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Final Engineer's Report for

Improvement of County Ditch 59 Branch B, 203 & 194 Renville County

0S1.130654.000

June 2026

Submitted by:

Bolton & Menk, Inc.
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Certification

Final Engineer's Report

For

Improvement

Of

County Ditch No. 59 Branch B, 203 & 194

Of

Renville County

June 2026

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.

By: Shaun P. Luker
Shaun P. Luker, P.E.
License No. 48756

Date: June 22, 2026

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Exhibits

- EXHIBIT 1: PRELIMINARY PLANS AND PROFILES
- EXHIBIT 2: PETITION FOR CD 59 IMPROVEMENT
- EXHIBIT 3: ENGINEER'S ESTIMATE
- EXHIBIT 4: SEPARABLE MAINTENANCE
- EXHIBIT 5: RIGHT OF WAY TABLE
- EXHIBIT 6: TILE TYPE MAP
- EXHIBIT 7: HYDROGRAPHS

STATE OF MINNESOTA

RENVILLE COUNTY, MINNESOTA

IN THE MATTER OF THE PETITION FOR AN IMPROVEMENT OF RENVILLE COUNTY DITCH NO 59 BRANCH B, BRANCH 203 AND BRANCH 194 IN RENVILLE COUNTY, MINNESOTA:

In January 2024, the Renville County Board, acting as the Drainage Authority for County Ditch No. 59 Branch B (BR B), Branch 203 (BR 203) and Branch 194 (BR 194) in Renville County, in accordance with Minnesota Statute 103E.215, accepted a petition for the improvement of portions of BR B, BR 203, and BR 194. Subsequent to that authorization, preliminary field surveys were performed to obtain elevations and establish an alignment for the proposed open ditch and culvert crossing improvements, as well as to evaluate the outlet for the system. Then a Preliminary Engineer's Report was submitted and approved by the Drainage Authority in January 2026.

This Final Engineer's Report summarizes the findings of the research, surveys, and analysis for the improvement and is submitted for consideration by the Drainage Authority.

I. LOCATION AND SCOPE OF IMPROVEMENT

County Ditch No. 59 Branch B, Branch 203 and Branch 194 lie within and provides drainage to a large watershed in the north-central portion of Renville County. The scope of the improvement includes 3.9 miles of tile from 6-inch to 30-inch diameter pipe. The system provides drainage to:

- portions of Sections 1 and 2 in Troy Township.
- portions of Sections 24, 25, 26, 27, 34, 35 and 36 in Winfield Township.

County Ditch No. 59 serves as an outlet for BR B, BR 203 and BR 194. County Ditch No. 59 has had several Water Quality and Storage Impoundments within the system both upstream and downstream of the proposed improvement. Therefore, this improvement will be looked as a part of the whole system management that Renville County has completed. The proposed improvement represents approximately 2.9 square miles out of the 15.9 square miles total managed through previous impoundments.

The outlet for CD 59 is into County Ditch 37 about two miles west of Danube, just north of the Twin Cities & Western (TC&W) Railroad. The total estimated watershed for CD 59 from USGS Streamstats data is 58.5 square miles. However, the majority of this watershed is from CD 17A. Upstream of County Road 59, the CD 59 watershed is approximately 15.9 square miles.

The petition presented to the Board requests consideration for the improvement of portions of Branch B and its laterals, Branch 203 and its laterals, and Branch 194 and its laterals as depicted in Exhibit 2. Alternative ponding locations shown in Exhibit 2 were considered by the board as described within the Preliminary Engineer's Report. The impoundments described in this Final Engineer's report reflect both the Drainage Authority's and landowner's preferable impoundment solutions. The purpose of this improvement is to achieve a 1/2" drainage coefficient within a majority of the properties located within the watershed.

Bolton & Menk, Inc. collected field survey information in March of 2024. Renville County collected field survey information in September of 2024 and May of 2025. This field survey information included the elevation of the tile outlets and the inverts of the intakes within the system. Additional field survey information will be required at any storage areas proposed for final

construction.

The design of the improvements also utilizes LIDAR data provided by the Minnesota Department of Natural Resources. This data, obtained from an aerial flight, provides additional elevation data at a confidence level equal to two-foot vertical contours.

Other information used for this report includes the plans and surveys from the CD 59 Branch 309 & Branch C Improvement and CD 59 Water Quality and Storage Impoundment.

II. EXISTING DITCH SYSTEM

Public information regarding the County Ditch No. 59 system was received from Renville County. This information provides a limited history of the CD 59 system. CD 59 was petitioned for establishment on June 26, 1916. Construction was completed on August 1, 1921. The original benefits for the ditch system were \$161,735. Existing benefits as determined in March 5, 2024 are \$17,082,709.

An extensive repair of the existing system, known as Repair F occurred in 1967. An improvement to the open ditch occurred in 2025 to 2026 and an impoundment to CD 59 main tile is also occurred in 2025.

III. CAPACITY OF THE EXISTING DRAINAGE SYSTEM

The portion of the proposed system improvements consists of underground tiles. From petitioner reports, the system is not able to drain the watershed adequately, resulting in extended ponding in portions of the watershed. This ponding results in crop stress and crop loss. Because of the limitations of the drainage system, the petitioners requested an improvement of the drainage system.

The capacity of the existing tile has been estimated using the Manning equation, assuming the original hydraulic efficiency of the system as constructed. Estimated tile sizes and grades are based on limited field data collected through tile intakes and general land grades. The amount of drainage that is needed for modern crop production has been compared to standards recommended by the Natural Resource Conservation Services (NRCS). These standards recommend that for drainage of row crops in mineral soils, where surface water intakes are provided, that a modern drainage system should be able to convey 1/2" of runoff per day. Watershed areas have been estimated using LIDAR data. The capacity of the existing tiles in Branch B is shown in Table 1, the capacity of the existing tiles in Branch 203 is shown in Table 2 and the capacity of existing tiles in Branch 194 is shown in Table 3.

Table 1 – Branch B Existing Tile Capacity Computations								
Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.013)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
Branch B11	End of pipe to 1800-ft North of 850th Ave	24	0.50	7	0.50	0.60	1.19	0.60
	1800-ft North of 850th Ave to 1600-ft North of 850th Ave	43	0.90	8	0.10	0.38	0.42	0.21
	1600-ft North of 850th Ave to	54	1.13	9	0.10	0.52	0.46	0.23

Table 1 – Branch B Existing Tile Capacity Computations

Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.013)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
	1500-ft North of 850th Ave							
	1500-ft North of 850th Ave to 990-ft North of 850th Ave	76	1.60	10	0.20	0.98	0.62	0.31
	990-ft North of 850th Ave to 370-ft North of 850th Ave	94	1.97	12	0.30	1.96	0.99	0.50
	370-ft North of 850th Ave to Branch B Main	140	2.94	10	0.50	1.55	0.53	0.26
Branch B10	End of pipe to Branch B Main	32	0.67	5	0.50	0.24	0.36	0.18
Branch B9	End of pipe to 280-ft East of 340th St	12	0.25	6	0.50	0.40	1.58	0.79
	280-ft East of 340th St to 190-ft West of 340th St	60	1.26	7	0.50	0.60	0.48	0.24
	190-ft West of 340th St to Branch B Main	65	1.37	8	0.50	0.86	0.63	0.31
Branch B8	End of pipe to 250-ft North of 840th Ave	56	1.18	6	0.10	0.18	0.15	0.08
	250-ft North of 840th Ave to Branch B7	62	1.30	7	0.20	0.38	0.29	0.15
Branch B7	End of pipe to 570-ft West of 340th St	66	1.39	12	0.15	1.38	1.00	0.50
	570-ft West of 340th St to 920-ft West of 340th St	73	1.53	12	0.10	1.13	0.74	0.37
	920-ft West of 340th St to 1200-ft West of 340th St	80	1.68	12	0.10	1.13	0.67	0.34
	1200-ft West of 340th St to Branch B8	87	1.83	12	0.10	1.13	0.62	0.31
	Branch B8 to Branch B Main	154	3.24	12	0.10	1.13	0.35	0.17
Branch B6	End of pipe to 370-ft West of 340th St	48	1.01	6	0.10	0.18	0.18	0.09
	370-ft West of 340th St to 760-ft West of 340th St	56	1.18	7	0.20	0.38	0.32	0.16
	760-ft West of 340th St to 1600-ft West of 340th St	64	1.34	8	0.20	0.54	0.40	0.20
	1600-ft West of 340th St to Branch B Main	76	1.60	10	0.20	0.98	0.62	0.31
Branch B5	End of pipe to 2580-ft East of 330th St	65	1.37	15	0.15	2.51	1.84	0.92
	2580-ft East of 330th St to	88	1.85	15	0.10	2.05	1.11	0.55

Table 1 – Branch B Existing Tile Capacity Computations								
Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.013)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
	Branch B7							
	Branch B7 to Branch B6	252	5.29	15	0.25	3.24	0.61	0.31
	Branch B6 to Branch B Main	332	6.97	15	0.05	1.45	0.21	0.10
Branch B4	End of pipe to Branch B3	3	0.06	5	0.25	0.17	2.75	1.37
Branch B3	End of pipe to Branch B4	2	0.04	5	0.25	0.17	4.12	2.06
	Branch B4 to Branch B Main	15	0.32	6	0.25	0.28	0.89	0.45
Branch B2	End of pipe to 2000-ft East of 330th St	5	0.11	5	1.40	0.41	3.90	1.95
	2000-ft East of 330th St to Branch B Main	15	0.32	7	1.40	1.00	3.19	1.59
Branch B1	End of Pipe to 970-ft East of 330th St	18	0.38	5	0.60	0.27	0.71	0.35
	970-ft East of 330th St to Branch B Main	21	0.44	7	0.60	0.66	1.49	0.75
Branch B Main	End of Pipe to 900-ft West of 340th St	33	0.69	6	0.33	0.32	0.47	0.23
	900-ft West of 340th St to 1800-ft West of 340th St	83	1.74	8	0.30	0.66	0.38	0.19
	1800-ft West of 340th St to 2300-ft West of 340th St	99	2.08	10	0.35	1.30	0.62	0.31
	2300-ft West of 340th St to 3500-ft West of 340th St	150	3.15	12	0.25	1.79	0.57	0.28
	Branch B11 to 3500-ft West of 340th St	309	6.49	15	0.20	2.90	0.45	0.22
	3500-ft West of 340th St to Branch B10	323	6.79	16	0.20	3.44	0.51	0.25
	Branch B10 to Branch B9	417	8.76	18	0.20	4.71	0.54	0.27
	Branch B9 to Branch B5	528	11.09	16	0.25	3.85	0.35	0.17
	Branch B5 to Branch B3	866	18.19	18	0.04	2.11	0.12	0.06
	Branch B3 to Branch B2	913	19.18	22	0.04	3.60	0.19	0.09
	Branch B2 to Branch B1	946	19.87	22	0.04	3.60	0.18	0.09
	Branch B1 to Outlet	1035	21.74	24	0.05	5.07	0.23	0.12

As shown in Table 1, several of the Branch B laterals are capable of draining the watershed. However, Branch B main is at or under 1/4" per day. Thus, there is inadequate capacity in the existing drainage system to provide for the efficient production of row crops.

Table 2 – Branch 203 Existing Tile Capacity Computations								
Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.013)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
Branch 203-4	End of Pipe to Branch 203	32	0.67	6	0.40	0.36	0.53	0.26
Branch 203	End of Pipe to Branch 203-4	7	0.15	6	0.60	0.44	2.96	1.48
	Branch 203-4 to 3200-ft East of TH 71	47	0.99	7	0.50	0.60	0.61	0.30
	3200-ft East of TH 71 to 2050 East of TH 71	93	1.95	8	0.35	0.72	0.37	0.18
	2050 East of TH 71 to 1250-ft East of TH 71	110	2.31	10	0.40	1.39	0.60	0.30
	1250-ft East of TH 71 to Outlet	116	2.44	9	0.40	1.05	0.43	0.22

As shown in Table 2, the majority of Branch 203 is capable of draining the watershed at a rate of about 3/16" to 1/4" per day. When compared to the NRCS recommended standard of 1/2" per day, the tile system is delivering about 36% to 61% of the recommended flow. Thus, there is inadequate capacity in the existing drainage system to provide for the efficient production of row crops.

Table 3 – Branch 194 Existing Tile Capacity Computations								
Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.013)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
Branch 194-69-3-3	End of Pipe to 1250-ft East of 330th Street	20	0.42	5	0.20	0.15	0.37	0.18
	1250-ft East of 330th Street to Branch 194-69-3	23	0.49	6	0.20	0.25	0.51	0.26
Branch 194-69-3	End of Pipe to Branch 194-69-3-3	13	0.27	6	0.20	0.25	0.92	0.46
	Branch 194-69-3-3 to Branch 194-69	41	0.87	7	0.20	0.38	0.44	0.22
Branch 194-69	End of Pipe to Branch 194-69-3	3	0.06	6	0.20	0.25	3.99	2.00
	Branch 194-69-3 to Branch 194	57	1.21	8	0.20	0.54	0.45	0.22
Branch 194-71	End of Pipe to 250-ft West of 330th Street	18	0.38	6	0.20	0.25	0.67	0.33
	250-ft West of 330th Street to Branch 194	23	0.48	5	0.20	0.15	0.32	0.16

Table 3 – Branch 194 Existing Tile Capacity Computations

Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.013)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
Branch 194-84-4N	End of Pipe to Branch 194-84	27	0.57	7	0.20	0.38	0.67	0.33
Branch 194-84-4W	End of Pipe to Branch 194-84	17	0.36	5	0.20	0.15	0.43	0.22
Branch 194-84	End of Pipe to Branch 194-84-4W	14	0.29	6	0.20	0.25	0.86	0.43
	Branch 194-84-4W to Branch 194	180	3.78	8	0.20	0.54	0.14	0.07
Branch 194-2	End of Pipe to Branch 194	29	0.61	6	0.20	0.25	0.41	0.21
Branch 194-1	End of Pipe to Branch 194	40	0.84	6	0.20	0.25	0.30	0.15
Branch 194	End of Pipe to 400-ft South of CR 11	23	0.48	6	0.20	0.25	0.52	0.26
	400-ft South of CR 11 to 1800-ft South of CR 11	62	1.30	8	0.20	0.54	0.42	0.21
	1800-ft South of CR 11 to 2700-ft East of 330th Street	111	2.33	10	0.06	0.54	0.23	0.12
	2700-ft East of 330th Street to 2250-ft East of 330th Street	119	2.50	12	0.06	0.88	0.35	0.18
	2250-ft East of 330th Street to Branch 194-69	195	4.10	14	0.05	1.20	0.29	0.15
	Branch 194-69 to Branch 194-71	264	5.55	15	0.20	2.90	0.52	0.26
	Branch 194-71 to 1330-ft West of 330th Street	344	7.23	15	0.35	3.83	0.53	0.26
	1330-ft West of 330th Street to Branch 194-84	349	7.34	16	0.35	4.55	0.62	0.31
	Branch 194-84 to Branch 194-2	609	12.80	18	0.35	6.23	0.49	0.24
	Branch 194-2 to Branch 194-1	662	13.92	18	0.15	4.08	0.29	0.15
	Branch 194-1 to Outlet	716	15.05	20	0.15	5.40	0.36	0.18

As shown in Table 3, the majority of Branch 194 is capable of draining the watershed at a rate of about 3/16" to 1/3" per day. When compared to the NRCS recommended standard of ½" per day, the tile system is delivering about 36% to 61% of the recommended flow. Thus, there is inadequate capacity in the existing drainage system to provide for the efficient production of row crops.

IV. DISCUSSION OF IMPROVEMENT

The petitioners for the Improvement of Branch B, Branch 203, and Branch 194 of CD 59 have requested the consideration of the construction of improvements in order to increase the drainage capacity of the system. A preliminary survey and the hydrologic and hydraulic analysis of potential improvements to the drainage system has been performed in order to establish preliminary grades and sizes. General observations and results of the analysis are as follows:

A. DESCRIPTION

As shown in Exhibit 1, the proposed Improvement consists of the following:

1. **Branch B** – The improvement will consist of new tile to replace Branch B Main up to Branch B5 as shown in Exhibit 1. Along with a portion of Branch B5 and all of Branch B6. A portion of Branch B will be rerouted into Branch 203 in the Northeast Quarter of Section 35 in Winfield Township.
2. **Branch 203** – The improvement will consist of new tiles to replace a portion of the existing system. Along with portions of Branch B and Branch 194 being rerouted into 203 as shown in Exhibit 1.
3. **Branch 194** – The improvement will consist of new tiles to replace portions of the existing system. This includes the outlet of Branch 194 and Branch 194-84. As stated previously a portion of Branch 194 will be rerouted into Branch 203 in the Northeast Quarter of Section 35 in Winfield Township.
4. **Water Quality & Storage** – a pond and WASCObS will be included within the drainage area to store and slow down waters within the system.

B. DESIGN DATA – DRAIN TILE

As shown on Exhibit 1, the proposed improvements to CD 59 consists of improving the tile. The type of pipe that should be used for the improvement is as follows:

1. Dual Wall or Triple Wall Polypropylene Drain Tile meeting the requirements of the American Society for Testing Materials F2376. Pipe will be bedded in granular foundation rock.
2. Dual Wall Polyethylene Drain Tile meeting the requirements of the American Society for Testing Materials F 2648. Pipe will be bedded in granular foundation rock as shown on Exhibit 1. Non-perforated pipe will be used. The perforated pipe will include a drain tile sock or micro perforations/slots to avoid granular infiltration into the pipe. An option would be provided for the contractor to shape the bottom of the trench to conform to the pipe and eliminate some of the granular bedding if the pipe manufacturer would warrant the material installation.
3. Reinforced concrete pipe meeting the requirements of MnDOT Specification 2501, with the joints being covered with geotextile fabric or gasketed joints.

