

Final Acceptance Report

Faribault County Ditch No. 64 Repair

Bid Packages 1, 2 & 3

Faribault County, Minnesota

Date: June, 2023

ISG Project No.: 17-21098



Architecture
Engineering
Environmental
Planning
ISGInc.com

REPORT FOR:
Faribault County Drainage Authority
415 South Grove Street
Blue Earth, MN 56013
507-304-4253
Merissa.Lore@co.faribault.mn.us

FROM:
ISG
Mark Origer., PE
Project Engineer
115 East Hickory Street + Suite 300
Mankato, MN 56001
507.387.6651
Mark.Origer@ISGInc.com

SIGNATURE SHEET

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.

Signature: Mark Origer

Printed Name: Mark Origer, PE

Date: 6/7/2023

License Number: 54863

Project Name: Faribault County Ditch No. 64 Repair

Faribault County, Minnesota

Engineer's Project Number: 17-21098

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EXECUTIVE SUMMARY

The Repair project started when ISG was contacted by the Faribault County Drainage Authority to review the County Ditch No. 64 (CD 64) drainage system in regard to its erosion concerns and develop non-traditional repairs geared towards addressing the channel and bank erosion. The Repair Report was approved in March of 2022.

The project scope was broken up into three bid packages to attract bids from local contractors. Bid Package 1 consists of side slope flattening and two-stage ditch construction from the CD 64 outlet to the 550th Ave crossing. Bid Package 2 includes bank stabilization, tile outlet repairs and installation of rock riffle structures. Bid Package 3 consisted of the repairing the concrete headwall at the beginning of the open ditch. Construction Documents were completed and Bid Packages 1 and 2 were advertised and bid in April of 2022. Krueger Excavating of Albert Lea, LLC was the low bidder for both bid packages and both were awarded in May of 2022. A request for quote for Bid Package 3 was solicited by Faribault County Drainage staff and the quote was awarded to Krueger in June of 2022.

Construction began in early July of 2022 with Krueger starting on Bid Package 1 and progressing upstream until achieving Substantial Completion in late August. The final punch list items were completed in September and establishment of vegetation was monitored throughout the rest of the summer and fall of 2022 in accordance with the requirements in the specifications.

CONSTRUCTION CONTRACT – BID PACKAGE 1

The awarded contract, based on Engineer's estimated quantities, was \$119,124.25. During construction there were two change orders approved. Change order 1 was issued to replace 18 inch tile in the fill area on the Leland property for a cost of \$4,200.00. Change Order 2 was issued to add additional common borrow and granular material for the Leland driveway crossing for a cost of \$1,424.00. There were also cost savings encountered during construction consisting primarily of private tile outlets and eliminating the pattern tiling that was planned in the fill area; The total cost of construction including base bid items and change orders is \$111,680.00. Additionally, a 55"x39" Corrugated Metal Arch Culvert was added as a floodplain culvert for 550th Avenue, it was constructed between the Township and Drainage Department Staff and was not included within Bid Package 1.

To date, Krueger has been paid \$106,096.00 with an unpaid balance of \$5,584.00 left of retainage remaining to be paid on the contract. ISG certifies that the work has been completed in accordance with the contract documents and recommend payment and final acceptance of the Faribault County Ditch No. 64 Repair – Bid Package 1 contract. The final pay application can be found in Appendix B of this report.

CONSTRUCTION CONTRACT – BID PACKAGE 2

The awarded contract, based on Engineer's estimated quantities, was \$112,195.00. During construction there were two change orders approved. Change order 1 was issued to replace a 36 inch CMP for the 560th Ave south-eastern Field Crossing for a cost of \$7,090.80. Change Order 2 was issued to add approved additional work items that were encountered during construction for an additional cost of \$28,671.25, these items included additional tree and brush removal, two additional ASIs, a 15" field approach culvert at the south-western corner of the 560th Ave crossing, along with additional items for regrading buffer strips. Additionally, more rock-riffle structures were installed due to additional availability of grant funding. There were also cost savings encountered during construction consisting primarily of private tile outlets and riprap that was included in the estimate but not required during construction; The total cost of construction including base bid items and change orders is \$122,890.05.

To date, Krueger has been paid \$116,745.55 with an unpaid balance of \$6,144.50 left of retainage remaining to be paid on the contract. ISG certifies that the work has been completed in accordance with the contract documents and recommend payment and final acceptance of the Faribault County Ditch No. 64 Repair – Bid Package 2 contract. The final pay application can be found in Appendix B of this report.

CONSTRUCTION INVOICE – BID PACKAGE 3

The awarded quote from Krueger for Bid Package 3 was for a total price of \$24,190.00. ISG tracked the quantities for Faribault County to complete a pay application for the work completed. Bid Package #3 consisted of grading around the existing headwall, which was found to be in poor condition yet still functional, at the upstream end of the ditch, along with the construction of several side inlets to prevent further erosion in the headwall area. Site conditions required an increase in amount of common borrow compared to the estimate resulting in additional costs; The total cost of construction is \$36,075.00.

To date, Krueger has been paid \$34,271.25 with an unpaid balance of \$1,803.75 left of retainage remaining to be paid. ISG certifies that the work has been completed in accordance with the RFQ plans and recommend payment and final acceptance of the Faribault County Ditch No. 64 Repair – Bid Package 3. The final pay application can be found in Appendix B of this report.

AS BUILTS

ISG has completed the As Built condition of the project, that will serve as the corrected record of the project. The complete as built is located in Appendix D of this report.

DAMAGES

ISG has captured all of the damages, both temporary and permanent, that had occurred due to the project. It is the Engineer's recommendation that the damages to the properties involved be paid out to the landowners at the rate the board adopted during the final hearing. The complete list of damages per property is located in Appendix E of this report.

CONCLUSION

The majority of this project was paid via grant funding secured through a small watershed grant. The total grant funding was \$248,000 for the entire watershed practices, both on ditch and upland. It is the Engineer's Opinion that the Contractor, Krueger Excavating LLC, has satisfactorily completed the contract in accordance with plans and specifications. Therefore, the Engineer recommends final payment to the contractor and payment of the constructed damages.

Appendix A: Construction Photos



Installed Rock Riffle Structure



Grading around existing headwall structure



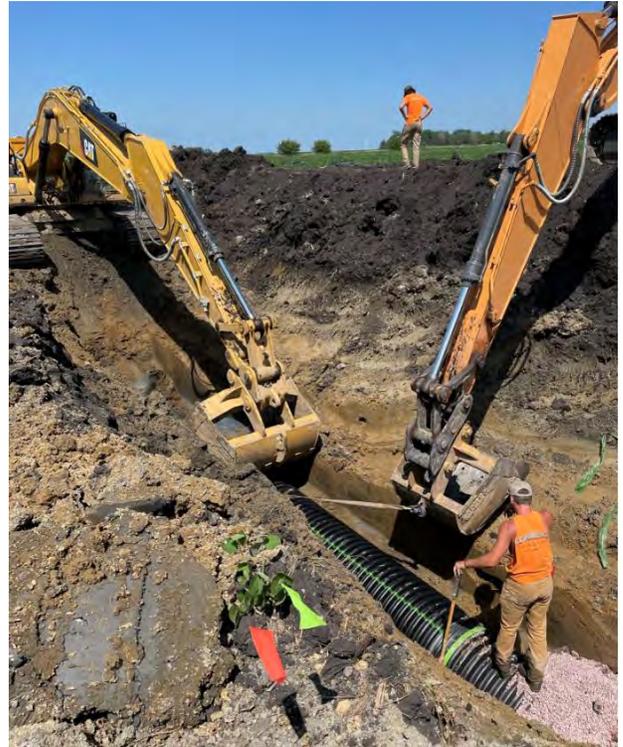
Alternate Side Intake at Headwall Grading



Constructed Two-Stage Ditch



Outlet Sideslope flattening



Leland Property 18" Tile Replacement



Construction Pictures



Construction Pictures

Appendix B: Final Pay Requests

ISG	Contractor's Application for Payment No.		5 FINAL
	Application Period:	9/10/2022 - 12/22/2022	Application Date: 12/22/2022
To (Owner):	Faribault County Drainage Authority 415 S Grove Street Blue Earth, MN 56013	From (Contractor):	Krueger Excavating of Albert Lea, LLC 70993 190th Street Albert Lea, MN 56007
Project:	Faribault County Ditch No. 64 Bid Package #1	Via (Engineer):	ISG Mark Origer 115 E Hickory St. Suite 300 Mankato, MN 56001
Owner's Contract No.		Contractor's Project No.	Engineer's Project No. 21098

**Application For Payment
Change Order Summary**

Approved Change Orders		
Number	Additions	Deductions
1	\$4,200.00	
2	\$1,424.00	
TOTALS	\$5,624.00	
NET CHANGE BY CHANGE ORDERS		\$5,624.00

1. ORIGINAL CONTRACT PRICE.....	\$ 119,124.25
2. Net change by Change Orders.....	\$ 5,624.00
3. Current Contract Price (Line 1 ± 2).....	\$ 124,748.25
4. Completed Bid Items (Column J total on Completed Items)	\$ 106,056.00
5. Completed Change Order Items (Column K total on Change Order Items)	\$ 5,624.00
6. Temporary Withholdings (Column L on Temporary Withholdings)	\$ -
7. Stored Materials (Column L total on Stored Materials)	\$ -
8. TOTAL COMPLETED AND STORED TO DATE LESS TEMPORARY WITHHOLDINGS	\$ 111,680.00
9. RETAINAGE:	
a. X \$ 111,680.00 Work Completed (Line 4+5+6).....	\$ -
b. X \$ - Stored Material (Line 7).....	\$ -
c. Total Retainage (Line 5.a + Line 5.b).....	\$ -
10. AMOUNT ELIGIBLE TO DATE (Line 8 - Line 9.c).....	\$ 111,680.00
11. LESS PREVIOUS PAYMENTS (Line 10 from prior Application).....	\$ 106,096.00
12. AMOUNT DUE THIS APPLICATION.....	\$ 5,584.00
13. BALANCE TO FINISH, PLUS RETAINAGE	
(Column L total on Completed Items + Column M Total Change Order Items + Column L on Temporary Withholdings + Line 9.c above).....	\$ -

Payment of:	<u>\$5,584.00</u>	
	(Line 8 or other - attach explanation of the other amount)	
is recommended by:	<u>Mark Origer</u>	<u>5-25-23</u>
	(Engineer)	(Date)
Payment of:	_____	
	(Line 8 or other - attach explanation of the other amount)	
is approved by:	_____	_____
	(Owner)	(Date)
Approved by:	_____	_____
	Funding or Financing Entity (if applicable)	(Date)

Contractor's Certification
The undersigned Contractor certifies, to the best of its knowledge, the following:
(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;
(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and
(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor Signature: Dustin Krueger
By: Dustin Krueger Date: 5/26/23

Completed Bid Items

ISG
Faribault County Ditch No. 64
Bid Package #1
Faribault County Drainage Authority

Pay Request 5 FINAL
 9/10/2022 To 12/22/2022

A	B	C	D	E	F	G	H	I	J	K	L	M
Bid Item Number	Bid Item	Unit	Quantity	Unit Price	Total Amount	Quantity This Pay Request	Amount This Pay Request	Quantity To Date	Amount To Date	Quantity Remaining	Amount Remaining	Over/Under Estimate
01.7113.1000.01	MOBILIZATION	LS	1.00	\$ 1,500.00	\$ 1,500.00	0.00	\$ -	1.00	\$ 1,500.00	0.00	\$ -	\$ -
31.2316.1000.07	COMMON EXCAVATION - DITCH (P) (EV)	CY	3,376.00	\$ 3.00	\$ 10,128.00	0.00	\$ -	3376.00	\$ 10,128.00	0.00	\$ -	\$ -
31.2316.1000.07	CONSTRUCT TWO-STAGE DITCH (P) (EV)	CY	14,316.00	\$ 3.00	\$ 42,948.00	0.00	\$ -	14316.00	\$ 42,948.00	0.00	\$ -	\$ -
31.2316.1000.07	TOP SOIL STRIP & PLACE SPOILS (P) (EV)	CY	2,566.00	\$ 2.00	\$ 5,132.00	0.00	\$ -	2566.00	\$ 5,132.00	0.00	\$ -	\$ -
31.2316.1000.07	TOP SOIL STRIP & PLACE SPOILS (P) (EV) (TWO-STAGE DITCH)	CY	8,594.00	\$ 2.50	\$ 21,485.00	0.00	\$ -	8594.00	\$ 21,485.00	0.00	\$ -	\$ -
31.3700.1000.07	CLASS III RIPRAP WITH GEOTEXTILE FABRIC	CY	25.00	\$ 70.00	\$ 1,750.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 1,750.00
32.9219.1000.10	SIDELSLOPE/BENCH SEEDING (SEED MIX: CUSTOM W/ CATEGORY 20 EROSION CONTROL BLANKET)	SY	1,720.00	\$ 1.50	\$ 2,580.00	0.00	\$ -	2489.00	\$ 3,733.50	0.00	\$ -	\$ 1,153.50
32.9219.1000.10	BUFFER SEEDING (SEED MIX: CUSTOM W/ TYPE 3 MULCH)	AC	1.20	\$ 2,500.00	\$ 3,000.00	0.00	\$ -	1.20	\$ 3,000.00	0.00	\$ -	\$ -
32.9219.1000.10	SIDELSLOPE/BENCH SEEDING (SEED MIX: CUSTOM W/ CATEGORY 20 EROSION CONTROL BLANKET) (TWO-STAGE DITCH)	SY	10,740.00	\$ 1.50	\$ 16,110.00	0.00	\$ -	10953.00	\$ 16,429.50	0.00	\$ -	\$ 319.50
33.0513.1000.02	REMOVE EXISTING ROADSIDE CULVERT	EA	1.00	\$ 500.00	\$ 500.00	0.00	\$ -	1.00	\$ 500.00	0.00	\$ -	\$ -
33.4510.1000.02	10-INCH TILE OUTLET	EA	1.00	\$ 940.00	\$ 940.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 940.00
33.4510.1000.02	12-INCH TILE OUTLET	EA	2.00	\$ 860.00	\$ 1,720.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 1,720.00
33.4510.1000.02	8-INCH TILE OUTLET	EA	1.00	\$ 800.00	\$ 800.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 800.00
33.4510.1000.02	6-INCH TILE OUTLET	EA	3.00	\$ 780.00	\$ 2,340.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 2,340.00
33.4510.1000.02	ARMOR TILE OUTLET (RIPRAP & GEOTEXTILE FABRIC)	EA	5.00	\$ 300.00	\$ 1,500.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 1,500.00
33.4510.1000.03	15-INCH AGRICULTURAL TILE	LF	65.00	\$ 15.00	\$ 975.00	0.00	\$ -	80.00	\$ 1,200.00	0.00	\$ -	\$ 225.00
33.4510.1000.03	6-INCH AGRICULTURAL TILE	LF	90.00	\$ 9.00	\$ 810.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 810.00
33.4510.1000.03	4" PRIVATE TILE (PERFORATED SINGLE WALL TILE)	LF	3,925.00	\$ 1.25	\$ 4,906.25	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 4,906.25
					\$ 119,124.25		\$ -		\$ 106,056.00		\$ -	\$ 16,464.25

Completed Change Order Items



Faribault County Ditch No. 64
Bid Package #1

Faribault County Drainage Authority

Pay Request 5 FINAL
9/10/2022 To 12/22/2022

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Change Order	Bid Item Number	Bid Item	Unit	Quantity	Unit Price	Total Amount	Quantity This Pay Request	Amount This Pay Request	Quantity To Date	Amount To Date Date	Quantity Remaining	Amount Remaining	Over/Under Estimate
1	1-101	18-INCH AGRICULTURAL TILE - (Leland tile replacement)	LF	240.00	\$ 17.50	\$ 4,200.00	0.00	\$ -	240.00	\$ 4,200.00	0.00	0.00	\$ -
2	2-201	GRANULAR MATERIAL FOR LELAND DRIVEWAY	CY	40.00	\$ 30.00	\$ 1,200.00	0.00	\$ -	40.00	\$ 1,200.00	0.00	0.00	\$ -
2	2-202	COMMON BORROW	CY	28.00	\$ 8.00	\$ 224.00	0.00	\$ -	28.00	\$ 224.00	0.00	0.00	\$ -
						\$ 5,624.00		\$ -		\$ 5,624.00		\$ -	\$ -

ISG	Contractor's Application for Payment No.		4 FINAL
	Application Period: 9/10/2022 - 12/22/2022	Application Date: 12/22/2022	
To (Owner): Faribault County Drainage Authority 415 S Grove Street Blue Earth, MN 56013	From (Contractor): Krueger Excavating of Albert Lea, LLC 70993 190th Street Albert Lea, MN 56007	Via (Engineer): ISG Mark Origer 115 E Hickory St. Suite 300 Mankato, MN 56001	
Project: Faribault County Ditch No. 64 Bid Package #2	Contract:		
Owner's Contract No.	Contractor's Project No.	Engineer's Project No. 21098	

**Application For Payment
Change Order Summary**

Approved Change Orders		
Number	Additions	Deductions
1	\$7,090.80	
2	\$28,671.25	
TOTALS	\$35,762.05	
NET CHANGE BY CHANGE ORDERS	\$35,762.05	

1. ORIGINAL CONTRACT PRICE.....	\$ 112,195.00
2. Net change by Change Orders.....	\$ 35,762.05
3. Current Contract Price (Line 1 ± 2).....	\$ 147,957.05
4. Completed Bid Items (Column J total on Completed Items)	\$ 87,128.00
5. Completed Change Order Items (Column K total on Change Order Items)	\$ 35,762.05
6. Temporary Withholdings (Column L on Temporary Withholdings)	\$ -
7. Stored Materials (Column L total on Stored Materials)	\$ -
8. TOTAL COMPLETED AND STORED TO DATE LESS TEMPORARY WITHHOLDINGS	\$ 122,890.05
9. RETAINAGE:	
a. X \$ 122,890.05 Work Completed (Line 4+5+6).....	\$ -
b. X \$ - Stored Material (Line 7).....	\$ -
c. Total Retainage (Line 5.a + Line 5.b).....	\$ -
10. AMOUNT ELIGIBLE TO DATE (Line 8 - Line 9.c).....	\$ 122,890.05
11. LESS PREVIOUS PAYMENTS (Line 10 from prior Application).....	\$ 116,745.55
12. AMOUNT DUE THIS APPLICATION.....	\$ 6,144.50
13. BALANCE TO FINISH, PLUS RETAINAGE	
(Column L total on Completed Items + Column M Total Change Order Items + Column L on Temporary Withholdings + Line 9.c above).....	\$ -

Payment of:	<u>\$6,144.50</u>	
	(Line 8 or other - attach explanation of the other amount)	
is recommended by:	<u>Mark Origer</u>	<u>5-25-23</u>
	(Engineer)	(Date)
Payment of:	_____	
	(Line 8 or other - attach explanation of the other amount)	
is approved by:	_____	_____
	(Owner)	(Date)
Approved by:	_____	_____
	Funding or Financing Entity (if applicable)	(Date)

Contractor's Certification
The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor Signature: Justin Krueger

By: Justin Krueger Date: 5/26/23

Completed Bid Items



Faribault County Ditch No. 64
Bid Package #2

Faribault County Drainage Authority

Pay Request 4 FINAL
9/10/2022 To 12/22/2022

A	B	C	D	E	F	G	H	I	J	K	L	M
Bid Item Number	Bid Item	Unit	Quantity	Unit Price	Total Amount	Quantity This Pay Request	Amount This Pay Request	Quantity To Date	Amount To Date	Quantity Remaining	Amount Remaining	Over/Under Estimate
01.7113.1000.01	MOBILIZATION	LS	1.00		\$ -	0.00	\$ -	1.00	\$ -	0.00	\$ -	\$ -
31.2311.1000.03	DITCH SIDESLOPE REPAIR	LF	500.00	\$ 4.50	\$ 2,250.00	0.00	\$ -	420.00	\$ 1,890.00	0.00	\$ -	\$ 360.00
31.2311.1000.03	SPOT DITCH CLEANING	LF	540.00	\$ 3.00	\$ 1,620.00	0.00	\$ -	540.00	\$ 1,620.00	0.00	\$ -	\$ -
31.2316.1000.07	COMMON BORROW (P) (CV)	CY	500.00	\$ 8.00	\$ 4,000.00	0.00	\$ -	2161.00	\$ 17,288.00	0.00	\$ -	\$ 13,288.00
31.3700.1000.07	CLASS III RIPRAP WITH GEOTEXTILE FABRIC	CY	192.00	\$ 40.00	\$ 7,680.00	0.00	\$ -	55.00	\$ 2,200.00	0.00	\$ -	\$ 5,480.00
31.3700.1000.07	CLASS III RIPRAP (RIFFLE STRUCTURE)	CY	522.00	\$ 40.00	\$ 20,880.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 20,880.00
31.3700.1000.07	CLASS V RIPRAP (RIFFLE STRUCTURE)	CY	194.00	\$ 40.00	\$ 7,760.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 7,760.00
31.3700.1000.07	FIELD STONE (RIFFLE STRUCTURE)	CY	175.00	\$ 30.00	\$ 5,250.00	0.00	\$ -	349.00	\$ 10,470.00	0.00	\$ -	\$ 5,220.00
32.9219.1000.04	SIDESLOPE SEEDING (SEED MIX 25-142 W/MNDOT EROSION CONTROL BLANKET CATEGORY 20)	SY	2,900.00	\$ 1.50	\$ 4,350.00	0.00	\$ -	2900.00	\$ 4,350.00	0.00	\$ -	\$ -
32.9219.1000.10	16.5' BUFFER STRIP SEEDING (SEED MIX: MNDOT 25-142 WITH TYPE 3 MULCH)	AC	1.30	\$ 2,000.00	\$ 2,600.00	0.00	\$ -	4.00	\$ 8,000.00	0.00	\$ -	\$ 5,400.00
33.0513.1000.02	INSTALL 24-INCH ASI RISER ASSEMBLY W/TRASH GRATE	EA	1.00	\$ 1,025.00	\$ 1,025.00	0.00	\$ -	2.00	\$ 2,050.00	0.00	\$ -	\$ 1,025.00
33.0513.1000.02	INSTALL 15-INCH ASI RISER ASSEMBLY W/TRASH GRATE	EA	4.00	\$ 610.00	\$ 2,440.00	0.00	\$ -	4.00	\$ 2,440.00	0.00	\$ -	\$ -
33.0513.1000.02	INSTALL 10-INCH ASI RISER ASSEMBLY W/TRASH GRATE	EA	3.00	\$ 560.00	\$ 1,680.00	0.00	\$ -	2.00	\$ 1,120.00	0.00	\$ -	\$ 560.00
33.0513.1000.02	INSTALL 8-INCH ASI RISER ASSEMBLY W/TRASH GRATE	EA	2.00	\$ 540.00	\$ 1,080.00	0.00	\$ -	1.00	\$ 540.00	0.00	\$ -	\$ 540.00
33.0513.1000.02	INSTALL 24-INCH ASI OUTLET ASSEMBLY	EA	1.00	\$ 1,300.00	\$ 1,300.00	0.00	\$ -	2.00	\$ 2,600.00	0.00	\$ -	\$ 1,300.00
33.0513.1000.02	INSTALL 15-INCH ASI OUTLET ASSEMBLY	EA	4.00	\$ 1,100.00	\$ 4,400.00	0.00	\$ -	4.00	\$ 4,400.00	0.00	\$ -	\$ -
33.0513.1000.02	INSTALL 10-INCH ASI OUTLET ASSEMBLY	CY	3.00	\$ 940.00	\$ 2,820.00	0.00	\$ -	2.00	\$ 1,880.00	0.00	\$ -	\$ 940.00
33.0513.1000.02	REMOVE EXISTING SIDE INTAKE	EA	2.00	\$ 150.00	\$ 300.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 300.00
33.0513.1000.02	INSTALL 8-INCH ASI OUTLET ASSEMBLY	EA	2.00	\$ 900.00	\$ 1,800.00	0.00	\$ -	1.00	\$ 900.00	0.00	\$ -	\$ 900.00
33.4510.1000.02	RIFFLE STRUCTURE ACCESS RAMP	EA	8.00	\$ 2,000.00	\$ 16,000.00	0.00	\$ -	8.00	\$ 16,000.00	0.00	\$ -	\$ -
33.4510.1000.02	30-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	1.00	\$ 1,300.00	\$ 1,300.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 1,300.00
33.4510.1000.02	24-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	1.00	\$ 1,040.00	\$ 1,040.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 1,040.00
33.4510.1000.02	18-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	3.00	\$ 940.00	\$ 2,820.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 2,820.00
33.4510.1000.02	15-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	2.00	\$ 900.00	\$ 1,800.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 1,800.00
33.4510.1000.02	12-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	5.00	\$ 860.00	\$ 4,300.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 4,300.00
33.4510.1000.02	10-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	2.00	\$ 820.00	\$ 1,640.00	0.00	\$ -	2.00	\$ 1,640.00	0.00	\$ -	\$ -
33.4510.1000.02	8-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	2.00	\$ 800.00	\$ 1,600.00	0.00	\$ -	3.00	\$ 2,400.00	0.00	\$ -	\$ 800.00
33.4510.1000.02	6-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	7.00	\$ 780.00	\$ 5,460.00	0.00	\$ -	3.00	\$ 2,340.00	0.00	\$ -	\$ 3,120.00
33.4510.1000.02	ARMOR TILE OUTLET (RIPRAP & GEOTEXTILE FABRIC)	EA	10.00	\$ 300.00	\$ 3,000.00	0.00	\$ -	10.00	\$ 3,000.00	0.00	\$ -	\$ -
					\$ 112,195.00		\$ -		\$ 87,128.00		\$ -	\$ 79,133.00

Completed Change Order Items



**Faribault County Ditch No. 64
Bid Package #2**

Faribault County Drainage Authority

Pay Request 4 FINAL
9/10/2022 To 12/22/2022

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Change Order	Bid Item Number	Bid Item	Unit	Quantity	Unit Price	Total Amount	Quantity This Pay Request	Amount This Pay Request	Quantity To Date	Amount To Date	Quantity Remaining	Amount Remaining	Over/Under Estimate
1	1-101	36-INCH CMP (560th Ave Field Crossing)	LF	60.00	\$ 118.18	\$ 7,090.80	0.00	\$ -	60.00	\$ 7,090.80	0.00	0.00	\$ -
2	2-201	Tree & Brush Removal - Excavator	HR	5.50	\$ 300.00	\$ 1,650.00	0.00	\$ -	5.50	\$ 1,650.00	0.00	0.00	\$ -
2	2-202	Tree & Brush Removal - Skidsteer	HR	5.50	\$ 200.00	\$ 1,100.00	0.00	\$ -	5.50	\$ 1,100.00	0.00	0.00	\$ -
2	2-203	Sta 96+00 (S) 15" culvert	LF	40.00	\$ 15.00	\$ 600.00	0.00	\$ -	40.00	\$ 600.00	0.00	0.00	\$ -
2	2-204	12" ASI Riser	EA	2.00	\$ 585.00	\$ 1,170.00	0.00	\$ -	2.00	\$ 1,170.00	0.00	0.00	\$ -
2	2-205	12" ASI outlet	EA	2.00	\$ 980.00	\$ 1,960.00	0.00	\$ -	2.00	\$ 1,960.00	0.00	0.00	\$ -
2	2-206	Common Excavation to repair crossing	HR	12.50	\$ 190.00	\$ 2,375.00	0.00	\$ -	12.50	\$ 2,375.00	0.00	0.00	\$ -
2	2-207	Class III riprap for crossing	CY	22.00	\$ 40.00	\$ 880.00	0.00	\$ -	22.00	\$ 880.00	0.00	0.00	\$ -
2	2-208	Granular material for crossing	CY	13.00	\$ 30.00	\$ 390.00	0.00	\$ -	13.00	\$ 390.00	0.00	0.00	\$ -
2	2-209	Common Borrow Sta 87+00	CY	210.00	\$ 8.00	\$ 1,680.00	0.00	\$ -	210.00	\$ 1,680.00	0.00	0.00	\$ -
2	2-210	Power Rake	HR	8.00	\$ 150.00	\$ 1,200.00	0.00	\$ -	8.00	\$ 1,200.00	0.00	0.00	\$ -
2	2-211	Grading buffer strip	HR	36.50	\$ 165.00	\$ 6,022.50	0.00	\$ -	36.50	\$ 6,022.50	0.00	0.00	\$ -
2	2-212	Riprap for Rock Chute	CY	35.00	\$ 40.00	\$ 1,400.00	0.00	\$ -	35.00	\$ 1,400.00	0.00	0.00	\$ -
2	2-213	Field Stone for Rock Chute	CY	26.00	\$ 30.00	\$ 780.00	0.00	\$ -	26.00	\$ 780.00	0.00	0.00	\$ -
2	2-214	6" and 8" tile for tile outlet repairs	LF	140.00	\$ 9.00	\$ 1,260.00	0.00	\$ -	140.00	\$ 1,260.00	0.00	0.00	\$ -
2	2-215	Grading Sta 80+00-87+00	HR	19.75	\$ 165.00	\$ 3,258.75	0.00	\$ -	19.75	\$ 3,258.75	0.00	0.00	\$ -
2	2-216	Common Excavation 80+00-87+00	HR	15.50	\$ 190.00	\$ 2,945.00	0.00	\$ -	15.50	\$ 2,945.00	0.00	0.00	\$ -
						\$ 35,762.05		\$ -		\$ 35,762.05		\$ -	\$ -

Completed Bid Items



Faribault County Ditch No. 64
 Bid Package #3
 Faribault County Drainage Authority

Pay Request 4 FINAL
 9/10/2022 To 12/22/2022

A	B	C	D	E	F	G	H	I	J	K	L	M
Bid Item Number	Bid Item	Unit	Quantity	Unit Price	Total Amount	Quantity This Pay Request	Amount This Pay Request	Quantity To Date	Amount To Date	Quantity Remaining	Amount Remaining	Over/Under Estimate
01.7113.1000.01	MOBILIZATION	LS	1.00	\$ -	\$ -	0.00	\$ -	1.00	\$ -	0.00	\$ -	\$ -
33.4510.1000.03	30-INCH AGRICULTURAL TILE	LF	80.00	\$ 40.00	\$ 3,200.00	0.00	\$ -	40.00	\$ 1,600.00	0.00	\$ -	\$ 1,600.00
33.4510.1000.03	24-INCH AGRICULTURAL TILE	LF	40.00	\$ 28.00	\$ 1,120.00	0.00	\$ -	40.00	\$ 1,120.00	0.00	\$ -	\$ -
33.4510.1000.02	CONNECT EXISTING 30-INCH TILE	EA	2.00	\$ 1,500.00	\$ 3,000.00	0.00	\$ -	2.00	\$ 3,000.00	0.00	\$ -	\$ -
33.4510.1000.02	CONNECT EXISTING 24-INCH TILE	EA	2.00	\$ 1,500.00	\$ 3,000.00	0.00	\$ -	2.00	\$ 3,000.00	0.00	\$ -	\$ -
33.4510.1000.07	GRANULAR PIPE FOUNDATION	CY	15.00	\$ 30.00	\$ 450.00	0.00	\$ -	29.00	\$ 870.00	0.00	\$ -	\$ 420.00
33.4510.1000.02	30-INCH DUAL WALL 45 DEGREE BEND	EA	1.00	\$ 535.00	\$ 535.00	0.00	\$ -	0.00	\$ -	0.00	\$ -	\$ 535.00
31.2316.1000.07	COMMON BORROW (P) (CV)	CY	370.00	\$ 20.00	\$ 7,400.00	0.00	\$ -	1190.00	\$ 23,800.00	0.00	\$ -	\$ 16,400.00
32.9219.1000.04	SIDESLOPE SEEDING (SEED MIX 25-142 W/MNDOT EROSION CONTROL BLANKET CATEGORY 20)	SY	830.00	\$ 1.50	\$ 1,245.00	0.00	\$ -	830.00	\$ 1,245.00	0.00	\$ -	\$ -
31.3700.1000.07	CLASS III RIPRAP WITH GEOTEXTILE FABRIC	CY	50.00	\$ 80.00	\$ 4,000.00	0.00	\$ -	15.00	\$ 1,200.00	0.00	\$ -	\$ 2,800.00
33.4510.1000.03	REMOVE EXISTING TILE (SIZE & MATERIAL MAY VARY)	LF	80.00	\$ 3.00	\$ 240.00	0.00	\$ -	80.00	\$ 240.00	0.00	\$ -	\$ -
					\$ 24,190.00		\$ -		\$ 36,075.00		\$ -	\$ 21,755.00

