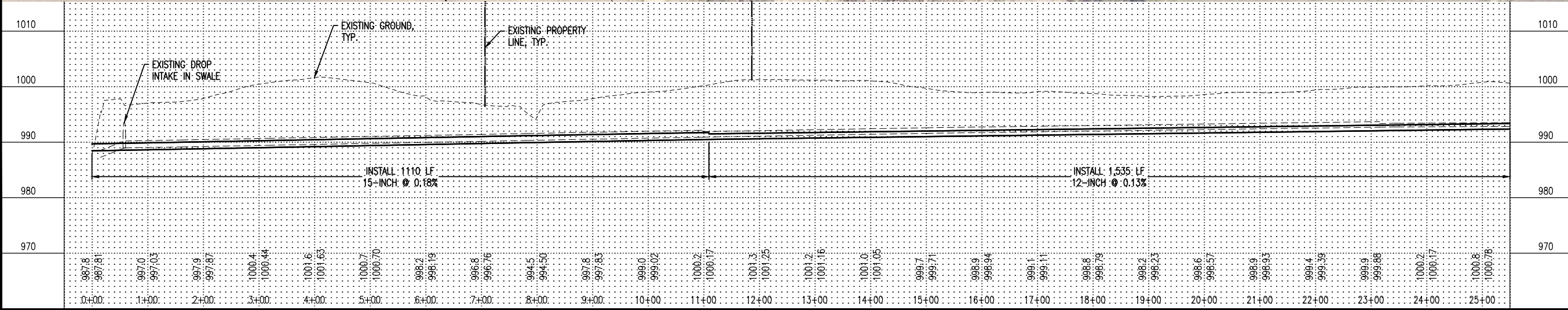
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA,

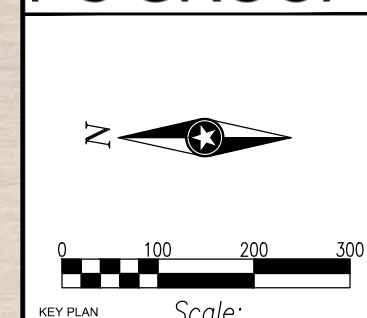
DATE _____ LIC. NO. _____

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PROJECT		
LE SUEUR COUNTY		
COUNTY DITCH NO. 58 REPAIRS		
CLEVELAND TWP. MINNESOTA		
REVISION SCHEDULE		
NO	DATE	DESCRIPTION

PROJECT NO.	17265
FILE NAME	17265 CD 58 PROFILES
DRAWN BY	ASB
DESIGNED BY	ASB/CJB
REVIEWED BY	CJB
ISSUE DATE	03/24/2015
CLIENT PROJECT NO.	—
TITLE	
OPTION 2 PROFILE	
SHEET	
5 OF 7	





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CHARLES J. BRANDEI

DATE _____ LIC. NO. 43359

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PROJECT

LE SUEUR COUNTY

COUNTY DITCH NO 58 REPAIRS

CLEVELAND TWP. MINNESOTA

[illegible]

PROJECT NO.	17265
FILE NAME	17265 CD 58 PROFILES
DRAWN BY	ASB
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ISSUE DATE	03/24/2015
CLIENT PROJECT NO.	—