The criterion for the design of the tile system size is based on Natural Resource Conservation Services (NRCS) methodology. The minimum design coefficient recommended by the NRCS for drainage systems where row crops are raised on mineral soils, and open intakes are placed on the tile, is 1/2" per day. In other words, the system should be able to drain the amount of water produced by 1/2" of runoff over the entire watershed in one day. Since the Improvement will serve several areas which are depressional in nature, this design criteria has been selected.

The capacity of the proposed tiles for Branch B, Branch 203 and Branch 194 are shown in Table 4, Table 5 and Table 6. The tables also show the resulting runoff coefficient provided for the watershed served.

Table 4 – Branch B Proposed Tile Capacity Computations

Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.012)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
Branch B6	End of pipe to 370-ft West of 340th St	48	1.01	12	0.08	1.22	1.09	0.54
	370-ft West of 340th St to 760-ft West of 340th St	56	1.18	15	0.08	1.98	1.69	0.84
	760-ft West of 340th St to 1600-ft West of 340th St	64	1.34	15	0.08	1.98	1.48	0.74
	1600-ft West of 340th St to Branch B Main	76	1.60	15	0.08	1.98	1.24	0.62
Branch B5	Branch B6 to Branch B Main	332	6.97	30	0.05	9.96	1.43	0.71
Branch B1-A	End of pipe to B1	29	0.61	8	0.09	0.39	0.65	0.32
Branch B Main	Branch B5 to Branch B3	384	8.07	30	0.05	9.96	1.24	0.62
	Branch B3 to Branch B2	431	9.05	30	0.05	9.96	1.10	0.55
	Branch B2 to Branch B1	464	9.75	30	0.05	9.96	1.02	0.51
	Branch B1 to Outlet	553	11.62	30	0.07	11.79	1.01	0.51

Table 5 – Branch 203 Proposed Tile Capacity Computations

Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.012)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
Branch B11	End of pipe to 1800-ft North of 850th Ave	24	0.50	10	0.50	1.68	3.34	1.67
	1800-ft North of 850th Ave to 1600-ft North of 850th Ave	43	0.90	12	0.10	1.22	1.35	0.68
	1600-ft North of 850th Ave to 1500-ft North of 850th Ave	54	1.13	12	0.10	1.22	1.08	0.54
	1500-ft North of 850th Ave to 990-ft North of 850th Ave	76	1.60	12	0.26	1.97	1.24	0.62

Table 5 – Branch 203 Proposed Tile Capacity Computations

Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.012)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
	990-ft North of 850th Ave to 370-ft North of 850th Ave	94	1.97	12	0.26	1.97	1.00	0.50
	370-ft North of 850th Ave to Branch B Main	140	2.94	12	1.20	4.24	1.44	0.72
	370-ft North of 850th Ave to Branch B Main	140	2.94	15	0.18	2.98	1.01	0.51
Branch B9	450-ft West of 340th St to Branch B	65	1.37	10	0.35	1.41	1.03	0.52
Branch B Main	End of Pipe to 900-ft West of 340th St	33	0.69	8	0.33	0.75	1.09	0.54
	900-ft West of 340th St to 1800-ft West of 340th St	83	1.74	15	0.10	2.22	1.27	0.64
	1800-ft West of 340th St to 2300-ft West of 340th St	99	2.08	15	0.10	2.22	1.07	0.53
	2300-ft West of 340th St to 3500-ft West of 340th St	150	3.15	15	0.21	3.22	1.02	0.51
	Branch B11 to 3500-ft West of 340th St	309	6.49	24	0.08	6.95	1.07	0.54
	3500-ft West of 340th St to Branch B10	323	6.79	24	0.08	6.95	1.02	0.51
	Branch B10 to Branch B9	417	8.76	24	0.13	8.86	1.01	0.51
	Branch B9 to Branch 203	481	10.10	24	0.17	10.13	1.00	0.50
Branch 194-69	330th Street to Branch 194	57	1.21	12	0.10	1.22	1.01	0.51
Branch 194	330th Street to Branch 194-69	195	4.10	15	0.40	4.44	1.08	0.54
	Branch 194-69 to Branch 194-71	262	5.51	18	0.25	5.71	1.04	0.52
	Branch 194-71 to County Road 65	322	6.77	24	0.10	7.77	1.15	0.57
	County Road 65 to Branch 203-4	338	7.11	24	0.10	7.77	1.09	0.55
Branch 203-4	Branch 194 to Branch 203	370	7.78	24	1.12	26.01	3.34	1.67
Branch 203-A	End of pipe to Branch 203	6	0.13	8	0.90	1.25	9.88	4.94
Branch 203	Branch 203-4 to 3200-ft East of TH 71	866	18.20	30	0.30	24.40	1.34	0.67
	3200-ft East of TH 71 to 2050	912	19.17	30	0.30	24.40	1.27	0.64

Table 5 – Branch 203 Proposed Tile Capacity Computations								
Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.012)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
	East of TH 71							
	2050 East of TH 71 to 1250-ft East of TH 71	929	19.52	30	0.30	24.40	1.25	0.62
	1250-ft East of TH 71 to Outlet	941	19.78	30	0.30	24.40	1.23	0.62

Table 6 – Branch 194 Proposed Tile Capacity Computations								
Branch Label	Location	Cumulative Drainage Area (Acres)	NRCS Tile Flow (cfs) (1/2" Per Day)	Tile Size (in.)	Tile Grade (%)	Tile Capacity (cfs) (n = 0.012)	Tile Efficiency Ratio	Tile Coefficient (in./Day)
Branch 194-84-4W	End of Pipe to Branch 194-84	27	0.57	8	0.50	0.93	1.64	0.82
Branch 194	Branch 194-84-4W to Branch 194	180	3.78	18	0.12	3.95	1.05	0.52
Branch 194	Branch 194-2 to Branch 194-1	338	7.10	24	0.11	8.15	1.15	0.57
	Branch 194-1 to Outlet	392	8.23	24	0.11	8.15	1.02	0.51

C. DESIGN DATA – WATER QUALITY & STORAGE

Water quality and storage (WQ&S) improvements were included in the petition for this CD 59 improvement. The pond and WASCObS can be seen in Exhibit 1. The intended purpose of this storage is to temporarily store water, reduce peak flows, settle suspended solids and reduce downstream erosion. The information about the proposed storage can be seen in the Table below.

Table 7 – Proposed Storage Information							
WQ&S Feature	Parcel	Landowner	Design Event	Storage Time (hrs)	Permanent Easement (acres)	Ponded Area (acres)	Storage Created (acre-feet)
Pond	27-01791-00	David & Elizabeth Kadlec	10-year	70	3.46	2.4	10.3
WASCOB-1	27-01820-00	Steffel/Karen M	1-year	28	0	4.6 & 23.8	1.7 & 8.1
WASCOB-2	27-01820-00	Steffel/Karen M	1-year	11	0	12.9	3.2
WASCOB-3	27-01800-00	Zenk/James & Dianne	2-year	6	0	0.5	0.5
WASCOB-4	27-01712-00	Kingstrom/Roger D	1-year	8	0	0.4	0.2

V. ALTERNATIVE SOLUTIONS

A. “DO NOTHING ALTERNATIVE”

The “Do Nothing” Alternative has been discussed. However, the petitioners have experienced poor drainage throughout the drainage system for many years with the excess surface water damaging crops and resulting in frequent crop stress or crop loss. This loss of production equates to an economic loss for Renville County and the State of Minnesota. The loss results in a reduced property value for the wet acres, thus affecting the taxing capacity of the County and State. In addition, the ability of the landowners to receive a reasonable return on their investment is diminished because of this inadequate drainage.

For these reasons, the “Do Nothing” alternative has been dismissed. The economic question of the cost of the Improvement versus the benefits derived still needs to be evaluated. However, the “Do Nothing” alternative is not viewed as solving the drainage problem in the watershed.

B. WETLAND CREATION

Another alternative would be to restore the typically flooded areas of the watershed to wetland use. This alternative would provide storage in the watershed depressional areas for the water that is currently accumulating in these areas and drowning out agricultural crops. The proposal would also have added benefits for wildlife and possibly water quality.

To be effective, this alternative would need to restore sufficient acres to wetland use so that the existing ditch system could convey the excess runoff. Utilizing NRCS data, about 1535 acres of water cannot be discharged from this portion of CD 59 watershed through the existing drainage systems in a 48-hour period for a 5-year rain event. If sufficient wetland acres were available to store this runoff at a one-and-a-half-foot depth, approximately 140 acres of wetland creation would be needed to provide sufficient storage capacity for the excess runoff.

To convert the 140 acres to wetlands, at least twice this many acres would need to be acquired for irregular wetland shapes and marginal damp soils. Thus, about 280 acres of land would be needed. This acquisition would likely involve several properties, whose owners would voluntarily need to agree to the reversion. The estimated cost of acquisition plus reconstructing tile lines for wetland creation would likely be about \$18,000 per acre, resulting in a total cost of about \$5.04 million. This does not account for the tile that would still need to be repaired for the system to be in good condition. With the addition the estimated cost of repair the total cost is \$7.78 million or twice the total cost of the improvement.

Alternatively deeper wetlands of up to four and a half feet deep could be used. It is worth noting that the only willing landowner for a permanent impoundment on the property is at the location of the storage pond along the Branch B6 alignment. Approximately 47 acres of wetland creation would be needed to provide sufficient storage capacity at a depth of four and a half feet. Again, twice as much area would be required to achieve 47 acres of storage when adjusting for irregular shapes amounting to 94 acres. The cost per acre to create a four and a half feet depth wetland is approximately \$35,000 per acre. This is due to there not being areas within the system that already impound waters to a depth of four and a half feet, so additional excavation and cost are needed to get areas to that depth. The total cost of this option is \$6.03 million or 1.8 times the cost of the improvement.

Wetland creation remains a viable option for providing some improvement in the functioning of the drainage system. If sufficient acres of wetlands could be restored, particularly in the upper part of the watershed, it could reduce the need for as large of an outlet as is proposed. Finding willing landowners to participate in a creation project and locating sufficient funding would be critical in order to make this option viable. Copies of this Report will be provided to the SWCD and NRCS so that early coordination can occur for potential funding and technical assistance toward this option.

C. WASCOB CONSTRUCTION

The proposed WASCOBs can be seen in Exhibit 1. These WASCOBs are designed to help mitigate sediment loss from the site by slowing overland flow. The act of water slowing down through the system helps for sediment that was suspended in the water column to settle back out.

WASCOBs act as a good alternative to wetlands and permanent ponds due to their lower construction cost relative to other practices. Primarily due to a lack of permanent stabilization being required and the easement required being a temporary construction easement.

D. REPAIR

An alternative solution would be to repair the existing system instead of doing an improvement. A repair would only be as effective as stated in Section III of this report. It would also not solve any localized flooding within the system.

A repair would cost approximately \$2,742,464 or 82% of the total project cost. As shown in Tables 1, 2 and 3 the existing system is undersized. With this being the case, and that landowners often back out of proposed storage options when moving from an improvement to a repair, we do not recommend going forward with a repair. Especially when they are willing landowners for an improvement with storage options in the system.

VI. OTHER CONSIDERATIONS

A. PERMIT REQUIREMENTS

A permit from the Minnesota Pollution Control Agency for stormwater and erosion control for the project would be necessary. This permit requirement, which applies to any project that disturbs more than one acre of land, requires that the contractor and owner secure a permit for the project. The permit process will also require erosion control measures to be taken during the construction. Typical erosion control measures include placement of riprap and grass stabilization on the ditch bank and inlet protection around installed inlet areas. The fee for this permit is currently \$400.00. This permit will be applied for shortly before construction is scheduled so that the contractor can also sign the permit application.

A permit will also be necessary for any work within the TH 71 right of way from MnDOT. This permit will be applied for following the Final Hearing.

B. WETLANDS

National Wetland Inventory Maps have been reviewed to locate potential wetlands subject to regulations. These maps do not show any wetlands within the project watershed, as shown on Sheet 1.01 in Exhibit 1. However, wetlands on farm ground often do not show up

on the national inventory maps. Impacts of the potential drainage system on individual land parcels will be evaluated by the Natural Resources Conservation Service upon filing of a Form AD 1026 by landowners. This NRCS process will identify any wetlands and measures that need to be taken in order for the drainage project to avoid impact to these wetlands. Because of federal data privacy requirements, it is not possible for non-landowners to obtain this information. Thus, the obligation for filling out these forms and doing this investigation will rest with individual landowners.

Drainage of non-directly impacted wetland will be controlled by supplemental drainage systems installed by private owners. Owners are advised that under US Army Corps of Engineers and NRCS rules, such supplemental drainage may not be permitted, and may affect US Department of Agriculture program eligibility.

C. PUBLIC AND PRIVATE BENEFITS AND COSTS

The estimated cost of the proposed Improvement to CD 59 is shown in Exhibit 3 of this report. Benefits for the Improvement, both public and private, will be established by the viewers and a report will be available at the final hearing.

Landowners certainly have other costs associated with construction and maintenance of their individual drainage systems. The proposed Improvement would only serve as an outlet or collector of runoff and drainage flow from the lands within the watershed. Each landowner is responsible to construct and maintain their own drainage system in order to drain their farmlands adequately. Individual benefits for an adequate drainage system are in increased crop production from farmlands.

D. AGRICULTURAL EFFECTS

Once the improvements are constructed, the lands within the improved watershed will be largely dependent on this drainage system for both surface and subsurface drainage flows. Thus, it is imperative that the proposed system have adequate capacity in order to allow for modern farming operations.

It should be noted that many of the established ditch systems in Minnesota are now 70 to 100 years old. These systems are approaching the need for complete repair or replacement if the farmland is to remain productive. When feasible, it is economically imperative that these drainage systems be improved to become compatible with present day farming techniques and they be continually maintained. If properly maintained during normal growing seasons, the agricultural lands in the watershed are some of the most productive in the State of Minnesota.

E. WATER QUALITY

The table below shows the total reduction in pollution due to the proposed water quality and storage features. These reductions were calculated using the MPCA Watershed Pollutant Load Reduction Calculator. The location of this watershed within the calculator is listed as Yellow Medicine with the HUC 12 being CD 59.

Table 8 – Pollution Reduction					
WQ&S Feature	Parcel	Upstream Effective Watershed (acres)	Nitrogen (lbs/yr)	Phosphorous (lbs/yr)	Sediment (tons/yr)
Pond	27-01791-00	35	15	2.2	0.2
WASCOB-1	27-01820-00	165	168	23.1	2.4
WASCOB-2	27-01820-00	83	84	11.5	1.2
WASCOB-3	27-01800-00	6	6	0.8	0.1
WASCOB-3	27-01712-00	173	176	24.0	2.5
Total			449	61.6	6.4

As can be seen from Table 8 this project is helping to meet local goals of pollution reduction. Primarily when looking at Nitrogen, Phosphorous and Sediment within the CD 59 system.

At the culvert outlets, riprap will be constructed to further reduce the energy at the outlets, and lessen the erosive force. The largest source of suspended solids in tile system drainage is from water discharging into open intakes. Although open intakes will still be used on the system, ponding occurs around these intakes for any significant storm events. Thus, solids have time to settle rather than being discharged. The use of Hickenbottom risers on these intakes has been shown to result in a significant reduction in suspended solids discharge and thus their use will help with water quality. Additionally, the storage areas will allow for water to filter through grass swales prior to entering downstream drain tile.

As a requirement of the MPCA Erosion Control Permit, the establishment of an erosion control plan is necessary. Incorporation of such devices as inlet protection, riprap at the outlet and permanent grasses as soon as possible following the construction are anticipated. All of these measures will help to reduce erosion and maintain water quality during the construction of the project.

The Renville County SWCD and NRCS Offices will be contacted regarding conservation measures. The SWCD encourages landowners to sign up for the Conservation Reserve Program (CRP). This is a volunteer program, so landowners are encouraged to call the local agencies to discuss additional conservation measures.

F. FISH AND WILDLIFE

The only threatened or endangered species to have the potential to be in Renville County at the time of this report is the northern long-eared bat. According to the Minnesota DNR, there are no known roost trees or hibernacula in Renville County. Additionally, there are no trees to be removed as a part of the improvement, so there is no impact to the northern long-eared bat. Bald eagles are present in Renville County, and are protected under the Bald and Golden Eagle Protection Act. Again, there are no trees to be removed as a part of the improvement, so there is no impact to the bald eagle.

The open ditch and existing grass buffers are potential wildlife habitat. These areas will be temporarily impacted during the construction of the improvement, but will be restored or improved following the construction.

Current wet areas within the project watershed do provide for transitory stop over locations for migratory waterfowl. However, these areas currently dry up following wet periods and are then under cultivation and production. It is anticipated that some of these temporary

ponding areas will still exist after the construction of the Improvement although ponding times will likely be reduced. Therefore, the provisions for adequate drainage of these lands will not be of a detrimental nature to local wildlife resources.

G. GROUNDWATER

The purpose of an agricultural drainage system is to maintain the elevation of the shallow groundwater table sufficiently below the surface to provide for efficient production of crops. The level at which the groundwater will be maintained has been and will be determined by the depth of the tile system and private tiles in the area. The proposed Improvement will not significantly lower the bottom of the ditch or the tile system. Additionally, soils within the watershed are typically C or D soils, with low infiltration rates. Therefore, no change in the availability, distribution, or use of the groundwater beyond that necessary for the sufficient production of crops within the watershed is anticipated by this construction.