Appendix C: As-Builts

FARIBAULT COUNTY COUNTY DITCH No. 64 REPAIRS BID PACKAGE 1



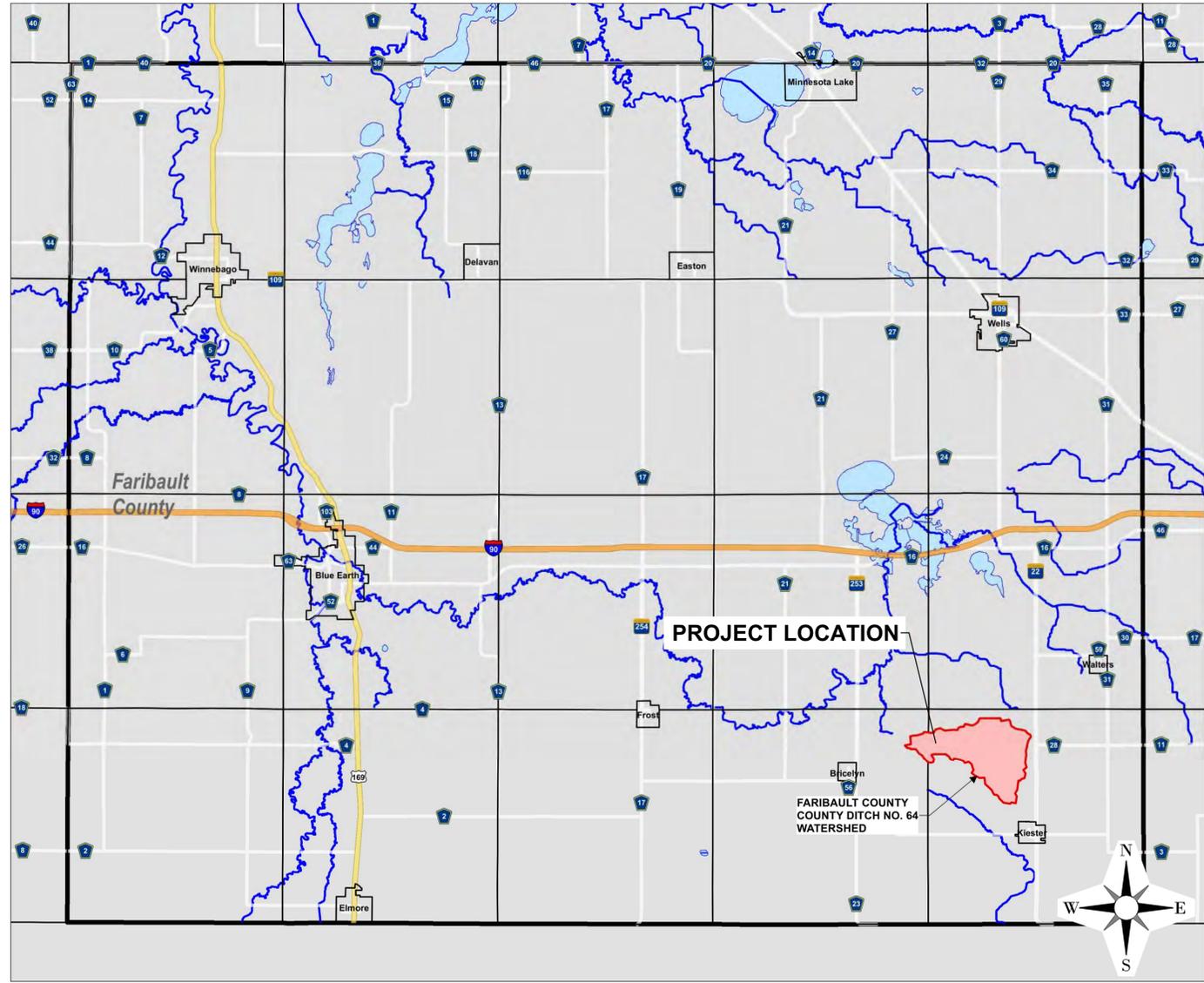
SEELY TOWNSHIP, MINNESOTA

AS-BUILT PLANS

ISG PROJECT # 17-21098

LEGEND

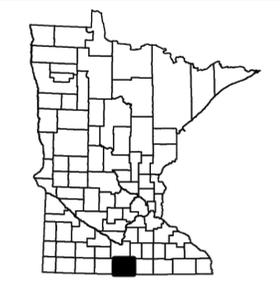
- EXISTING**
- WATERSHED BOUNDARY
 - CITY LIMITS
 - SECTION LINE
 - QUARTER SECTION LINE
 - RIGHT OF WAY LINE
 - PROPERTY / LOTLINE
 - EASEMENT LINE
 - ACCESS CONTROL
 - WATER EDGE
 - WETLAND BOUNDARY
 - FENCE LINE
 - EXISTING OPEN DITCH
 - CULVERT
 - TILE
 - PRIVATE TILE
 - WATER
 - GAS
 - OVERHEAD ELECTRIC
 - UNDERGROUND ELECTRIC
 - UNDERGROUND TELEPHONE
 - UNDERGROUND TV
 - OVERHEAD UTILITY
 - UNDERGROUND UTILITY
 - UNDERGROUND FIBER OPTIC
 - CONTOUR (MAJOR)
 - CONTOUR (MINOR)
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - TREE LINE
 - DROP INTAKE
 - HYDRANT
 - POWER POLE
- PROPOSED**
- EASEMENT
 - PROPOSED OPEN DITCH
 - OPEN DITCH REPAIR
 - CULVERT (RCP)
 - CULVERT (CMP)
 - CULVERT (HDPE)
 - TILE
 - TILE (PIPE WIDTH)
 - PRIVATE TILE
 - WATER
 - GAS
 - OVERHEAD ELECTRIC
 - UNDERGROUND ELECTRIC
 - UNDERGROUND TV
 - CONTOUR (MAJOR)
 - CONTOUR (MINOR)
 - DROP INTAKE
 - SLOUGH REPAIR
 - SPOIL PLACEMENT
 - TREE CLEARING
 - REMOVE TREE
 - BUFFER



LOCATION MAP

SHEET INDEX

- 1 TITLE
- 2 NOTES & QUANTITIES
- 3 DETAILS
- 4 DETAILS SPOILS CROSS SECTIONS
- 5 OVERALL WATERSHED MAP
- 6 BID PACKAGE 1 MAP
- 7-8 PLAN-PROFILE (MAINLINE)
- 9 BERM APPROACH GRADING
- 10-19 CROSS SECTIONS (MAINLINE)
- 20 EROSION CONTROL DETAILS
- 21 DITCH SEEDING MAP



NOTE:
THE CLARITY OF THESE PLANS DEPEND UPON COLOR COPIES. IF THIS TEXT DOES NOT APPEAR IN COLOR, THIS IS NOT AN ORIGINAL PLAN SET AND MAY RESULT IN MISINTERPRETATION.

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.

MARK ORIGER
Mark Origer

DATE: 2/8/2023 LIC. NO. 54863

THIS DOCUMENT IS THE PROPERTY OF I & S GROUP, INC. AND MAY NOT BE USED, COPIED OR DUPLICATED WITHOUT PRIOR WRITTEN CONSENT.

GIS DISCLAIMER:
INFORMATION FOR THE BOUNDARY / LOT LINES, AND UNDERGROUND UTILITIES SHOWN WAS DERIVED FROM DIGITAL DATABASES AND IS FOR INFORMATIONAL PURPOSES ONLY. DATA MAY NOT HAVE BEEN PREPARED FOR, OR BE SUITABLE FOR, LEGAL, ENGINEERING, OR SURVEYING PURPOSES.

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, INC. (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, MINIMUM 2 BUSINESS DAYS PRIOR TO ANY EXCAVATION / CONSTRUCTION (1-800-252-1166).

FARIBAULT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #1

SEELY TOWNSHIP MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY
AS-BUILT		
2/8/2023		

PROJECT NO.	17-21098
FILE NAME	21098 TITLE BP1
DRAWN BY	JJM
DESIGNED BY	MAO
REVIEWED BY	MAO
ORIGINAL ISSUE DATE	05/18/22
CLIENT PROJECT NO.	-

PROJECT INDEX:

OWNER:
FARIBAULT COUNTY DRAINAGE AUTHORITY
415 SOUTH GROVE STREET
BLUE EARTH, MN, 56013
PH: 507-304-4253

PROJECT ADDRESS / LOCATION:
SEELY TOWNSHIP, SECTIONS:
1, 4, 5, 6, 12
KEISTER TOWNSHIP, SECTIONS:
7, 8, 9, 16, 17

MANAGING OFFICE:
ISG
MANKATO OFFICE
115 EAST HICKORY STREET
SUITE 300
MANKATO, MN 56001
PHONE: 507.387.6651
PROJECT MANAGER: MARK ORIGER
EMAIL: MARK.ORIGER@ISGINC.COM

SPECIFICATIONS REFERENCE
ALL CONSTRUCTION SHALL COMPLY WITH THE COUNTY OF FARIBAULT REQUIREMENTS AND MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2020 EDITION, AND THE STANDARD SPECIFICATIONS FOR SANITARY SEWER, STORM DRAIN AND WATERMAIN AS PROPOSED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA 2018, UNLESS DIRECTED OTHERWISE.
PROJECT DATUM
HORIZONTAL COORDINATES HAVE BEEN REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), 1996 ADJUSTMENT (NAD83(1996)) ON THE FARIBAULT 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=1174.67
BRUSS MNDOT POINT
TOPOGRAPHIC SURVEY
THIS PROJECT'S TOPOGRAPHIC SURVEY CONSISTS OF DATA COLLECTED IN MAY OF 2018 BY ISG.

TITLE
TITLE
SHEET
1 OF 21

GENERAL PROJECT NOTES:

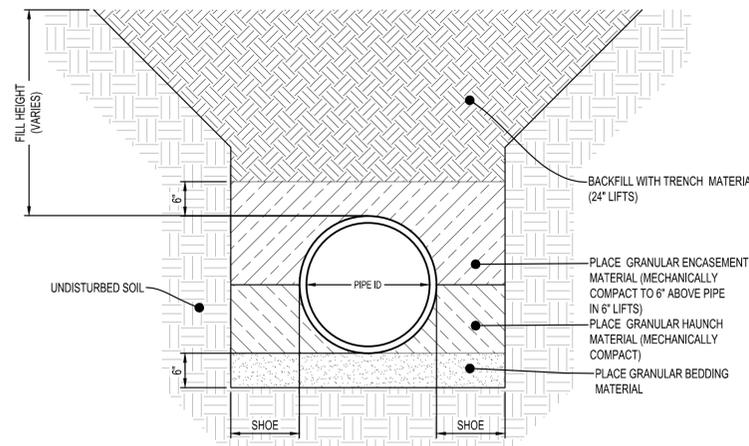
- DURING CONSTRUCTION, CONTRACTOR SHALL MAINTAIN A DRAINAGE OUTLET FOR THE ENTIRE CD 64 PROJECT AREA.
- ALL PIPE DIMENSIONS REFERENCED IN THE PLANS REFER TO THE INSIDE DIAMETER.
- RODENT GUARDS SHALL BE INSTALLED ON ALL OUTLETS 18" AND SMALLER. (INCIDENTAL TO RESPECTIVE BID ITEMS).
- ALL ROAD SIGNAGE, COORDINATION, AND TRAFFIC CONTROL SIGNAGE SHALL BE INCIDENTAL TO ROAD RESTORATIONS AND SHALL CONFORM TO LOCAL ROAD AUTHORITY PERMITS AND REGULATIONS.
- THE CONTRACTOR SHALL SUBMIT A WINTER CONSTRUCTION PLAN FOR SITE STABILIZATION, EROSION PREVENTION, AND SEDIMENT CONTROL IF THE PROJECT IS NOT COMPLETED BY OCTOBER 15 OF THE GIVEN CONSTRUCTION SEASON, UNLESS APPROVED BY THE ENGINEER. THE PLAN SHALL BE DEVELOPED TO SPECIFICALLY ADDRESS SHUTDOWN PROCEDURES OR ACTIVE CONSTRUCTION PLANS.
- ALL DEWATERING FOR THE PROJECT IS INCIDENTAL.
- PRODUCT MATERIAL SHALL BE AS SPECIFIED IN THE PLANS. IF NO SPECIFIC MATERIAL IS CALLED OUT, MATERIAL SHALL CONFORM TO THE APPROVED PRODUCT LIST IN THE APPROPRIATE SPECIFICATION.
- ALL EFFORTS SHALL BE MADE DURING CONSTRUCTION TO SEPARATE SOIL TYPES. BACKFILL SHALL BE COMPACTED PRIOR TO PLACEMENT OF TOPSOIL, EXCEPT THE TOP TWO (2) FEET, FOR WHICH COMPACTION SHALL BE MINIMIZED TO THE EXTENT POSSIBLE. TOPSOIL SHALL BE PLACED TO A MINIMUM DEPTH OF 18", OR UNIFORM TO THE TOPSOIL DEPTH OF THE SURROUNDING AREA UNLESS SPECIFIED ELSEWHERE IN THE PLANS. EXCAVATED SPOILS SHALL BE SPREAD EVENLY IN CONSTRUCTION AREA AS TO NOT IMPEDE DRAINAGE. ALL EFFORTS SHALL BE MADE TO KEEP TOPSOIL ON TOP AND SEPARATED. NO TOPSOIL SHALL BE PLACED IN THE TRENCH BELOW 2' FROM EXISTING GROUND UNLESS APPROVED BY THE ENGINEER.
- ALL SPOIL LEVELING, GRADING, AND RESTORATION OF DISTURBED AREAS SHALL BE IN ACCORDANCE TO THE CONTRACT DOCUMENTS AND SHALL BE INCIDENTAL TO THE WORK UNLESS OTHERWISE SPECIFIED.
- HEAVY VEGETATIVE CLEARING WITH TREE REMOVAL SHALL ONLY BE COMPLETED AS NECESSARY FOR SAFE CONSTRUCTION PRACTICES AND WITHIN THE ALLOWED CONSTRUCTION EASEMENT, UNLESS APPROVED BY THE ENGINEER. TREE REMOVAL AND GRUBBING SHALL BE INCIDENTAL TO HEAVY VEGETATIVE CLEARING WITH TREE REMOVAL BID ITEM.
- TREES CALLED OUT AS "REMOVE TREE" SHALL BE PAID FOR BY EACH OCCURRENCE. IF TREES ARE NOT CALLED OUT IN THE CONSTRUCTION DOCUMENTS AS REMOVE TREE, THEN THE REMOVAL SHALL BE PAID FOR BY THE ACRE AS HEAVY VEGETATIVE CLEARING WITH TREE REMOVAL.
- AGGREGATE SURFACE SHALL BE INCIDENTAL TO CROSSING OR ROAD RESTORATION.
- RIPRAP QUANTITIES ARE ESTIMATED. ADDITIONAL QUANTITY MAY BE REQUIRED BY THE ENGINEER. ALL RIPRAP QUANTITIES SHALL BE PAID BY THE CUBIC YARD INSTALLED, UNLESS RIPRAP IS INCIDENTAL TO A SEPARATE PAY ITEM. ALL EXCAVATION AND GEOTEXTILE FABRIC SHALL BE INCIDENTAL TO RESPECTIVE BID ITEM.
- ALL WORK SHALL BE DONE IN 2,500 LF SECTIONS, UNLESS APPROVED OF BY THE ENGINEER. PRIOR TO COMMENCING ON A NEW SECTION, ALL WORK IN THE PREVIOUS SECTION MUST BE COMPLETED IN ADHERENCE WITH THE CONTRACT DOCUMENTS. THE ENGINEER RESERVES THE RIGHT TO CEASE OPERATIONS AND/OR WITHHOLD PAYMENT UNTIL COMPLIANCE HAS BEEN ACHIEVED.
- EXISTING TILES THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE PROJECT, UNLESS OTHERWISE SPECIFIED.
- ALL SIGNS AND MARKERS SHALL BE PROTECTED OR REMOVED AND REINSTALLED AT NO ADDITIONAL COST TO THE PROJECT, UNLESS OTHERWISE SPECIFIED. THE ENGINEER SHALL BE NOTIFIED OF ANY SIGNS OR MARKERS IN POOR CONDITION PRIOR TO REMOVAL.
- THE DRAINAGE AUTHORITY TAKES NO AUTHORITY OVER OR RESPONSIBILITY FOR ANY AND ALL PRIVATE TILE SHOWN ON THESE PLANS. PRIVATE TILE LOCATIONS HAVE BEEN SUPPLIED BY LANDOWNERS FOR USE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL PAY ALL DAMAGES OUTSIDE OF THE AGREED UPON EASEMENT IN AN AMOUNT OF \$1,200 PER ACRE OF DISTURBANCE, AS MEASURED BY THE ENGINEER.

UTILITY NOTES:

- THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THE UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED: STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA.

GENERAL OPEN DITCH NOTES:

- UNLESS OTHERWISE NOTED, CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITY TO WITHIN A 50-FOOT WIDE AREA ALONG TOP OF DITCH ALIGNMENTS. DISTURBANCE THROUGH ROAD CROSSINGS, ROAD DITCHES, AND GRASS BUFFERS SHALL BE LIMITED TO THE TRENCH WIDTH NECESSARY FOR SAFE CONSTRUCTION PRACTICES, UNLESS OTHERWISE NOTED.
- A 16.5-FOOT GRASS STRIP SHALL BE ESTABLISHED IN AREAS THAT DO NOT HAVE AN EXISTING 16.5-FOOT GRASS STRIP. FINAL SEEDING SHALL OCCUR AFTER ALL WORK HAS BEEN COMPLETED IN THE AREA AND SHALL COMPLY WITH THE CONTRACT DOCUMENTS. TEMPORARY SEEDING MAY BE REQUIRED AND SHALL BE INCIDENTAL.
- DITCH CLEANING SHALL BE PERFORMED ON THE SIDE OF THE DITCH THAT IS THE LOWEST FOR THE GREATEST DISTANCE ALONG THE OPEN DITCH SEGMENT. DITCH CLEANING SPOILS SHALL BE PLACED AND LEVELED (INCIDENTAL) WITHIN THE 16.5-FOOT WIDE GRASS STRIP FROM THE TOP OF DITCH SLOPE UNLESS OTHERWISE DETERMINED BY THE ENGINEER.
- TOPSOIL IN TOPSOIL STRIP AREAS DESIGNATED ON THE PLANS SHALL BE STRIPPED PRIOR TO THE PLACEMENT OF FILL MATERIAL FROM DITCH EXCAVATION. TOPSOIL STRIP AREAS MAY ADJUST BASED ON ACTUAL TOPSOIL THICKNESS. RECLAIMING AND LEVELING OF THE TOPSOIL ON TOP OF THE SPOILS SHALL BE INCIDENTAL TO TOPSOIL STRIPPING.
- SHAPING AROUND SIDE INLETS, ASIS, ASIROS, AND CULVERT INLETS SHALL BE INCIDENTAL TO THEIR RESPECTIVE PAY ITEMS.
- ALL EXISTING TILE OUTLETS INTO THE OPEN DITCH, INCLUDING ANY NOT SHOWN ON THE PLANS, SHALL BE REPAIRED OR ARMORED. UNLESS SPECIFICALLY NOTED, HDPE OR PVC SHALL BE THE ONLY ACCEPTABLE MATERIAL FOR ALL TILE REPAIRS (SEE DETAILS).
- EXISTING TILE OUTLETS MAY BE SALVAGED, REUSED, AND PROTECTED WITH RIPRAP IF THE OUTLET IS DETERMINED TO BE IN GOOD CONDITION BY THE ENGINEER. TILE REPAIR AT THESE LOCATIONS SHALL BE PAID FOR AS BID ITEM "ARMOR TILE OUTLET" (SEE DETAILS).
- MISCELLANEOUS TREE CLEARING SHALL BE INCIDENTAL TO DITCH PAY ITEM(S), UNLESS SPECIFICALLY CALLED OUT IN THE PLANS.
- DITCH BANKS SHALL BE SEEDED WITHIN TWO (2) DAYS OF FINISHED EXCAVATION UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SEE SEEDING NOTES AND SPECIFICATIONS.
- EXCESS TOPSOIL FROM TWO-STAGE SPOILS SHALL BE STOCKPILED ALONG 550TH STREET FOR USE IN FUTURE. SEE SHEET 8, (INCIDENTAL)



NOTE:

GRANULAR BEDDING, GRANULAR ENCASEMENT, AND BACKFILL SHALL BE INCIDENTAL TO CONSTRUCTION.
 ALL PIPE WITH A FILL HEIGHT GREATER THAN 15-FEET SHALL BE FULLY ENCASED IN ASTM CLASS 1 MATERIAL.
 THE SHOE WIDTH SHALL BE THE SAME AS THE COMPACTING MECHANISMS WIDTH OR THE PIPE MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS GREATER.

HDPE FLAT BOTTOM TRENCH
 NTS AG110

TOTAL ESTIMATED QUANTITIES			
Item Code	Item	Unit	Estimated Quantity
01.7113.1000.01	MOBILIZATION	LS	1
31.2316.1000.07	COMMON EXCAVATION - DITCH (P) (EV)	CY	3376
31.2316.1000.07	CONSTRUCT TWO-STAGE DITCH (P) (EV)	CY	14316
31.2316.1000.07	TOP SOIL STRIP & PLACE SPOILS (P) (EV)	CY	2566
31.2316.1000.07	TOP SOIL STRIP & PLACE SPOILS (P) (EV) (TWO-STAGE DITCH)	CY	8594
32.9219.1000.10	SIDE/SLOPE/BENCH SEEDING (SEED MIX: CUSTOM W/ CATEGORY 20 EROSION CONTROL BLANKET)	SY	2489
32.9219.1000.10	BUFFER SEEDING (SEED MIX: CUSTOM W/ TYPE 3 MULCH)	AC	1.2
32.9219.1000.10	SIDE/SLOPE/BENCH SEEDING (SEED MIX: CUSTOM W/ CATEGORY 20 EROSION CONTROL BLANKET) (TWO-STAGE DITCH)	SY	10953
33.0513.1000.02	REMOVE EXISTING ROADSIDE CULVERT	EA	1
33.4510.1000.03	15-INCH AGRICULTURAL TILE	LF	80

CHANGE ORDER QUANTITIES			
Item Code	Item	Unit	Estimated Quantity
01.7113.1000.01	MOBILIZATION	LS	1
31.2316.1000.07	COMMON BORROW	CY	28
33.4510.1000.03	18-INCH AGRICULTURAL TILE - (LELAND TILE REPLACEMENT)	LF	240
33.4520.1000.07	GRANULAR MATERIAL FOR LELAND DRIVEWAY	CY	40

OUTLET SIDE-SLOPE FLATTENING SPOIL PLACEMENT AREA			
SITE BALANCE:		Embankment	Topsoil
Side-Slope Common Excavation		+	2741 CY
Fill Material Needed (Spoils)		-	2467 CY
Topsoil Strip (Fill Area)		+	2566 CY
Topsoil Redress(Fill Area)		-	2566 CY
Shrink/ Swell	Common Excavation Shrink	-	274 CY
	Other	+/-	CY
TOTAL:			0 CY
			43 CY

Note: A positive total indicates excess material is left after grading operations are complete. A negative total indicates a shortage of material exists. Additional calculations may be needed to determine if an adequate amount of suitable fill material is available to achieve desired grading.

EARTHWORK SUMMARY:	
COMMON EXCAVATION (P)(EV):	3376 CY
TOPSOIL STRIP INPLACE OF SPOILS (EV):	2566 CY
A SHRINKAGE FACTOR OF 10% (EMBANKMENT) & 15% (TOPSOIL) WERE APPLIED TO ALL EXCAVATED MATERIAL WHEN DETERMINING SITE BALANCE.	
NO WARRANTY IS MADE OR IMPLIED AS TO THE ACCURACY, SUFFICIENCY, OR RELIABILITY OF THE SHRINKAGE FACTORS.	
18" OF TOPSOIL WAS ASSUMED IN ALL AREAS. TOPSOIL REDRESS IN AREA'S OF FILL SHALL HAVE MINIMUM OF 18", UNLESS APPROVED BY THE ENGINEER.	
THE SITE BALANCE PROVIDED ABOVE IS FOR INFORMATIONAL PURPOSES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL QUANTITIES PRIOR TO SUBMITTING A BID FOR THE PROJECT.	

TWO STAGE SPOIL PLACEMENT AREA			
SITE BALANCE:		Embankment	Topsoil
Common Excavation (Two-Stage Bench)		+	10600 CY
Fill Material Needed (Spoils)		-	9540 CY
Topsoil Strip (Fill Area)		+	8594 CY
Topsoil Redress(Fill Area)		-	8594 CY
Shrink/ Swell	Common Excavation Shrink	-	1060 CY
	Other	+/-	CY
TOTAL:			0 CY
			1219 CY

Note: A positive total indicates excess material is left after grading operations are complete. A negative total indicates a shortage of material exists. Additional calculations may be needed to determine if an adequate amount of suitable fill material is available to achieve desired grading.

EARTHWORK SUMMARY:	
COMMON EXCAVATION (P)(EV):	14316 CY
TOPSOIL STRIP INPLACE OF SPOILS (EV):	8594 CY
A SHRINKAGE FACTOR OF 10% (EMBANKMENT) & 15% (TOPSOIL) WERE APPLIED TO ALL EXCAVATED MATERIAL WHEN DETERMINING SITE BALANCE.	
NO WARRANTY IS MADE OR IMPLIED AS TO THE ACCURACY, SUFFICIENCY, OR RELIABILITY OF THE SHRINKAGE FACTORS.	
18" OF TOPSOIL WAS ASSUMED IN ALL AREAS. TOPSOIL REDRESS IN AREA'S OF FILL SHALL HAVE MINIMUM OF 18", UNLESS APPROVED BY THE ENGINEER.	
THE SITE BALANCE PROVIDED ABOVE IS FOR INFORMATIONAL PURPOSES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL QUANTITIES PRIOR TO SUBMITTING A BID FOR THE PROJECT.	

ABBREVIATIONS

AC	ACRE	GA	GAUGE	PP	POLYPROPYLENE
ADD	ADDENDUM	GAL	GALLON	PSI	POUNDS PER SQUARE INCH
AGG	AGGREGATE	GPM	GALLONS PER MINUTE	PVC	POLYVINYL CHLORIDE
APPROX	APPROXIMATE	HDPE	HIGH DENSITY POLYETHYLENE	PVMT	PAVEMENT
BIT	BITUMINOUS	HORIZ	HORIZONTAL	QTY	QUANTITY
CAD	COMPUTER-AIDED DESIGN	HR	HOURLY	RCP	REINFORCED CONCRETE PIPE
CFS	CUBIC FEET PER SECOND	HWL	HIGH WATER LEVEL	REBAR	REINFORCING BAR
CF	CUBIC FOOT	HWY	HIGHWAY	REM	REMOVE
CL	CENTERLINE	HYD	HYDRANT	ROW	RIGHT OF WAY
CMP	CORRUGATED METAL PIPE	I	INVERT	R/W	RIGHT OF WAY
CONC	CONCRETE	ID	INSIDE DIAMETER	SCH	SCHEDULE
CONST	CONSTRUCTION	IN	INCH	SF	SQUARE FOOT
CONT	CONTINUOUS	INV	INVERT	SPEC	SPECIFICATION
CR	COUNTY ROAD	LF	LINEAR FEET	SQ	SQUARE
CSAH	COUNTY STATE AID	LIN	LINEAR	STA	STATION
CY	CUBIC YARD	LS	LUMP SUM	SY	SQUARE YARD
DI	DROP INTAKE	MAX	MAXIMUM	TEMP	TEMPORARY
DIA	DIAMETER	MH	MANHOLE	THRU	THROUGH
DIM	DIMENSION	MIN	MINIMUM	TRANS	TRANSFORMER
EA	EACH	MISC	MISCELLANEOUS	TV	TELEVISION
ELEC	ELECTRICAL	NO	NUMBER	TYP	TYPICAL
ELEV	ELEVATION	NTS	NOT TO SCALE	UT	UTILITY, UNDERGROUND
EOF	EMERGENCY OVERFLOW	NWL	NORMAL WATER LEVEL	W/O	WITHOUT
EQ	EQUAL	OC	ON CENTER	VCP	VITRIFIED CLAY PIPE
EX	EXISTING	OCEW	ON CENTER EACH WAY	W/	WITH
FDN	FOUNDATION	OH	OVERHEAD	YD	YARD
FPM	FEET PER MINUTE	OHWL	ORDINARY HIGH WATER	YR	YEAR
FPS	FEET PER SECOND	OZ	OUNCE		
FT	FOOT, FEET	PERF	PERFORATED		
		PL	PROPERTY LINE		



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MARK ORIGER
Mark Origer
 DATE: 2/8/2023 LIC. NO. 54863

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PROJECT
FARIBAUT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #1

SEELY TOWNSHIP MINNESOTA

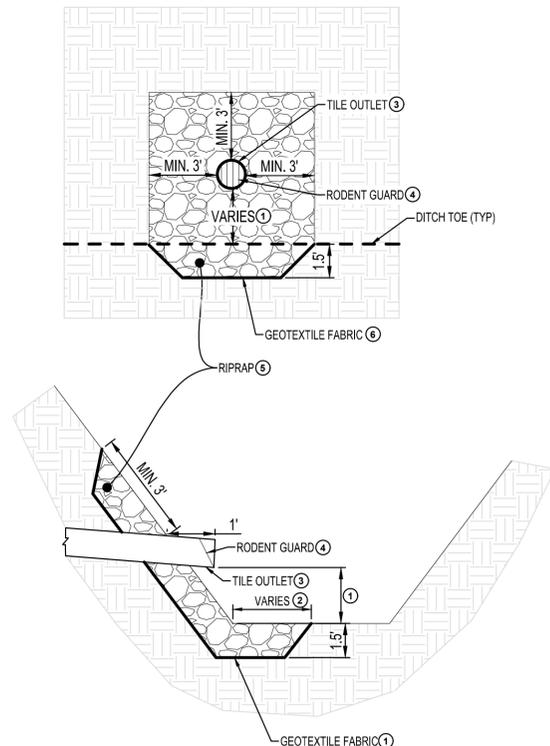
REVISION SCHEDULE

DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 QUANTDETNOTES BP1
DRAWN BY	JJM
DESIGNED BY	MAO
REVIEWED BY	MAO
ORIGINAL ISSUE DATE	05/18/22
CLIENT PROJECT NO.	-

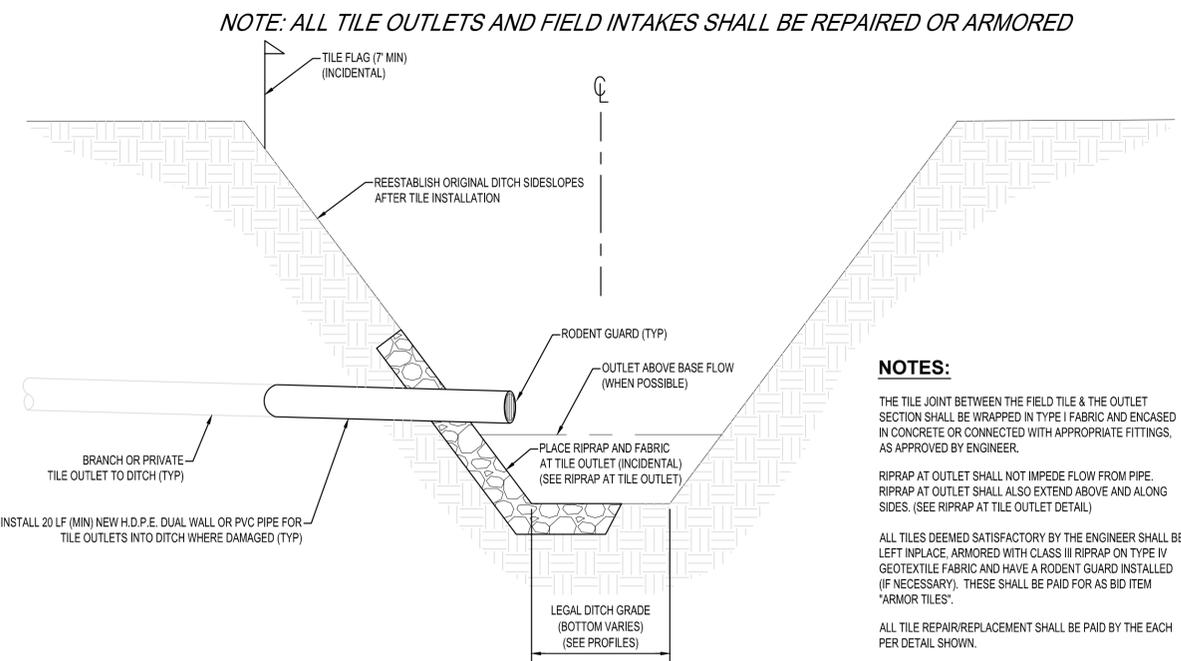
TITLE
NOTES & QUANTITIES



DIMENSIONS	
NOMINAL PIPE DIA	RIPRAP ③
UNDER 12"	8 CY
12"-15"	8.5 CY
18" TO 36"	9 CY
42" TO 60"	10 CY
ABOVE 60"	12 CY

- NOTES:**
- ① DISTANCE VARIES. REFER TO PLANS AND DETAILS.
 - ② DISTANCE VARIES. 4' OR 1/2 OF DITCH BOTTOM, WHICHEVER IS GREATER.
 - ③ SIZE AND TYPE VARIES. REFER TO PLANS AND SCHEDULES.
 - ④ RODENT GUARDS SHALL BE INSTALLED ON ALL OUTLETS 18" AND SMALLER. (INCIDENTAL TO RESPECTIVE BID ITEMS).
 - ⑤ RIPRAP SHALL BE MNDOT CLASS III, UNLESS OTHERWISE SPECIFIED. THE CUBIC YARD LISTED IN THE TABLE SHALL BE INCIDENTAL TO THE RESPECTIVE BID ITEM. ADDITIONAL RIPRAP SHALL BE PAID FOR BY THE CUBIC YARD INSTALLED.
 - ⑥ GEOTEXTILE FABRIC SHALL BE MNDOT TYPE IV. (INCIDENTAL TO RESPECTIVE BID ITEM)
- RIPRAP DIMENSIONS SHOWN ARE TYPICAL AND MAY BE MODIFIED ON A SITUATIONAL BASIS, IF APPROVED BY THE ENGINEER.
- RIPRAP SHALL NOT IMPEDE FLOW FROM THE TILE OUTLET OR THE RECEIVING BODY.
- RIPRAP OF THE OPPOSITE BANK MAY BE REQUIRED BY THE ENGINEER IN THE FIELD OR AS CALLED OUT IN THE PLANS, PAID FOR BY THE CUBIC YARD INSTALLED.