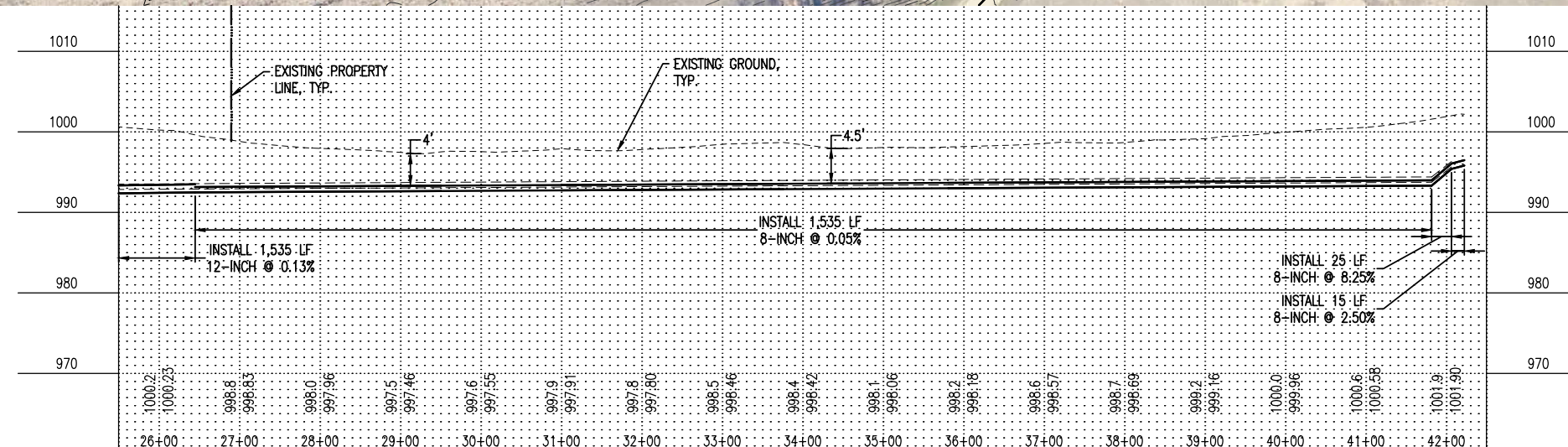
TITLE

**OPTION 2
PROFILE**

SHEET

6

OF



Appendix B: Cost Estimates



LE SUEUR COUNTY DITCH No. 58
April 13, 2015

SUMMARY OF OPTIONS

OPTION	SWALE REPAIR	TILE REPAIR	TOTAL COST
OPTION 1	\$ 50,566	\$ 97,708	\$ 148,274
OPTION 2	\$ 50,566	\$ 133,384	\$ 183,950
OPTION 3	\$ 50,566	\$ 104,250	\$ 154,816



SWALE REPAIR COSTS

BRANCH 2

Item No.	Item	Unit	Quantity	Unit Price	Amount
001	Mobilization	LS	1	\$ 2,350.00	\$ 2,350.00
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	100	\$ 40.00	\$ 4,000.00
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					\$ 38,500.00
10% Unforeseen					\$ 3,850.00
Subtotal					\$ 42,350.00
Temporary Damages		AC	1.1	\$ 800.00	\$ 909.09
County Administration Costs					\$ 1,483.00
Topographic Survey					\$ 1,165.00
Repair Plans, and Specifications					\$ 1,906.00
Construction Staking & Administration					\$ 2,753.00
Total Repair Cost					\$ 50,566.09

REPAIR OPTION 1

REPAIR COSTS

BRANCH 2

Item No.	Item	Unit	Quantity	Unit Price	Amount
001	Mobilization	LS	1	\$ 2,419.20	\$ 2,419.20
002	15" Tile Outlet (Riprap & Geotextile Fabric)	LS	1	\$ 550.00	\$ 550.00
003	15-Inch Agricultural Tile (Original 14-inch)	LF	1,080	\$ 24.00	\$ 25,920.00
004	12-Inch Agricultural Tile	LF	1,222	\$ 22.00	\$ 26,884.00
005	8-Inch Agricultural Tile	LF	588	\$ 16.00	\$ 9,408.00
006	Drop Intake	EA	3	\$ 1,300.00	\$ 3,757.00
007	Tile Connections	EA	8	\$ 325.00	\$ 2,600.00
Total					\$ 71,600.00
10% Unforeseen					\$ 7,160.00
Subtotal					\$ 78,760.00
Temporary Damages		AC	6.7	\$ 800.00	\$ 5,360.00
County Administration Costs					\$ 2,757.00
Topographic Survey					\$ 2,166.00
Repair Plans, and Specifications					\$ 3,545.00
Construction Staking & Administration					\$ 5,120.00
Total Repair Cost					\$ 97,708.00