H. ENVIRONMENTAL IMPACT

The adverse effects of the proposed Improvement are of a temporary nature and are listed as follows:

1. Disturbing of the ground surface during construction could result in the loss of one crop within the construction limits.
2. Temporary noise and dust generation can be expected from the construction operations. These impacts are not viewed as significant since there are no residences near the proposed construction route.
3. Temporary erosion of soil may occur in the construction area until permanent ground cover and ground stabilization occurs. Although these effects need to be considered, they are not significantly different from the current topsoil loss that occurs annually from erosion of topsoil due to overland flow in the watershed. This construction erosion will be minimized using inlet protection, riprap, and rapid establishment of permanent grass cover.

Numerous beneficial effects are anticipated from the proposed Improvement. Most of these benefits are directly attributable to increased crop production from lands presently damaged through period flooding and ponding. Among the most obvious benefits are the following:

1. Construction of the Pond, WASCOBs, and the use of Hicenbottom intakes will improve water quality on a micro watershed scale.
2. Increased personal farm income
3. Increased value of benefited farm land
4. Contribution to the local economy through additional purchases, farm modernization, and expansion.

I. LAND USE

The present use of the land in the Improvement watershed is largely agricultural. This use is expected to continue into the future.

VII. RESPONSE TO DNR COMMENTS

A. HYDRAULIC IMPACTS

Flow duration, flow volume, velocity, and hydrographs can be seen in Exhibit 7. Flow duration can be read on the x-axis of the hydrographs. The velocity for the adequacy of the outlet shown was calculated within the 84" culvert. Using pipe velocity in this location will be the peak velocity as ditch velocity will be slower. Flow volume is represented by the area underneath the curve shown in the Hydrograph.

Total flow volume does not change between the existing and proposed condition within our model. This is due to the difficulty in estimating water loss within the system. For instance, our proposed system will have a lesser effect on the groundwater table due to modern standards using gasketed joints and not installing perforated pipe below 6-feet of depth. Additionally, the top 6-feet of soil will be able to infiltrate and use more water in a non-fully saturated state. Alternatively, the existing conditions will pond more water and allow for additional evaporation to take place. Note that ponding areas have a 100% runoff or approximately 1.2 times the runoff of an average agricultural field when calculating peak flows.

B. LOCATION OF MODELED OUTLET

This project is part of a comprehensive effort within the watershed to provide storage and consideration for potential future improvements. This is why we are showing both the Historic and Existing conditions within Table 8. From the research this has been done it is the opinion of environmental agencies and advocacy groups that a system wide analysis be done when doing improvement projects. There is also the goal that drainage projects do analysis further downstream than what was done historically. Because this system has been modeled extensively and this data is readily available for this project we have chosen an outlet location in line with this goal. We do recognize that additional branches are influencing the downstream waters as well but the effects of these changes can be seen when comparing the Historic versus the Existing Conditions in Table 8.

C. IMPOUNDMENTS INCLUDED IN PROPOSED IMPROVEMENT

We recommend that all the WASCObS and the Pond be included in the final construction plans.

VIII. ADEQUACY OF THE OUTLET

A. GENERAL INFORMATION

As mentioned earlier, CD 59 has had several projects within the watershed in the last few years. The open ditch flows generally east to west to an eventual outlet into County Ditch 37 about two miles west of Danube, just north of the Twin Cities & Western (TC&W) Railroad. This location at the TC&W Railroad will be the designed outlet location for this project due to the water quality and storage features located upstream of the crossing.

B. ADEQUACY OF THE OUTLET

A HydroCAD model of the watershed was developed to estimate the change in the peak flow rates at County Road 59. This location was chosen due to the existing improvements and impoundments within the CD 59 system that have created additional storage up to

County Road 59. HydroCAD is a computer model that computes the runoff storm hydrograph using methodology developed by the Natural Resources Conservation Service. The peak flows computed in HydroCAD are typically higher than those from other models.

Shown below in Table 9 is four conditions for change in peak flow rate.

- 1) Historic – prior to 2024 and 2025 Improvement and Repair work within the immediate CD 59 watershed.
- 2) Existing – current conditions of the watershed including all current Improvement and Repair work of the system.
- 3) Proposed w/o storage – tile improvements without any additional storage within the system.
- 4) Proposed w/ storage – tile improvements with the additional three WASCOBs and the storage pond shown in Exhibit 1.

Table 9 – Change in Peak Flow Rate							
Flow Event	Historic Peak Flow (cfs)	Existing Peak Flow (cfs)	Change in Peak Flow (Ex.-Hi.) (cfs)	Proposed Peak w/o Storage Flow (cfs)	Change in Peak Flow (w/o-Hi.) (cfs)	Proposed Peak w/ Storage Flow (cfs)	Change in Peak Flow (Pro.-Hi.) (cfs)
2-Year	417	407	-10	421	+4	412	-5
5-Year	456	444	-12	447	-9	445	-11
10-Year	474	465	-9	467	-7	465	-9
25-Year	499	489	-10	490	-9	490	-9
50-Year	516	504	-12	505	-11	505	-11
100-Year	574	521	-53	523	-51	522	-52

As shown in Table 9 the highest peak flow rates for the system were prior to any improvement or impoundment (Historic). Whereas the Existing conditions (current) has the lowest overall peak flows.

The change in peak flow for the proposed condition with storage has similar flow rates at the County Road 59 crossing as the existing conditions except for the 2-year event that has an increase of 5 cubic feet per second.

With minor increases across the board for peak flow rates from current conditions, but lower than historic conditions at the outlet of the system it is our opinion that the outlet is adequate with the proposed improvement.

IX. ESTIMATE OF COST

The preliminary cost estimate to construct the proposed Improvements, as described in this report is shown in Exhibit 3. The total estimated project cost with storage is approximately \$3,369,178. Included in the project cost estimate are the acreages of land to be permanently taken out of production for: storage (3.46 acres). The cost estimate also includes compensation for agricultural land that will be temporarily taken out of production by the construction for

temporary right-of-way (82.51 acres).

The total cost of storage for the project equates to \$391,656. The tile that would be eliminated from the project equates to \$11,121. So, the total additional cost of 24.0 acre-feet of storage within the system is \$380,535 or \$15,855.63 per acre-foot of storage.

X. RECOMMENDATIONS

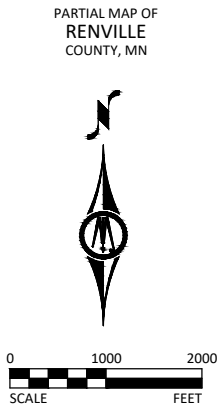
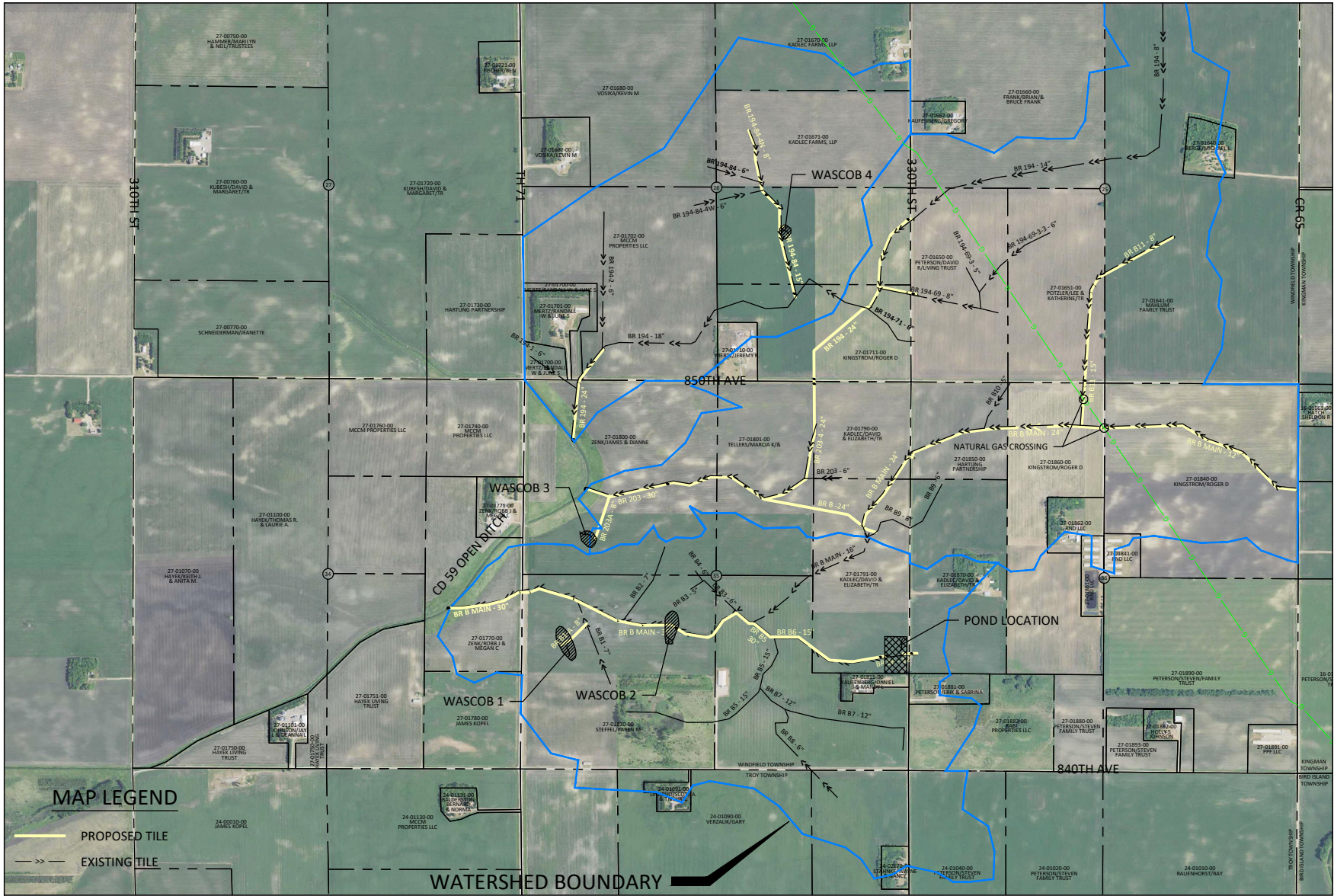
The proposed Improvements to the CD 59 in Renville County as described in this report is feasible and practical and is necessary in order to provide drainage for the cultivation of crops in this watershed area. The existing drainage in the area is inadequate to provide proper drainage for current agricultural practices. The outlet is adequate in order to convey the discharge with or without the online storage. We recommend that the County continue to work with the SWCD to look for grants to help offset the cost of storage within the system.

It is the recommendation of your engineer that the Final Engineer's Report be approved, the Board approves storage to be included in the scope of the improvement, that the Board order the preparation of final plans and specifications.

EXHIBIT 1: PRELIMINARY PLANS AND PROFILES

RENVILLE COUNTY
PRELIMINARY PLANS FOR
CD 59 BRANCH B IMPROVEMENT

GRADING, EROSION CONTROL, TILE AND INTAKE IMPROVEMENTS
JUNE, 2026



SHEET NUMBER	SHEET TITLE
GENERAL	
G0.01 - G0.02	TITLE SHEET, LEGEND
CIVIL	
C1.01 - C1.02	TABLES, DETAILS, TYPICAL SECTIONS
C2.01 - C2.08	EROSION CONTROL PLAN, SWPPP
C3.01 - C3.05	GRADING PLAN
C5.01 - C5.04	CD 59 - BRANCH B PLAN & PROFILE
C5.05 - C5.16	CD 59 - BRANCH 203 PLAN & PROFILE
C5.17 - C5.18	CD 59 - BRANCH 194 PLAN & PROFILE
THIS PLAN SET CONTAINS <u>35</u> SHEETS.	

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

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A:\PROJECTS\2025\CD 59 BRANCH B IMPROVEMENT\CD 59 BRANCH B IMPROVEMENT.dwg 6/25/2026 7:27:25 PM

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
ENGINEER IN THE STATE OF MINNESOTA.
PRELIMINARY NOT FOR CONSTRUCTION
SHEETER: LUKAS
LIC. NO. 48756 DATE MM/DD/YYYY



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DESIGNED	NO.	ISSUED FOR	DATE
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CHECKED	NO.	ISSUED FOR	DATE
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CLIENT PROJ. NO.	NO.	ISSUED FOR	DATE
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⚡ BM=1079.90 REFERENCE MARK DISC NE QUAD COUNTY RD 1 & 840TH AVENUE	PROJECT DATUM: RENVILLE CO COORDINATED HORIZONTAL: RENVILLE CO - NAD83 (2007ADJ) VERTICAL: NAVD 88	RECORD DRAWING INFORMATION	
		OBSERVER:	
		CONTRACTOR:	
		DATE:	
RENVILLE COUNTY, MINNESOTA		SHEET G0.01	
CD 59 BRANCH B, 203 & 194 - IMPROVEMENT			
TITLE SHEET			

EXISTING TOPOGRAPHIC SYMBOLS

	ACCESS GRATE		REGULATION STATION GAS
	AIR CONDITION UNIT		SATELLITE DISH
	ANTENNA		SIGN NON TRAFFIC
	AUTO SPRINKLER CONNECTION		SIGN TRAFFIC
	BARRICADE PERMANENT		SIGNAL CONTROL CABINET
	BASKETBALL POST		SOIL BORING
	BENCH		SIREN
	BIRD FEEDER		TELEPHONE BOOTH
	BOLLARD		TILE INLET
	BUSH		TILE OUTLET
	CATCH BASIN RECTANGULAR CASTING		TILE RISER
	CATCH BASIN CIRCULAR CASTING		TRANSFORMER-ELECTRIC
	CURB STOP		TREE-CONIFEROUS
	CLEAN OUT		TREE-DEAD
	CULVERT END		TREE-DECIDUOUS
	DRINKING FOUNTAIN		TREE STUMP
	DOWN SPOUT		TRAFFIC ARM BARRIER
	FILL PIPE		TRAFFIC SIGNAL
	FIRE HYDRANT		TRASH CAN
	FLAG POLE		UTILITY MARKER
	FLARED END / APRON		VALVE
	FUEL PUMP		VALVE POST INDICATOR
	GRILL		VALVE VAULT
	GUY WIRE ANCHOR		VAULT
	HANDHOLE		VENT PIPE
	HANDICAP SPACE		WATER SPIGOT
	IRRIGATION SPRINKLER HEAD		WELL
	IRRIGATION VALVE BOX		WETLAND DELINEATED MARKER
	LIFT STATION CONTROL PANEL		WETLAND
	LIFT STATION		WET WELL
	LIGHT ON POLE		YARD HYDRANT
	LIGHT-GROUND		
	MAILBOX		

	MANHOLE-COMMUNICATION		CLEANOUT
	MANHOLE-ELECTRIC		MANHOLE
	MANHOLE-GAS		LIFT STATION
	MANHOLE-HEAT		STORM SEWER CIRCULAR CASTING
	MANHOLE-SANITARY SEWER		STORM SEWER RECTANGULAR CASTING
	MANHOLE-STORM SEWER		STORM SEWER FLARED END / APRON
	MANHOLE-UTILITY		STORM SEWER OUTLET STRUCTURE
	MANHOLE-WATER		STORM SEWER OVERFLOW STRUCTURE
	METER		CURB BOX
	ORDER MICROPHONE		FIRE HYDRANT
	PARKING METER		WATER VALVE
	PAVEMENT MARKING		WATER REDUCER
	PEDESTAL-COMMUNICATION		WATER BEND
	PEDESTAL-ELECTRIC		WATER TEE
	PEDESTRIAN PUSH BUTTON		WATER CROSS
	PICNIC TABLE		WATER SLEEVE
	POLE-UTILITY		WATER CAP / PLUG
	POLE-BRACE		RIP RAP
	POST		DRAINAGE FLOW
	RAILROAD SIGNAL POLE		TRAFFIC SIGNS

SURVEY SYMBOLS

	BENCHMARK LOCATION		CAST IRON MONUMENT
	CONTROL POINT		STONE MONUMENT
	MONUMENT FOUND		

EXISTING TOPOGRAPHIC LINES

	RETAINING WALL
	FENCE
	FENCE-DECORATIVE
	GUARD RAIL
	TREE LINE
	BUSH LINE

SURVEY LINES

	CONTROLLED ACCESS
	BOUNDARY
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	SETBACK LINE
	SECTION LINE
	QUARTER LINE
	SIXTEENTH LINE
	TEMPORARY EASEMENT

EXISTING UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE

PROPOSED UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE
	PIPE CASING
	TRENCHLESS PIPE (PLAN VIEW)
	TRENCHLESS PIPE (PROFILE VIEW)

GRADING INFORMATION

	EXISTING CONTOUR MINOR
	EXISTING CONTOUR MAJOR
	PROPOSED CONTOUR MINOR
	PROPOSED CONTOUR MAJOR
	PROPOSED GRADING LIMITS / SLOPE LIMITS
	PROJECT LIMITS
	PROPOSED SPOT ELEVATION
	RISE:RUN (SLOPE)

HATCH PATTERNS

	BITUMINOUS		GRAVEL
	CONCRETE		

EXISTING PRIVATE UTILITY LINES

NOTE:
EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS 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"

	UNDERGROUND FIBER OPTIC
	UNDERGROUND ELECTRIC
	UNDERGROUND GAS
	UNDERGROUND COMMUNICATION
	OVERHEAD ELECTRIC
	OVERHEAD COMMUNICATION
	OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL :

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-02.