RIPRAP AT TILE OUTLET
NTS AG640



- NOTES:**
- THE TILE JOINT BETWEEN THE FIELD TILE & THE OUTLET SECTION SHALL BE WRAPPED IN TYPE I FABRIC AND ENCASED IN CONCRETE OR CONNECTED WITH APPROPRIATE FITTINGS, AS APPROVED BY ENGINEER.
- RIPRAP AT OUTLET SHALL NOT IMPEDE FLOW FROM PIPE. RIPRAP AT OUTLET SHALL ALSO EXTEND ABOVE AND ALONG SIDES. (SEE RIPRAP AT TILE OUTLET DETAIL)
- ALL TILES DEEMED SATISFACTORY BY THE ENGINEER SHALL BE LEFT IN PLACE. ARMORED WITH CLASS III RIPRAP ON TYPE IV GEOTEXTILE FABRIC AND HAVE A RODENT GUARD INSTALLED (IF NECESSARY). THESE SHALL BE PAID FOR AS BID ITEM "ARMOR TILES".
- ALL TILE REPAIR/REPLACEMENT SHALL BE PAID BY THE EACH PER DETAIL SHOWN.
- RODENT GUARDS SHALL BE INSTALLED ON ALL TILE REPAIRS 18" AND SMALLER, AND ARE INCIDENTAL TO THE PAY ITEM.
- ALL FITTINGS TO CONNECT EXISTING TILE SHALL BE INCIDENTAL TO TILE OUTLET REPAIR.
- FENCE POST WITH 8' LONG PIECE OF PVC SLIPPED OVER IT MAY BE SUBSTITUTED FOR THE TILE FLAG.
- REFER TO OPEN DITCH NOTES FOR ACCEPTABLE OUTLET MATERIAL TYPES.
- SEEDING MUST OCCUR WITHIN 2 DAYS OF CONSTRUCTION.

TYPICAL TILE OUTLET REPAIR
NTS AG630

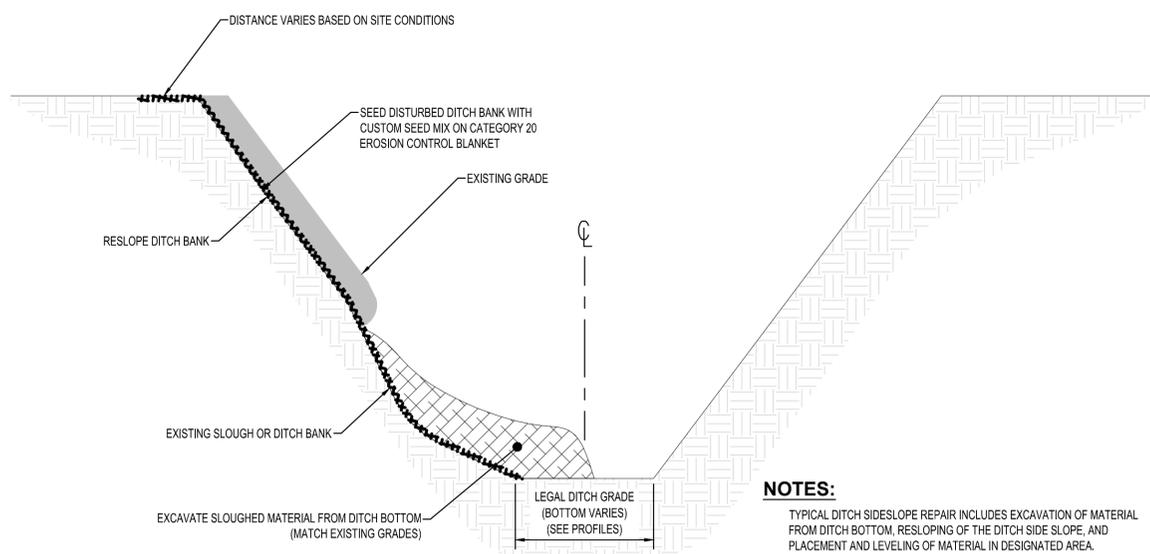
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MARK ORIGER
Mark Origer

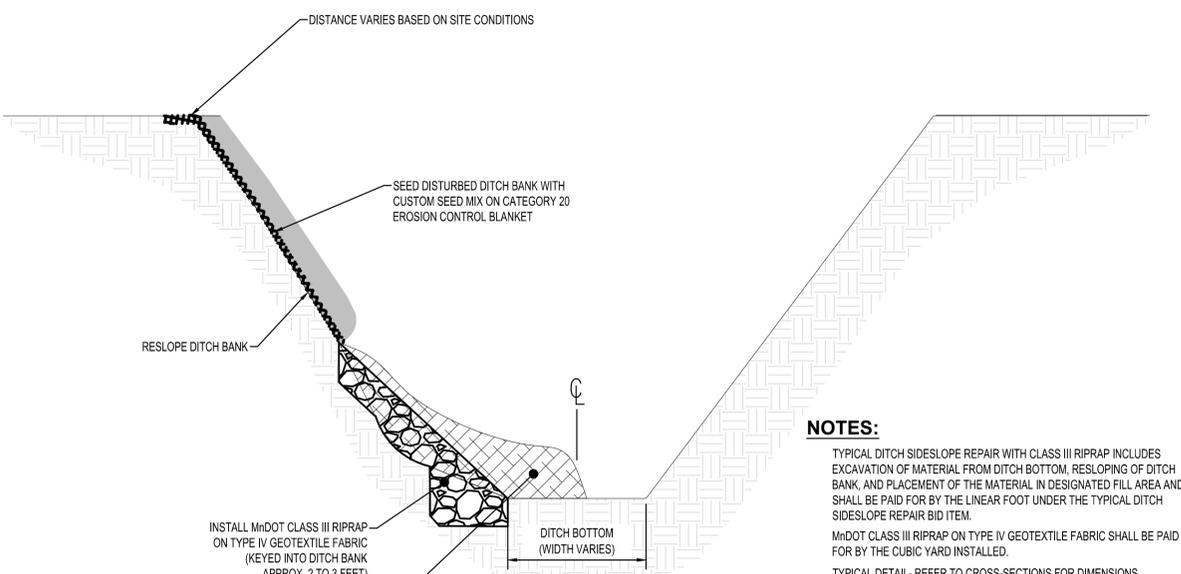
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- NOTES:**
- TYPICAL DITCH SIDESLOPE REPAIR INCLUDES EXCAVATION OF MATERIAL FROM DITCH BOTTOM, RESLOPING OF THE DITCH SIDE SLOPE, AND PLACEMENT AND LEVELING OF MATERIAL IN DESIGNATED AREA.
- DITCH SIDESLOPE REPAIR SHALL BE PAID FOR BY THE LINEAR FOOT MEASURED ALONG THE DITCH CENTERLINE.
- TYPICAL DETAIL- REFER TO CROSS-SECTIONS FOR DIMENSIONS.
- SEEDING SHALL BE MEASURED AND PAID FOR BY THE SY INSTALLED.
- DITCH BANK SEEDING MUST OCCUR WITHIN 2 DAYS OF CONSTRUCTION.

TYPICAL DITCH SIDESLOPE REPAIR
NTS AG460



- NOTES:**
- TYPICAL DITCH SIDESLOPE REPAIR WITH CLASS III RIPRAP INCLUDES EXCAVATION OF MATERIAL FROM DITCH BOTTOM, RESLOPING OF DITCH BANK, AND PLACEMENT OF THE MATERIAL IN DESIGNATED FILL AREA AND SHALL BE PAID FOR BY THE LINEAR FOOT UNDER THE TYPICAL DITCH SIDESLOPE REPAIR BID ITEM.
- MNDOT CLASS III RIPRAP ON TYPE IV GEOTEXTILE FABRIC SHALL BE PAID FOR BY THE CUBIC YARD INSTALLED.
- TYPICAL DETAIL- REFER TO CROSS-SECTIONS FOR DIMENSIONS.
- SEEDING SHALL BE MEASURED AND PAID FOR BY THE SY INSTALLED.
- COORDINATE RIPRAP DIMENSIONS WITH ENGINEER BASED ON CONDITIONS FOUND AFTER SLOUGH REMOVAL.
- DITCH BANK SEEDING MUST OCCUR WITHIN 2 DAYS OF CONSTRUCTION.

TYPICAL DITCH SIDESLOPE REPAIR WITH CLASS III RIPRAP
NTS AG470

PROJECT

**FARIBAULT COUNTY
DITCH
No. 64 REPAIRS
BID PACKAGE #1**

SEELY TOWNSHIP MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 QUANTDETNOTES BP1
DRAWN BY	JJM
DESIGNED BY	MAO
REVIEWED BY	MAO
ORIGINAL ISSUE DATE	05/18/22
CLIENT PROJECT NO.	-

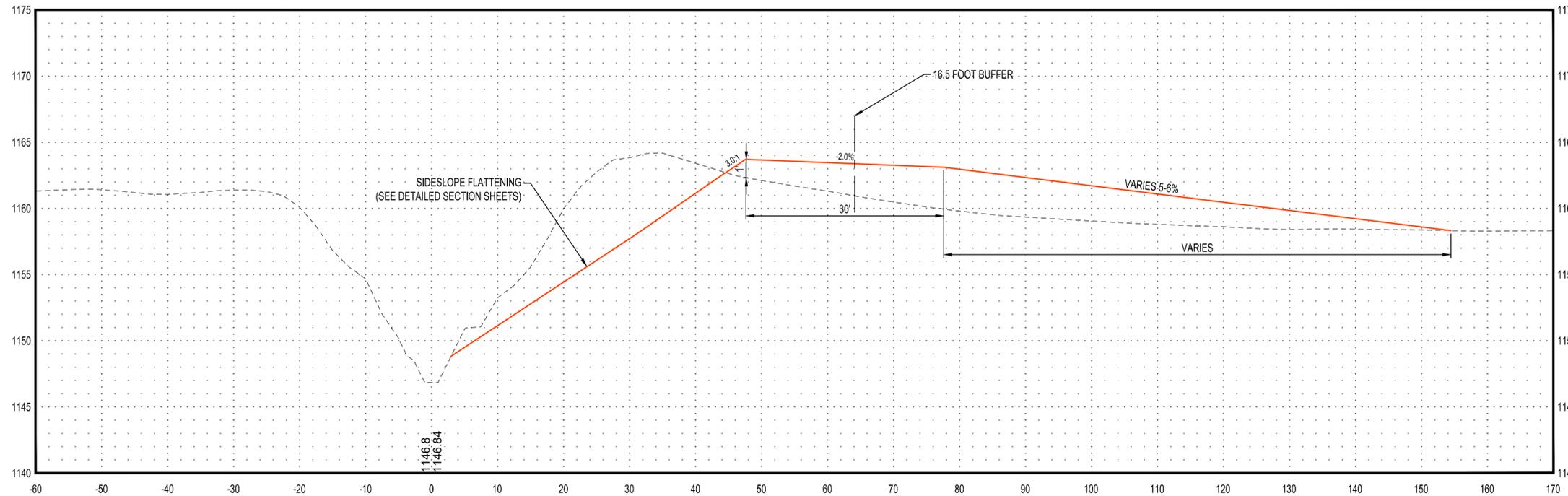
TITLE

DETAILS

SHEET



TYPICAL OUTLET SIDE SLOPE FLATTENING SECTION



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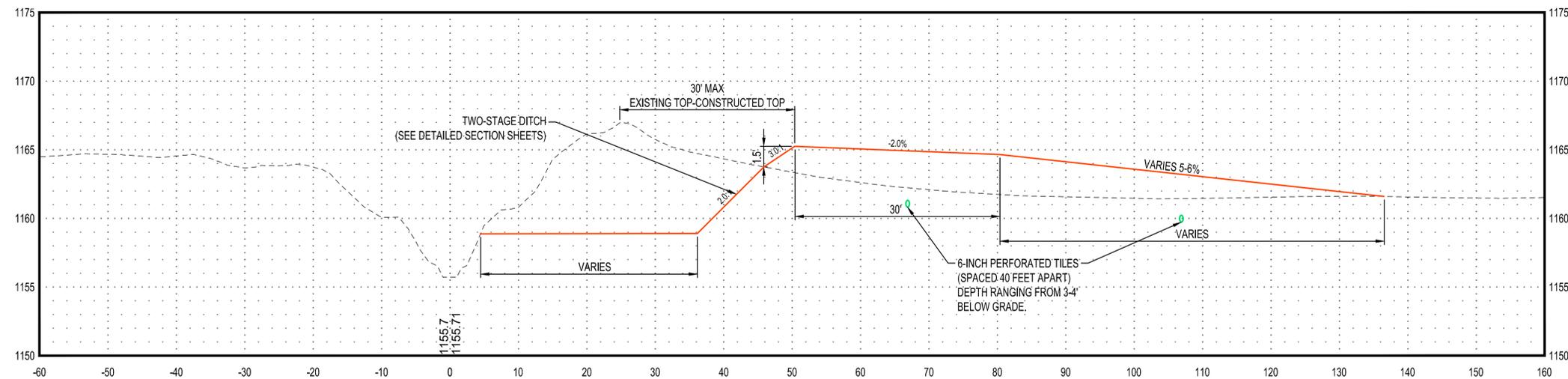
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TYPICAL TWO-STAGE DITCH SECTION



NOTES:

- OPEN DITCH SPOILS SHALL BE PLACED WITHIN THE 16.5' BUFFER, UNLESS THE SPECIFIED DIMENSIONS ARE NOT FEASIBLE. IF THE SPECIFIED DIMENSIONS CANNOT BE OBTAINED, THE ENGINEER SHALL BE NOTIFIED AND SPOILS SHALL BE CONTINUED OUTSIDE OF THE BUFFER IN ACCORDANCE WITH THE PLANS. TOPSOIL STRIPPING MAY BE REQUIRED.
- TYPICAL DITCH CLEANING INCLUDES EXCAVATION OF SEDIMENT DEPOSITS AND SPOIL PLACEMENT AND LEVELING.
- DO NOT OVER EXCAVATE DITCH BOTTOM OR SIDE SLOPES WHEN CLEANING SEDIMENT.
- TYPICAL DETAIL- REFER TO CROSS-SECTIONS FOR DIMENSIONS.
- BACKSLOPE OUTSIDE OF THE BUFFER SHALL BE DRIVABLE BY A COMBINE WITH AN ATTACHMENT.
- EXISTING AREAS WITH TOPSOIL ON BANKS SHALL BE REUSED TO DRESS SIDE SLOPES AS APPROVED BY ENGINEER IN FIELD.
- DITCH BANK SEEDING MUST OCCUR WITHIN 2 DAYS OF CONSTRUCTION.

PROJECT

FARIBAULT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #1

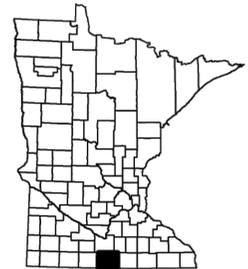
SEELY TOWNSHIP MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 SPOILS SECTIONS BP 1
DRAWN BY	-
DESIGNED BY	-
REVIEWED BY	-
ORIGINAL ISSUE DATE	05/18/22
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DETAILS SPOILS CROSS SECTIONS



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PROJECT

**FARIBAULT COUNTY
DITCH
No. 64 REPAIRS
BID PACKAGE #1**

SEELY TOWNSHIP MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 WATERSHEDMAPS
DRAWN BY	-
DESIGNED BY	-
REVIEWED BY	-
ORIGINAL ISSUE DATE	05/18/22
CLIENT PROJECT NO.	-

TITLE

**OVERALL
WATERSHED MAP**

SHEET

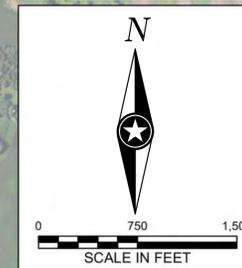
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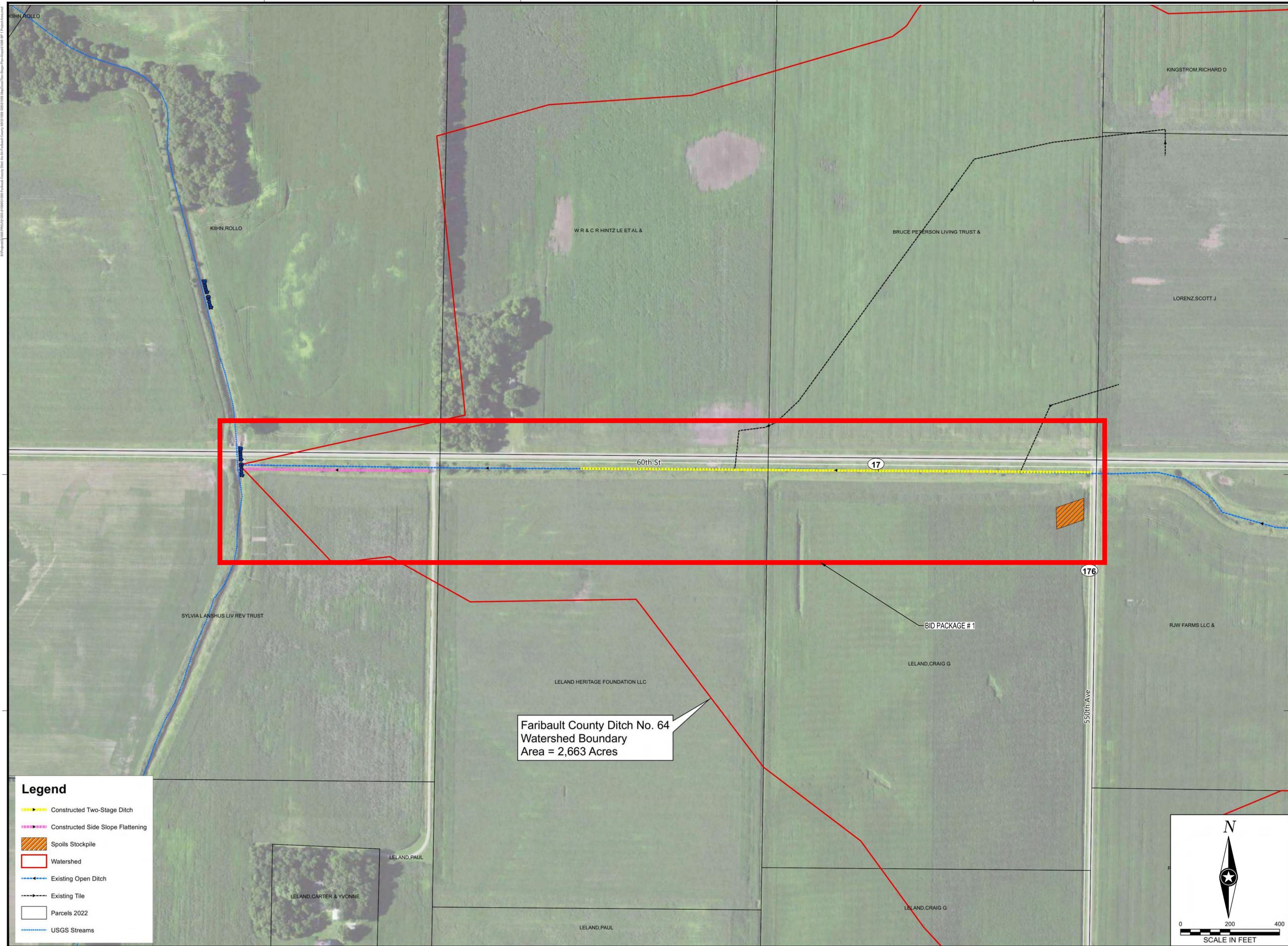
OF 21



Legend

- ★ Constructed Riffles
- Constructed Grade Stabilization Structures
- ▬ Constructed Two-Stage Ditch
- ▬ Constructed Side Slope Flattening
- ▬ Existing Open Ditch
- ▬ Existing Tile
- ▭ Watershed





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**FARIBAULT COUNTY
DITCH
No. 64 REPAIRS
BID PACKAGE #1**

SEELY TOWNSHIP MINNESOTA

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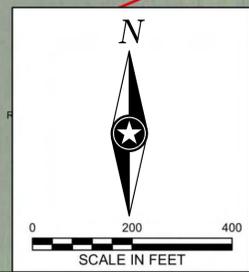
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REVIEWED BY	-
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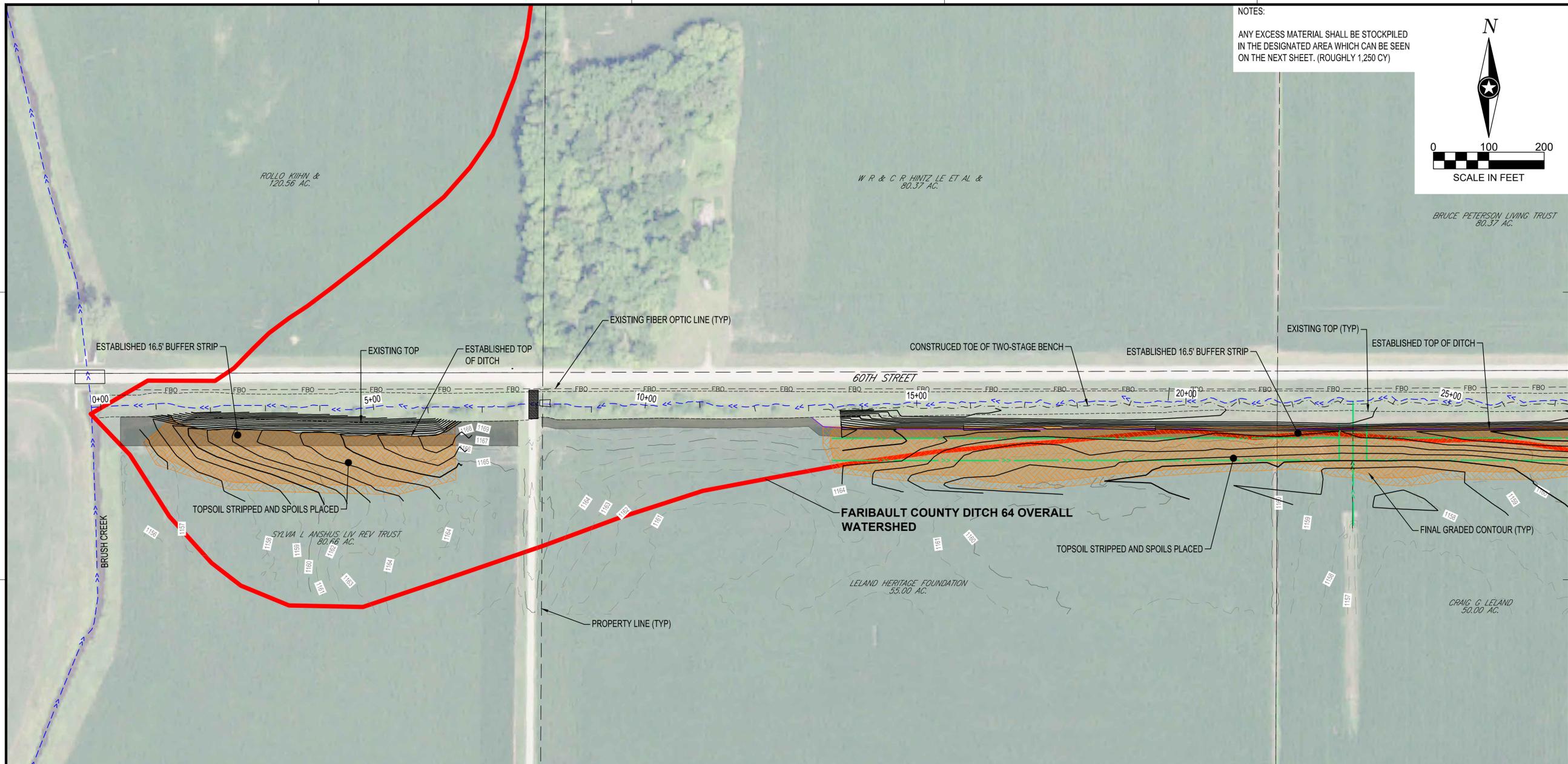
TITLE
**BID PACKAGE 1
MAP**

SHEET
6
OF 21

- Legend**
- Constructed Two-Stage Ditch
 - Constructed Side Slope Flattening
 - Spoils Stockpile
 - Watershed
 - Existing Open Ditch
 - Existing Tile
 - Parcels 2022
 - USGS Streams



Faribault County Ditch No. 64
Watershed Boundary
Area = 2,663 Acres



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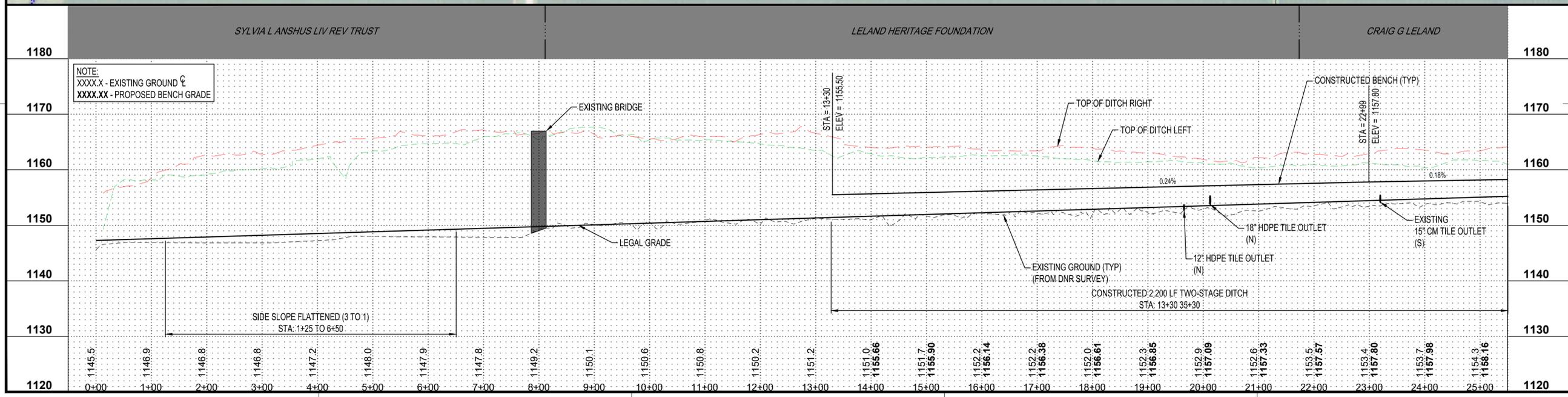
PROJECT
FARIBAULT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #1

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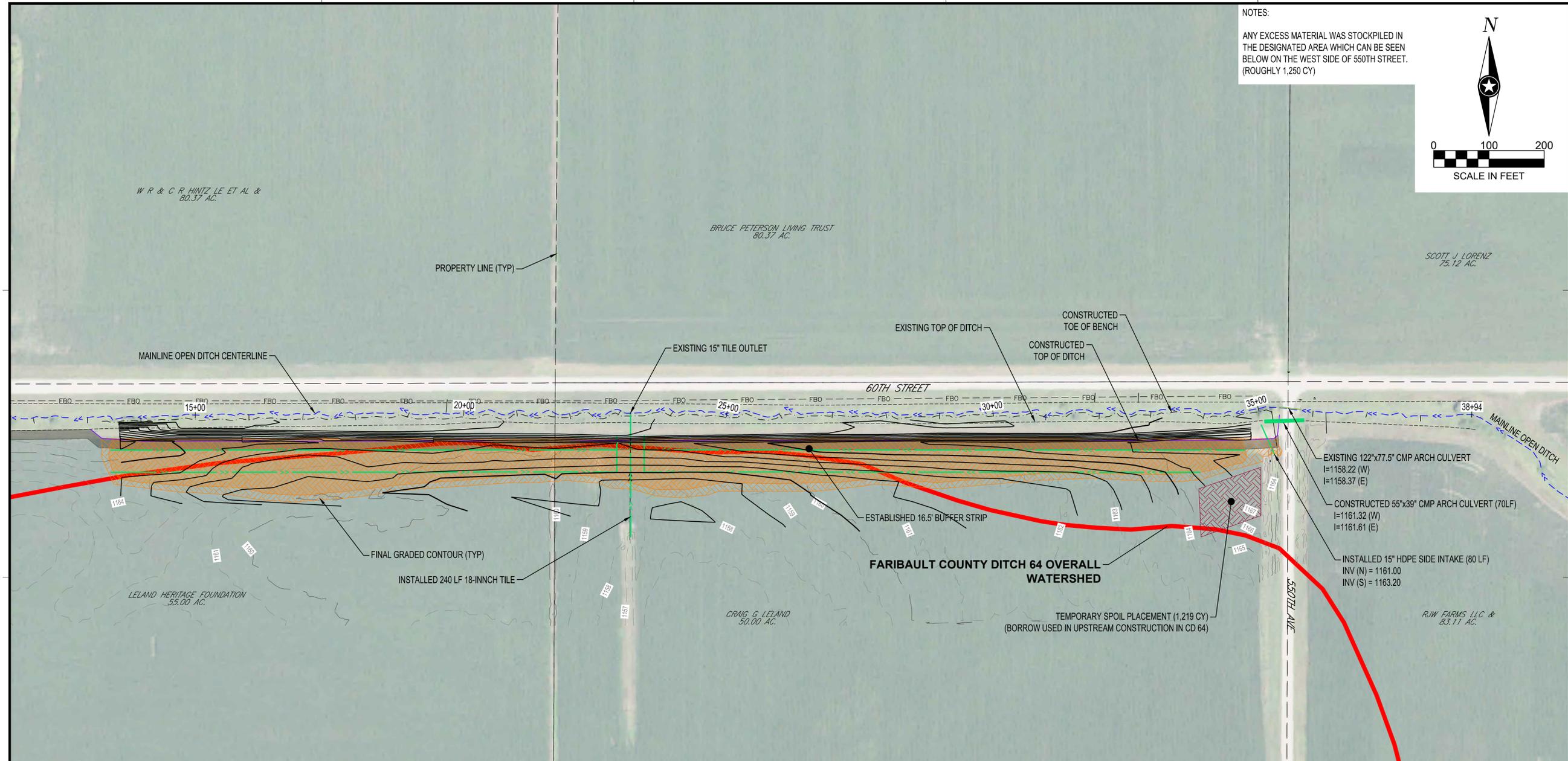
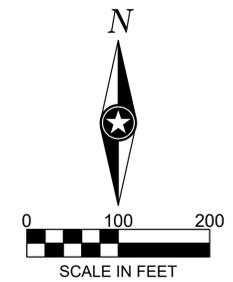
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PROJECT NO.	17-21098
FILE NAME	21098 2-STAGE PLN-PROF BP 1
DRAWN BY	-
DESIGNED BY	-
REVIEWED BY	-
ORIGINAL ISSUE DATE	05/18/22
CLIENT PROJECT NO.	-

TITLE
PLAN-PROFILE (MAINLINE)



NOTES:
 ANY EXCESS MATERIAL WAS STOCKPILED IN THE DESIGNATED AREA WHICH CAN BE SEEN BELOW ON THE WEST SIDE OF 560TH STREET. (ROUGHLY 1,250 CY)



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FARIBAULT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #1