REPAIR OPTION 2

REPAIR COSTS

BRANCH 2

Item No.	Item	Unit	Quantity	Unit Price	Amount
001	Mobilization	LS	1	\$ 3,291.60	\$ 3,291.60
002	15" Tile Outlet (Riprap & Geotextile Fabric)	LS	1	\$ 550.00	\$ 550.00
003	15-Inch Agricultural Tile (Original 14-inch)	LF	1,100	\$ 24.00	\$ 26,400.00
004	12-Inch Agricultural Tile	LF	1,535	\$ 22.00	\$ 33,770.00
005	8-Inch Agricultural Tile	LF	1,578	\$ 16.00	\$ 25,248.00
006	Drop Intake	EA	4	\$ 1,300.00	\$ 5,476.90
007	Tile Connections	EA	8	\$ 325.00	\$ 2,600.00
Total					\$ 97,400.00
10% Unforeseen					\$ 9,740.00
Subtotal					\$ 107,140.00
	Temporary Damages	AC	9.7	\$ 800.00	\$ 7,760.00
	County Administration Costs				\$ 3,750.00
	Topographic Survey				\$ 2,947.00
	Repair Plans, and Specifications				\$ 4,822.00
	Construction Staking & Administration				\$ 6,965.00
Total Repair Cost					\$ 133,384.00

REPAIR OPTION 3

REPAIR COSTS

BRANCH 2

Item No.	Item	Unit	Quantity	Unit Price	Amount
001	Mobilization	LS	1	\$ 2,577.70	\$ 2,577.70
002	15" Tile Outlet (Riprap & Geotextile Fabric)	LS	1	\$ 550.00	\$ 550.00
003	15-Inch Agricultural Tile (Original 14-inch)	LF	1,100	\$ 24.00	\$ 26,400.00
004	12-Inch Agricultural Tile	LF	1,206	\$ 22.00	\$ 26,532.00
005	8-Inch Agricultural Tile	LF	842	\$ 16.00	\$ 13,472.00
006	Drop Intake	EA	3	\$ 1,300.00	\$ 4,092.40
007	Tile Connections	EA	8	\$ 325.00	\$ 2,600.00
Total					\$ 76,300.00
10% Unforeseen					\$ 7,630.00
Subtotal					\$ 83,930.00
	Temporary Damages	AC	7.3	\$ 800.00	\$ 5,840.00
	County Administration Costs				\$ 2,938.00
	Topographic Survey				\$ 2,309.00
	Repair Plans, and Specifications				\$ 3,777.00
	Construction Staking & Administration				\$ 5,456.00
Total Repair Cost					\$ 104,250.00

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 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.

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

[15741-0020/2035904/1]

1

WHEREAS, the three 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 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 2 (\$183,950), though most expensive (alternative 1 \$148,274, 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 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

[15741-0020/2035904/1]

2

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

WHEREAS, the Board further finds that the realignment associated with the repair will require a determination of damages for additional right of way; and

WHEREAS, the Board further finds that upon completion of the proposed repair, if ordered, the old alignment of Branch 2 of LCD 58 will no longer serve a substantial useful purpose as part of the drainage system to any property remaining in the system and will not be of substantial public benefit and utility.

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 2 as indicated in the revised engineer's repair report dated April 13, 2015.
2. That the proceedings be recessed for the purpose of appointing and qualifying viewers under statutes section 103E.715, subd., for the purpose of determining damages caused by the realignment of the drainage system proposed by the engineer's recommended repair alternative 2.
3. That the proceedings be re-noticed and reconvened within 30 days after the property owners' report of damages is mailed.
4. That after the continued hearing on the report of damages, subject to further Board order, the engineer prepare plans and specifications for the repair and bid the project.

5. 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.
6. That upon completion of the repair, if ordered, the remnant portion of Branch 2 of LCD 58, as replaced by the realignment repair, be abandoned.

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