UTILITY QUALITY LEVELS:

QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

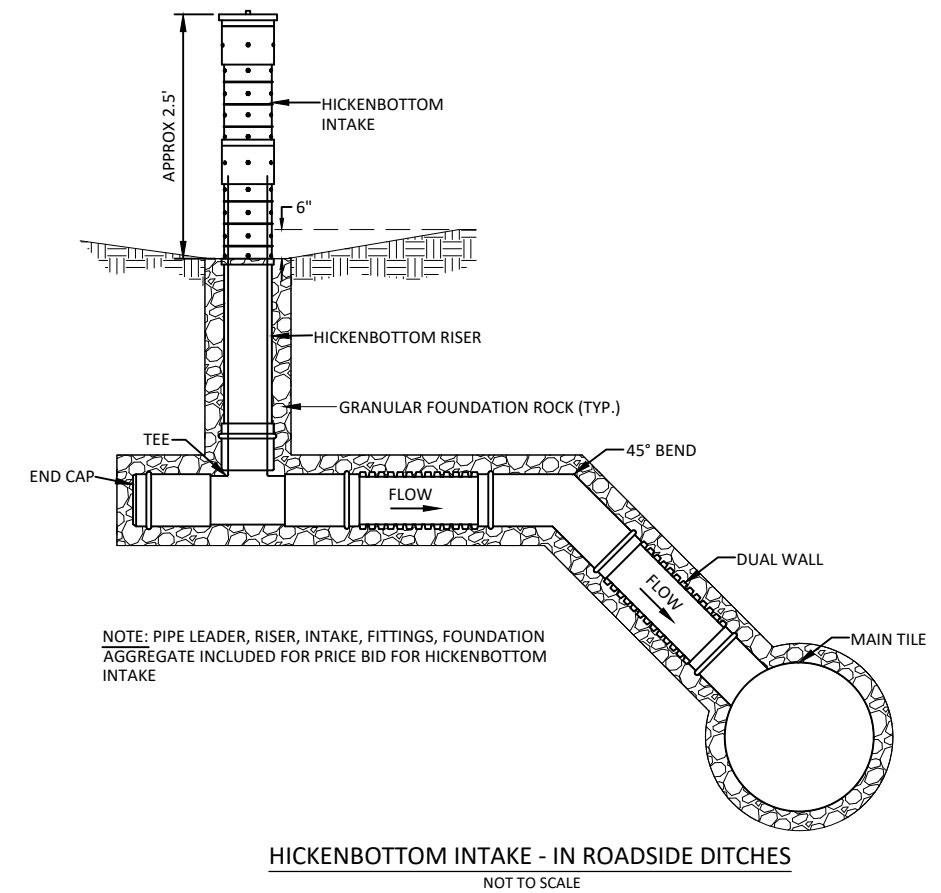
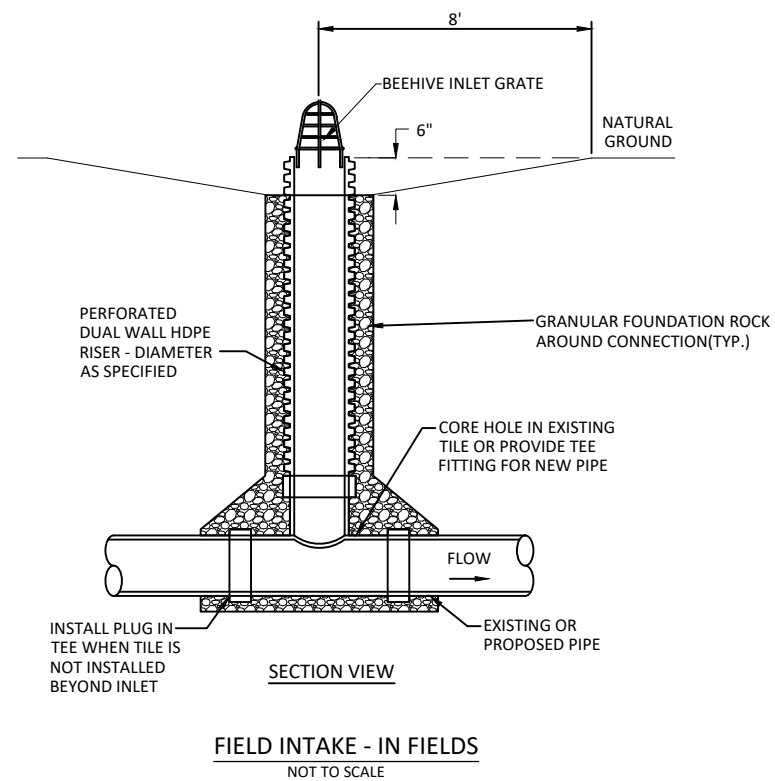
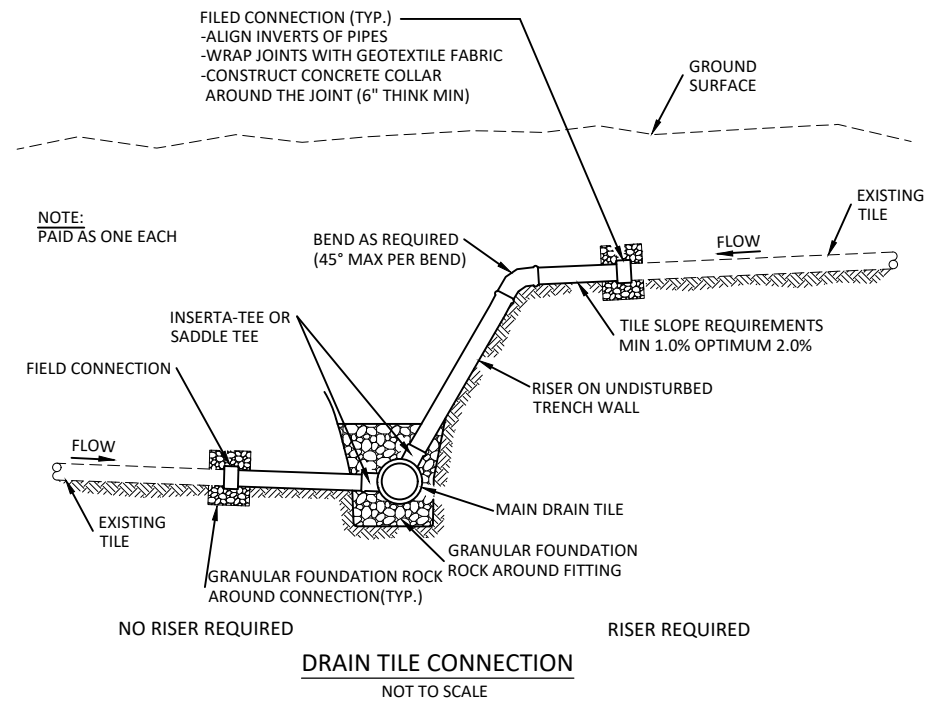
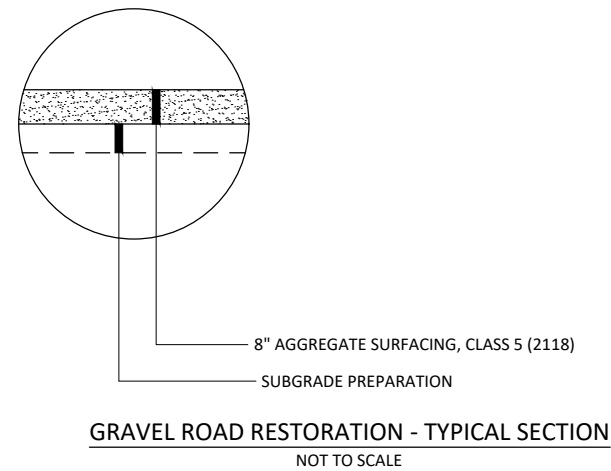
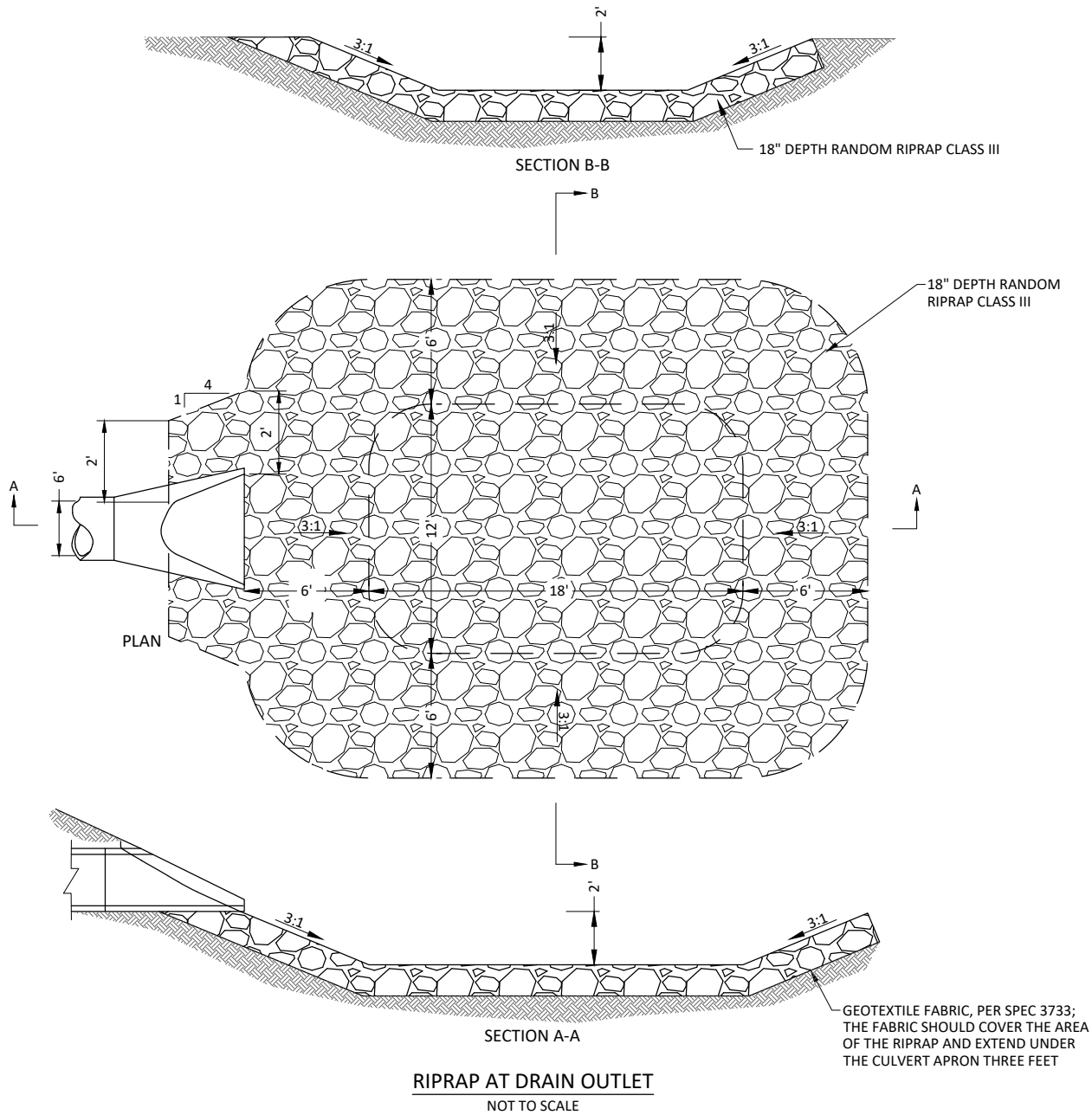
QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE	AC	ACRES
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CF	CUBIC FEET
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CV	COMPACTED VOLUME
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EA	EACH
ER	END RADIUS	PERM	PERMANENT	EV	EXCAVATED VOLUME
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LB	POUND
EX	EXISTING	PL	PROPERTY LINE	LF	LINEAR FEET
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LS	LUMP SUM
F-F	FACE TO FACE	PT	POINT OF TANGENT	LV	LOOSE VOLUME
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SF	SQUARE FEET
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SV	STOCKPILE VOLUME
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		

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A:\MCD\051130654\CD\CD 59 BRANCH B, 203 & 194 IMP.DWG 6/25/2026 7:27:42 PM



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PRELIMINARY NOT FOR CONSTRUCTION

SHAUN LUKER
LIC. NO. 48756 DATE MM/DD/YYYY

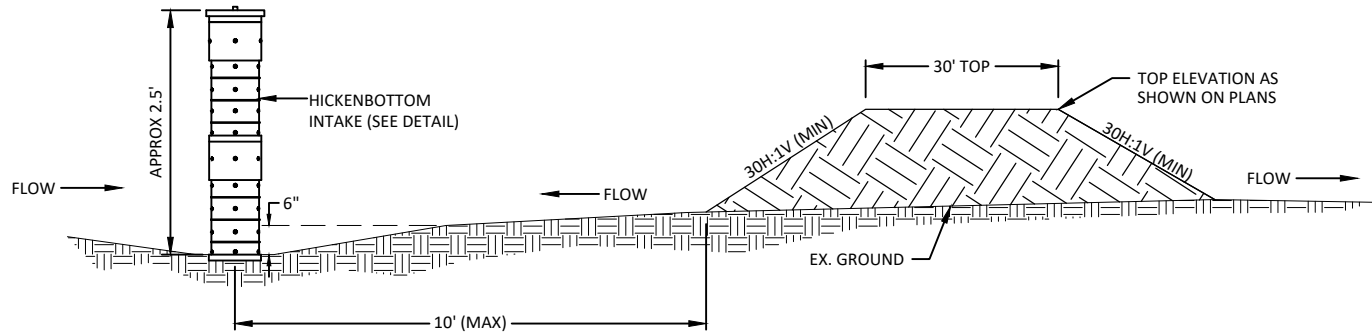


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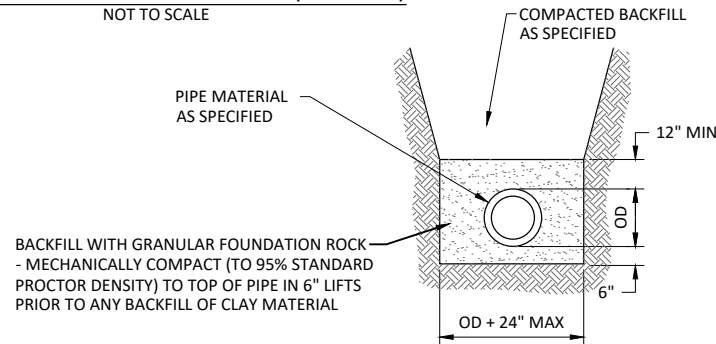
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RENNVILLE COUNTY, MINNESOTA
CD 59 BRANCH B, 203 & 194 - IMPROVEMENT
TYPICAL SECTIONS AND DETAILS

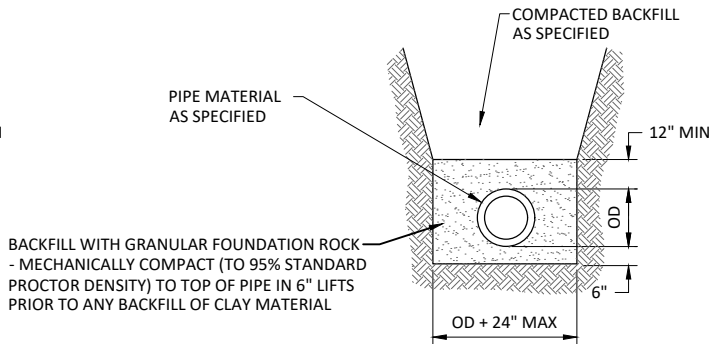
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C1.01