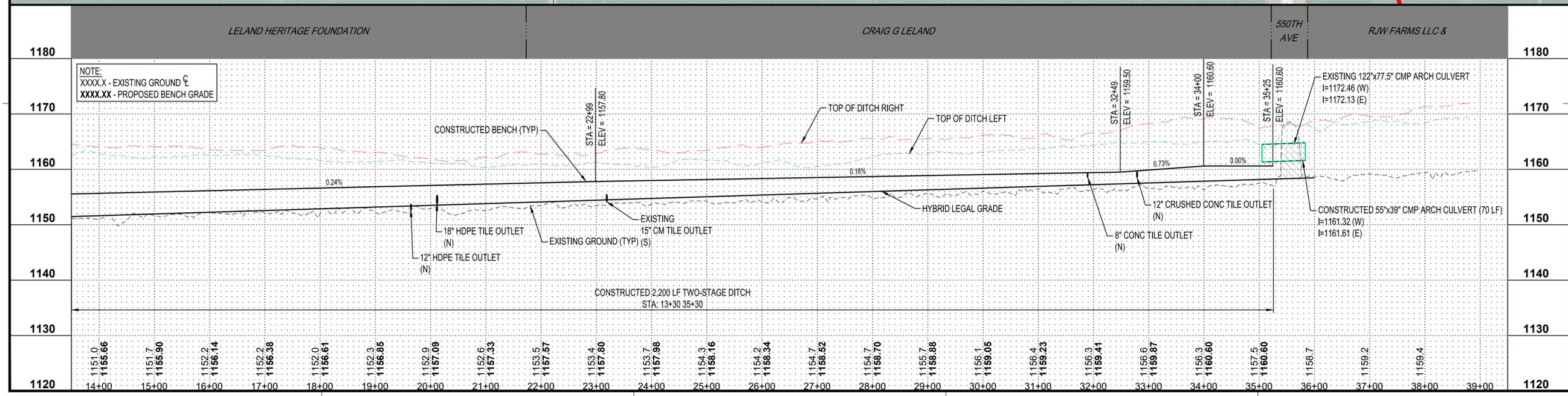
REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

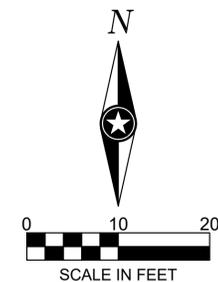
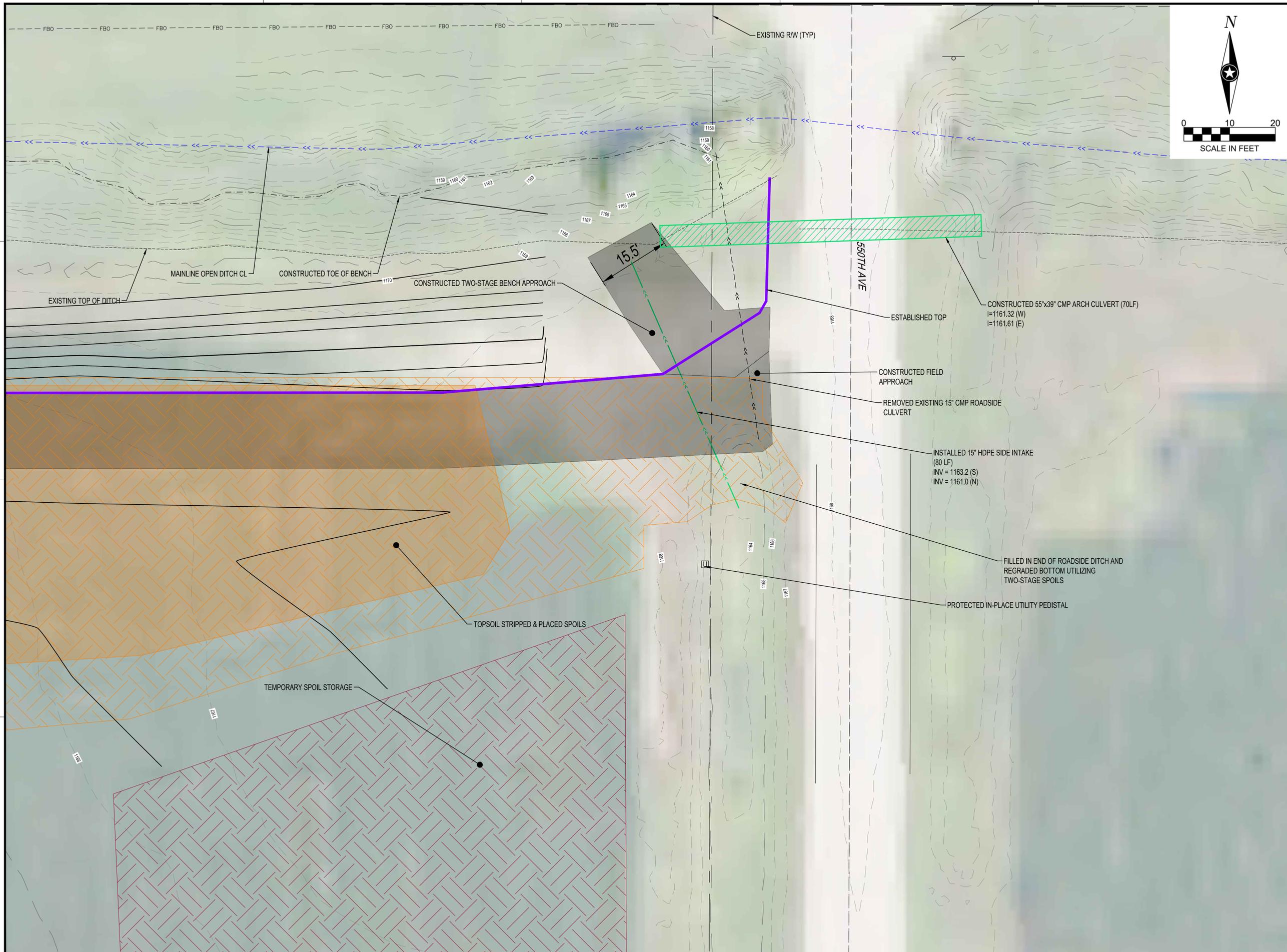
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CLIENT PROJECT NO.	-

TITLE
PLAN-PROFILE (MAINLINE)

SHEET
8 OF 21



NOTE:
 XXXX.X - EXISTING GROUND E
 XXXX.XX - PROPOSED BENCH GRADE



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PROJECT
**FARIBAUT COUNTY
 DITCH
 No. 64 REPAIRS
 BID PACKAGE #1**

SEELY TOWNSHIP MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 2-STAGE DETAILED GRADING
DRAWN BY	BP-1
DESIGNED BY	-
REVIEWED BY	-
ORIGINAL ISSUE DATE	05/18/22
CLIENT PROJECT NO.	-

TITLE
**BERM APPROACH
 GRADING**

NOTE: AS VIEWED IN THE DIRECTION OF INCREASING STATION



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PROJECT
**FARIBAULT COUNTY
DITCH
No. 64 REPAIRS
BID PACKAGE #1**

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

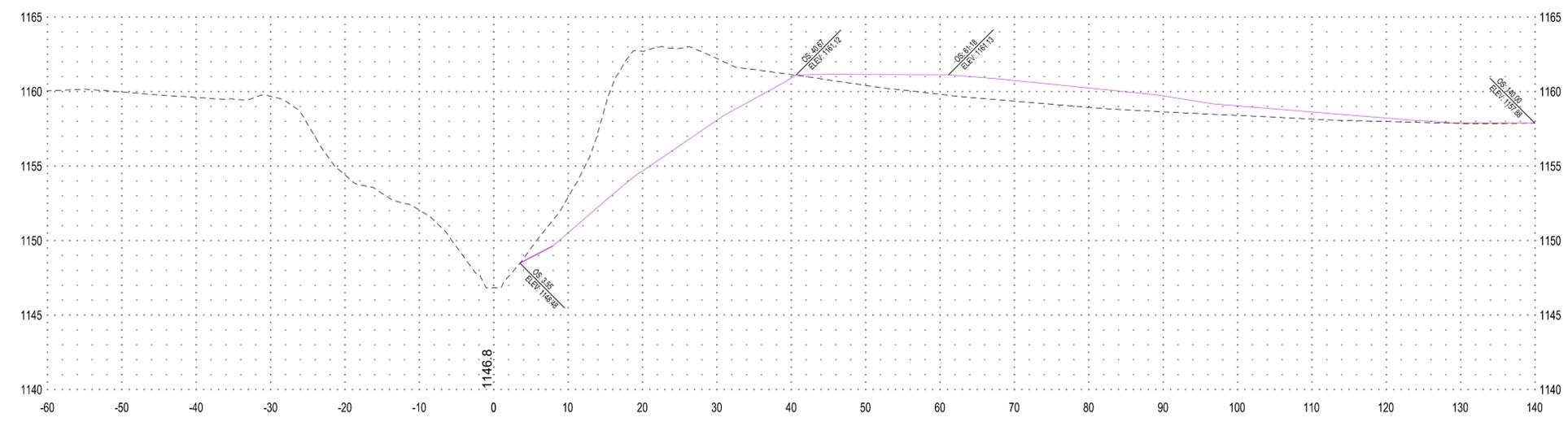
AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 2-STAGE SECTIONS BP 1
DRAWN BY	-
DESIGNED BY	-
REVIEWED BY	-
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CLIENT PROJECT NO.	-

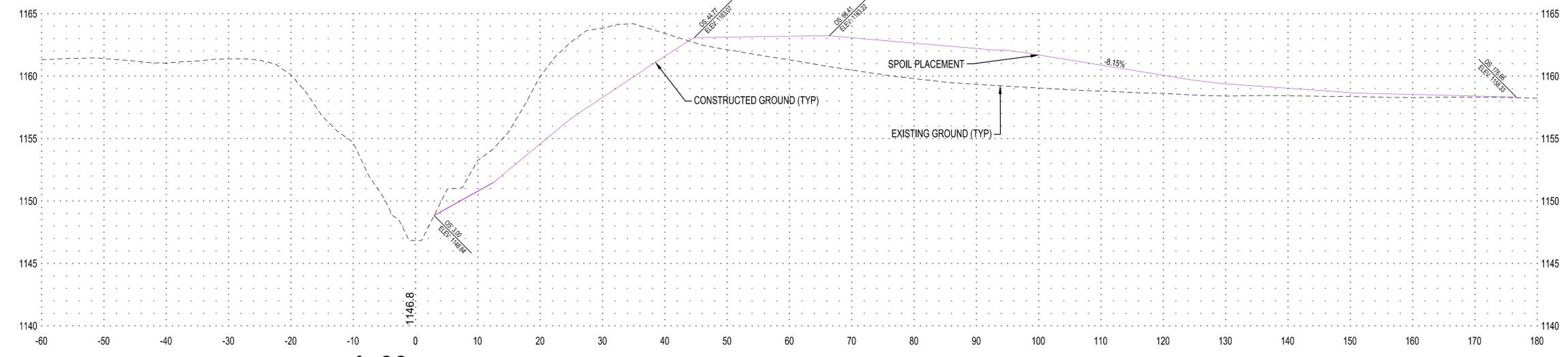
TITLE
**CROSS SECTIONS
(MAINLINE)**

SHEET
10 OF 21

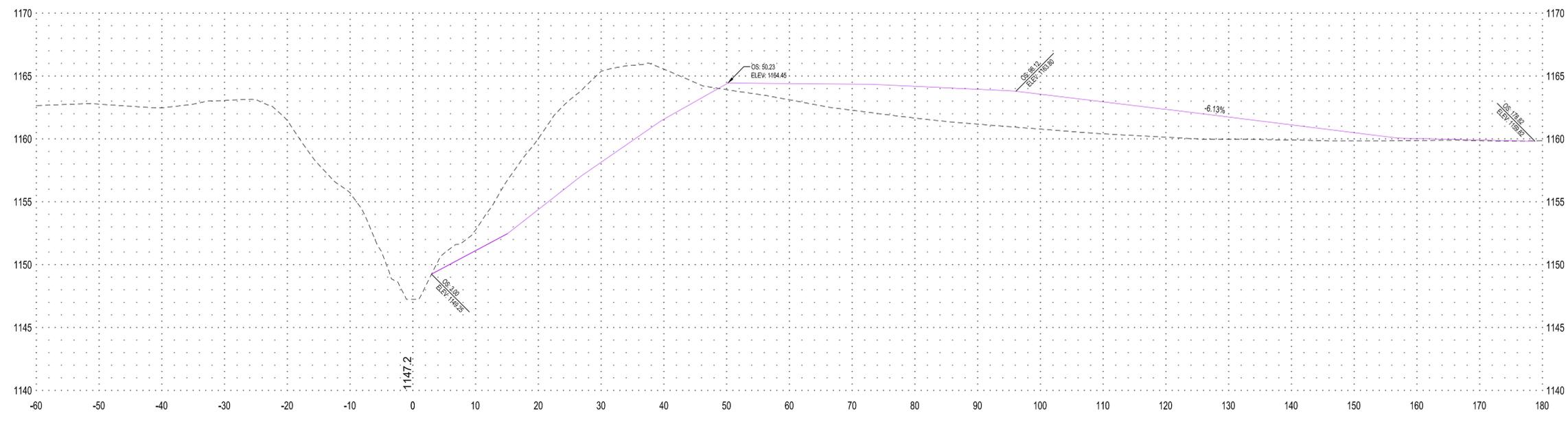
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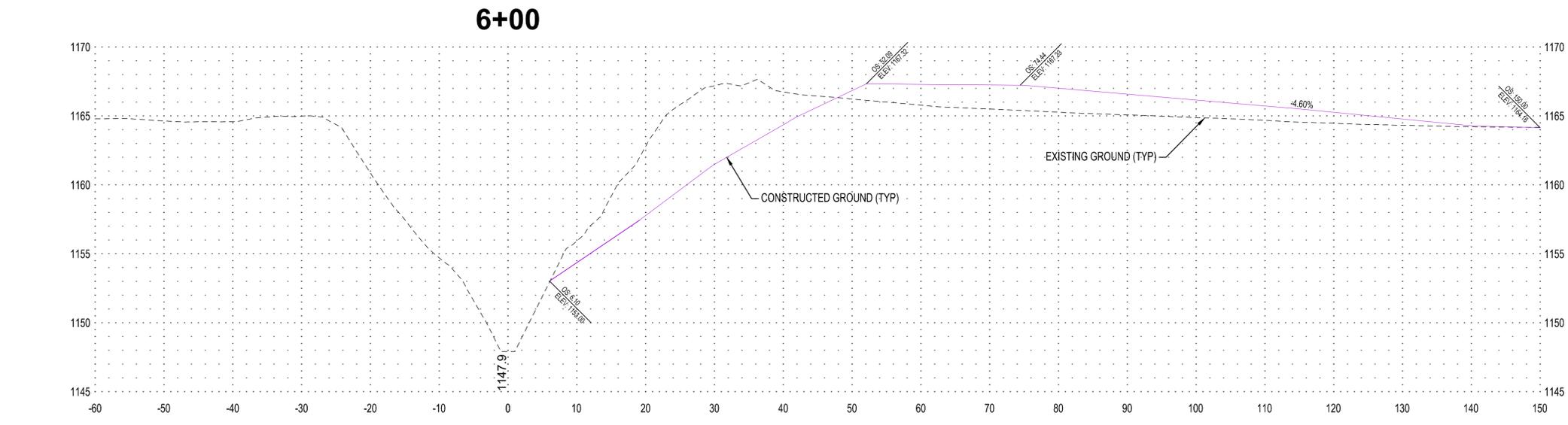
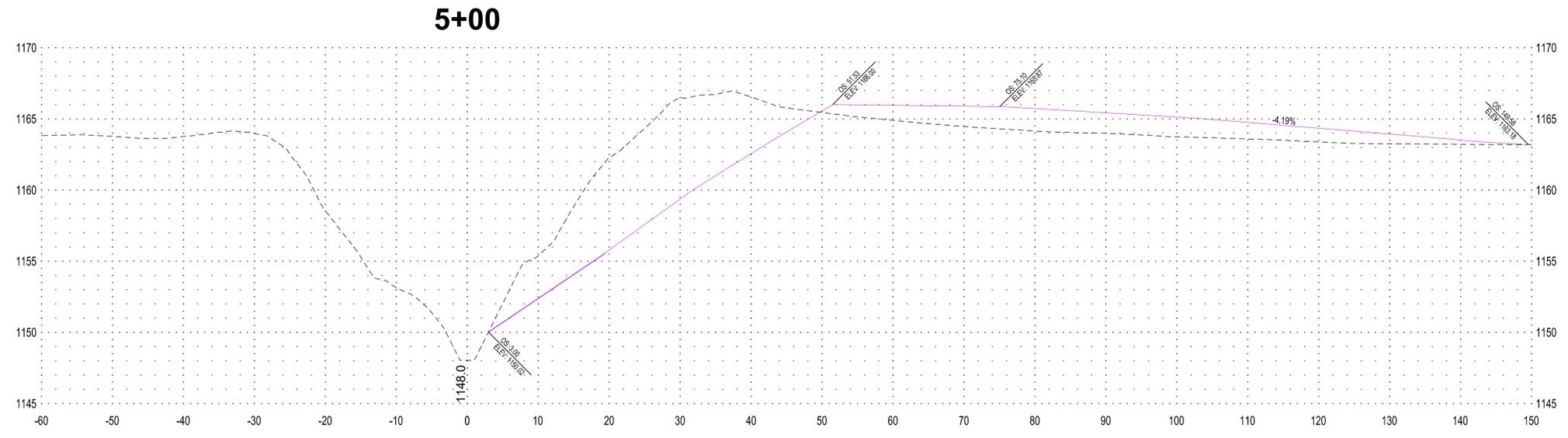
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MARK ORIGER
Mark Origer
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PROJECT
**FARIBAULT COUNTY
DITCH
No. 64 REPAIRS
BID PACKAGE #1**

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 2-STAGE SECTIONS BP 1
DRAWN BY	-
DESIGNED BY	-
REVIEWED BY	-
ORIGINAL ISSUE DATE	05/18/22
CLIENT PROJECT NO.	-

TITLE
**CROSS SECTIONS
(MAINLINE)**

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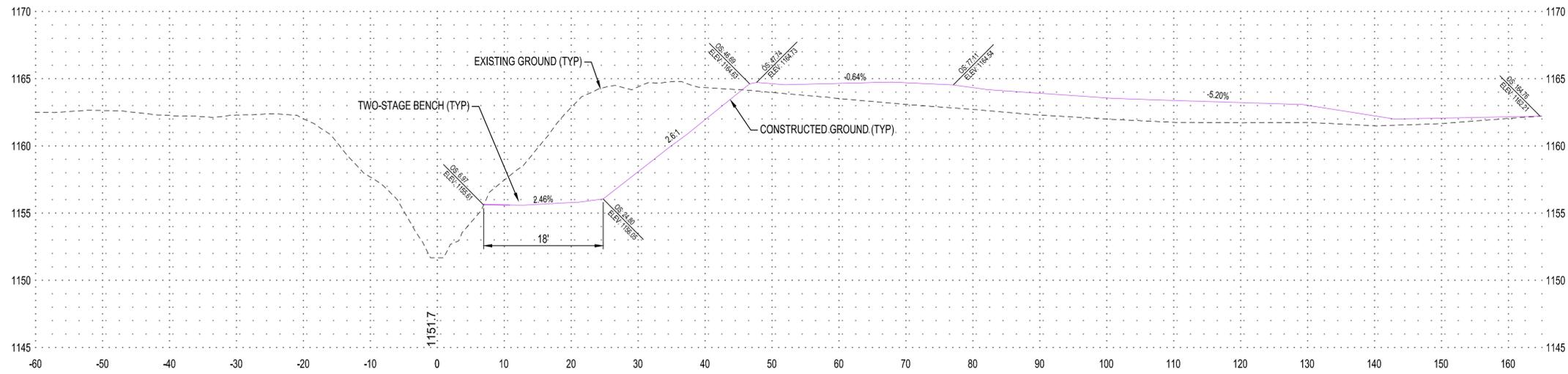
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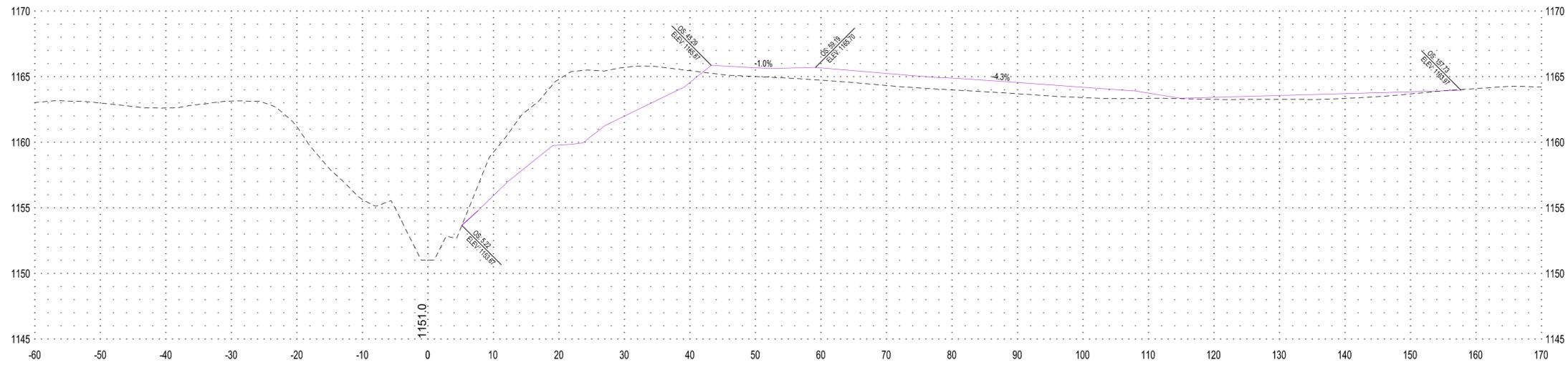
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(MAINLINE)**

SHEET
12 OF 21

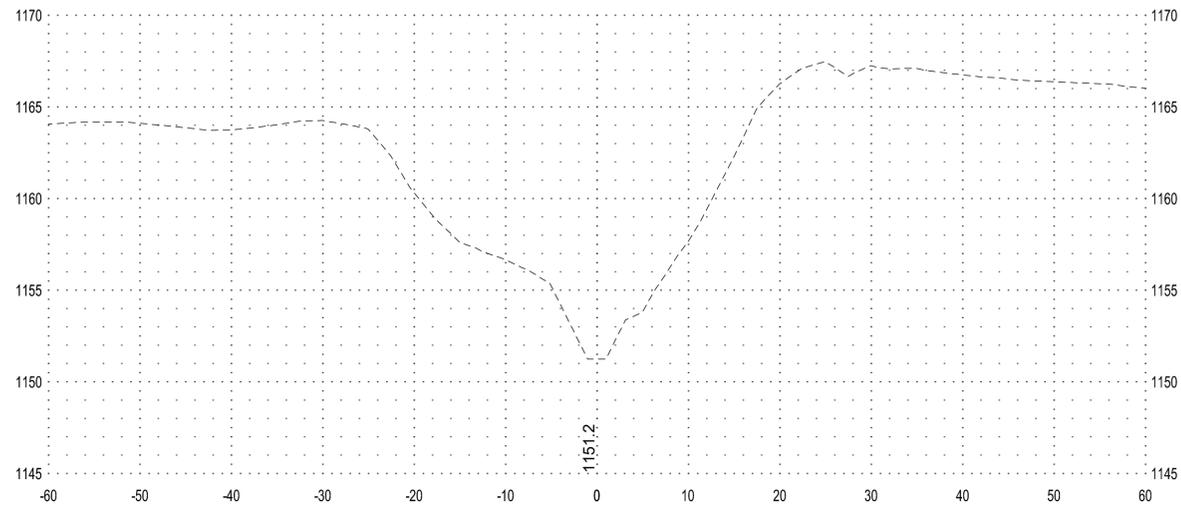
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DITCH
No. 64 REPAIRS
BID PACKAGE #1**

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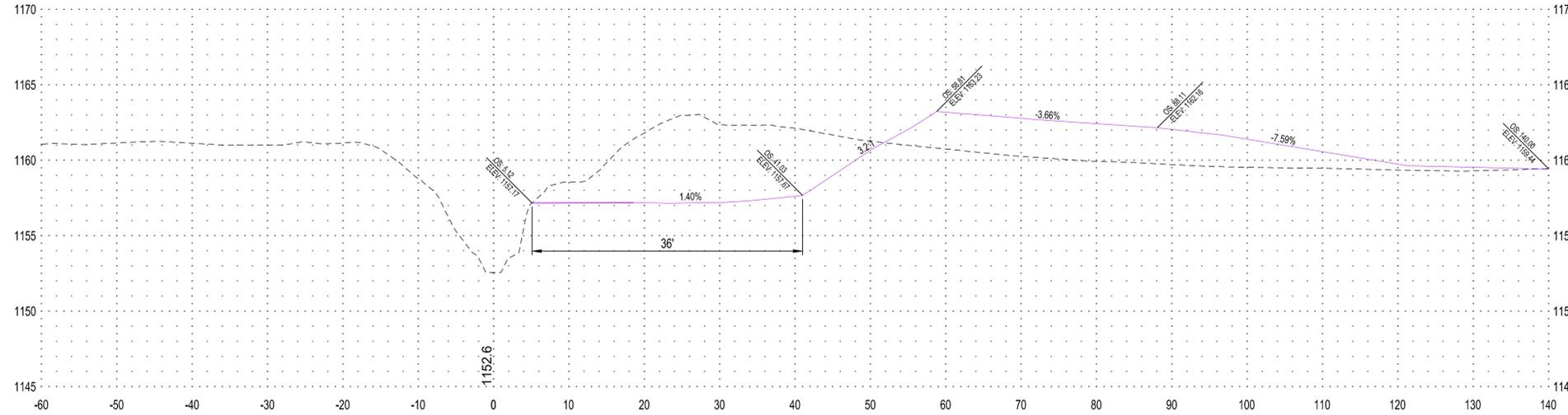
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CLIENT PROJECT NO.	-

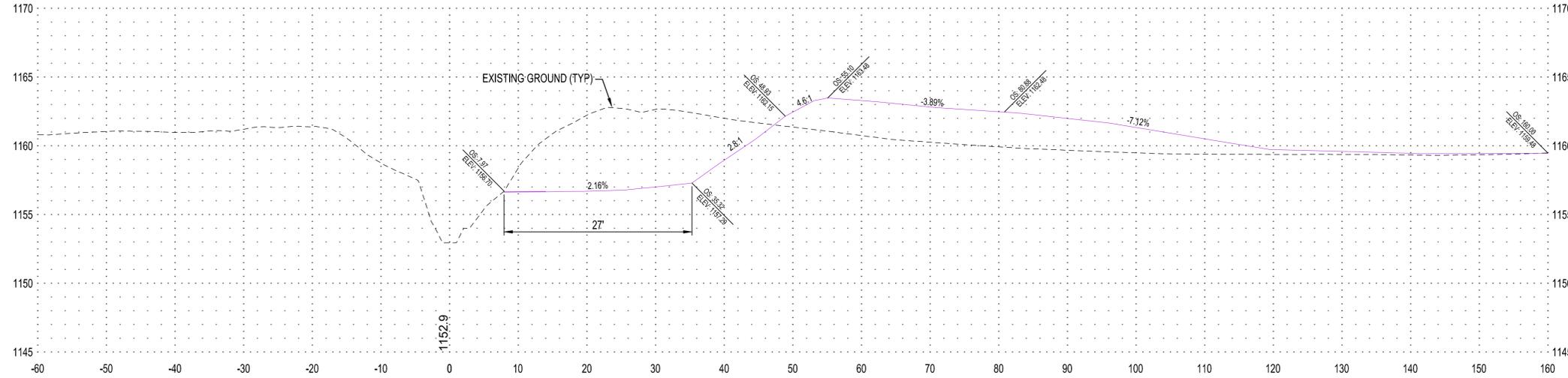
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(MAINLINE)**

SHEET
14 OF 21

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20+00



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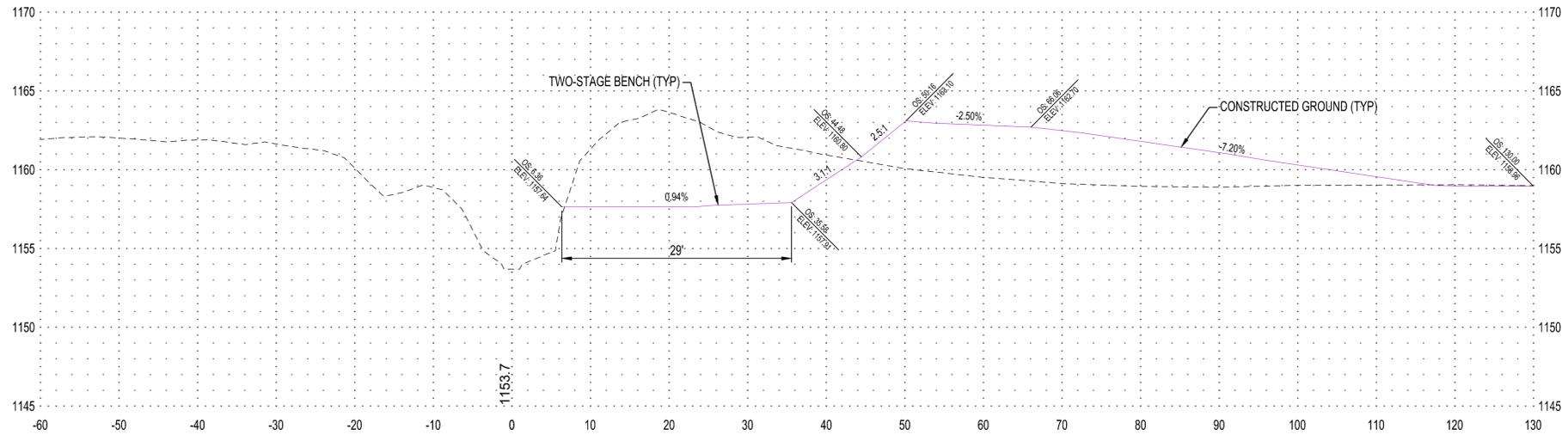


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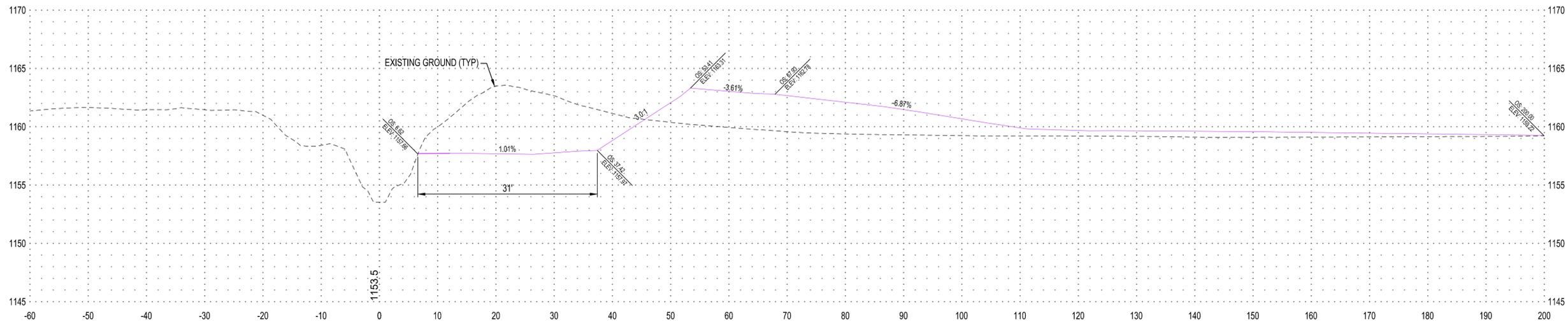
24+10



22+62



22+00



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DITCH
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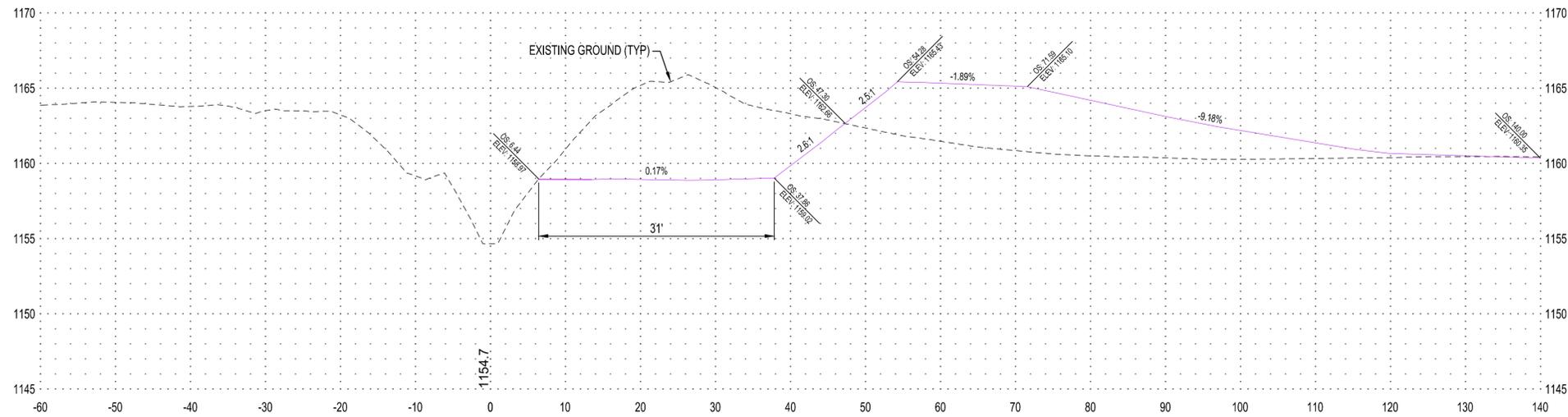
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(MAINLINE)**