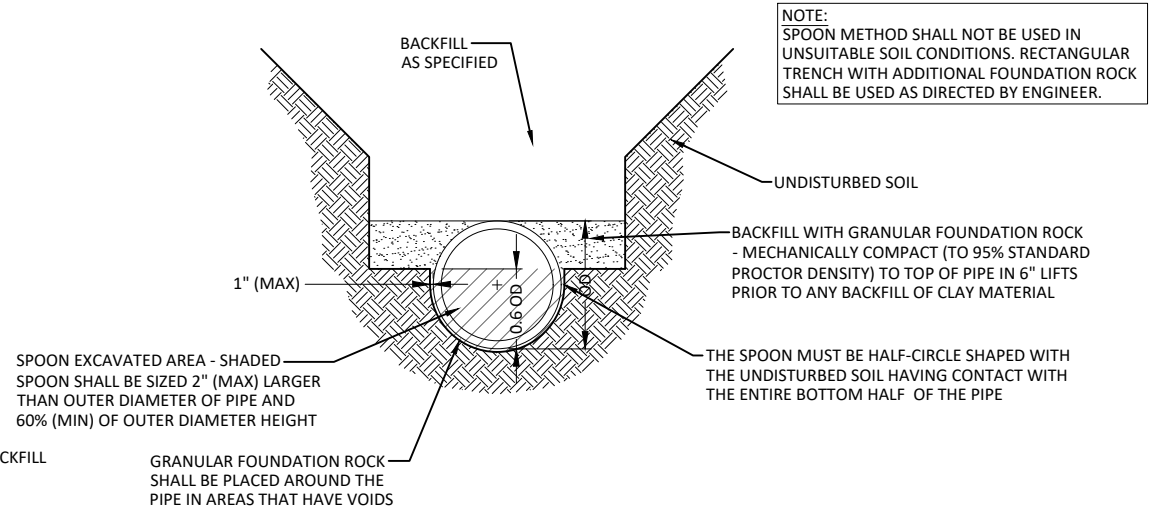
WATER SEDIMENT CONTROL BASIN (WASCOB)
NOT TO SCALE



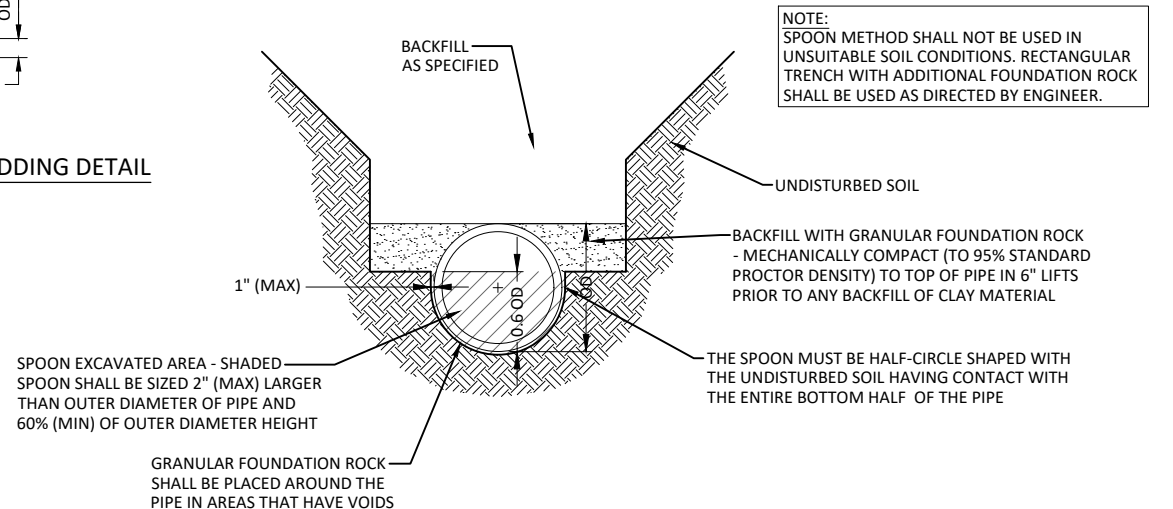
HDPE RECTANGULAR TRENCH BEDDING DETAIL
NOT TO SCALE



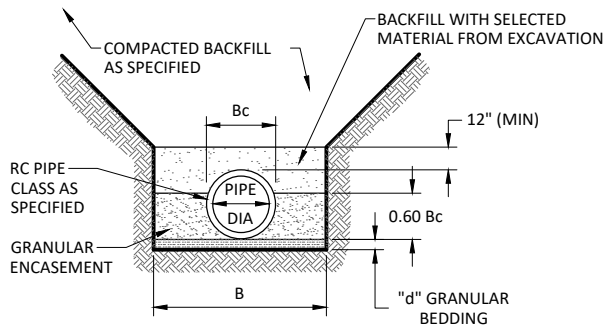
POLYPROPYLENE RECTANGULAR TRENCH BEDDING DETAIL
NOT TO SCALE



HDPE "SPOON" TRENCH BEDDING DETAIL
NOT TO SCALE



POLYPROPYLENE "SPOON" TRENCH BEDDING DETAIL
NOT TO SCALE



PIPE DIA	d	B
27" OR LESS	3"	Bc + 24"
30" TO 60"	4"	1.5 x Bc
66" OR OVER	6"	Bc + 36"

**RC PIPE CLASS "B"
BEDDING-SQUARE TRENCH**
NOT TO SCALE

LAST REVISION:
04-2021

PLATE NO.
4-001-1

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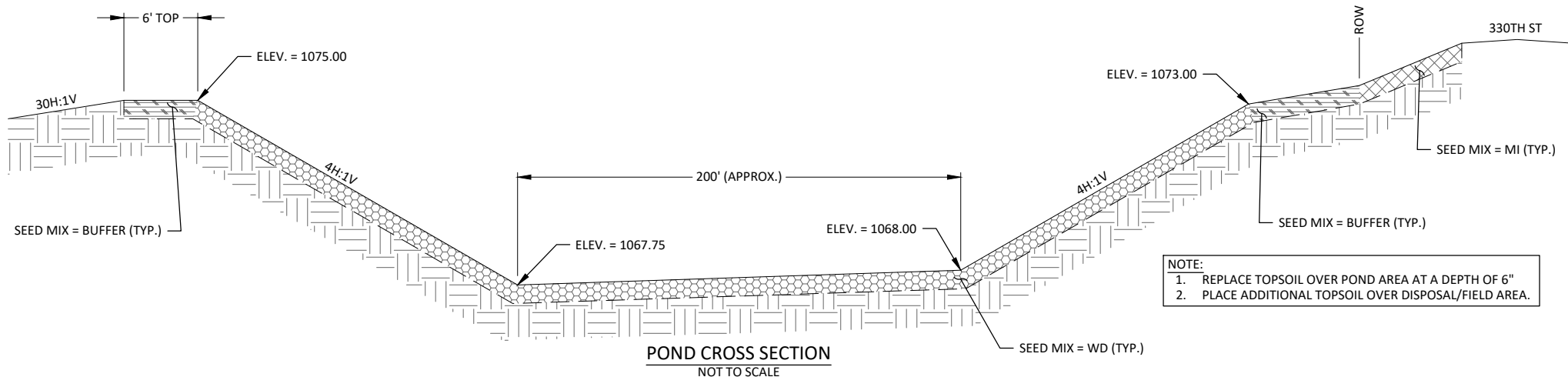
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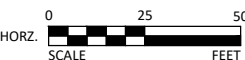
RENNVILLE COUNTY, MINNESOTA
CD 59 BRANCH B, 203 & 194 - IMPROVEMENT
C1 - TABLES DETAILS & PHASING
TYPICAL SECTIONS AND DETAILS

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C1.02

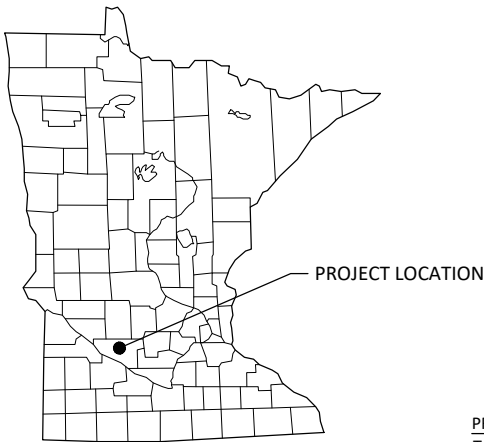


POND CROSS SECTION
NOT TO SCALE



STORMWATER
POLLUTION PREVENTION
PLAN (SWPPP)

CD 59 BR B IMPROVEMENT
RENNVILLE COUNTY, MINNESOTA



LEGEND

- 1-MILE BOUNDARY
- PROJECT BOUNDARY
- IMPAIRED, SPECIAL OR PROTECTED WATERS
- NATIONAL WETLANDS INVENTORY
- CALCAREOUS FEN
- RECEIVING WATERS

RESPONSIBLE PARTIES:
The Contractor and Owner will be joint applicants under the MPCA's General Stormwater Permit for Construction Activity as required by the National Pollutant Discharge Elimination System (NPDES) Phase II program.

The Contractor shall provide one or more trained Construction SWPPP Manager(s) knowledgeable and experienced in the application of erosion prevention and sediment control BMPs that will oversee the implementation of the SWPPP, and the installation, inspection and maintenance of the erosion prevention and sediment control BMPs.

A Construction SWPPP Manager must be available for an on-site inspection within 72 hours upon request by the MPCA.

	COMPANY	CONTACT PERSON	PHONE
OWNER:	Renville County	Seth Sparks	320-523-3759
SWPPP DESIGNER:	Bolton & Menk, Inc.	Jordan Bengtson	507-596-2034
CONTRACTOR:	TBD	TBD	TBD
CONSTRUCTION SWPPP MANAGER:	TBD	TBD	TBD
PARTY RESPONSIBLE FOR LONG TERM O&M:	Renville County	Seth Sparks	320-523-3759

The SWPPP Designer, Construction SWPPP Manager, and BMP Installer must have appropriate training. Documentation showing training commensurate with the job duties and responsibilities is required to be included in the SWPPP prior to any work beginning on the site. Training documentation for the SWPPP Designer is included on the Narrative sheet. The Contractor shall attach training documentation to this SWPPP for the Construction SWPPP Manager and BMP Installer prior to the start of construction. This information shall be kept up to date until the project NOT is filed.

ADDITIONAL COMPENSATION
Payment for all work associated with Erosion and Sediment Control shall be as described in the Project Manual. Unless otherwise authorized by the Owner no additional payment shall be made for any work required to administer and maintain the site erosion and sediment control in compliance with the Minnesota Pollution Control Agency (MPCA) - General Stormwater Permit for Construction Activity (MN R100001) including but not limited to inspection, maintenance, and removal of BMPs or addition of BMPs to accommodate Contractor phasing.

DOCUMENT RETENTION
Permittees must make the SWPPP, including all inspection reports, maintenance records, training records and other information required by this permit, available to federal, state, and local officials within three (3) days upon request for the duration of the permit and for three (3) years following the NOT.

GENERAL STORMWATER DISCHARGE REQUIREMENTS
All requirements listed in Section 5.1 of the Permit for the design of the permanent stormwater management system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:

- The expected amount, frequency, intensity, and duration of precipitation.
- The nature of stormwater runoff and run-on at the site
- Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
- The range of soil particle sizes expected to be present on the site.

Permanent stormwater treatment systems for this project have been designed in accordance with the guidance in the MN Stormwater Manual in place at the time of bidding. Copies of the design information and calculations are part of this SWPPP and will be provided in digital format upon written request to the Engineer.

PROJECT AREAS:
Total Project Size (disturbed area) = 87.4 ACRES
Existing area of impervious surface = 0.5 ACRES
Post construction area of impervious surface = 0.5 ACRES
Total new impervious surface area created = 0.0 ACRES

Planned Construction Start Date: XX/XX/XXXX
Estimated Construction Completion Date: XX/XX/XXXX

PERMANENT STORMWATER MANAGEMENT SYSTEM:
Type of storm water management used if more than 1 acre of new impervious surface is created:

	Wet Sedimentation Basin
	Infiltration/Filtration
	Regional Pond
X	Permanent Stormwater Management Not Required
X	Less than 1 acre of impervious surface created

COUNTY	TOWNSHIP	RANGE	SECTION	LATITUDE	LONGITUDE
RENNVILLE	T116N	R35W	25,26,34,35,36	44.8094°	-95.0394°

BMP SUMMARY	QUANTITY	UNIT
RANDOM RIPRAP, CLASS III	90	TON
INLET PROTECTION	48	EACH
MULCH MATERIAL, TYPE 1	160	TON
RAPID STABILIZATION METHOD 4	5800	SQ YD
PERMANENT SEEDING 1	1.9	ACRE
PERMANENT SEEDING 2	2.3	ACRE
STABILIZED CONSTRUCTION EXIT	1	LS

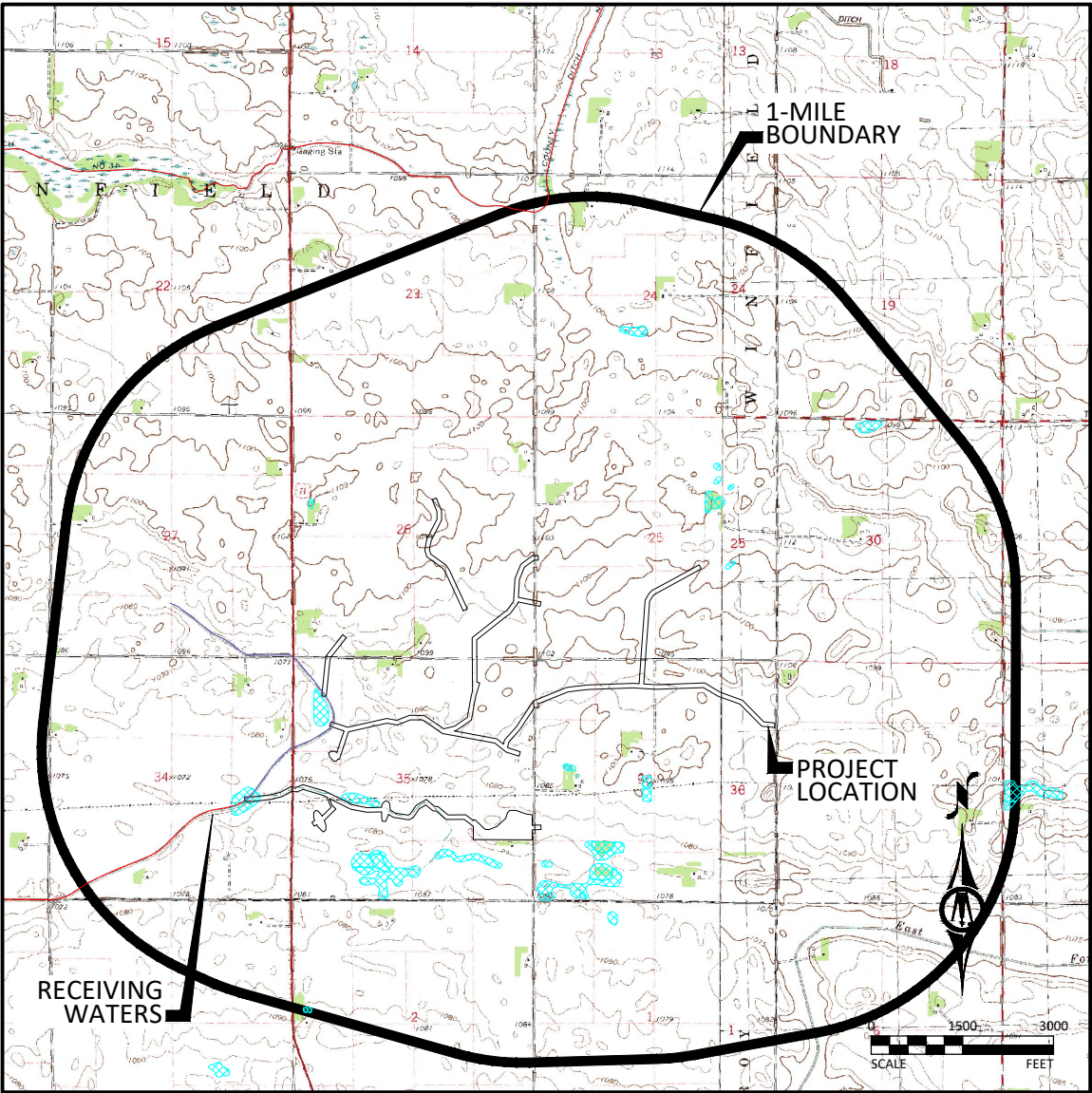
DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:
Construction activities include: Site grading, agricultural drain tile, temporary erosion and sediment control, and permanent stabilization.

Stormwater currently drains overland and into various agricultural drain tile. Where it then discharges out into County Ditch No. 59 open ditch.

After construction is complete stormwater will continue to flow as in the existing conditions, but through an updated drainage system.

This project includes the following stormwater management BMPs:

- Random Riprap, Class III
- Inlet Protection
- Mulch Material, Type 1
- Rapid Stabilization, Method 4
- Permanent Seeding
- Stabilized Construction Exit



RECEIVING WATERS:
Receiving waters, including surface water, wetlands, Public Waters, and stormwater ponds, within 1-mile of the project boundary are identified on the USGS 7.5 min quad map above. Receiving waters that are impaired, the impairment, and WLA are listed as follows. All specific BMPs relative to construction activities listed in the permit for special, prohibited, restricted, or impaired have been incorporated into this plan. All specific BMPs listed in approved TMDLs and those BMPs listed for construction related waste load allocations have also been incorporated.

NAME OF WATER BODY	TYPE (ditch, pond, wetland, lake, etc.)	Special, Prohibited, Restricted Water ¹	Flows to Impaired Water Within 1-Mile ²	USEPA Approved Construction Related TMDL ³
COUNTY DITCH NO. 59	DITCH	NO	YES	NO

¹ Special, prohibited, and restricted waters are listed in Section 23 of the MN Construction Stormwater General Permit (MNR100001).
² Identified as impaired under section 303 (d) of the federal Clean Water Act for phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.
³ Construction Related TMDLs include those related to: phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.

IMPLEMENTATION SCHEDULE AND PHASING: The Contractor is required to provide an updated schedule and site management plan meeting the minimum requirements of Section 1717 of the Minnesota Standard Specifications for Construction.

- Submit SWPPP Updates to Engineer. Submittal shall include any requested changes to the SWPPP, including but not limited to: Trained Personnel, Locations for Stockpiles, Concrete Washout, Sanitation Facilities, Types and Locations of Erosion & Sediment Control. Failure to submit updates shall be considered acceptance of the SWPPP as designed with no changes.
- Install perimeter sediment control, inlet protection, and construction exit.
- Install Drain Tile and Pond excavation.
- Backfilling, WASCOB and Disposal area grading
- Add additional temporary BMPs as necessary during construction based on inspection reports.
- Ensure final stabilization measures are complete.
- Provide digital copy of all Field SWPPP Documentation including Inspection Reports and SWPPP Revisions to the Owner.
- Submit Notice of Termination (NOT) to MPCA. NOTE: The NOT must be submitted to MPCA before Final Stabilization is considered complete.