SHEET
15
OF 21

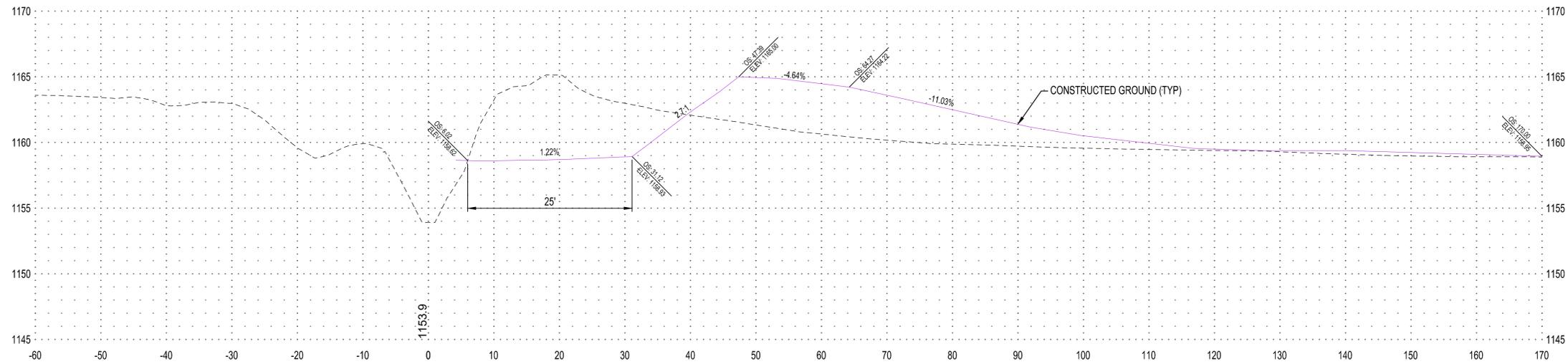
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27+00



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25+00



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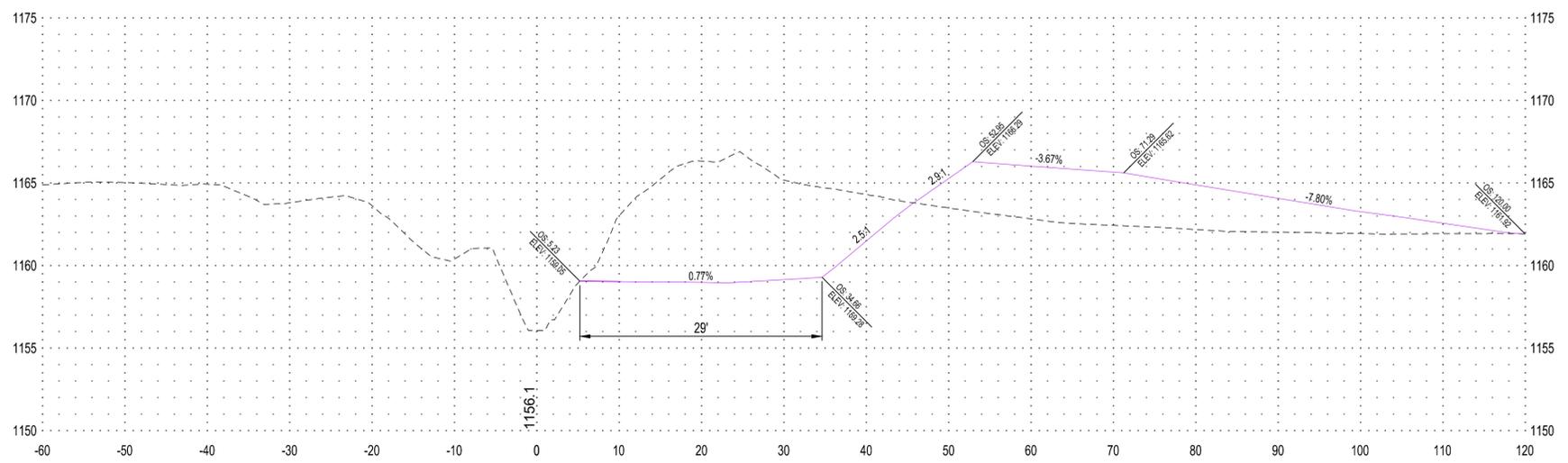
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**CROSS SECTIONS
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SHEET
16 OF 21

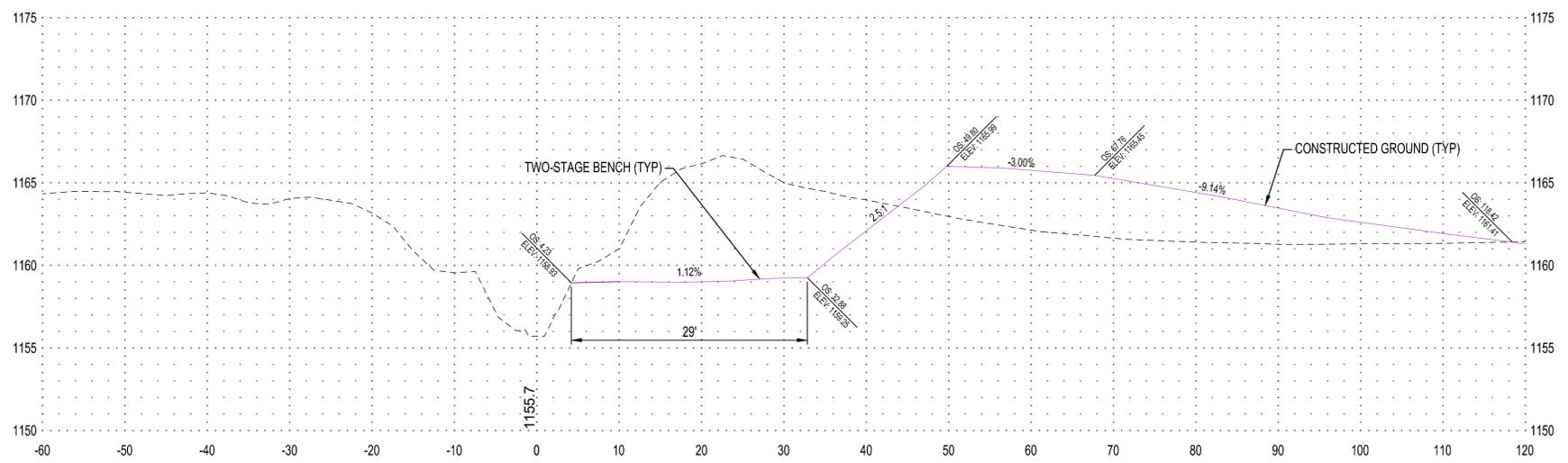


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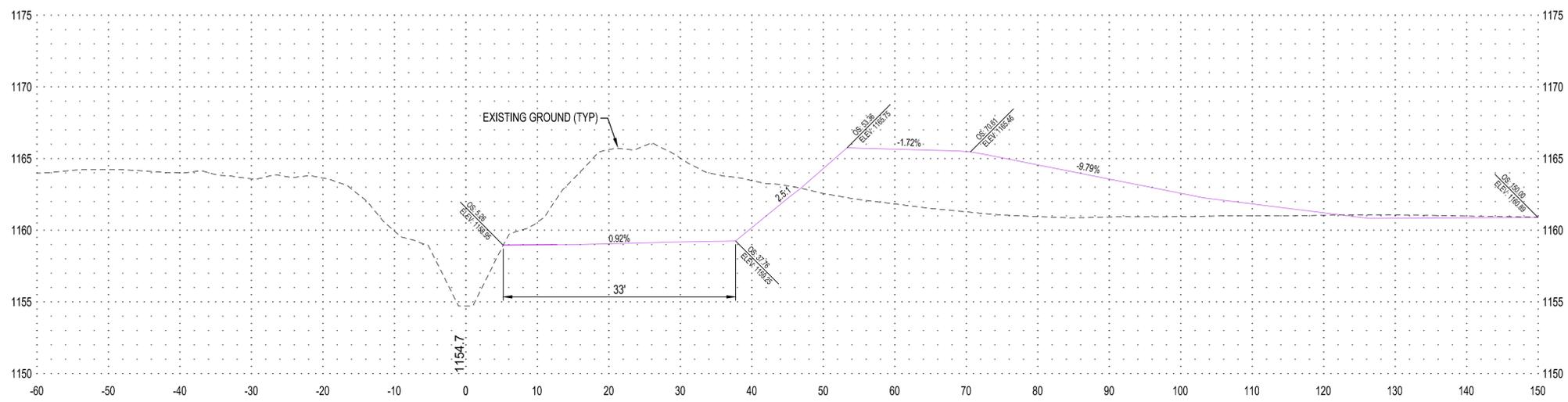
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PROJECT

FARIBAULT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #1

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 2-STAGE SECTIONS BP 1
DRAWN BY	-
DESIGNED BY	-
REVIEWED BY	-
ORIGINAL ISSUE DATE	05/18/22
CLIENT PROJECT NO.	-

TITLE

CROSS SECTIONS (MAINLINE)

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DITCH
No. 64 REPAIRS
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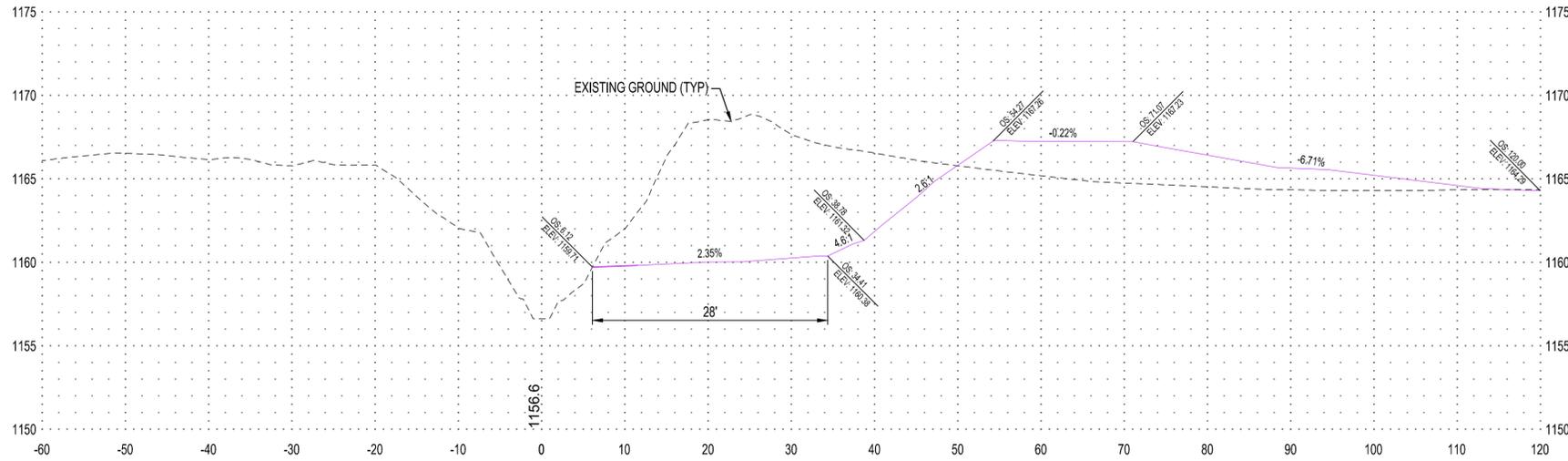
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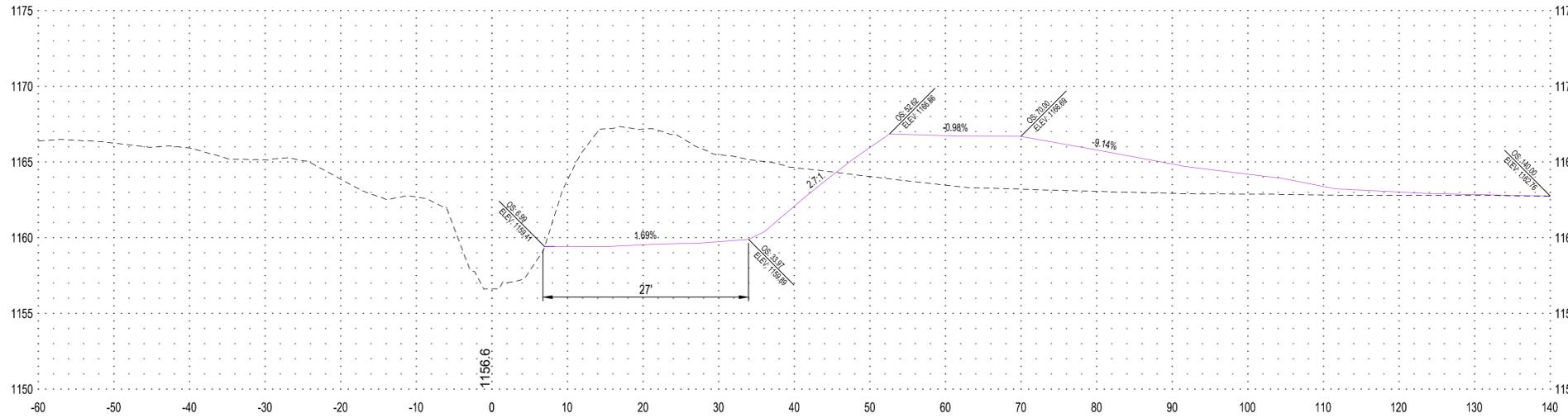
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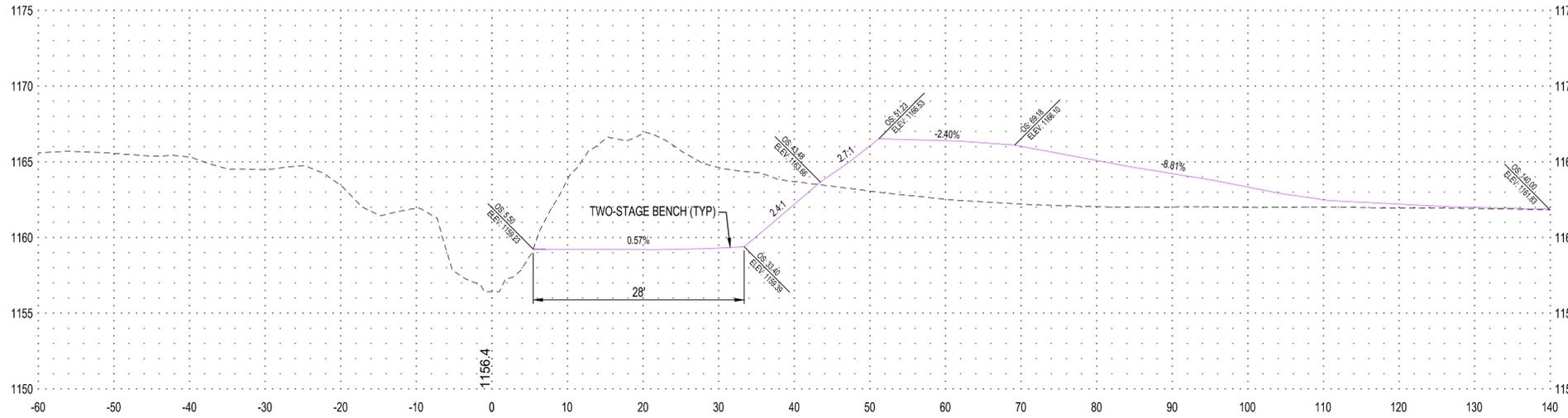
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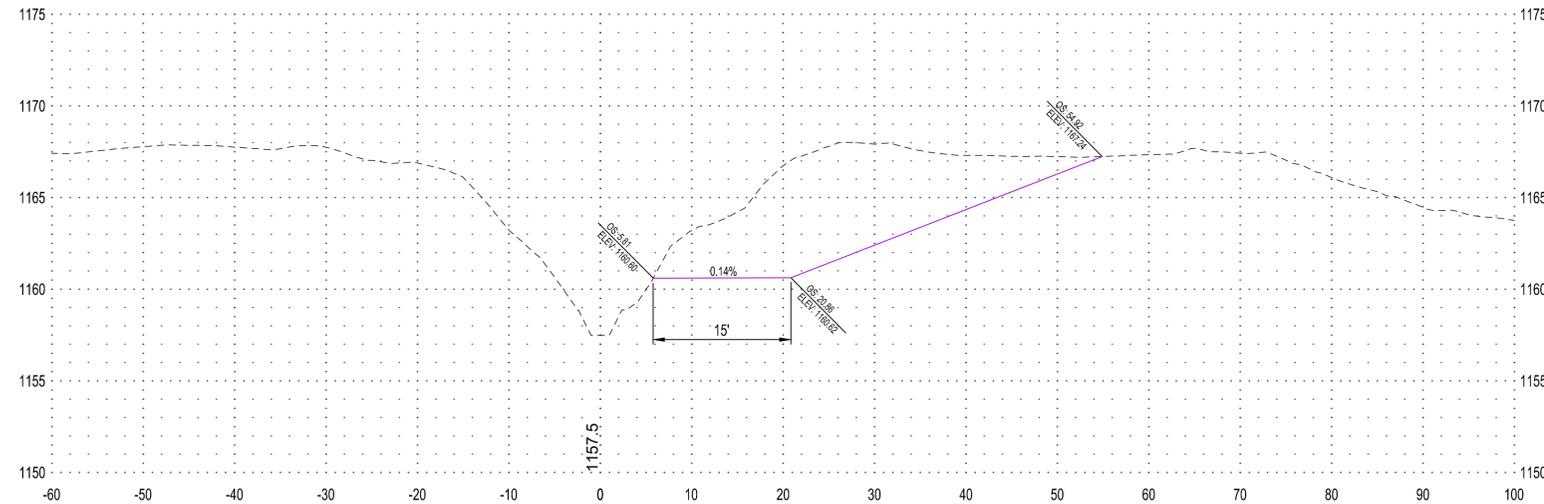
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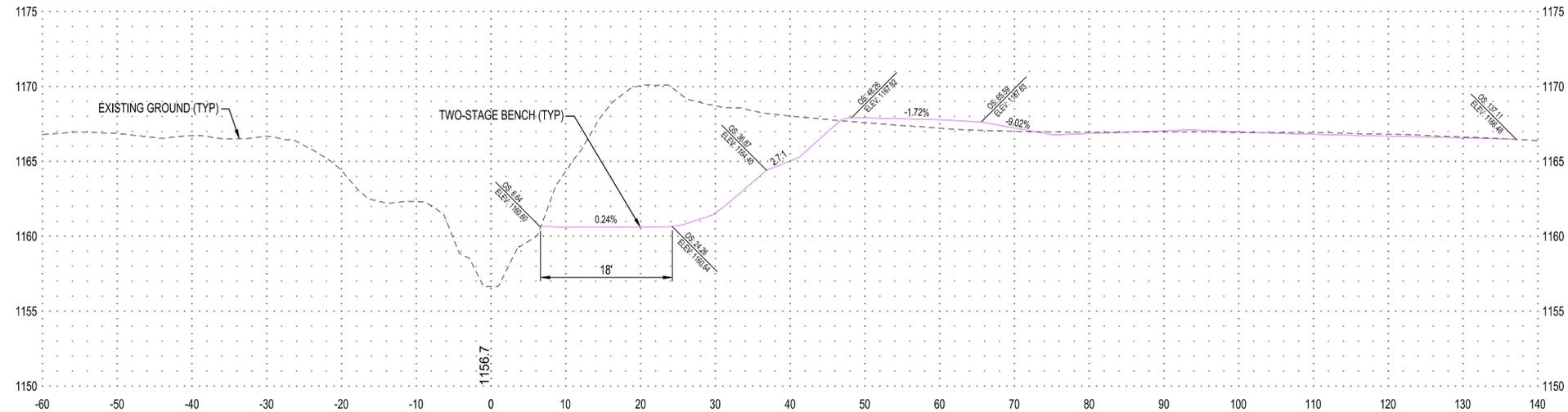
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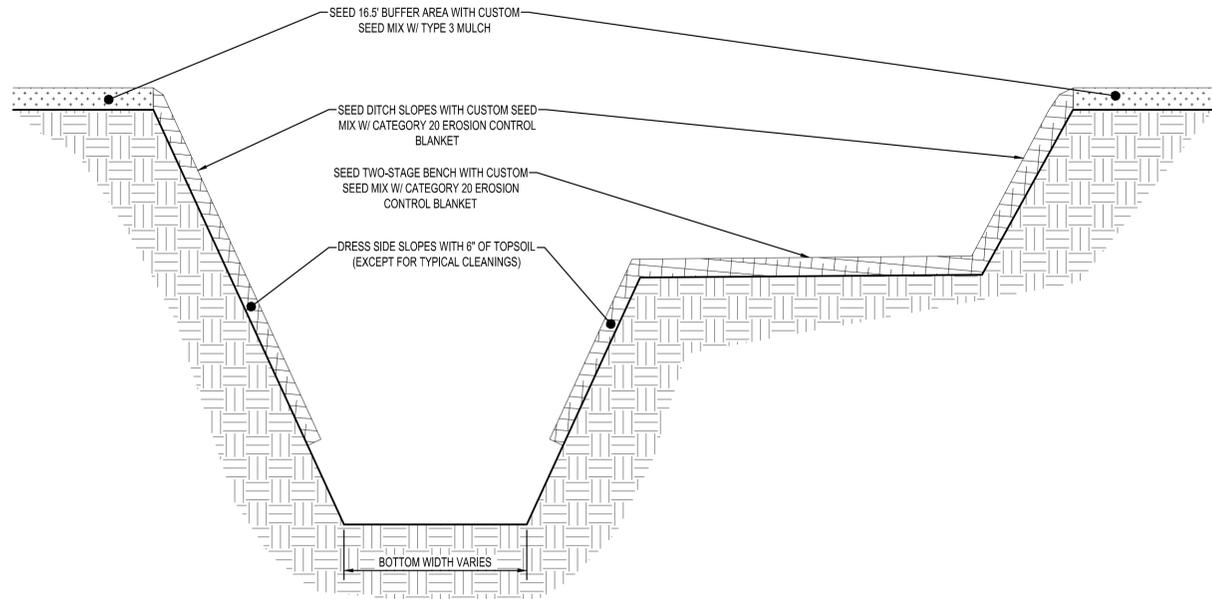
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19 OF 21

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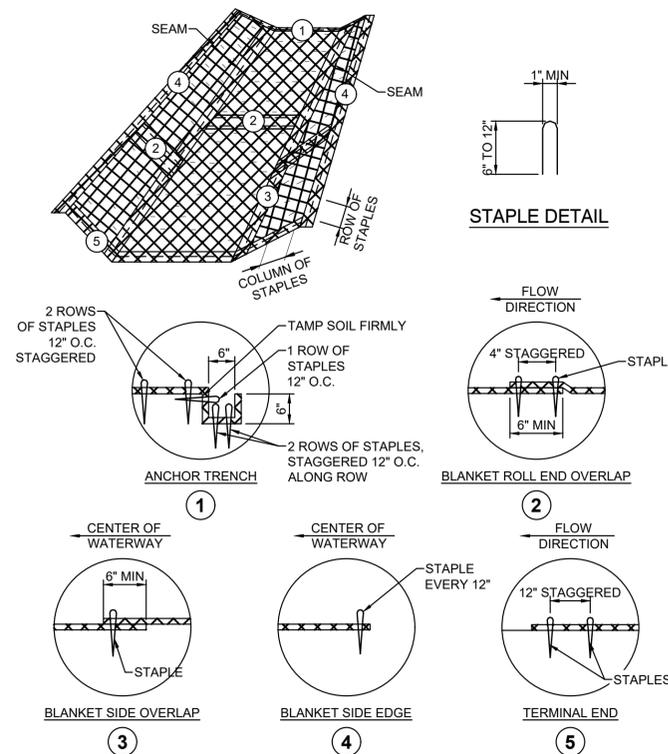
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TYPICAL OPEN DITCH SEEDING SECTION
NTS

NOTES:
DISTURBED DITCH SIDE SLOPES FROM WIDENING, DEEPENING, AND NEW CONSTRUCTION SHALL BE REDRESSED WITH 6" OF TOPSOIL, UNLESS APPROVED BY THE ENGINEER.
REFER TO BUFFER BLEND SEED MIX TABLE.
DITCH BANK SEEDING MUST OCCUR WITHIN 2 DAYS.



EROSION CONTROL BLANKET INSTALLATION
NTS

NOTES:
INSTALL EROSION CONTROL BLANKET (ECB) OVER WATERWAYS AS SHOWN IN THE STORM WATER POLLUTION PREVENTION PLAN.
THE ECB SHALL CONFORM TO MNDOT STANDARD SPECIFICATIONS SECTION 3885.
PREPARE SOIL PRIOR TO INSTALLING ECB, INCLUDING SEEDING AND FERTILIZING.
THE ECB SHALL BE PLACED IN FIRM CONTACT WITH THE SOIL AND NOT BE ALLOWED TO BRIDGE OVER SURFACE IRREGULARITIES. THE MAT SHALL NOT BE STRETCHED.
START LAYING THE MATS BY ROLLING CENTER MAT IN THE DIRECTION OF FLOW, CENTERED ON THE CENTERLINE OF WATERWAY. THERE SHALL NOT BE AN OVERLAP OF MATS AT THE CENTER OF THE WATERWAY.
THE ECB SHALL BE ANCHORED, OVERLAPPED, AND STAPLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. IF NO MANUFACTURER'S INSTRUCTIONS ARE AVAILABLE, INSTALL THE MAT AS FOLLOWS.
STAPLES SHALL BE "U" SHAPED, 0.12" DIAMETER WIRE OR GREATER (#11 GAUGE). (SEE STAPLE DETAIL FOR DIMENSIONS)
1. BURY UPSTREAM END OF MAT IN A TRENCH 6" WIDE BY 6" DEEP AND STAPLED IN STAGGERED ROWS ACROSS THE WIDTH AS SHOWN IN DETAIL 1.
2. FOR JOINING ENDS OF ROLLS, OVERLAP END OF UP SLOPE MAT A MINIMUM OF 6" OVER DOWN SLOPE MAT (SHINGLE STYLE). USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART, AS SHOWN IN DETAIL 2.
3. MATS ON SIDE SLOPES SHALL OVERLAP A MINIMUM OF 6" OVER THE MAT BELOW (SHINGLE STYLE). STAPLE OVERLAP AT 12" INTERVALS. (SEE DETAIL 3)
4. E. THE OUTER EDGE ALONG SIDES OF THE MAT SHALL BE STAPLED EVERY 12". (SEE DETAIL 4)
F. STAPLES ARE TO BE PLACED ALTERNATELY IN COLUMNS (IN THE DIRECTION OF THE WATERWAY) 2' APART AND IN ROWS (ACROSS THE WATERWAY) 3' APART THROUGHOUT THE AREA COVERED BY THE ECB.
5. G. DOWNSTREAM (TERMINAL) END OF BLANKET SHALL BE STAPLED WITH A DOUBLE ROW OF STAGGERED STAPLES 12" APART. (SEE DETAIL 5)

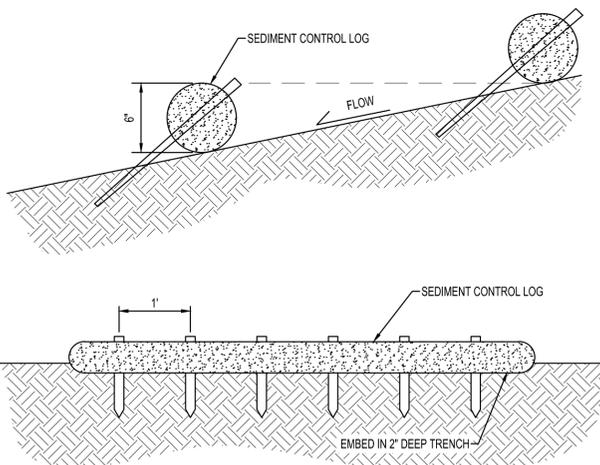
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NOTES:

SEDIMENT CONTROL LOGS TO BE 6" DIAMETER UNLESS OTHERWISE NOTED.
STAKED INTO THE GROUND WITH WOOD STAKES.
WOOD STAKES ARE A MINIMUM OF 2"x16"x12" UNLESS PRECLUDED BY PAVED SURFACE OR ROCK.
WOOD STAKES DRIVEN THROUGH BACK HALF OF SEDIMENT CONTROL LOG AT AN APPROXIMATE ANGLE OF 45° WITH THE TOP OF STAKE POINTING UP STREAM.
WHEN MORE THAN ONE SEDIMENT CONTROL LOG IS NEEDED, OVERLAP ENDS A MINIMUM OF 6" AND STAKE.

SEDIMENT CONTROL LOG STAKING
NTS

CUSTOM SEED MIX

Common Name	Scientific Name	% of Mix	Seeds/ft ²	Total
Big Bluestem	<i>Andropogon gerardii</i>	15.09%	14.7	4.00 PLS lb
Indiangrass	<i>Sorghastrum nutans</i>	11.32%	13.2	3.00 PLS lb
Canada Wild Rye	<i>Elymus canadensis</i>	11.32%	5.7	3.00 PLS lb
Virginia Wild Rye	<i>Elymus virginicus</i>	11.32%	4.6	3.00 PLS lb
Switchgrass	<i>Panicum virgatum</i>	7.55%	10.3	2.00 PLS lb
Fowl Bluegrass	<i>Poa palustris</i>	5.66%	71.6	1.50 PLS lb
Smooth Bromegrass	<i>Bromus inermis</i>	7.31%	6.4	1.94 PLS lb
Slender Wheatgrass	<i>Agropyron trachycaulum</i>	1.89%	1.3	0.50 PLS lb
Perennial Rye	<i>Lolium perenne</i>	12.74%	18.6	3.38 PLS lb
Switchgrass	<i>Panicum virgatum</i>	1.42%	1.9	0.38 PLS lb
Timothy	<i>Phleum pratense</i>	1.65%	11.7	0.44 PLS lb
Alfalfa	<i>Medicago sativa</i>	11.79%	16.1	3.13 PLS lb
Prairie Cord Grass	<i>Spartina pectinata</i>	0.57%	0.4	0.15 PLS lb
Blue Joint Grass	<i>Calamagrostis canadensis</i>	0.38%	10.3	0.10 PLS lb

25-142 Agricultural Roadside					
Common Name	Scientific Name	Rate (lb/ac)	Rate (kg/ha)	% of Mix (by weight)	Seeds/ sq ft
Perennial Ryegrass	<i>Lolium perenne</i>	13.50	15.13	30.00%	67.25
Smooth Brome	<i>Bromus inermis</i>	7.75	8.69	17.23%	25.43
fowl bluegrass	<i>Poa palustris</i>	6.00	6.73	13.33%	286.50
slender wheatgrass	<i>Elymus trachycaulus</i>	2.00	2.24	4.45%	5.08
Timothy	<i>Phleum pratense</i>	1.75	1.96	3.89%	49.43
switchgrass	<i>Panicum virgatum</i>	1.50	1.68	3.33%	7.70
Grasses Subtotal		32.50	36.43	72.23%	441.39
Alfalfa	<i>Medicago sativa</i>	12.50	14.01	27.77%	65.07
Forbs Subtotal		12.50	14.01	27.77%	65.07
Total		45.00	50.44	100.00%	506.46
Purpose:	General non-native roadside for areas that will be cut for hay.				
Planting Area:	Statewide				
Combine all components when blending this mix.					

BUFFER BLEND

COMMON NAME	SCIENTIFIC NAME	RATE (LB/AC)	% OF MIX (% BY WT)	SEEDS/SF
Big Bluestem	<i>Andropogon gerardii</i>	0.625	1.65%	2.30
Side-oats Grama	<i>Bouteloua curtipendula</i>	0.50	1.32%	1.11
Fringed Brome	<i>Bromus ciliatus</i>	0.70	1.85%	2.84
Nodding Wild Rye	<i>Elymus canadensis</i>	1.00	2.63%	1.91
Slender Wheatgrass	<i>Elymus trachycaulus</i>	3.25	7.74%	8.25
Virginia Wild Rye	<i>Elymus virginicus</i>	1.00	2.63%	1.55
Switchgrass	<i>Panicum virgatum</i>	1.875	4.32%	9.63
Fowl Bluegrass	<i>Poa palustris</i>	6.30	14.12%	300.75
Indian grass	<i>Sorghastrum nutans</i>	0.50	1.32%	2.20
Smooth Brome	<i>Bromus inermis</i>	7.75	17.23%	25.43
Perennial Ryegrass	<i>Lolium perenne</i>	13.50	30.00%	67.25
Timothy	<i>Phleum pratense</i>	1.75	3.89%	49.43
Grasses Subtotal		38.75	88.68%	472.63
Canada tick trefoil	<i>Desmodium canadense</i>	0.035	0.10%	0.08
Partridge Pea	<i>Chamaecrista fasciculata</i>	0.135	0.36%	0.14
Wild Berhamot	<i>Monarda fistulosa</i>	0.010	0.02%	0.20
Black-eyed Susan	<i>Rudbeckia hirta</i>	0.045	0.12%	1.50
Hoary Vervain	<i>Verbena stricta</i>	0.025	0.07%	0.25
Alfalfa	<i>Medicago sativa</i>	12.50	27.77%	65.07
Forbs Subtotal		12.75	28.43%	67.23
Oats	<i>Avena sativa</i>	12.50	32.90%	5.57
Cover Crop Subtotal		12.50	32.90%	5.57
Total		64.00	150.00%	545.42

* 50% SEED MIX 32-241
** 100% SEED MIX 25-142

PROJECT
FARIBAUT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #1

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 SWPP BP1
DRAWN BY	-
DESIGNED BY	-
REVIEWED BY	-
ORIGINAL ISSUE DATE	05/18/22
CLIENT PROJECT NO.	-

TITLE
EROSION CONTROL DETAILS

VEGETATION RESTORATION LEGEND

LOCATION	DESCRIPTION	UNITS	QUANTITY
SIDESLOPE FLATTENING	CUSTOM SEED MIX WITH CATEGORY 20 EROSION CONTROL BLANKET	SY	2489
	CUSTOM SEED MIX WITH TYPE 3 MULCH	AC	0.40
TWO-STAGE DITCH	CUSTOM SEED MIX WITH CATEGORY 20 EROSION CONTROL BLANKET	SY	10953
	CUSTOM SEED MIX WITH TYPE 3 MULCH	AC	0.80



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STATE OF MINNESOTA.

MARK ORIGER
Mark Origer
DATE: 2/8/2023 LIC. NO. 54863

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PROJECT
**FARIBAUT COUNTY
DITCH
No. 64 REPAIRS
BID PACKAGE #1**

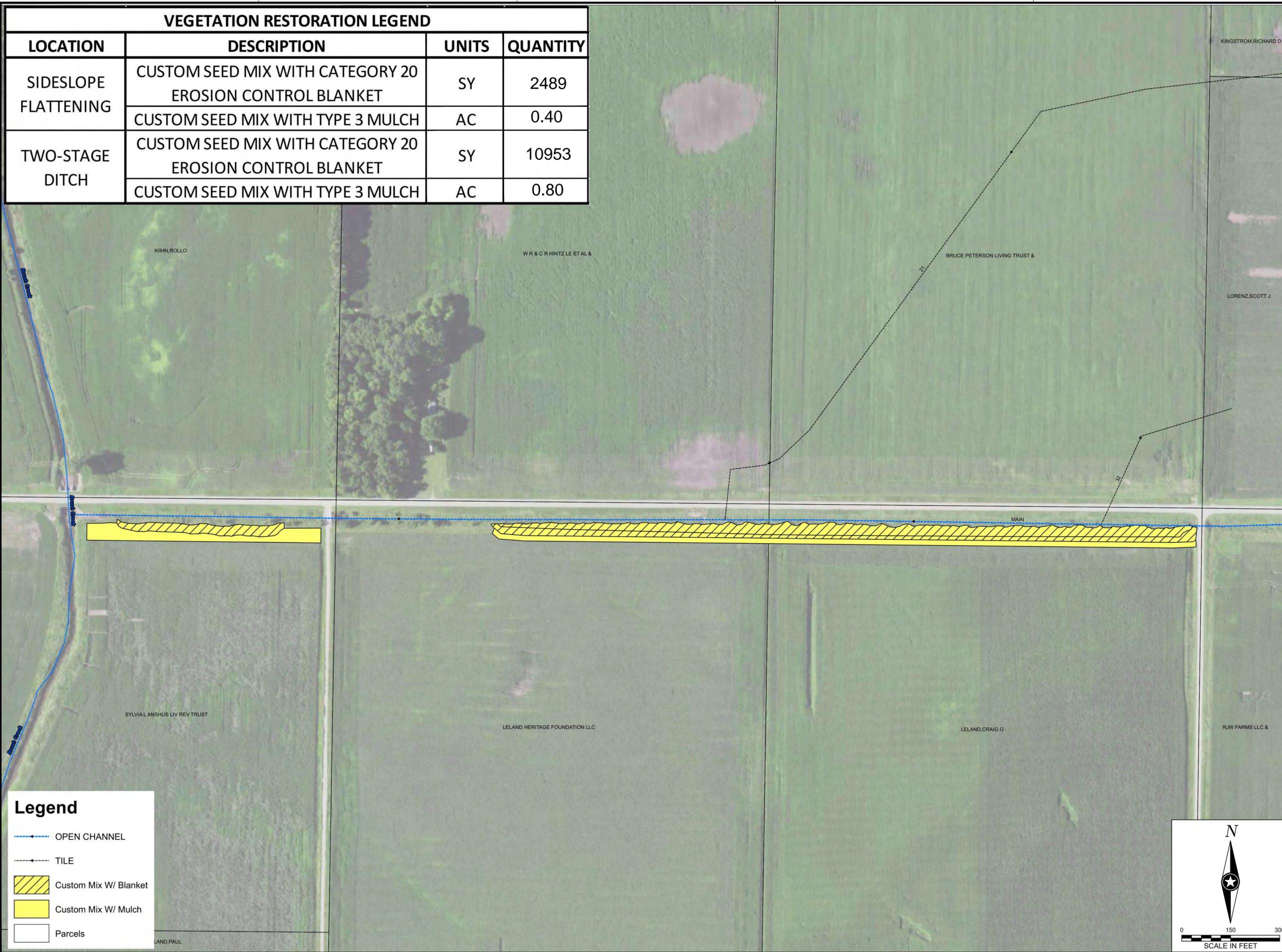
REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 SWPP BP1
DRAWN BY	-
DESIGNED BY	-
REVIEWED BY	-
ORIGINAL ISSUE DATE	05/18/22
CLIENT PROJECT NO.	-

TITLE
**DITCH SEEDING
MAP**

SHEET
21 OF 21



Legend

- OPEN CHANNEL
- TILE
- Custom Mix W/ Blanket
- Custom Mix W/ Mulch
- Parcels

FARIBAULT COUNTY COUNTY DITCH No. 64 BID PACKAGE #2

KEISTER TOWNSHIP, MINNESOTA

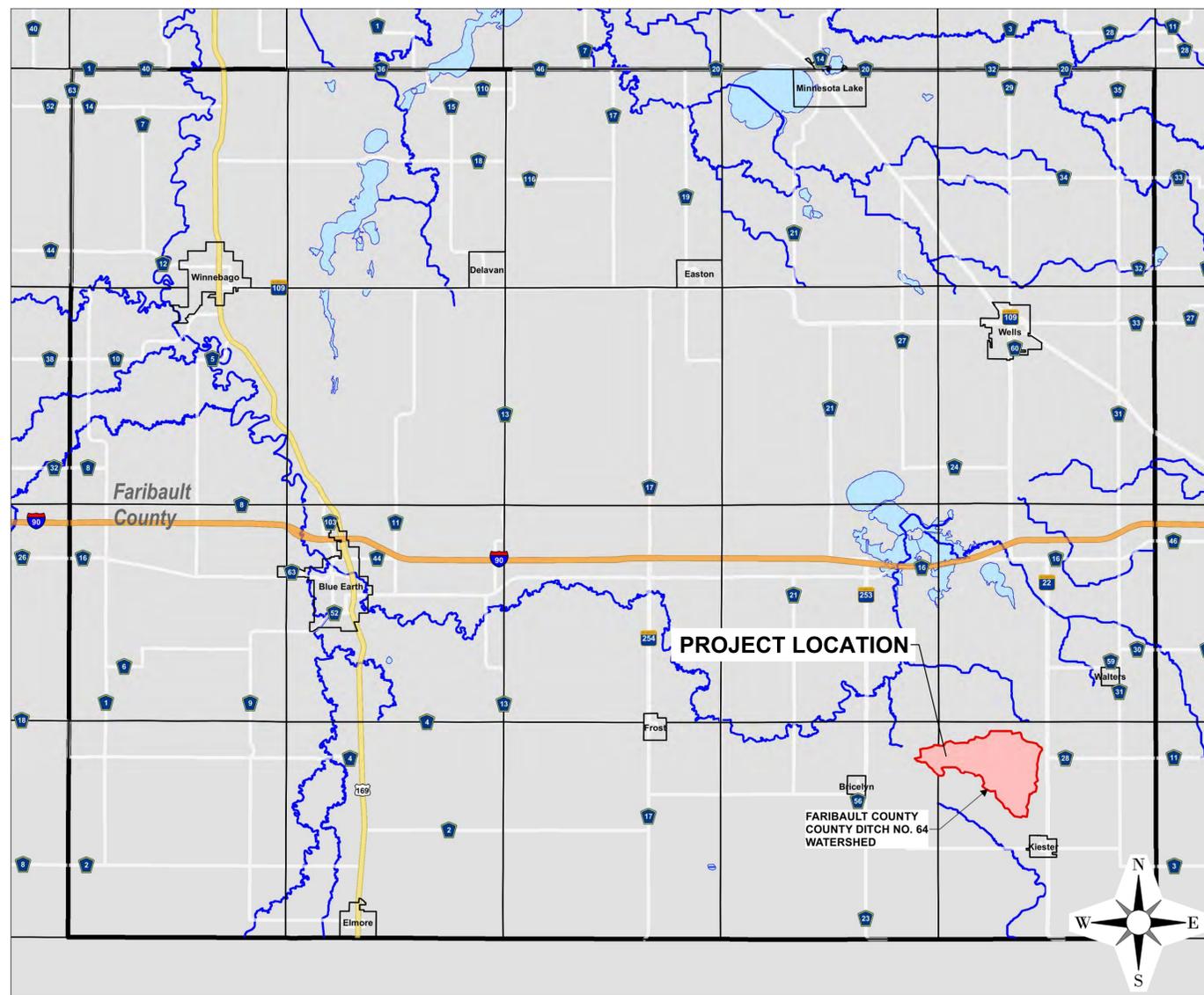
FINAL AS-BUILT PLANS

ISG PROJECT # 17-21098



LEGEND

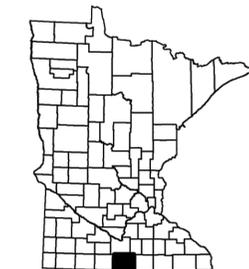
EXISTING	
	WATERSHED BOUNDARY
	CITY LIMITS
	SECTION LINE
	QUARTER SECTION LINE
	RIGHT OF WAY LINE
	PROPERTY / LOTLINE
	EASEMENT LINE
	ACCESS CONTROL
	WATER EDGE
	WETLAND BOUNDARY
	FENCE LINE
	EXISTING OPEN DITCH
	CULVERT
	TILE
	PRIVATE TILE
	WATER
	GAS
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	UNDERGROUND TELEPHONE
	UNDERGROUND TV
	OVERHEAD UTILITY
	UNDERGROUND UTILITY
	UNDERGROUND FIBER OPTIC
	CONTOUR (MAJOR)
	CONTOUR (MINOR)
	DECIDUOUS TREE
	CONIFEROUS TREE
	TREE LINE
	DROP INTAKE
	HYDRANT
	POWER POLE
PROPOSED	
	EASEMENT
	PROPOSED OPEN DITCH
	OPEN DITCH REPAIR
	CULVERT (RCP)
	CULVERT (CMP)
	CULVERT (HDPE)
	TILE
	TILE (PIPE WIDTH)
	PRIVATE TILE
	WATER
	GAS
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	UNDERGROUND TV
	CONTOUR (MAJOR)
	CONTOUR (MINOR)
	DROP INTAKE
	SLOUGH REPAIR
	SPOIL PLACEMENT
	TREE CLEARING
	REMOVE TREE
	BUFFER



LOCATION MAP

SHEET INDEX

- 1 TITLE
- 2 NOTES & QUANTITIES
- 3-5 DETAILS
- 6 WEST BERM SECTION DETAIL
- 7 OVERALL WATERSHED MAP
- 8-10 PLAN-PROFILE (MAINLINE)



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MARK ORIGER

Mark Origer

DATE: 2/8/2023 LIC. NO. 54863

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GIS DISCLAIMER:
INFORMATION FOR THE BOUNDARY / LOT LINES, AND UNDERGROUND UTILITIES SHOWN WAS DERIVED FROM DIGITAL DATABASES AND IS FOR INFORMATIONAL PURPOSES ONLY. DATA MAY NOT HAVE BEEN PREPARED FOR, OR BE SUITABLE FOR, LEGAL, ENGINEERING, OR SURVEYING PURPOSES.

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, INC. (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, MINIMUM 2 BUSINESS DAYS PRIOR TO ANY EXCAVATION / CONSTRUCTION (1-800-252-1166).

FARIBAULT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #2

KEISTER TOWNSHIP MINNESOTA

REVISION SCHEDULE

DATE	DESCRIPTION	BY
	AS-BUILT	
	2/8/2023	

PROJECT NO. 17-21098

FILE NAME 21098 TITLE BP2 AB

DRAWN BY JJM

DESIGNED BY MAO

REVIEWED BY MAO

ORIGINAL ISSUE DATE 11/4/22

CLIENT PROJECT NO. -

PROJECT INDEX:

OWNER:
FARIBAULT COUNTY DRAINAGE AUTHORITY
415 SOUTH GROVE STREET
BLUE EARTH, MN, 56013
PH: 507-304-4253

PROJECT ADDRESS / LOCATION:
SEELY TOWNSHIP, SECTIONS:
1, 4, 5, 6, 12
KEISTER TOWNSHIP, SECTIONS:
7, 8, 9, 16, 17

MANAGING OFFICE:
ISG
MANKATO OFFICE
115 EAST HICKORY STREET
SUITE 300
MANKATO, MN 56001
PHONE: 507.387.6651
PROJECT MANAGER: MARK ORIGER
EMAIL: MARK.ORIGER@ISGINC.COM

SPECIFICATIONS REFERENCE
ALL CONSTRUCTION SHALL COMPLY WITH THE COUNTY OF FARIBAULT REQUIREMENTS AND MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2020 EDITION, AND THE STANDARD SPECIFICATIONS FOR SANITARY SEWER, STORM DRAIN AND WATERMAIN AS PROPOSED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA 2018, UNLESS DIRECTED OTHERWISE.
PROJECT DATUM
HORIZONTAL COORDINATES HAVE BEEN REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), 1996 ADJUSTMENT (NAD83(1996)) ON THE FARIBAULT 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=1174.67
BRUSS MNDOT POINT

TOPOGRAPHIC SURVEY
THIS PROJECT'S TOPOGRAPHIC SURVEY CONSISTS OF DATA COLLECTED IN MAY OF 2018 BY ISG.

TITLE
TITLE
SHEET
1 OF 10

GENERAL PROJECT NOTES:

- DURING CONSTRUCTION, CONTRACTOR SHALL MAINTAIN A DRAINAGE OUTLET FOR THE ENTIRE CD 64 PROJECT AREA.
- ALL PIPE DIMENSIONS REFERENCED IN THE PLANS REFER TO THE INSIDE DIAMETER.
- RODENT GUARDS SHALL BE INSTALLED ON ALL OUTLETS 18" AND SMALLER. (INCIDENTAL TO RESPECTIVE BID ITEMS).
- ALL ROAD SIGNAGE, COORDINATION, AND TRAFFIC CONTROL SIGNAGE SHALL BE INCIDENTAL TO ROAD RESTORATIONS AND SHALL CONFORM TO LOCAL ROAD AUTHORITY PERMITS AND REGULATIONS.
- THE CONTRACTOR SHALL SUBMIT A WINTER CONSTRUCTION PLAN FOR SITE STABILIZATION, EROSION PREVENTION, AND SEDIMENT CONTROL IF THE PROJECT IS NOT COMPLETED BY OCTOBER 15 OF THE GIVEN CONSTRUCTION SEASON, UNLESS APPROVED BY THE ENGINEER. THE PLAN SHALL BE DEVELOPED TO SPECIFICALLY ADDRESS SHUTDOWN PROCEDURES OR ACTIVE CONSTRUCTION PLANS.
- ALL DEWATERING FOR THE PROJECT IS INCIDENTAL.
- PRODUCT MATERIAL SHALL BE AS SPECIFIED IN THE PLANS. IF NO SPECIFIC MATERIAL IS CALLED OUT, MATERIAL SHALL CONFORM TO THE APPROVED PRODUCT LIST IN THE APPROPRIATE SPECIFICATION.
- ALL EFFORTS SHALL BE MADE DURING CONSTRUCTION TO SEPARATE SOIL TYPES. BACKFILL SHALL BE COMPACTED PRIOR TO PLACEMENT OF TOPSOIL, EXCEPT THE TOP TWO (2) FEET, FOR WHICH COMPACTION SHALL BE MINIMIZED TO THE EXTENT POSSIBLE. TOPSOIL SHALL BE PLACED TO A MINIMUM DEPTH OF 18", OR UNIFORM TO THE TOPSOIL DEPTH OF THE SURROUNDING AREA UNLESS SPECIFIED ELSEWHERE IN THE PLANS. EXCAVATED SPOILS SHALL BE SPREAD EVENLY IN CONSTRUCTION AREA AS TO NOT IMPEDE DRAINAGE. ALL EFFORTS SHALL BE MADE TO KEEP TOPSOIL ON TOP AND SEPARATED. NO TOPSOIL SHALL BE PLACED IN THE TRENCH BELOW 2' FROM EXISTING GROUND UNLESS APPROVED BY THE ENGINEER.
- ALL SPOIL LEVELING, GRADING, AND RESTORATION OF DISTURBED AREAS SHALL BE IN ACCORDANCE TO THE CONTRACT DOCUMENTS AND SHALL BE INCIDENTAL TO THE WORK UNLESS OTHERWISE SPECIFIED.
- HEAVY VEGETATIVE CLEARING WITH TREE REMOVAL SHALL ONLY BE COMPLETED AS NECESSARY FOR SAFE CONSTRUCTION PRACTICES AND WITHIN THE ALLOWED CONSTRUCTION EASEMENT, UNLESS APPROVED BY THE ENGINEER. TREE REMOVAL AND GRUBBING SHALL BE INCIDENTAL TO HEAVY VEGETATIVE CLEARING WITH TREE REMOVAL BID ITEM.
- TREES CALLED OUT AS "REMOVE TREE" SHALL BE PAID FOR BY EACH OCCURRENCE. IF TREES ARE NOT CALLED OUT IN THE CONSTRUCTION DOCUMENTS AS REMOVE TREE, THEN THE REMOVAL SHALL BE PAID FOR BY THE ACRE AS HEAVY VEGETATIVE CLEARING WITH TREE REMOVAL.
- AGGREGATE SURFACE SHALL BE INCIDENTAL TO CROSSING OR ROAD RESTORATION.
- RIPRAP QUANTITIES ARE ESTIMATED. ADDITIONAL QUANTITY MAY BE REQUIRED BY THE ENGINEER. ALL RIPRAP QUANTITIES SHALL BE PAID BY THE CUBIC YARD INSTALLED, UNLESS RIPRAP IS INCIDENTAL TO A SEPARATE PAY ITEM. ALL EXCAVATION AND GEOTEXTILE FABRIC SHALL BE INCIDENTAL TO RESPECTIVE BID ITEM.
- ALL WORK SHALL BE DONE IN 2,500 LF SECTIONS, UNLESS APPROVED OF BY THE ENGINEER. PRIOR TO COMMENCING ON A NEW SECTION, ALL WORK IN THE PREVIOUS SECTION MUST BE COMPLETED IN ADHERENCE WITH THE CONTRACT DOCUMENTS. THE ENGINEER RESERVES THE RIGHT TO CEASE OPERATIONS AND/OR WITHHOLD PAYMENT UNTIL COMPLIANCE HAS BEEN ACHIEVED.
- EXISTING TILES THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE PROJECT, UNLESS OTHERWISE SPECIFIED.
- ALL SIGNS AND MARKERS SHALL BE PROTECTED OR REMOVED AND REINSTALLED AT NO ADDITIONAL COST TO THE PROJECT, UNLESS OTHERWISE SPECIFIED. THE ENGINEER SHALL BE NOTIFIED OF ANY SIGNS OR MARKERS IN POOR CONDITION PRIOR TO REMOVAL.
- THE DRAINAGE AUTHORITY TAKES NO AUTHORITY OVER OR RESPONSIBILITY FOR ANY AND ALL PRIVATE TILE SHOWN ON THESE PLANS. PRIVATE TILE LOCATIONS HAVE BEEN SUPPLIED BY LANDOWNERS FOR USE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL PAY ALL DAMAGES OUTSIDE OF THE AGREED UPON EASEMENT IN AN AMOUNT OF \$1,200 PER ACRE OF DISTURBANCE, AS MEASURED BY THE ENGINEER.

UTILITY NOTES:

- THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THE UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED: STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA.

GENERAL OPEN DITCH NOTES:

- UNLESS OTHERWISE NOTED, CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITY TO WITHIN A 50-FOOT WIDE AREA ALONG TOP OF DITCH ALIGNMENTS. DISTURBANCE THROUGH ROAD CROSSINGS, ROAD DITCHES, AND GRASS BUFFERS SHALL BE LIMITED TO THE TRENCH WIDTH NECESSARY FOR SAFE CONSTRUCTION PRACTICES.
- A 16.5-FOOT GRASS STRIP SHALL BE ESTABLISHED IN AREAS THAT DO NOT HAVE AN EXISTING 16.5-FOOT GRASS STRIP. FINAL SEEDING SHALL OCCUR AFTER ALL WORK HAS BEEN COMPLETED IN THE AREA AND SHALL COMPLY WITH THE CONTRACT DOCUMENTS. TEMPORARY SEEDING MAY BE REQUIRED AND SHALL BE INCIDENTAL.
- DITCH CLEANING SHALL BE PERFORMED ON THE SIDE OF THE DITCH THAT IS THE LOWEST FOR THE GREATEST DISTANCE ALONG THE OPEN DITCH SEGMENT UNLESS OTHERWISE NOTED. DITCH CLEANING SPOILS SHALL BE PLACED AND LEVELED (INCIDENTAL) WITHIN THE 16.5-FOOT WIDE GRASS STRIP FROM THE TOP OF DITCH SLOPE UNLESS OTHERWISE DETERMINED BY THE ENGINEER.
- TOPSOIL IN TOPSOIL STRIP AREAS DESIGNATED ON THE PLANS SHALL BE STRIPPED PRIOR TO THE PLACEMENT OF FILL MATERIAL FROM DITCH EXCAVATION. TOPSOIL STRIP AREAS MAY ADJUST BASED ON ACTUAL TOPSOIL THICKNESS. RECLAIMING AND LEVELING OF THE TOPSOIL ON TOP OF THE SPOILS SHALL BE INCIDENTAL TO TOPSOIL STRIPPING.
- SHAPING AROUND SIDE INLETS, ASIS, ASIROS, AND CULVERT INLETS SHALL BE INCIDENTAL TO THEIR RESPECTIVE PAY ITEMS.
- ALL EXISTING TILE OUTLETS INTO THE OPEN DITCH, INCLUDING ANY NOT SHOWN ON THE PLANS, SHALL BE REPAIRED OR ARMORED. UNLESS SPECIFICALLY NOTED, HDPE OR PVC SHALL BE THE ONLY ACCEPTABLE MATERIAL FOR ALL TILE REPAIRS (SEE DETAILS).
- EXISTING TILE OUTLETS MAY BE SALVAGED, REUSED, AND PROTECTED WITH RIPRAP IF THE OUTLET IS DETERMINED TO BE IN GOOD CONDITION BY THE ENGINEER. TILE REPAIR AT THESE LOCATIONS SHALL BE PAID FOR AS BID ITEM "ARMOR TILE OUTLET" (SEE DETAILS).
- MISCELLANEOUS TREE CLEARING SHALL BE INCIDENTAL TO DITCH PAY ITEM(S), UNLESS SPECIFICALLY CALLED OUT IN THE PLANS.
- DITCH BANKS SHALL BE SEEDED WITHIN TWO (2) DAYS OF FINISHED EXCAVATION UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SEE SEEDING NOTES AND SPECIFICATIONS.
- SHOULD THE INSTALLATION OF THE ROCK RIFFLE STRUCTURE REQUIRE CLOSER ACCESS, THE CONTRACTOR MAY EXCAVATE THE DITCH SLOPE AND CONSTRUCT A TEMPORARY CONSTRUCTION RAMP. THESE RAMPS WILL BE PAID FOR BY EACH AND WILL CONSIST OF EXCAVATION AND RESLOPING/RESEEDING (SEED MIX: MnDOT 25-142 WITH CATEGORY 20 EROSION CONTROL BLANKET) AFTER ITS USE. AN ASSUMED TOTAL OF 400 SQUARE YARDS OF RESEEDING IS ANTICIPATED FOR THESE ACCESS STRUCTURES. ANY FURTHER RESLOPING/RESEEDING EFFORTS REQUIRED BEYOND WHAT IS DESCRIBED ABOVE WILL BE INCIDENTAL TO THE RIFFLE INSTALLATION PROCESS.
- COMMON BORROW FOR BERM CONSTRUCTION SHALL BE OBTAINED FROM THE SPOIL STORAGE PILE DEVELOPED BY THE BID PACKAGE #1 CONTRACTOR ON THE WEST SIDE OF 560TH AVENUE SOUTH OF THE OPEN DITCH.

ABBREVIATIONS

AC	ACRE	GA	GAUGE	PL	PROPERTY LINE	YR	YEAR
ADD	ADDENDUM	GAL	GALLON	PP	POLYPROPYLENE		
AGG	AGGREGATE	GPM	GALLONS PER MINUTE	PSI	POUNDS PER SQUARE INCH		
APPROX	APPROXIMATE	HDPE	HIGH DENSITY POLYETHYLENE	PVC	POLYVINYL CHLORIDE		
BIT	BITUMINOUS			PVMT	PAVEMENT		
CAD	COMPUTER-AIDED DESIGN	HORIZ	HORIZONTAL	QTY	QUANTITY		
CFS	CUBIC FEET PER SECOND	HR	HOUR	RCP	REINFORCED CONCRETE PIPE		
CF	CUBIC FOOT	HWL	HIGH WATER LEVEL				
CL	CENTERLINE	HWY	HIGHWAY	REBAR	REINFORCING BAR		
CMP	CORRUGATED METAL PIPE	HYD	HYDRANT	REM	REMOVE		
CONC	CONCRETE	I	INVERT	ROW	RIGHT OF WAY		
CONST	CONSTRUCTION	ID	INSIDE DIAMETER	R/W	RIGHT OF WAY		
CONT	CONTINUOUS	IN	INCH	SCH	SCHEDULE		
CR	COUNTY ROAD	INV	INVERT	SF	SQUARE FOOT		
CSAH	COUNTY STATE AID	LF	LINEAR FEET	SPEC	SPECIFICATION		
CSAH	HIGHWAY	LIN	LINEAR	SQ	SQUARE		
CY	CUBIC YARD	LS	LUMP SUM	STA	STATION		
DI	DROP INTAKE	MAX	MAXIMUM	SY	SQUARE YARD		
DIA	DIAMETER	MH	MANHOLE	TEMP	TEMPORARY		
DIM	DIMENSION	MIN	MINIMUM	THRU	THROUGH		
EA	EACH	MISC	MISCELLANEOUS	TRANS	TRANSFORMER		
ELEC	ELECTRICAL	NO	NUMBER	TV	TELEVISION		
ELEV	ELEVATION	NTS	NOT TO SCALE	TYP	TYPICAL		
EOF	EMERGENCY OVERFLOW	NWL	NORMAL WATER LEVEL	UT	UTILITY, UNDERGROUND		
EQ	EQUAL	OC	ON CENTER	UT	UTILITY, UNDERGROUND		
EX	EXISTING	OCEW	ON CENTER EACH WAY	VCP	VITRIFIED CLAY PIPE		
FDN	FOUNDATION	OH	OVERHEAD	W/O	WITHOUT		
FPM	FEET PER MINUTE	OHWL	ORDINARY HIGH WATER	W/	WITH		
FPS	FEET PER SECOND	OZ	OUNCE	YD	YARD		
FT	FOOT, FEET	PERF	PERFORATED				

TOTAL ESTIMATED QUAN TITIES			
Item Code	Item	Unit	Estimated Quantity
01.7113.1000.01	MOBILIZATION	LS	1
31.2311.1000.03	DITCH SIDESLOPE REPAIR	LF	420
31.2311.1000.03	SPOT DITCH CLEANING	LF	540
31.2316.1000.07	COMMON BORROW (P) (CV)	CY	2161
31.3700.1000.07	CLASS III RIPRAP WITH GEOTEXTILE FABRIC	CY	55
31.3700.1000.07	FIELD STONE (RIFFLE STRUCTURE)	CY	349
32.9219.1000.04	SIDESLOPE SEEDING (SEED MIX 25-142 W/MNDOT EROSION CONTROL BLANKET CATEGORY 20)	SY	2900
32.9219.1000.10	16.5' BUFFER STRIP SEEDING (SEED MIX: MnDOT 25-142 WITH TYPE 3 MULCH)	AC	4
33.0513.1000.02	INSTALL 24-INCH ASI RISER ASSEMBLY W/TRASH GRATE	EA	2
33.0513.1000.02	INSTALL 15-INCH ASI RISER ASSEMBLY W/TRASH GRATE	EA	4
33.0513.1000.02	INSTALL 10-INCH ASI RISER ASSEMBLY W/TRASH GRATE	EA	2
33.0513.1000.02	INSTALL 8-INCH ASI RISER ASSEMBLY W/TRASH GRATE	EA	1
33.0513.1000.02	INSTALL 24-INCH ASI OUTLET ASSEMBLY	EA	2
33.0513.1000.02	INSTALL 15-INCH ASI OUTLET ASSEMBLY	EA	4
33.0513.1000.02	INSTALL 10-INCH ASI OUTLET ASSEMBLY	CY	2
33.0513.1000.02	REMOVE EXISTING SIDE INTAKE	EA	0
33.0513.1000.02	INSTALL 8-INCH ASI OUTLET ASSEMBLY	EA	1
33.4510.1000.02	RIFFLE STRUCTURE ACCESS RAMP	EA	8
33.4510.1000.02	10-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	2
33.4510.1000.02	8-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	3
33.4510.1000.02	6-INCH TILE OUTLET (20 LF OF PIPE & RIPRAP ON GEOTEXTILE FABRIC)	EA	3
33.4510.1000.02	ARMOR TILE OUTLET (RIPRAP & GEOTEXTILE FABRIC)	EA	10

TOTAL AS-BUILT QUANTITIES-CHANGE ORDER			
Item Code	Item	Unit	Installed Quantity
#N/A	36-INCH CMP (560TH AVE FIELD APPROACH)	LF	60
31.3700.1000.07	TREE & BRUSH REMOVAL - EXCAVATOR	HR	5.5
31.3700.1000.07	TREE & BRUSH REMOVAL - SKIDSTEER	HR	5.5
31.3700.1000.07	STA 96+00 (S) 15" CULVERT	LF	40
31.3700.1000.07	12" ASI RISER	EA	2
31.3700.1000.07	12" ASI OUTLET	EA	2
31.3700.1000.07	COMMON EXCAVATION TO REPAIR CROSSING	HR	12.5
31.3700.1000.07	CLASS III RIPRAP FOR CROSSING	CY	22
31.3700.1000.07	GRANULAR MATERIAL FOR CROSSING	CY	13
31.3700.1000.07	COMMON BORROW STA 87+00	CY	210
31.3700.1000.07	POWER RAKE	HR	8
31.3700.1000.07	GRADING BUFFER STRIP	HR	36.5
31.3700.1000.07	RIPRAP FOR ROCK CHUTE	CY	35
31.3700.1000.07	FIELD STONE FOR ROCK CHUTE	CY	26
31.3700.1000.07	6" AND 8" TILE FOR TILE OUTLET REPAIRS	LF	140
31.3700.1000.07	GRADING STA 80+00-87+00	HR	19.75
31.3700.1000.07	COMMON EXCAVATION 80+00-87+00	HR	15.5



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MARK ORIGER
Mark Origer
DATE: 2/8/2023 LIC. NO. 54863