C2.03

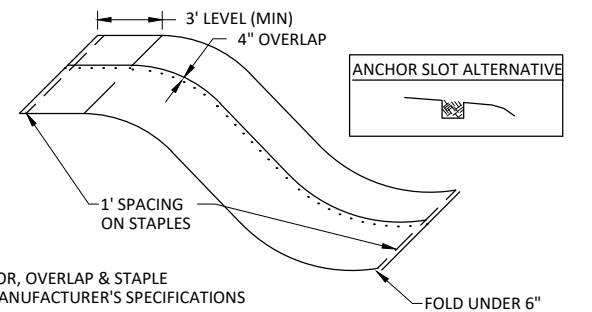
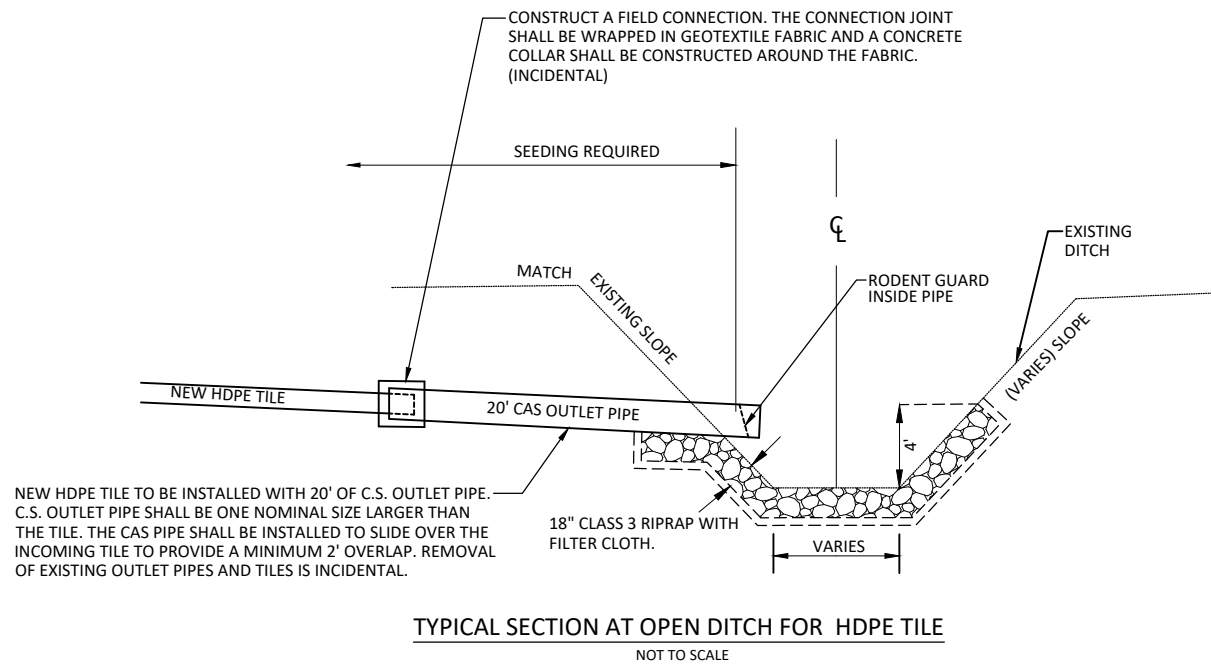
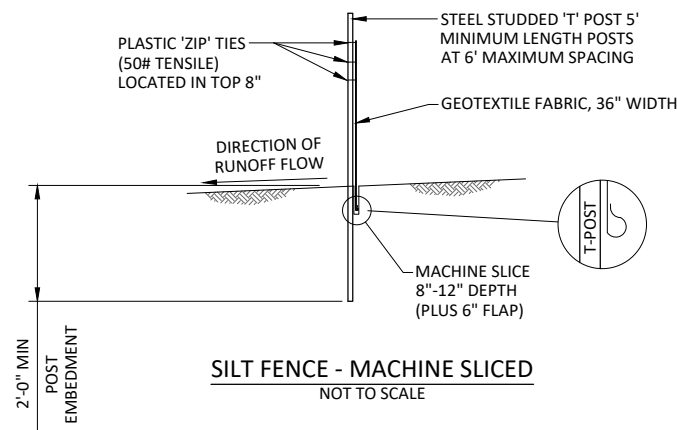
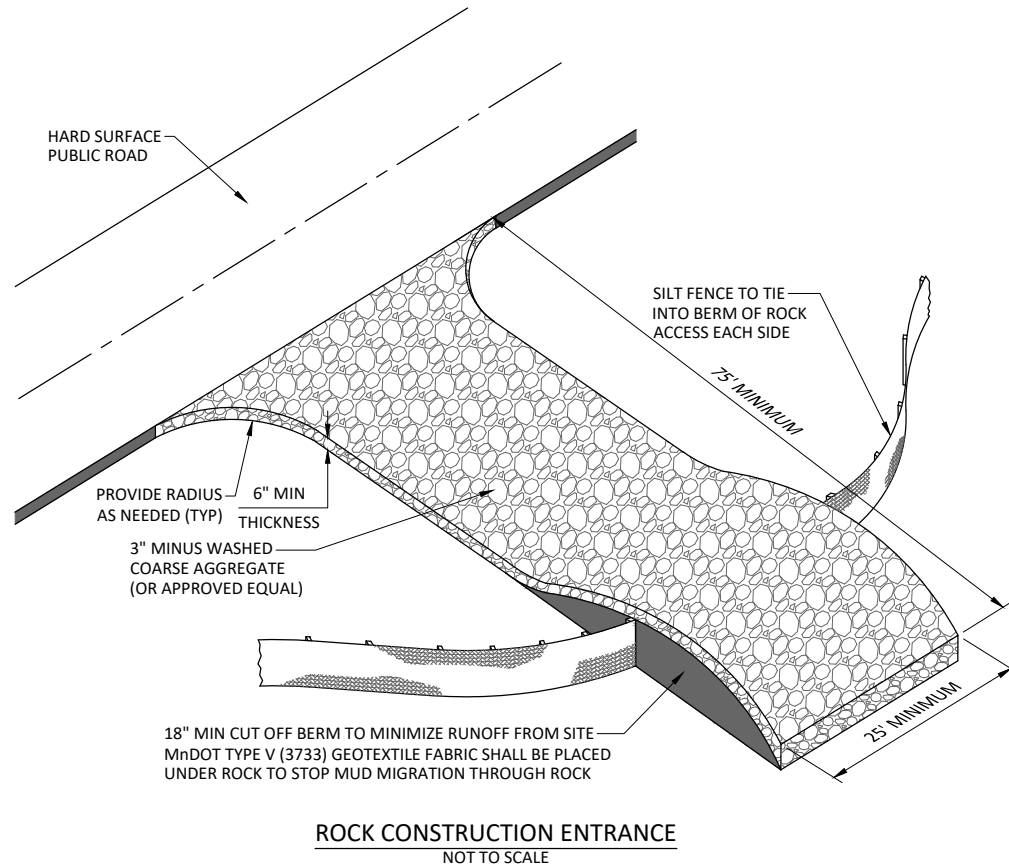
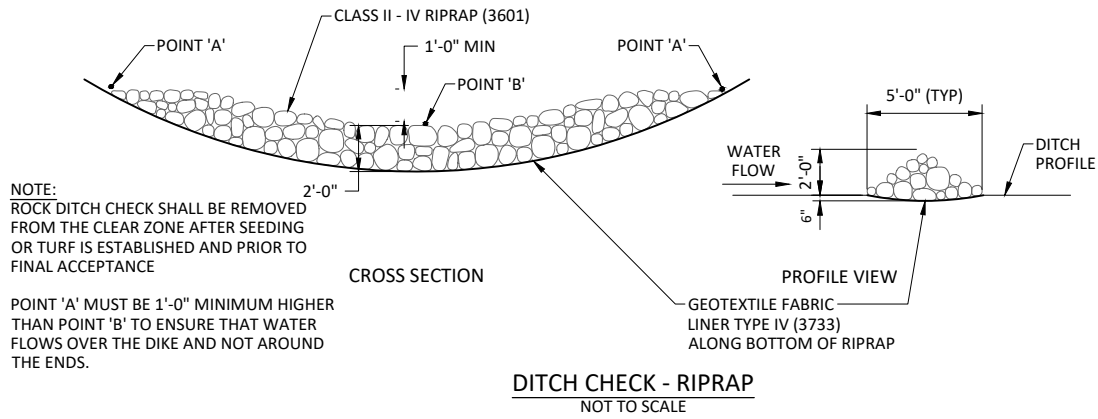


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0 5 10
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DATE 4/8/26



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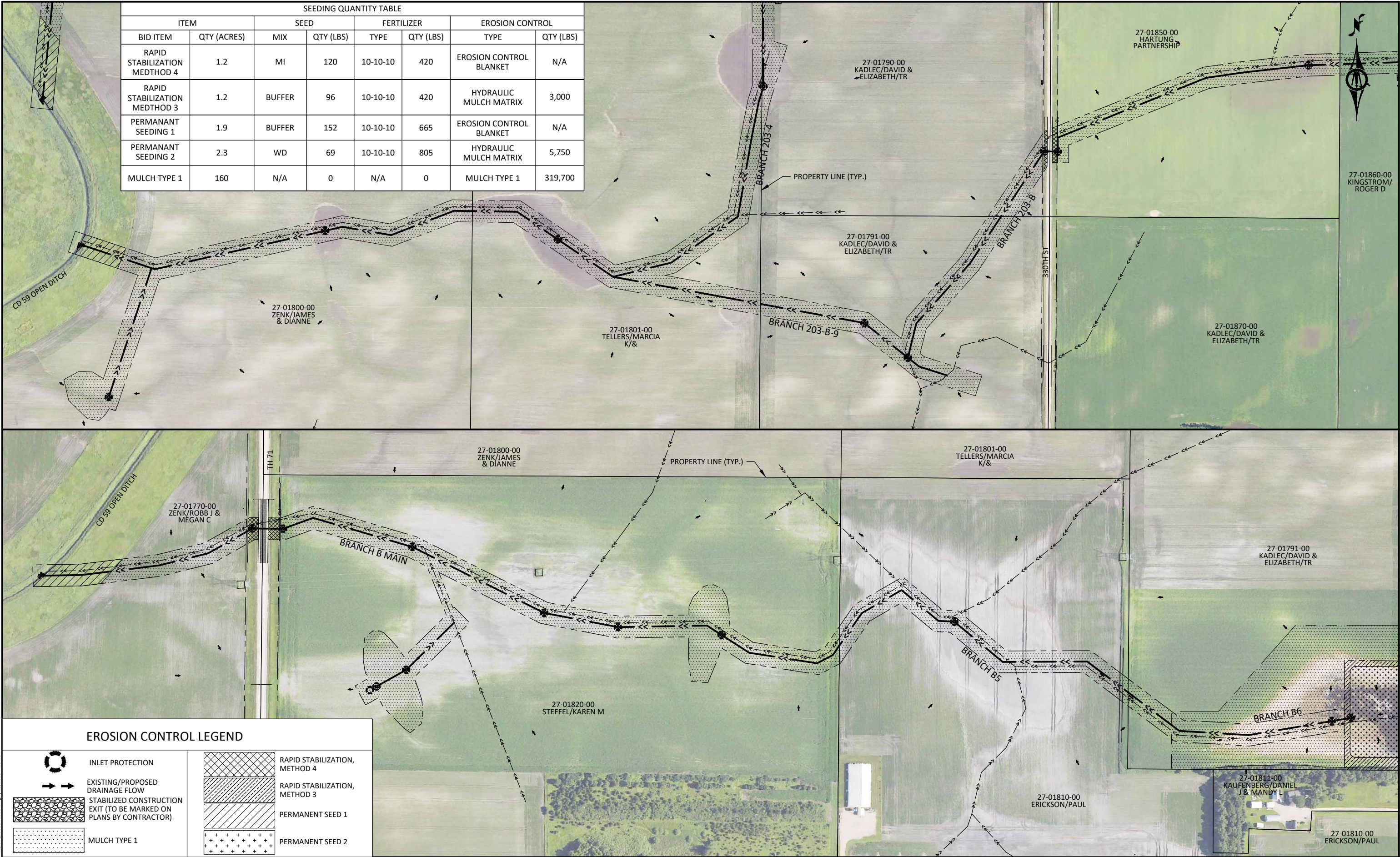
EROSION CONTROL
BLANKET INSTALLATION
NOT TO SCALE

LAST REVISION:
04-2021
PLATE NO.
3-200

RENNVILLE COUNTY, MINNESOTA
CD 59 BRANCH B, 203 & 194 - IMPROVEMENT
STORM WATER POLLUTION PREVENTION PLAN
SWPPP DETAILS

SHEET
C2.04

SEEDING QUANTITY TABLE							
ITEM		SEED		FERTILIZER		EROSION CONTROL	
BID ITEM	QTY (ACRES)	MIX	QTY (LBS)	TYPE	QTY (LBS)	TYPE	QTY (LBS)
RAPID STABILIZATION MEDTHOD 4	1.2	MI	120	10-10-10	420	EROSION CONTROL BLANKET	N/A
RAPID STABILIZATION MEDTHOD 3	1.2	BUFFER	96	10-10-10	420	HYDRAULIC MULCH MATRIX	3,000
PERMANANT SEEDING 1	1.9	BUFFER	152	10-10-10	665	EROSION CONTROL BLANKET	N/A
PERMANANT SEEDING 2	2.3	WD	69	10-10-10	805	HYDRAULIC MULCH MATRIX	5,750
MULCH TYPE 1	160	N/A	0	N/A	0	MULCH TYPE 1	319,700



EROSION CONTROL LEGEND

INLET PROTECTION

EXISTING/PROPOSED DRAINAGE FLOW

STABILIZED CONSTRUCTION EXIT (TO BE MARKED ON PLANS BY CONTRACTOR)

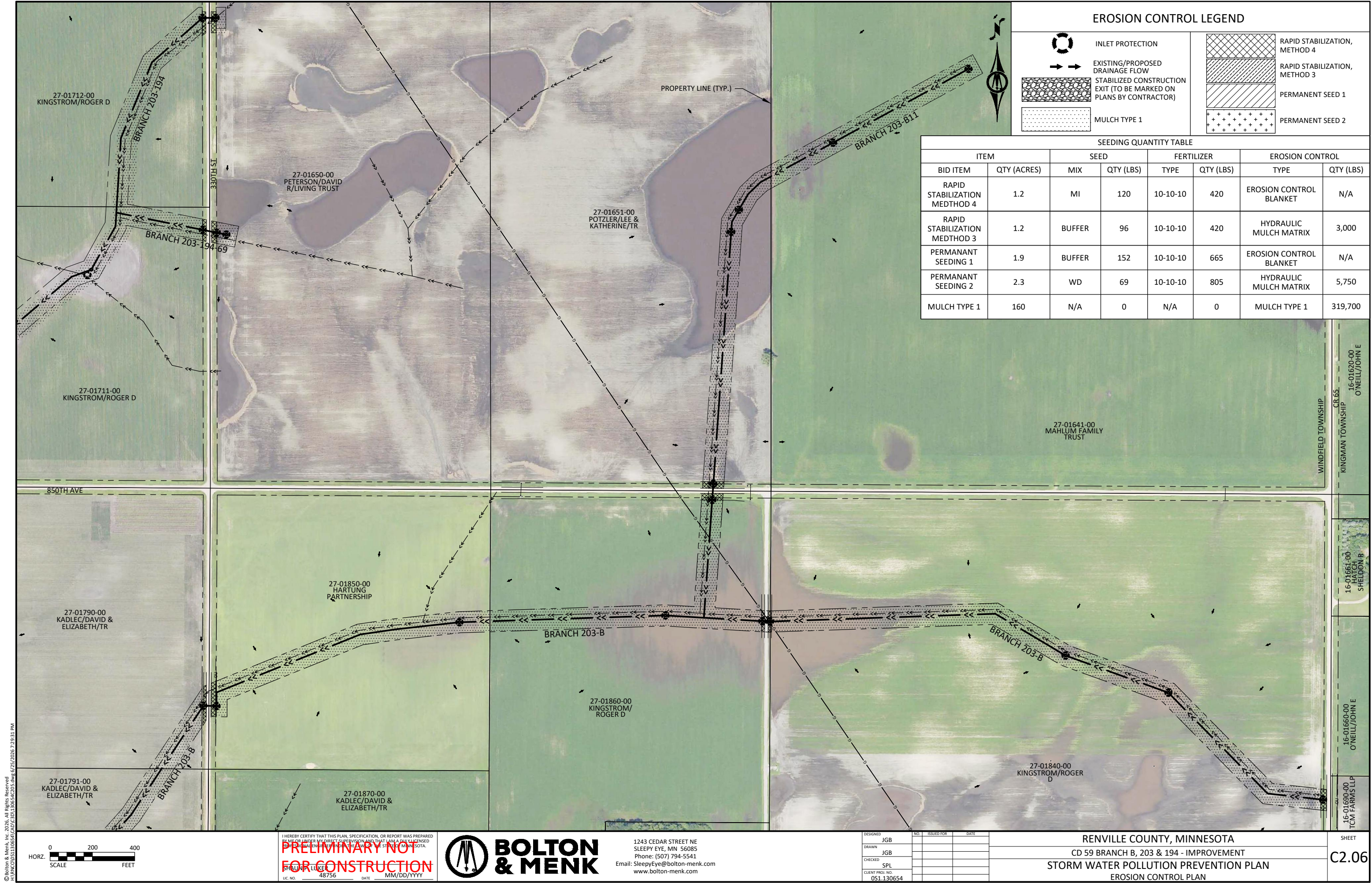
MULCH TYPE 1

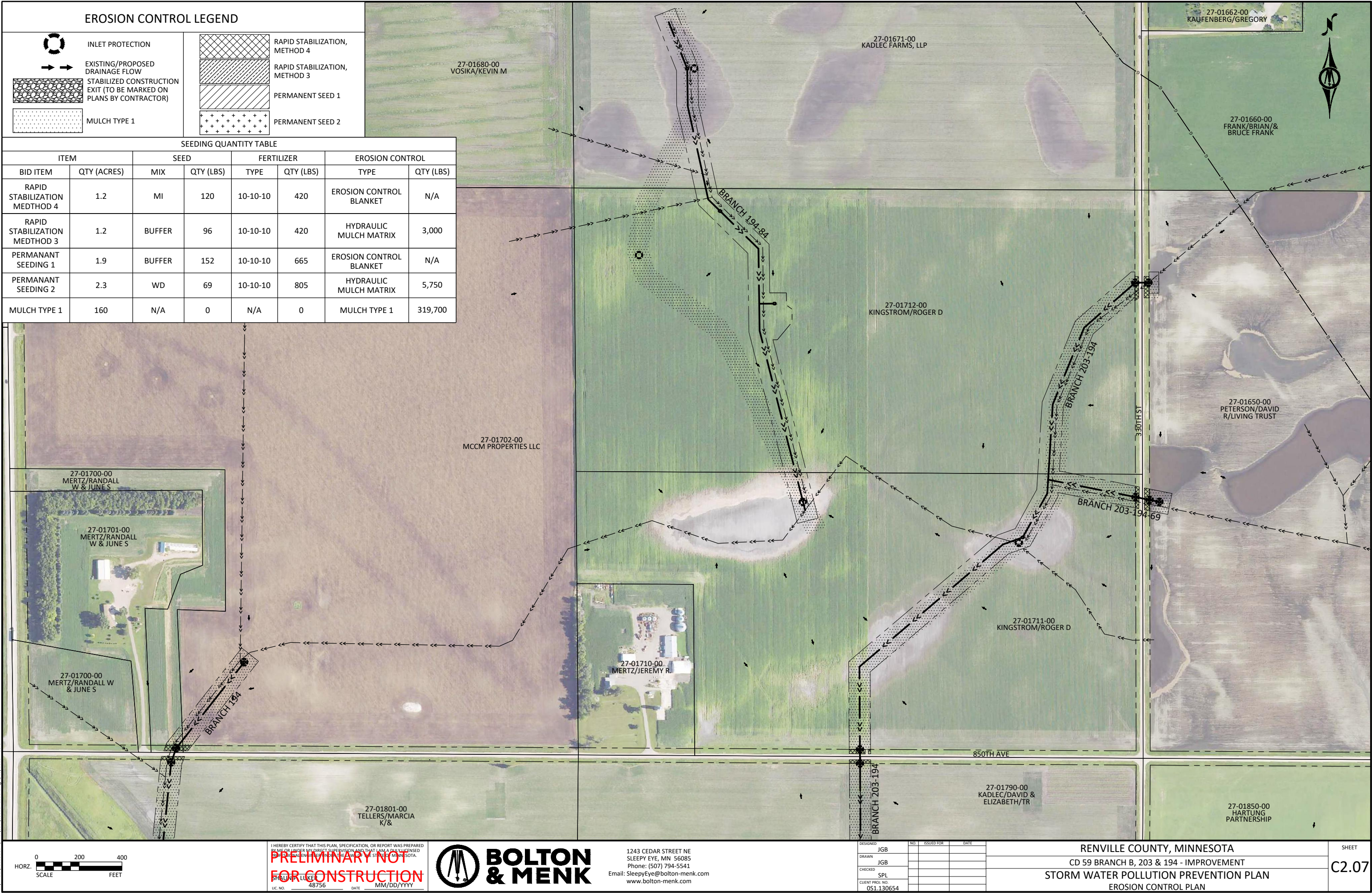
RAPID STABILIZATION, METHOD 4

RAPID STABILIZATION, METHOD 3

PERMANENT SEED 1

PERMANENT SEED 2





DESIGNED
JGB

DRAWN
JGB

CHECKED
SPL

CLIENT PROJ. NO.
051.130654

NO.

ISSUED FOR

DATE

RENVILLE COUNTY, MINNESOTA

CD 59 BRANCH B, 203 & 194 - IMPROVEMENT

STORM WATER POLLUTION PREVENTION PLAN

EROSION CONTROL PLAN

SHEET

C2.07

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PRELIMINARY NOT FOR CONSTRUCTION

SHRUMP, LUKE

LIC. NO. 48756

DATE MM/DD/YYYY

BOLTON & MENK

1243 CEDAR STREET NE

SLEEPY EYE, MN 56085

Phone: (507) 794-5541

Email: SleepyEye@bolton-menk.com

www.bolton-menk.com

INLET PROTECTION

EXISTING/PROPOSED DRAINAGE FLOW

STABILIZED CONSTRUCTION EXIT (TO BE MARKED ON PLANS BY CONTRACTOR)

MULCH TYPE 1

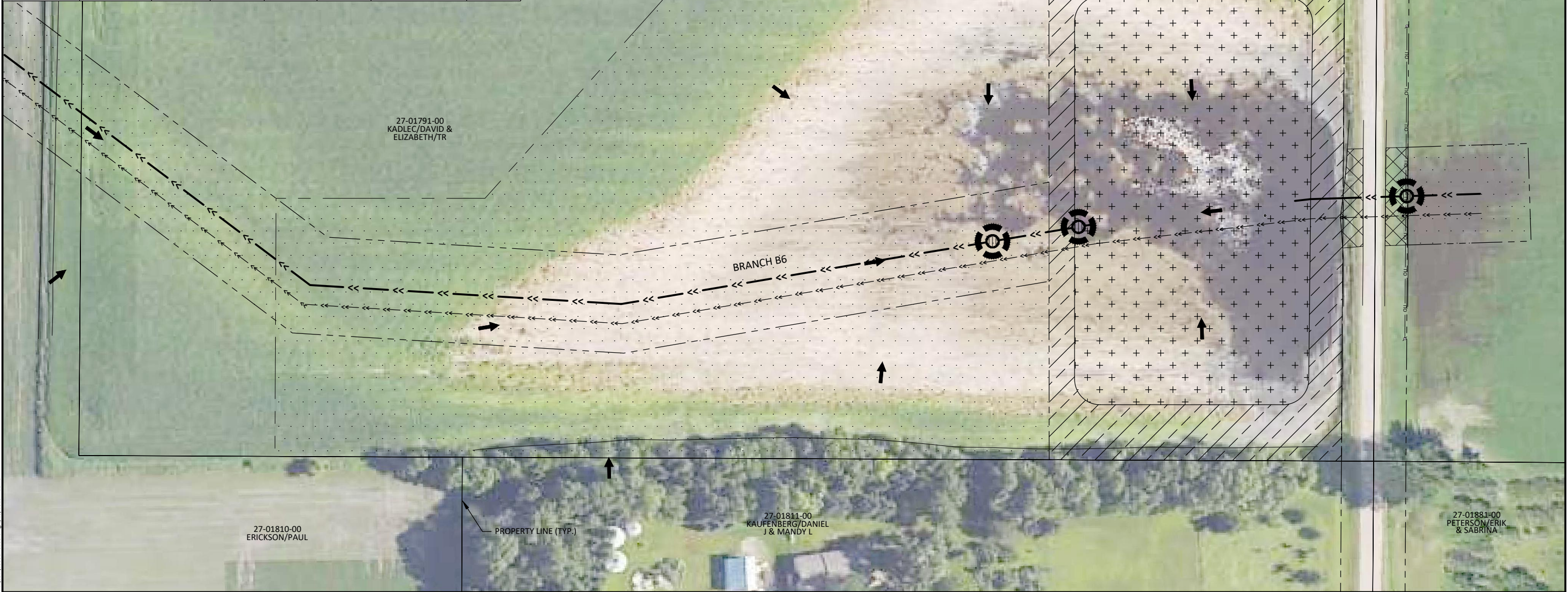
RAPID STABILIZATION, METHOD 4

RAPID STABILIZATION, METHOD 3

PERMANENT SEED 1

PERMANENT SEED 2

SEEDING QUANTITY TABLE							
ITEM		SEED		FERTILIZER		EROSION CONTROL	
BID ITEM	QTY (ACRES)	MIX	QTY (LBS)	TYPE	QTY (LBS)	TYPE	QTY (LBS)
RAPID STABILIZATION MEDTHOD 4	1.2	MI	120	10-10-10	420	EROSION CONTROL BLANKET	N/A
RAPID STABILIZATION MEDTHOD 3	1.2	BUFFER	96	10-10-10	420	HYDRAULIC MULCH MATRIX	3,000
PERMANANT SEEDING 1	1.9	BUFFER	152	10-10-10	665	EROSION CONTROL BLANKET	N/A
PERMANANT SEEDING 2	2.3	WD	69	10-10-10	805	HYDRAULIC MULCH MATRIX	5,750
MULCH TYPE 1	160	N/A	0	N/A	0	MULCH TYPE 1	319,700



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DATE: 6/25/2026 7:29:43 PM

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NO.

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DATE

RENVILLE COUNTY, MINNESOTA

CD 59 BRANCH B, 203 & 194 - IMPROVEMENT

STORM WATER POLLUTION PREVENTION PLAN

EROSION CONTROL PLAN

SHEET

C2.08

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HORZ.

SCALE

FEET

PRELIMINARY NOT FOR CONSTRUCTION

SHRUMP, LUKE

48756

DATE

MM/DD/YYYY

BOLTON & MENK

1243 CEDAR STREET NE

SLEEPY EYE, MN 56085

Phone: (507) 794-5541

Email: SleepyEye@bolton-menk.com

www.bolton-menk.com

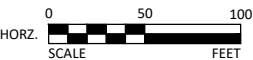
WATER QUALITY & STORAGE:
DESIGN STORM = 10 YEAR
DRAW DOWN TIME = 70 HR
LIVE STORAGE - 10.3 ACRE-FEET
PERMANENT EASEMENT - 3.46 ACRES
TEMPORARY EASEMENT - 8.54 ACRES
NORMAL HIGH WATER LEVEL = 1073.5
POND BOTTOM = 1067.75

F&I:
15,400 CY - COMMON EXCAVATION
11,970 CY - COMMON EMBANKMENT

NOTE:
POND EXCAVATED NON-TOPSOIL MATERIAL SHALL BE FIRST USED TO CONSTRUCT THE WASCOB'S.

THE REMAINING EXCAVATED MATERIAL SHALL BE PLACED TO THE APPROXIMATE FILL CONTOURS SHOWN AROUND THE POND. ANY NON-TOPSOIL MATERIAL PLACED SHALL HAVE THE EXISTING TOPSOIL STRIPPED PRIOR TO PLACEMENT.

THE FILL CONTOURS ARE FOR GUIDANCE ONLY. THE CONTRACTOR SHALL MAKE ALL FILL AREAS GRADE TO DRAIN TO THE POND OR INTAKE AS SHOWN WITHIN THE GRADING LIMITS.



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RENVILLE COUNTY, MINNESOTA
CD 59 BRANCH B, 203 & 194 - IMPROVEMENT
GRADING PLAN
POND 1

SHEET

C3.01

WASCOB - 1
DESIGN STORM = 1 YEAR
DRAW DOWN TIME = 28 HOUR
WATER STORED = 1.7 & 8.1 ACRE-FEET
WATER SURFACE AREA = 4.4 ACRES

F&I:
1080 CY - COMMON EMBANKMENT



PROPOSED CONSTRUCTION LIMITS (TYP.)

1 EA - 8" HICKENBOTTOM INTAKE

F&I:

TILE INTAKE
8" POLY
R=1068.82
L= 1066.49

F&I:
1 EA - 8" HICKENBOTTOM INTAKE

BRANCH B1-A
8" TILE

BRANCH B1
EX 7" TILE

27-01820-00
STEFFEL/KAREN M

EXISTING CONTOUR LINE

PROPOSED CONTOUR LINE

NOTE: 18" TOPSOIL STRIPPING OVER THE
ENTIRE GRADING LIMITS TO BE INCLUDED IN
THE PRICE BID FOR COMMON EMBANKMENT.
REDISTRIBUTE TOPSOIL WITHIN THE TOP 18"
OF FINISHED GRADE

SEE SHEET C5.04 FOR TILE PLAN & PROFILE

0 25 50
HORIZ. SCALE FEET

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SHAUN P. LUKER
LIC. NO. 48756 DATE MM/DD/YYYY



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RENNVILLE COUNTY, MINNESOTA
CD 59 BRANCH B, 203 & 194 - IMPROVEMENT
GRADING PLAN
WASCOB 1

SHEET

C3.02

WASCOB - 2
DESIGN STORM = 1 YEAR
DRAW DOWN TIME = 11 HOUR
WATER STORED = 3.2 ACRE-FEET
WATER SURFACE AREA = 12.6 ACRES

F&I:
1650 CY - COMMON EMBANKMENT



PROPOSED CONSTRUCTION LIMITS (TYP.)

EXISTING CONTOUR LINE

EX 22" TILE

30" TILE

100' ROW

1070

27-01820-00
STEFFEL/KAREN M

1073

1075

1072

1072

F&I:
1 EA - 12" HICKENBOTTOM INTAKE

EX 22" TILE

30" TILE

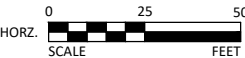
BRANCH B MAIN

PROPOSED CONTOUR LINE

1073

NOTE: 18" TOPSOIL STRIPPING OVER THE
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THE PRICE BID FOR COMMON EMBANKMENT.
REDISTRIBUTE TOPSOIL WITHIN THE TOP 18"
OF FINISHED GRADE

SEE SHEET C5.02 FOR TILE PLAN & PROFILE



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RENNVILLE COUNTY, MINNESOTA
CD 59 BRANCH B, 203 & 194 - IMPROVEMENT
GRADING PLAN
WASCOB 2

SHEET
C3.03

WASCOB - 3
DESIGN STORM = 2 YEAR
DRAW DOWN TIME = 6 HOUR
WATER STORED = 0.3 ACRE-FEET
WATER SURFACE AREA = 0.5 ACRES

F&I:
550 CY - COMMON EMBANKMENT



EXISTING CONTOUR LINE

PROPOSED CONSTRUCTION LIMITS (TYP.)

27-01800-00
ZENK/JAMES
& DIANNE

PROPOSED CONTOUR LINE

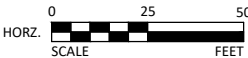
F&I:
1 EA - 8" HICKENBOTTOM INTAKE

BRANCH 203-A
8" TILE

100' ROW

NOTE: 18" TOPSOIL STRIPPING OVER THE
ENTIRE GRADING LIMITS TO BE INCLUDED IN
THE PRICE BID FOR COMMON EMBANKMENT.
REDISTRIBUTE TOPSOIL WITHIN THE TOP 18"
OF FINISHED GRADE

SEE SHEET C5.16 FOR TILE PLAN & PROFILE



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RENNVILLE COUNTY, MINNESOTA
CD 59 BRANCH B, 203 & 194 - IMPROVEMENT
GRADING PLAN
WASCOB 3

SHEET

C3.04

WASCOB - 4
DESIGN STORM = 1 YEAR
DRAW DOWN TIME = 8 HOUR
WATER STORED = 0.2 ACRE-FEET
WATER SURFACE AREA = 0.4 ACRES

F&I:
150 CY - COMMON EMBANKMENT



27-01712-00
KINGSTROM/ROGER
D

EXISTING CONTOUR LINE

BRANCH 194-84

100' ROW

F&I:
80 LF - 8" DRAIN TILE
1 EA - 8" HICKENBOTTOM INTAKE
INV = 1089.00

1094

1:30

30' TOP

1:30

1094

1093

PROPOSED CONSTRUCTION LIMITS (TYP.)