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PROJECT

**FARIBAUT COUNTY
DITCH
No. 64 REPAIRS
BID PACKAGE #2**

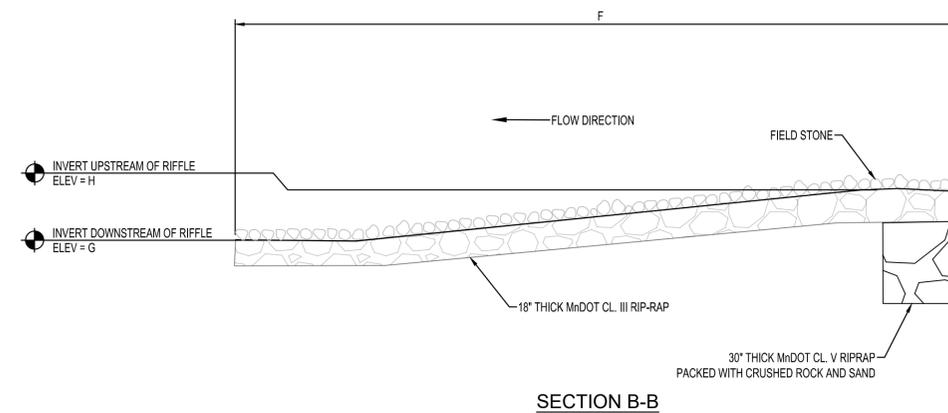
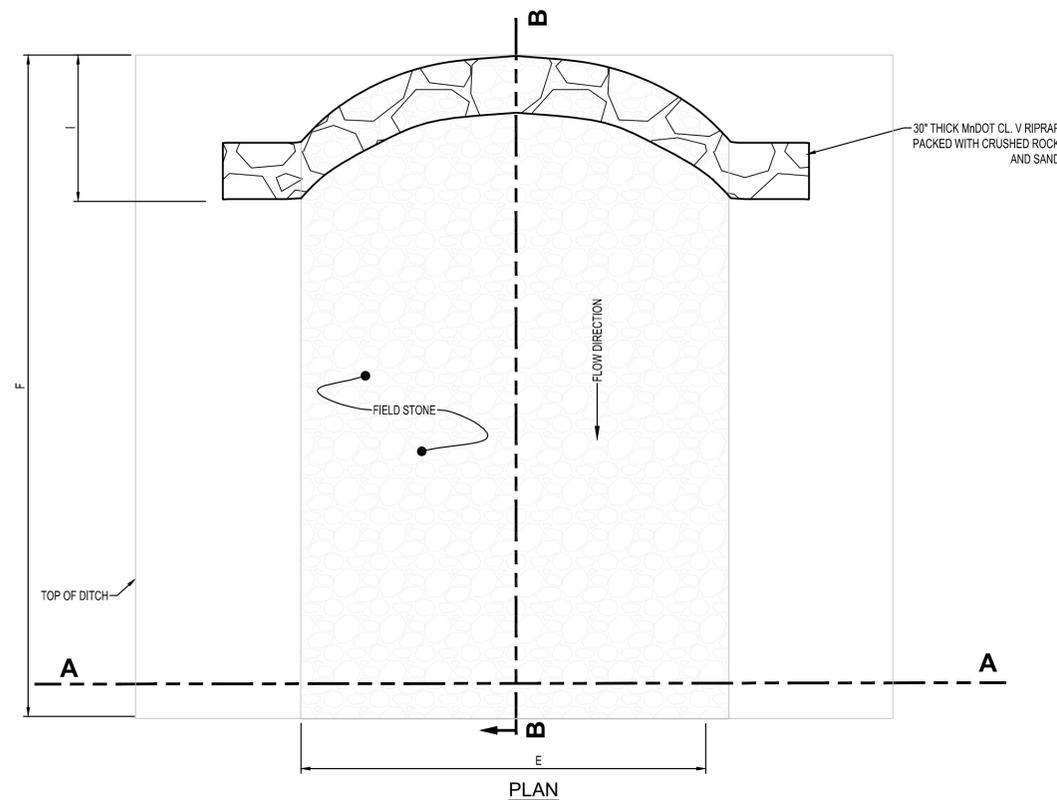
KEISTER TOWNSHIP MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 QUANTDETNOTES BP2 AB
DRAWN BY	JUM
DESIGNED BY	MAO
REVIEWED BY	MAO
ORIGINAL ISSUE DATE	11/4/22
CLIENT PROJECT NO.	-

**NOTES &
QUANTITIES**



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MARK ORIGER
Mark Origer
DATE 2/8/2023 LIC. NO. 54863

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PROJECT

**FARIBAULT COUNTY
DITCH
No. 64 REPAIRS
BID PACKAGE #2**

KEISTER TOWNSHIP MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

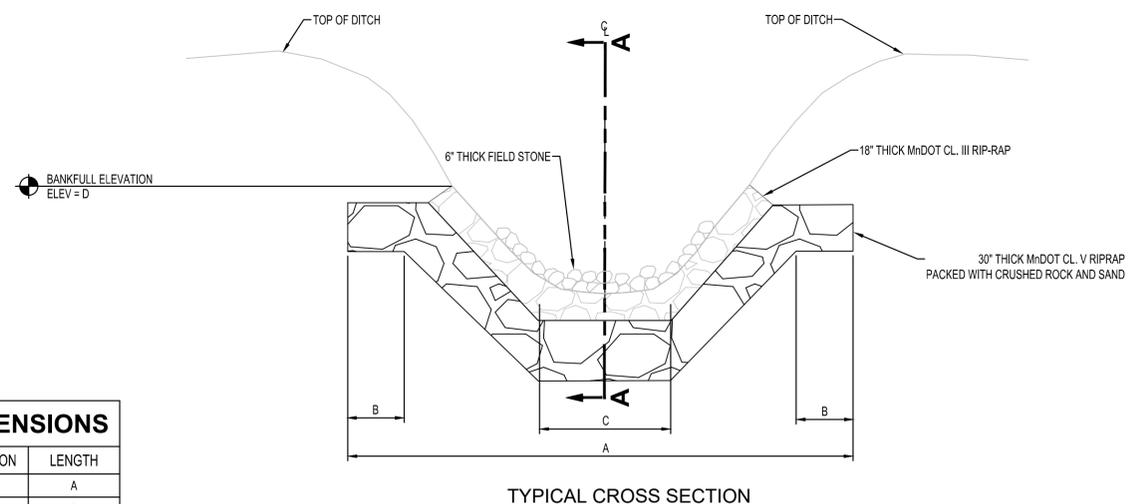
PROJECT NO.	17-21098
FILE NAME	21098 QUANTDETNOTES BP2 AB
DRAWN BY	JJM
DESIGNED BY	MAO
REVIEWED BY	MAO
ORIGINAL ISSUE DATE	11/4/22
CLIENT PROJECT NO.	-

TITLE

DETAILS

SHEET

3 OF 10

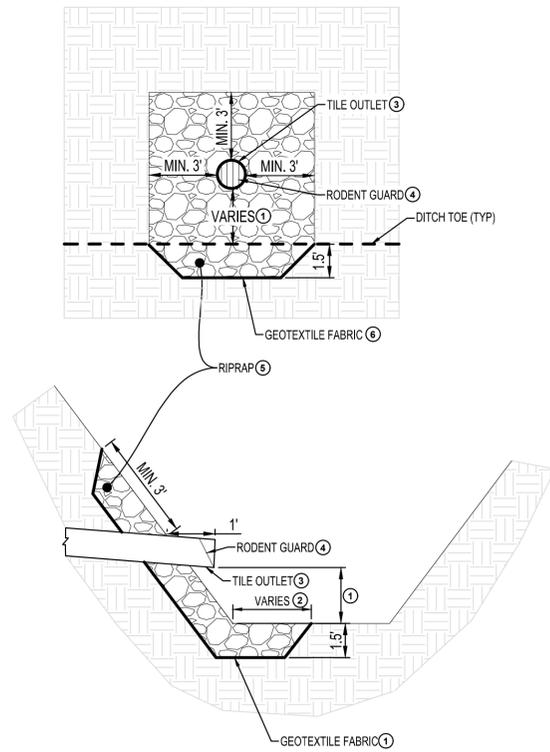


DIMENSIONS	
DIMENSION	LENGTH
A	A
B	B
C	C
D	D
E	E
F	F
G	G
H	H
I	I

NOTE:
ALL MnDOT CLASS V RIPRAP IS TO BE PACKED WITH CRUSHED ROCK AND SAND.

RIPRAP RIFFLE
NTS AG700

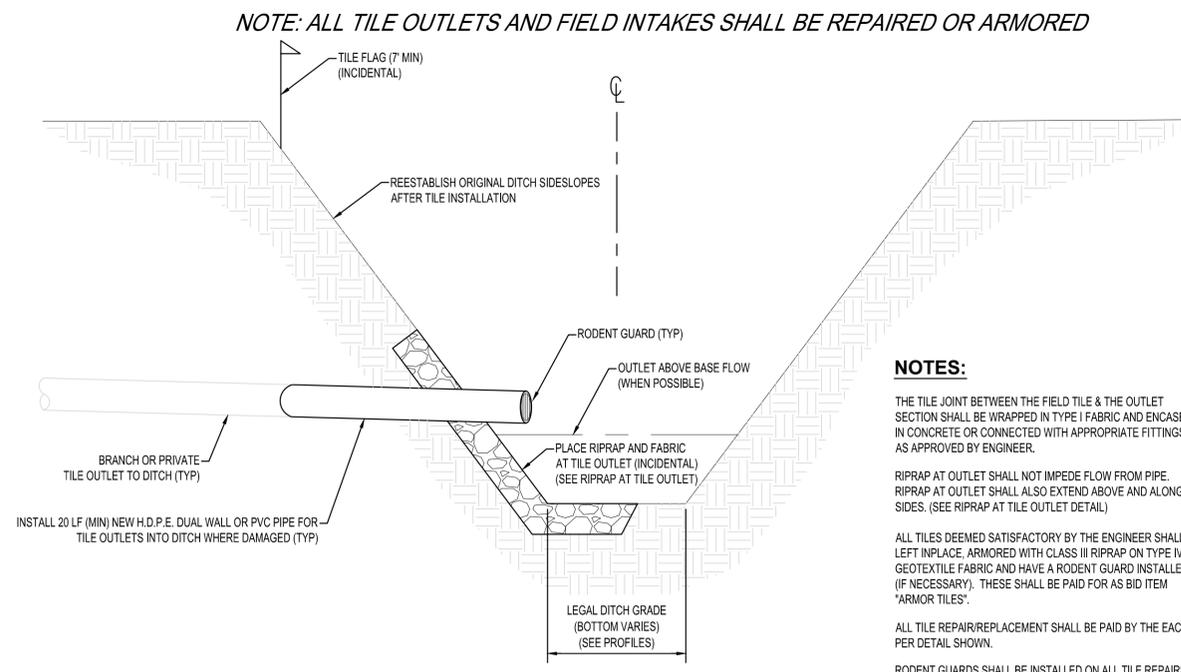
Description			Downstream		
ID	BRANCH (LOCATION)	STATION	F Riffle Length (ft)	G Downstream Elevation (MSL)	H Upstream Elevation (MSL)
1	Main	61+30	35	1170.03	1170.94
2	Main	63+30	35	1171.82	1172.12
3	Main	68+90	50	1174.15	1175.24
4	Main	71+60	45	1176.13	1176.69
5	Main	73+50	15	1176.98	1177.23
6	Main	74+25	20	1177.33	1177.52
7	Main	75+60	35	1177.94	1178.82
8	Main	78+30	25	1180.35	1180.72
9	Main	79+50	15	1180.84	1180.96
10	Main	80+30	25	1181.25	1181.77
11	Main	82+30	20	1182.06	1182.42
12	Main	84+40	25	1183.05	1183.84
13	Main	88+30	20	1185.77	1185.93
14	Main	89+70	20	1186.11	1186.68
15	Main	91+75	20	1187.66	1188.05



DIMENSIONS	
NOMINAL PIPE DIA	RIPRAP ⑤
UNDER 12"	8 CY
12"-15"	8.5 CY
18" TO 36"	9 CY
42" TO 60"	10 CY
ABOVE 60"	12 CY

- NOTES:**
- DISTANCE VARIES. REFER TO PLANS AND DETAILS.
 - DISTANCE VARIES. 4' OR 1/2 OF DITCH BOTTOM, WHICHEVER IS GREATER.
 - SIZE AND TYPE VARIES. REFER TO PLANS AND SCHEDULES.
 - RODENT GUARDS SHALL BE INSTALLED ON ALL OUTLETS 18" AND SMALLER. (INCIDENTAL TO RESPECTIVE BID ITEMS).
 - RIPRAP SHALL BE MNDOT CLASS III, UNLESS OTHERWISE SPECIFIED. THE CUBIC YARD LISTED IN THE TABLE SHALL BE INCIDENTAL TO THE RESPECTIVE BID ITEM. ADDITIONAL RIPRAP SHALL BE PAID FOR BY THE CUBIC YARD INSTALLED.
 - GEOTEXTILE FABRIC SHALL BE MNDOT TYPE IV. (INCIDENTAL TO RESPECTIVE BID ITEM)
- RIPRAP DIMENSIONS SHOWN ARE TYPICAL AND MAY BE MODIFIED ON A SITUATIONAL BASIS, IF APPROVED BY THE ENGINEER.
- RIPRAP SHALL NOT IMPEDE FLOW FROM THE TILE OUTLET OR THE RECEIVING BODY.
- RIPRAP OF THE OPPOSITE BANK MAY BE REQUIRED BY THE ENGINEER IN THE FIELD OR AS CALLED OUT IN THE PLANS, PAID FOR BY THE CUBIC YARD INSTALLED.

RIPRAP AT TILE OUTLET
NTS AG640



NOTE: ALL TILE OUTLETS AND FIELD INTAKES SHALL BE REPAIRED OR ARMORED

- NOTES:**
- THE TILE JOINT BETWEEN THE FIELD TILE & THE OUTLET SECTION SHALL BE WRAPPED IN TYPE I FABRIC AND ENCASED IN CONCRETE OR CONNECTED WITH APPROPRIATE FITTINGS, AS APPROVED BY ENGINEER.
- RIPRAP AT OUTLET SHALL NOT IMPEDE FLOW FROM PIPE. RIPRAP AT OUTLET SHALL ALSO EXTEND ABOVE AND ALONG SIDES. (SEE RIPRAP AT TILE OUTLET DETAIL)
- ALL TILES DEEMED SATISFACTORY BY THE ENGINEER SHALL BE LEFT IN PLACE. ARMORED WITH CLASS III RIPRAP ON TYPE IV GEOTEXTILE FABRIC AND HAVE A RODENT GUARD INSTALLED (IF NECESSARY). THESE SHALL BE PAID FOR AS BID ITEM "ARMOR TILES".
- ALL TILE REPAIR/REPLACEMENT SHALL BE PAID BY THE EACH PER DETAIL SHOWN.
- RODENT GUARDS SHALL BE INSTALLED ON ALL TILE REPAIRS 18" AND SMALLER, AND ARE INCIDENTAL TO THE PAY ITEM.
- ALL FITTINGS TO CONNECT EXISTING TILE SHALL BE INCIDENTAL TO TILE OUTLET REPAIR.
- FENCE POST WITH 8' LONG PIECE OF PVC SLIPPED OVER IT MAY BE SUBSTITUTED FOR THE TILE FLAG.
- REFER TO OPEN DITCH NOTES FOR ACCEPTABLE OUTLET MATERIAL TYPES.
- SEEDING MUST OCCUR WITHIN 2 DAYS OF CONSTRUCTION.

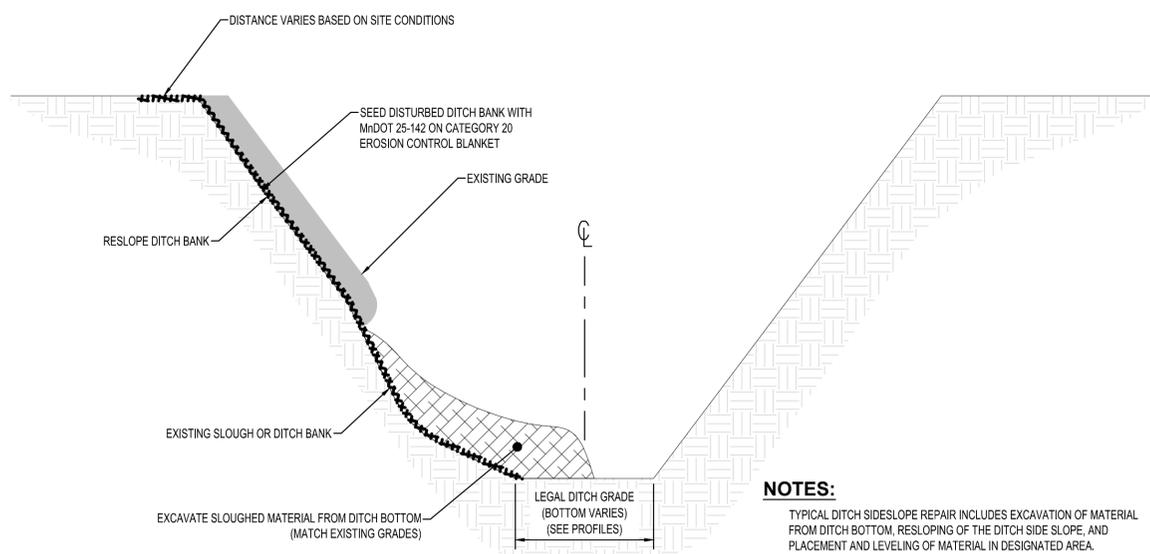
TYPICAL TILE OUTLET REPAIR
NTS AG630

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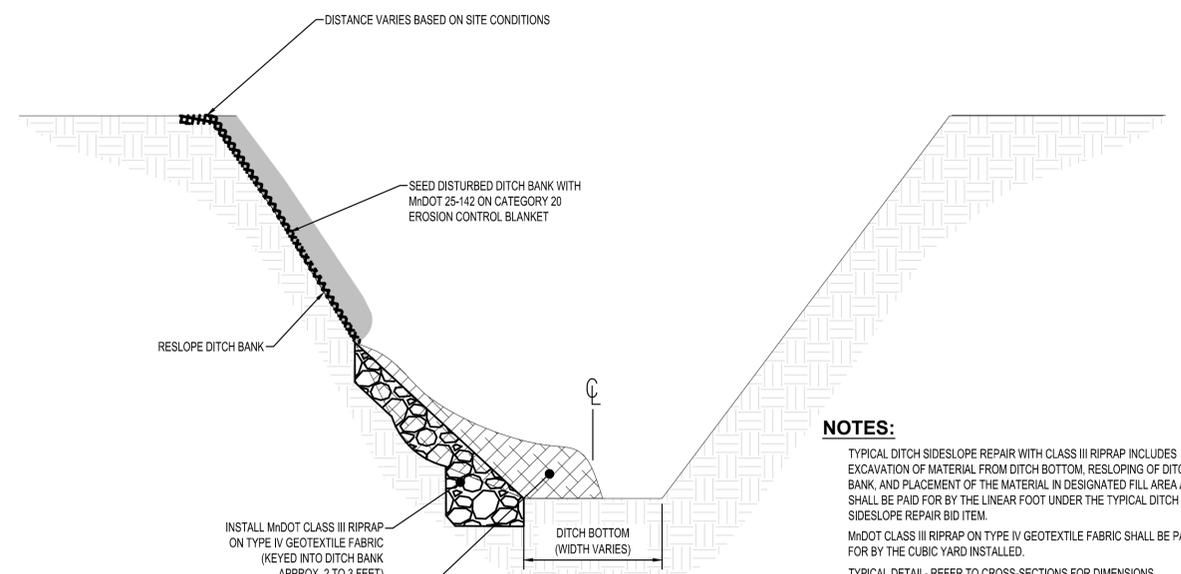
MARK ORIGER
DATE 2/8/2023 LIC. NO. 54863

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- NOTES:**
- TYPICAL DITCH SIDESLOPE REPAIR INCLUDES EXCAVATION OF MATERIAL FROM DITCH BOTTOM, RESLOPING OF THE DITCH SIDE SLOPE, AND PLACEMENT AND LEVELING OF MATERIAL IN DESIGNATED AREA.
- DITCH SIDESLOPE REPAIR SHALL BE PAID FOR BY THE LINEAR FOOT MEASURED ALONG THE DITCH CENTERLINE.
- TYPICAL DETAIL- REFER TO CROSS-SECTIONS FOR DIMENSIONS.
- SEEDING SHALL BE MEASURED AND PAID FOR BY THE SY INSTALLED.
- DITCH BANK SEEDING MUST OCCUR WITHIN 2 DAYS OF CONSTRUCTION.

TYPICAL DITCH SIDESLOPE REPAIR
NTS AG460



- NOTES:**
- TYPICAL DITCH SIDESLOPE REPAIR WITH CLASS III RIPRAP INCLUDES EXCAVATION OF MATERIAL FROM DITCH BOTTOM, RESLOPING OF DITCH BANK, AND PLACEMENT OF THE MATERIAL IN DESIGNATED FILL AREA AND SHALL BE PAID FOR BY THE LINEAR FOOT UNDER THE TYPICAL DITCH SIDESLOPE REPAIR BID ITEM.
- MNDOT CLASS III RIPRAP ON TYPE IV GEOTEXTILE FABRIC SHALL BE PAID FOR BY THE CUBIC YARD INSTALLED.
- TYPICAL DETAIL- REFER TO CROSS-SECTIONS FOR DIMENSIONS.
- SEEDING SHALL BE MEASURED AND PAID FOR BY THE SY INSTALLED.
- COORDINATE RIPRAP DIMENSIONS WITH ENGINEER BASED ON CONDITIONS FOUND AFTER SLOUGH REMOVAL.
- DITCH BANK SEEDING MUST OCCUR WITHIN 2 DAYS OF CONSTRUCTION.

TYPICAL DITCH SIDESLOPE REPAIR WITH CLASS III RIPRAP
NTS AG470

PROJECT

FARIBAULT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #2

KEISTER TOWNSHIP MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

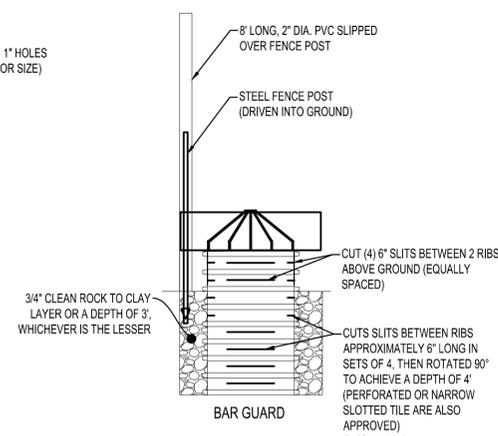
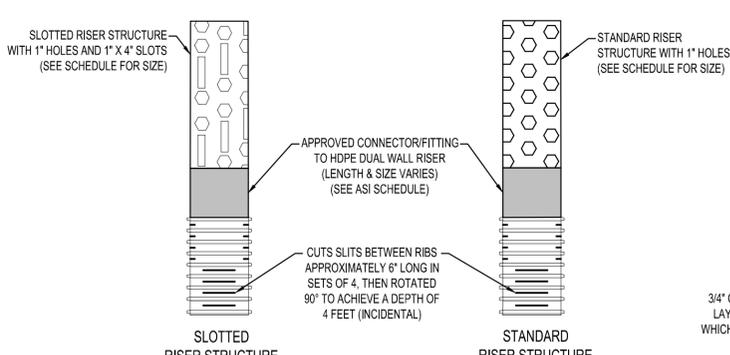
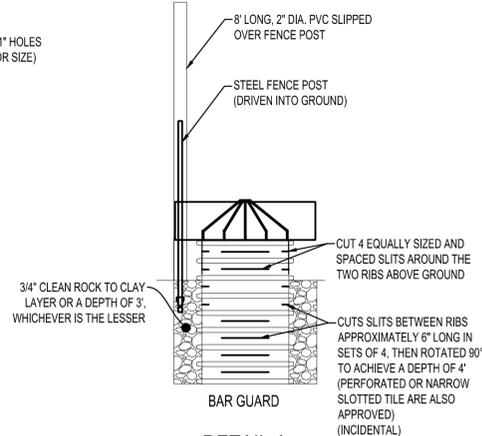
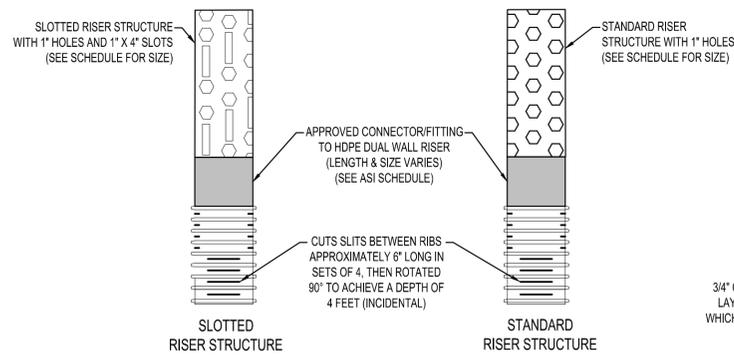
AS-BUILT 2/8/2023

PROJECT NO.	17-21098
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DRAWN BY	JJM
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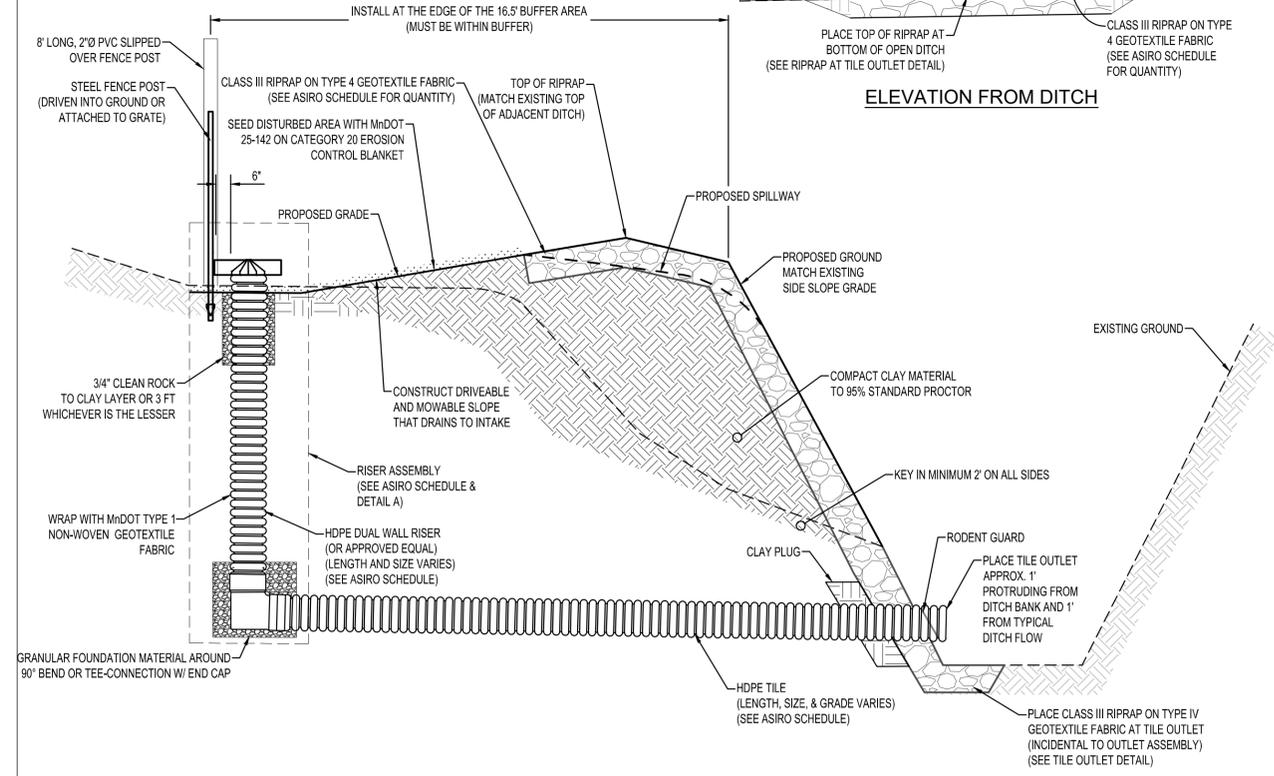
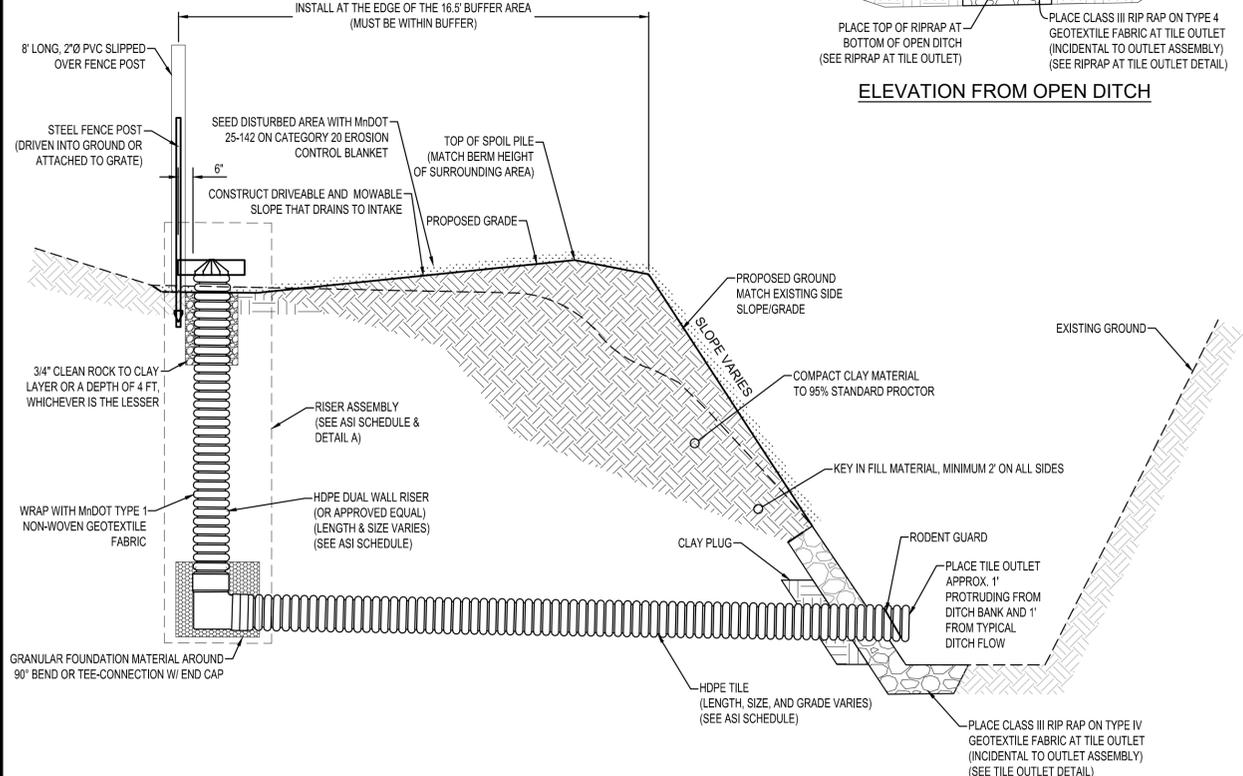
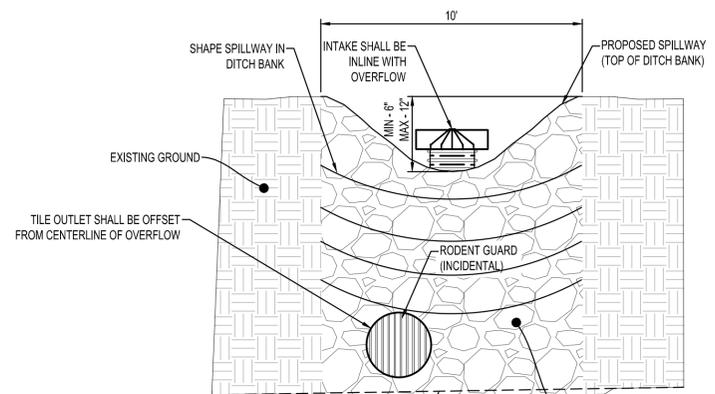
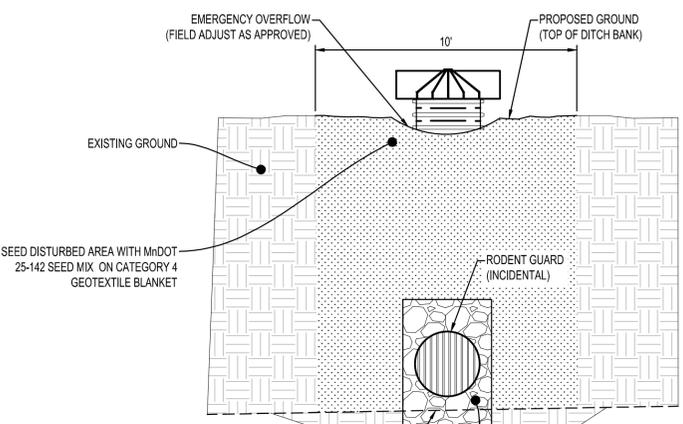
DETAILS

SHEET



NOTES:
 INTAKE TYPE AND TILE SIZE VARIES PER ASI. (SEE SCHEDULE)
 RISER ASSEMBLY SHALL BE A SEPARATE PAY ITEM THAN THE OUTLET ASSEMBLY.
 ALL DISTURBED AREAS WITHIN BUFFER EASEMENT SHALL BE SEEDED WITH MNDOT 25-142 ON CATEGORY 20 EROSION CONTROL BLANKET. (INCIDENTAL)
 ALL EFFORTS SHALL BE MADE TO SEPARATE SOIL TYPES. BACKFILL SHALL BE COMPACTED PRIOR TO PLACEMENT OF TOPSOIL, EXCEPT THE TOP TWO (2) FEET, FOR WHICH COMPACTION SHALL BE MINIMIZED TO THE EXTENT POSSIBLE. TOPSOIL SHALL BE PLACED TO A MINIMUM DEPTH OF 6" OR UNIFORM TO THE TOPSOIL DEPTH OF THE SURROUNDING AREA. ALL EFFORTS SHALL BE MADE TO KEEP TOPSOIL ON TOP AND SEPARATED. NO TOPSOIL SHALL BE PLACED IN THE TRENCH BELOW 2' FROM EXISTING GROUND UNLESS APPROVED BY THE ENGINEER.
 ALL INTAKES SHALL BE WRAPPED WITH MNDOT TYPE 1 GEOTEXTILE FABRIC. (INCIDENTAL TO RISER ASSEMBLY)
 ALL SLITS CUT INTO RISER ARE INCIDENTAL TO RISER ASSEMBLY.
 ALL 3/4" CLEAN ROCK AND GRANULAR FOUNDATION MATERIAL IS INCIDENTAL TO RISER ASSEMBLY.
 ALL OUTLET RIPRAP IS INCIDENTAL TO OUTLET ASSEMBLY.
 INTAKES SHALL BE FIELD ADJUSTED BASED ON ACTUAL LOCATION OF LOW AREAS, AS DETERMINED BY THE ENGINEER.
 TILE OUTLET ASSEMBLY SHALL CONFORM TO STANDARD TILE INSTALLATION.
 SHAPING OF LOW AREA TO GRADE TO DROP INTAKE SHALL BE INCIDENTAL TO PAY ITEM.
 TRASH GRATE, ANTI-VORTEX PLATE, AND FENCE POST WITH PVC SHALL BE INCIDENTAL.
 TILE FLAGS (7' MIN) MAY BE SUBSTITUTED FOR FENCE POST WITH PVC.

NOTES:
 INTAKE TYPE & TILE SIZE VARIES PER ASIRO. (SEE SCHEDULE)
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 SHAPING OF LOW AREA TO GRADE TO DROP INTAKE SHALL BE INCIDENTAL TO PAY ITEM.
 TRASH GRATE, ANTI-VORTEX PLAT, AND FENCE POST WITH PVC SHALL BE INCIDENTAL.
 TILE FLAGS (7' MIN) MAY BE SUBSTITUTED FOR FENCE POST WITH PVC.



ALTERNATIVE SIDE INLET (ASI)
 NTS AG600

ALTERNATIVE SIDE INLET WITH RIPRAP OVERFLOW (ASIRO)
 NTS AG610

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 DATE: 2/8/2023 LIC. NO. 54863

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FARIBAUT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #2

KEISTER TOWNSHIP MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

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FILE NAME	21098 QUANTDETNOTES BP2 AB
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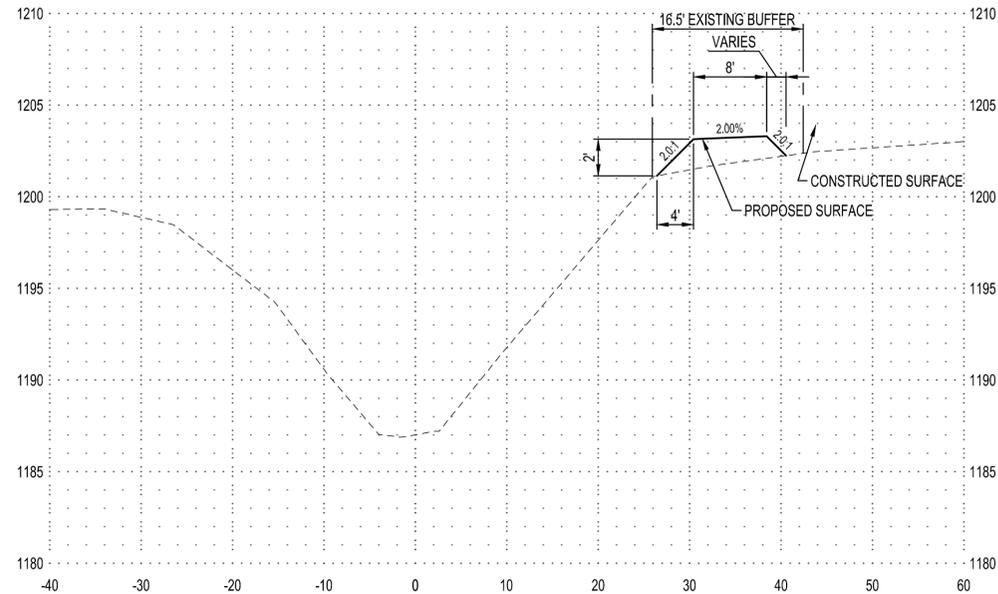
TITLE

DETAILS

SHEET



WEST BERM SECTION



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PROJECT
FARIBAULT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #2
KEISTER TOWNSHIP MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 BERM SECTION BP2 AB
DRAWN BY	JJM
DESIGNED BY	MAO
REVIEWED BY	MAO
ORIGINAL ISSUE DATE	11/4/22
CLIENT PROJECT NO.	-

TITLE
WEST BERM SECTION DETAIL

SHEET
6 OF 10

25-142 Agricultural Roadside

Common Name	Scientific Name	Rate (lb/ac)	Rate (kg/ha)	% of Mix (by weight)	Seeds/ sq ft
Perennial Ryegrass	<i>Lolium perenne</i>	13.50	15.13	30.00%	67.25
Smooth Brome	<i>Bromus inermis</i>	7.75	8.69	17.23%	25.43
fowl bluegrass	<i>Poa palustris</i>	6.00	6.73	13.33%	286.50
slender wheatgrass	<i>Elymus trachycaulus</i>	2.00	2.24	4.45%	5.08
Timothy	<i>Phleum pratense</i>	1.75	1.96	3.89%	49.43
switchgrass	<i>Panicum virgatum</i>	1.50	1.68	3.33%	7.70
	Grasses Subtotal	32.50	36.43	72.23%	441.39
Alfalfa	<i>Medicago sativa</i>	12.50	14.01	27.77%	65.07
	Forbs Subtotal	12.50	14.01	27.77%	65.07
	Total	45.00	50.44	100.00%	506.46

Purpose: General non-native roadside for areas that will be cut for hay.

Planting Area: Statewide

Combine all components when blending this mix.



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PROJECT

**FARIBAULT COUNTY
DITCH
No. 64 REPAIRS
BID PACKAGE #2**

KEISTER TOWNSHIP MINNESOTA

REVISION SCHEDULE

DATE	DESCRIPTION	BY

AS-BUILT 2/8/2023

PROJECT NO.	17-21098
FILE NAME	21098 WATERSHEDMAPS BP2 AB
DRAWN BY	-
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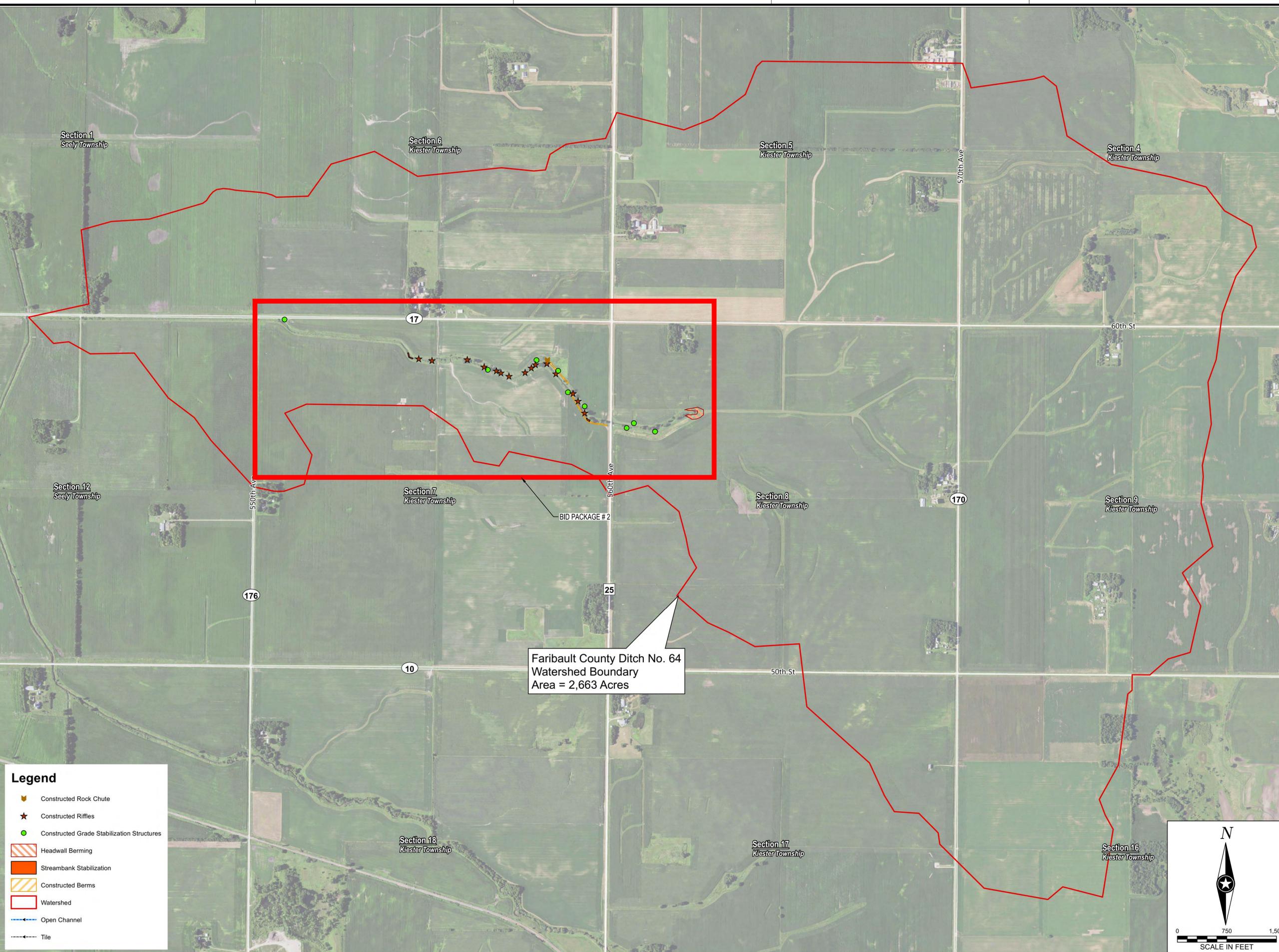
TITLE

**OVERALL
WATERSHED MAP**

SHEET

7

OF 10



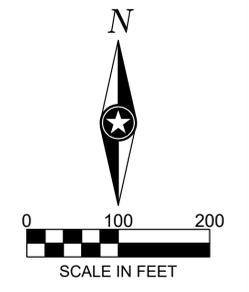
Legend

- Constructed Rock Chute
- Constructed Riffles
- Constructed Grade Stabilization Structures
- Headwall Berming
- Streambank Stabilization
- Constructed Berms
- Watershed
- Open Channel
- Tile

N

0 750 1,500

SCALE IN FEET



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PROJECT
**FARIBAULT COUNTY
DITCH
No. 64 REPAIRS
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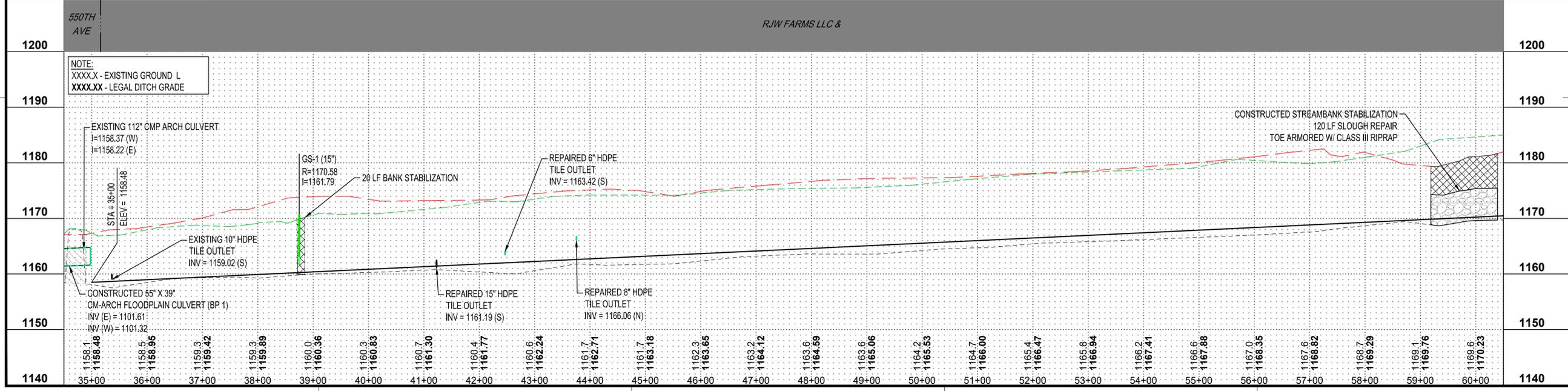
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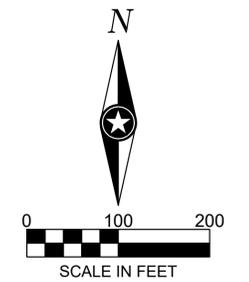
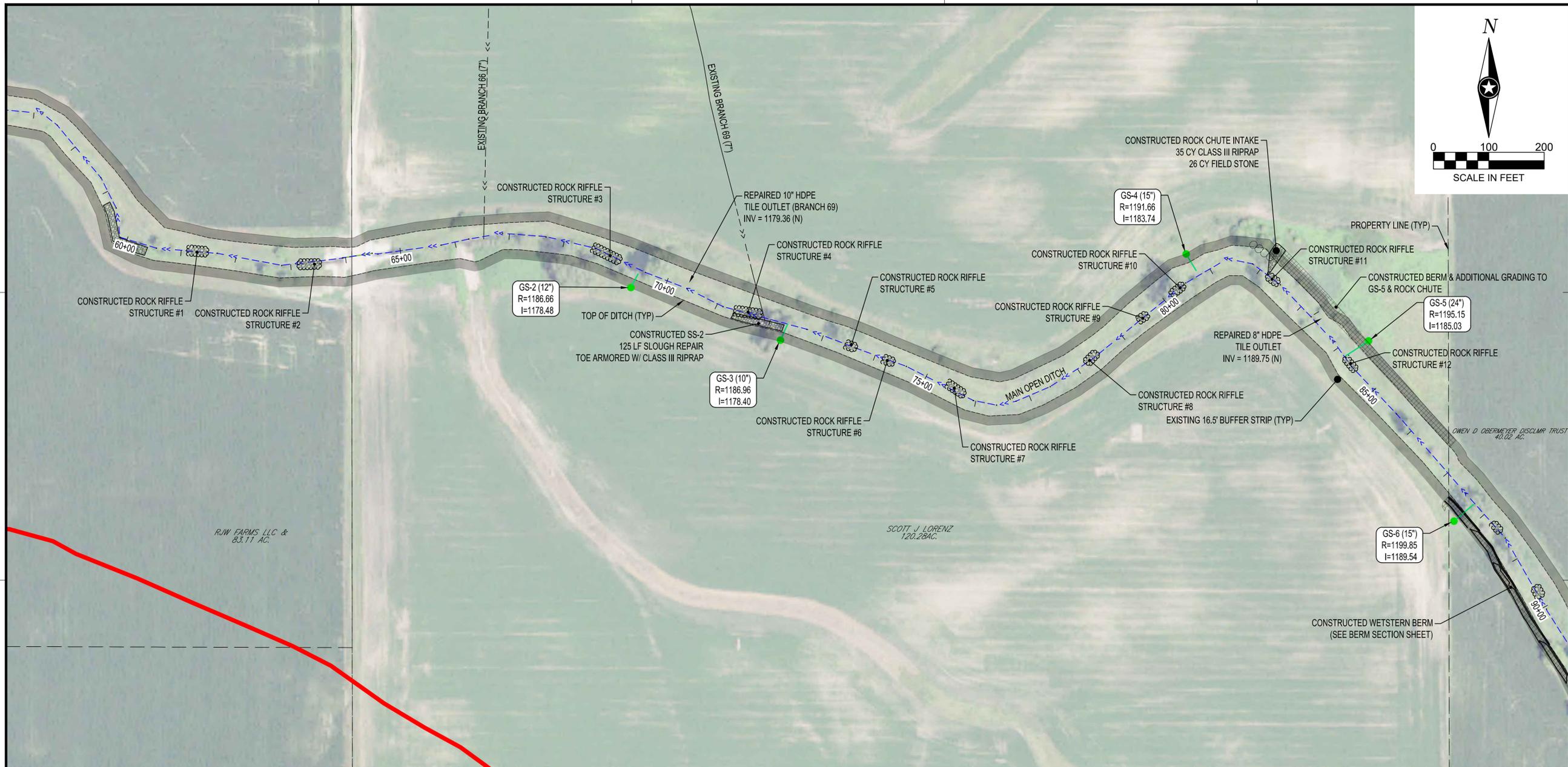
TITLE
**PLAN-PROFILE
(MAINLINE)**

SHEET
8
OF 10



NOTE:
XXXX.X - EXISTING GROUND L
XXXX.XX - LEGAL DITCH GRADE

Station	Existing Ground L	Legal Ditch Grade
35+00	1158.1	1158.48
36+00	1158.5	1158.95
37+00	1159.3	1159.42
38+00	1159.3	1159.89
39+00	1160.0	1160.36
40+00	1160.3	1160.83
41+00	1160.7	1161.30
42+00	1160.4	1161.77
43+00	1160.6	1162.24
44+00	1161.7	1162.71
45+00	1161.7	1163.18
46+00	1162.3	1163.65
47+00	1163.2	1164.12
48+00	1163.6	1164.59
49+00	1163.6	1165.06
50+00	1164.2	1165.53
51+00	1164.7	1166.00
52+00	1165.4	1166.47
53+00	1165.8	1166.94
54+00	1166.2	1167.41
55+00	1166.6	1167.88
56+00	1167.0	1168.35
57+00	1167.6	1168.82
58+00	1168.7	1169.29
59+00	1169.1	1169.76
60+00	1169.6	1170.23



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PROJECT
FARIBAUT COUNTY DITCH No. 64 REPAIRS BID PACKAGE #2

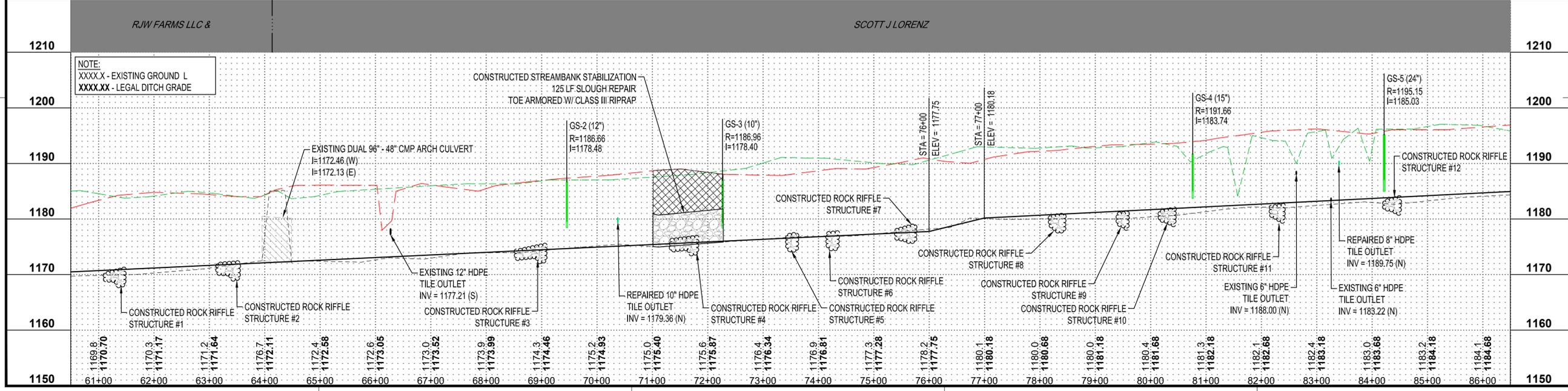
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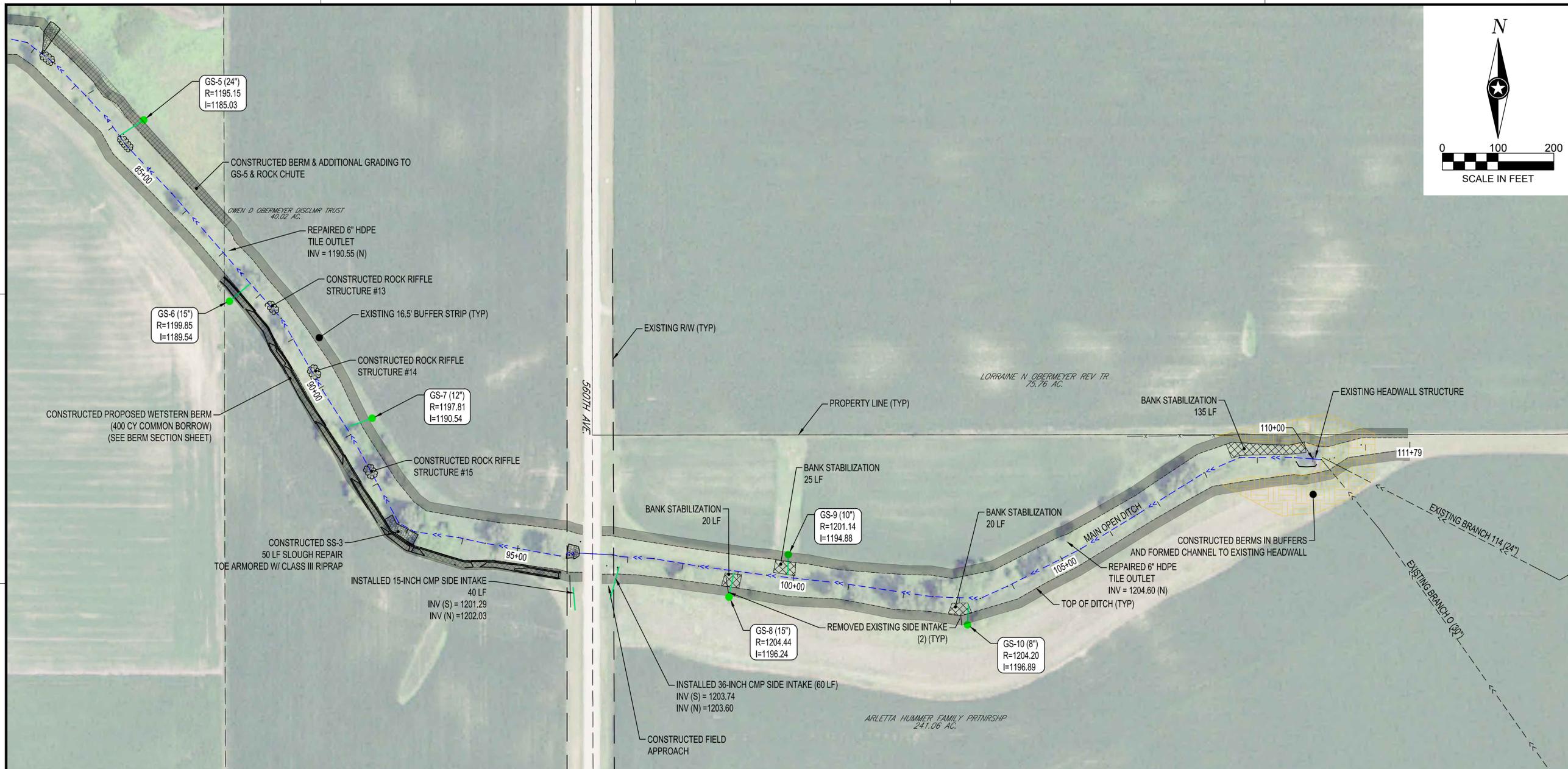
AS-BUILT 2/8/2023

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TITLE
PLAN-PROFILE (MAINLINE)

SHEET
9 OF 10





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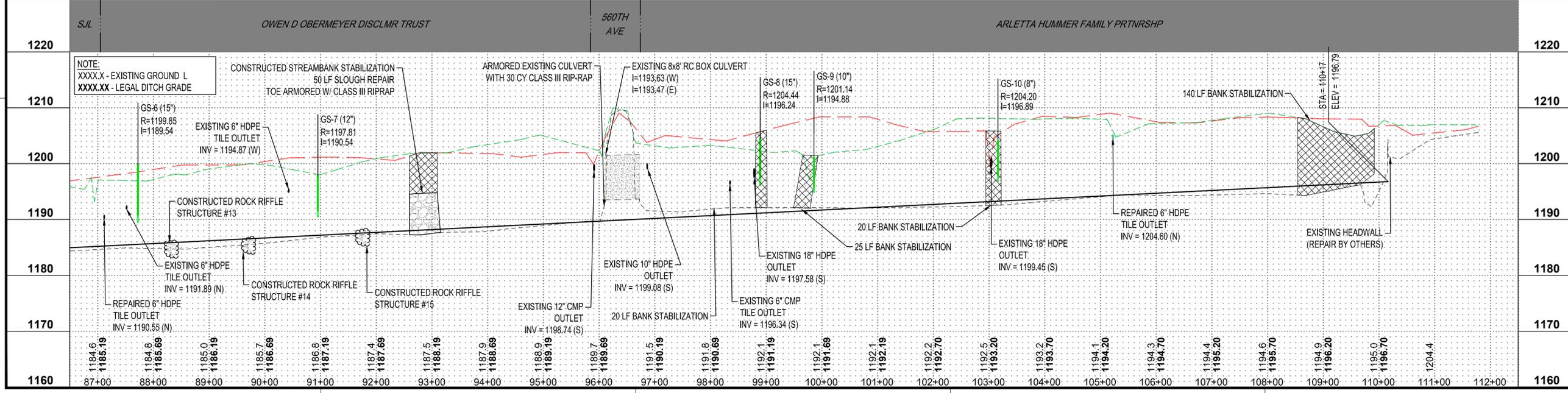
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DESIGNED BY	-
REVIEWED BY	-
ORIGINAL ISSUE DATE	11/4/22
CLIENT PROJECT NO.	-



PLAN-PROFILE (MAINLINE)

SHEET **10** OF 10

Appendix D: Damages

Faribault County Ditch No. 64
 2022 Construction Damages Summary
 Final Per As-Built
 Date: 2/8/2023



	General Tract Information						Permanent Damages			Temporary Damages			
	Parcel Description	Parcel Owner	Parcel ID	Approximate Station Range	Project Description	Crop Type	Buffer Strip Area (Acres)	New Top Area (Acres)	Total Permanent Easement (Acres)	Contractor Damages due to Construction (Acres)	Non-Crop Damages due to Construction (Acres)	Crop Damages due to Construction (Acres)	Total Temporary Easement (Acres)
Mainline	N 1/2 NW 1/4 SECTION 12 SEELY TOWNSHIP	SYLVIA L ANSHUS LIVING REVOCABLE TRUST	170120400	0+00 to 8+00	DITCH WIDENING	BEANS	0.30	0.29	0.59	0.00	0.00	1.06	1.06
	NW 1/4 NE 1/4 SECTION 12 SEELY TOWNSHIP	LELAND HERITAGE FOUNDATION LLC	170120500	8+00 to 22+00	2-STAGE DITCH	BEANS	0.50	0.54	1.04	0.00	0.00	1.50	1.50
	NE 1/4 NE 1/4 SECTION 12 SEELY TOWNSHIP	CRAIG LELAND	170120900	22+00 to 35+00	2-STAGE DITCH	CORN	0.47	1.07	1.54	0.00	0.00	1.96	1.96
Ditch No. 64 Total							1.3	1.90	3.17	0.00	0.00	4.52	4.52



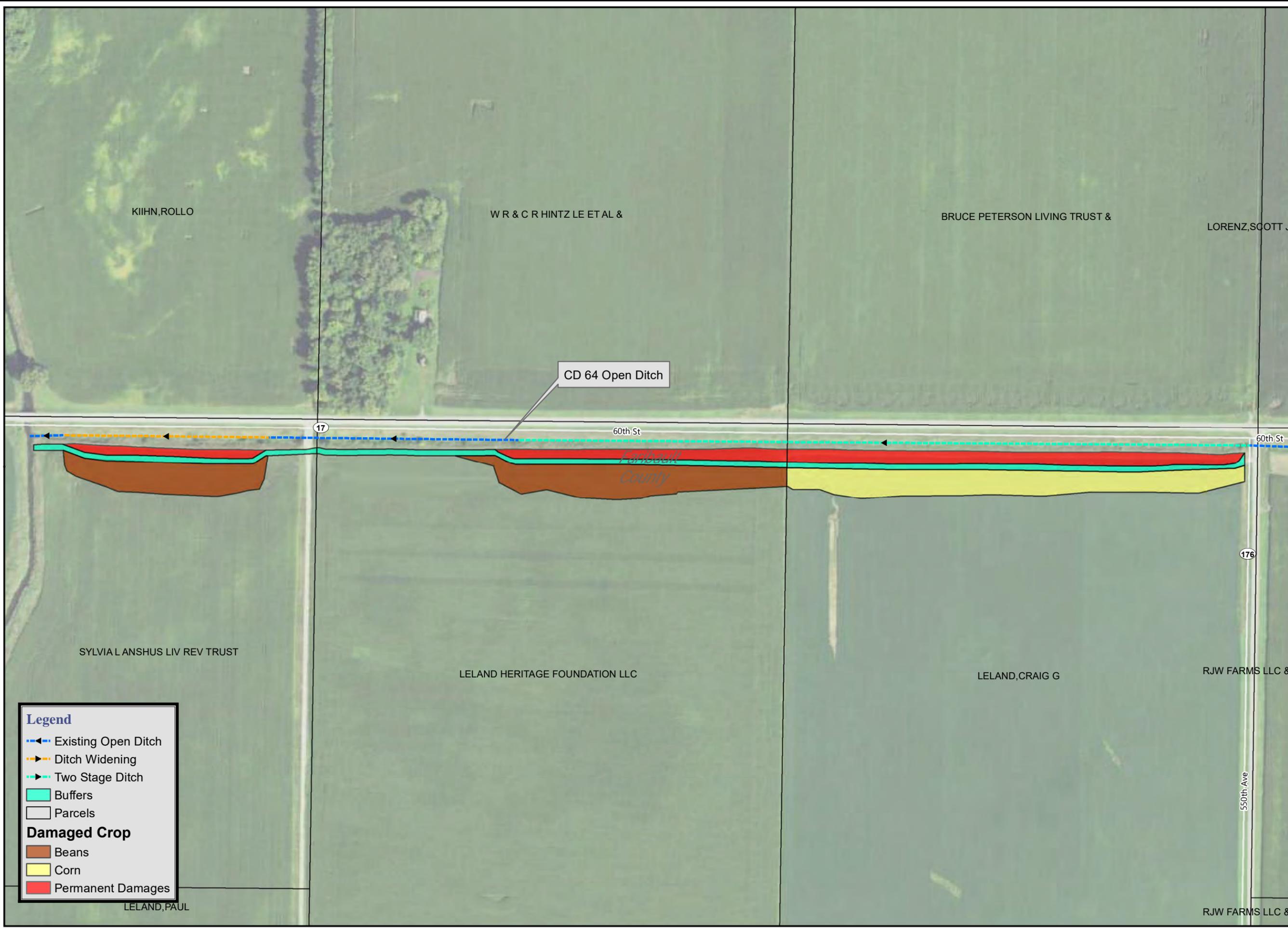
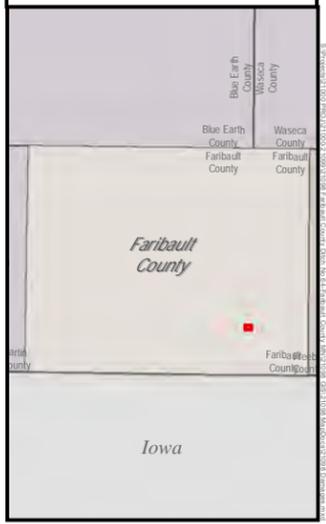
Damages Map
CD No. 64
 Faribault County,
 Minnesota
 Thursday, December 8, 2022

PN: 17-21098
 Source:

Orthophotograph (MnGeo WMS, 2015)
 Tile/Ditch (Faribault County, 2022)
 Parcels (Faribault County, 2022)
 Lakes (MN DNR, July, 2008)
 Major Stream (MN DNR, July 2008)
 Counties (MN DNR, July 2013)
 PLSS (MnGeo/USGS)



0 62.5 125 250
 Feet
 1 inch = 249 feet



Legend

- Existing Open Ditch
- Ditch Widening
- Two Stage Ditch
- Buffers
- Parcels

Damaged Crop

- Beans
- Corn
- Permanent Damages