PROPOSED CONTOUR LINE

NOTE: 18" TOPSOIL STRIPPING OVER THE
ENTIRE GRADING LIMITS TO BE INCLUDED IN
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REDISTRIBUTE TOPSOIL WITHIN THE TOP 18"
OF FINISHED GRADE

SEE SHEET C5.18 FOR TILE PLAN & PROFILE



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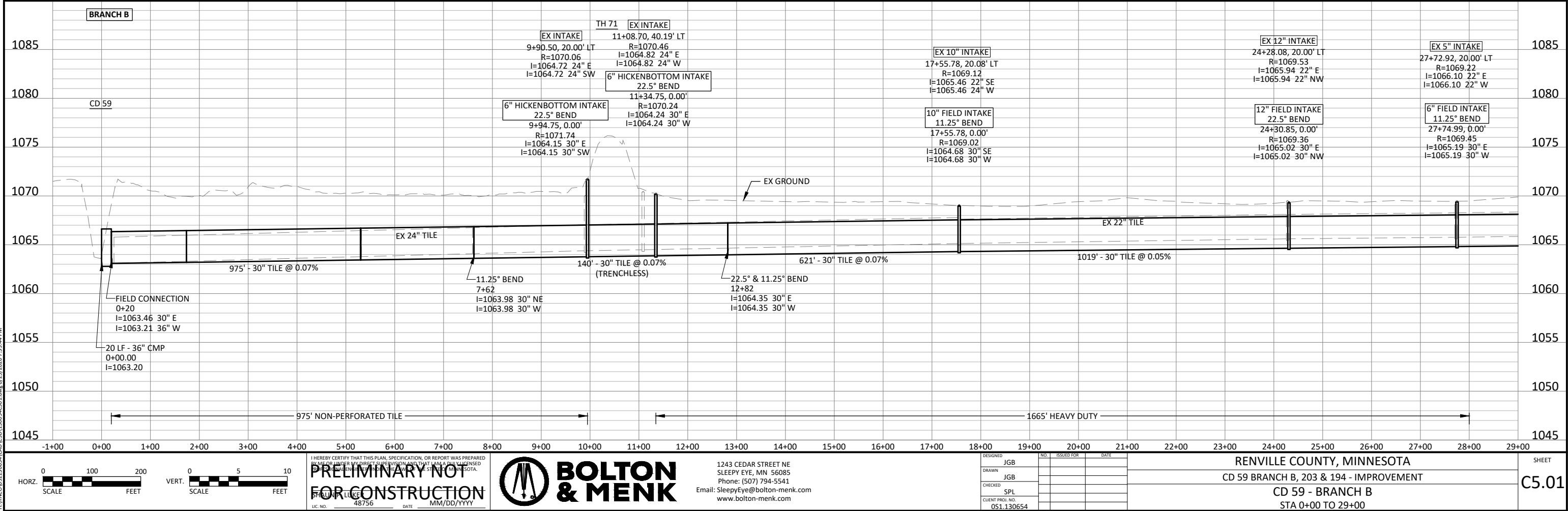
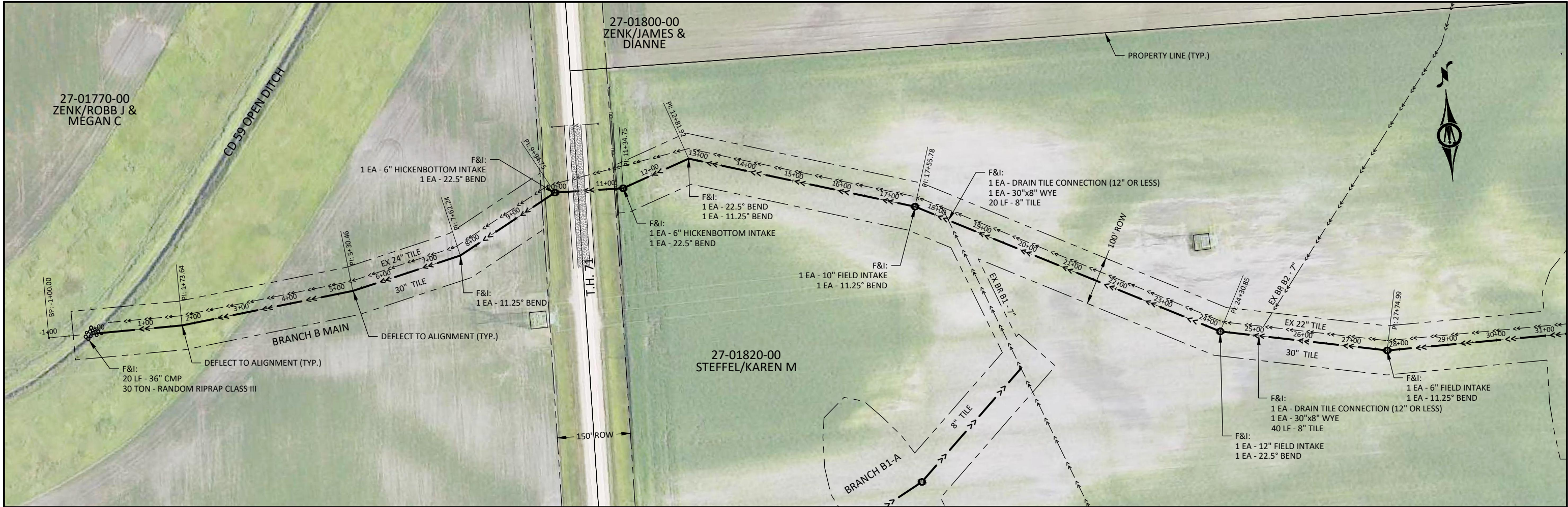


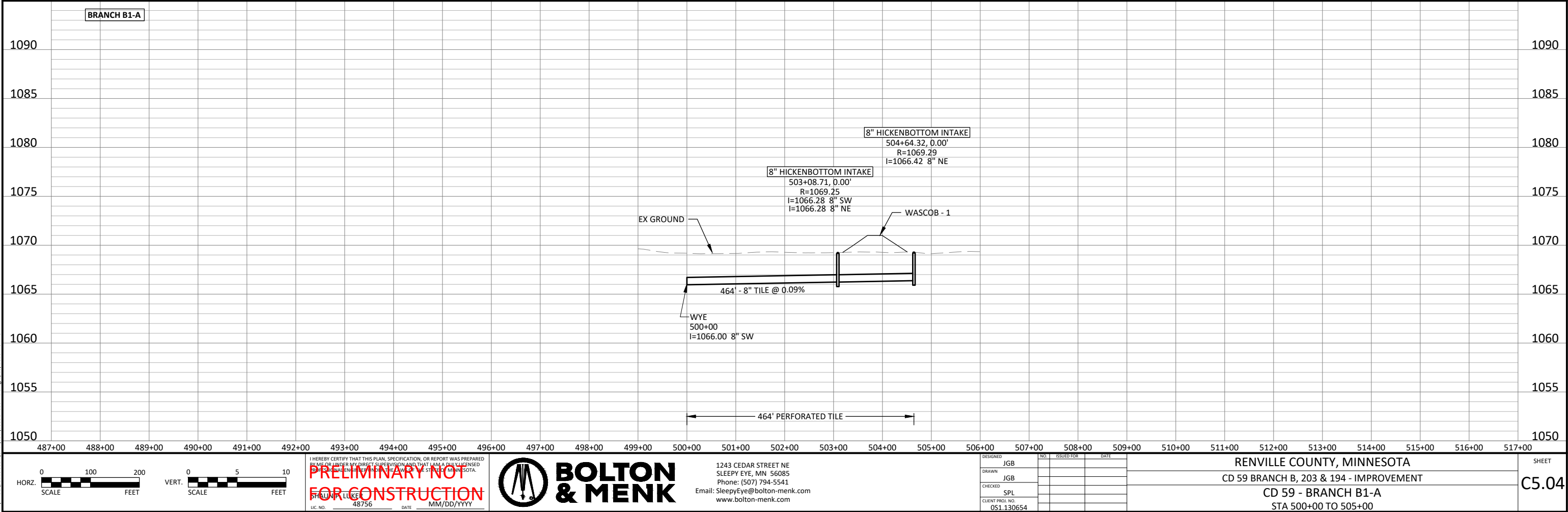
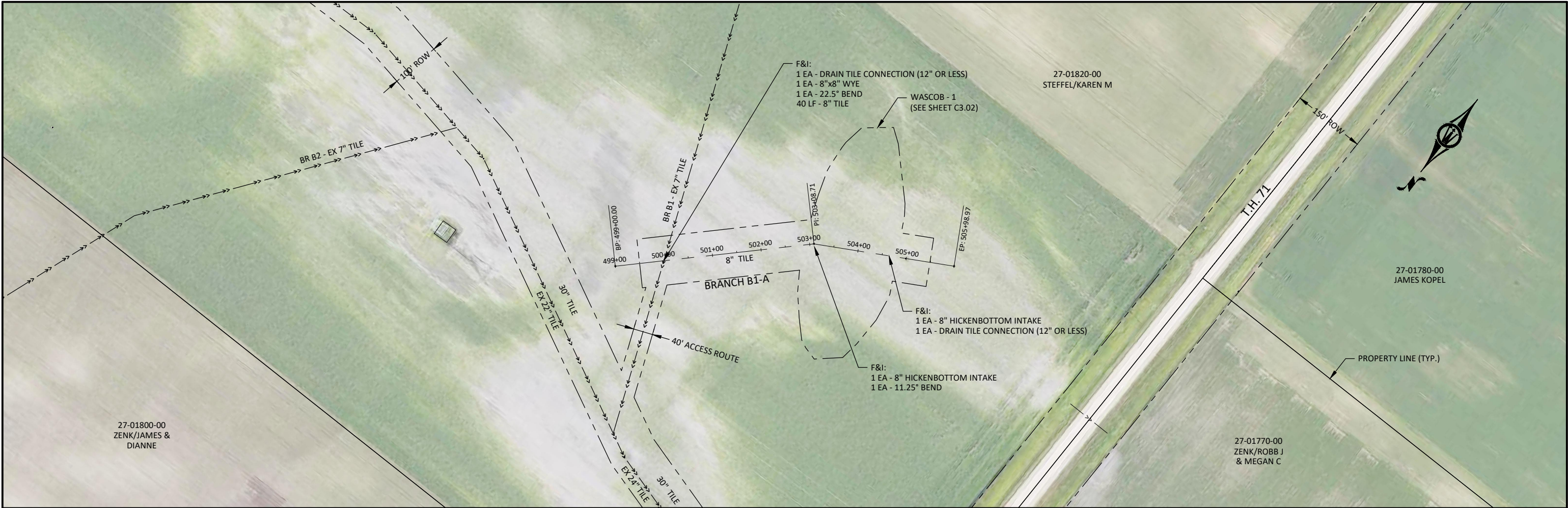
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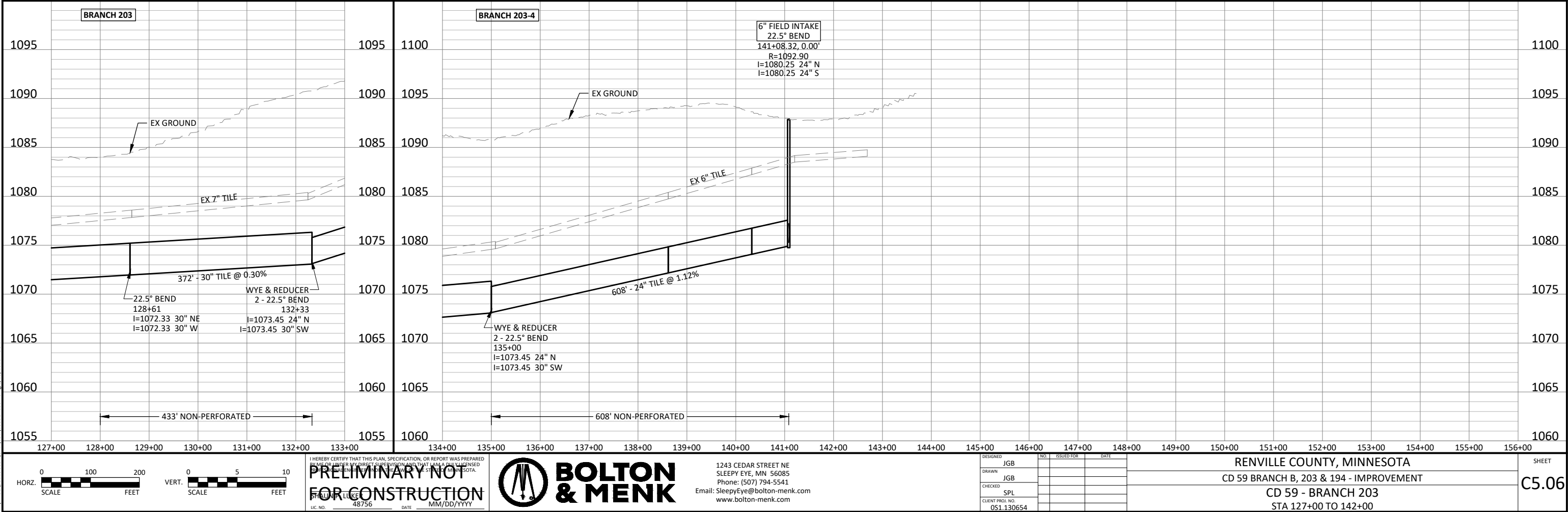
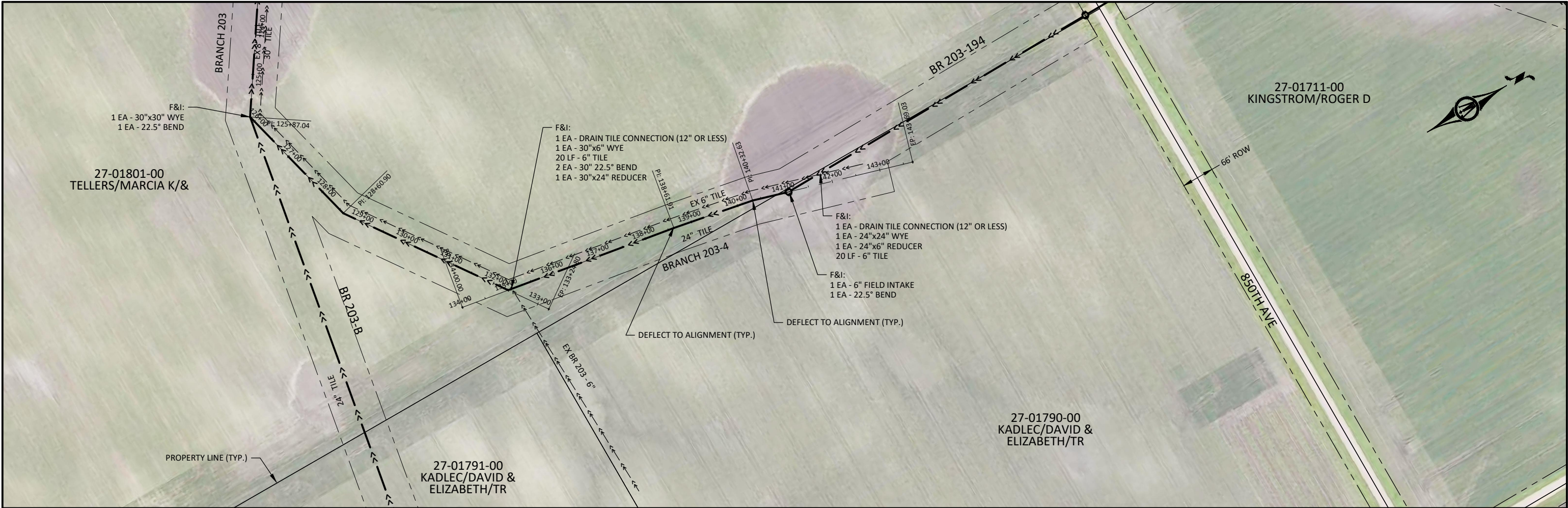
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RENVILLE COUNTY, MINNESOTA	SHEET C3.05
CD 59 BRANCH B, 203 & 194 - IMPROVEMENT	
GRADING PLAN WASCOB 4	

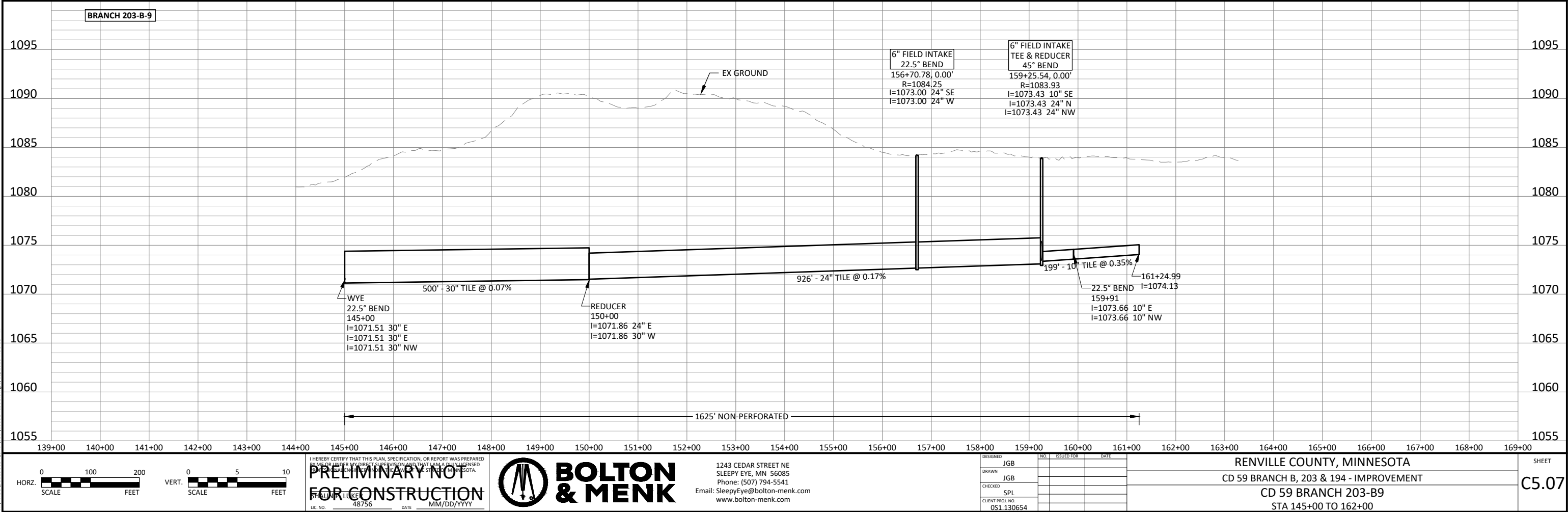
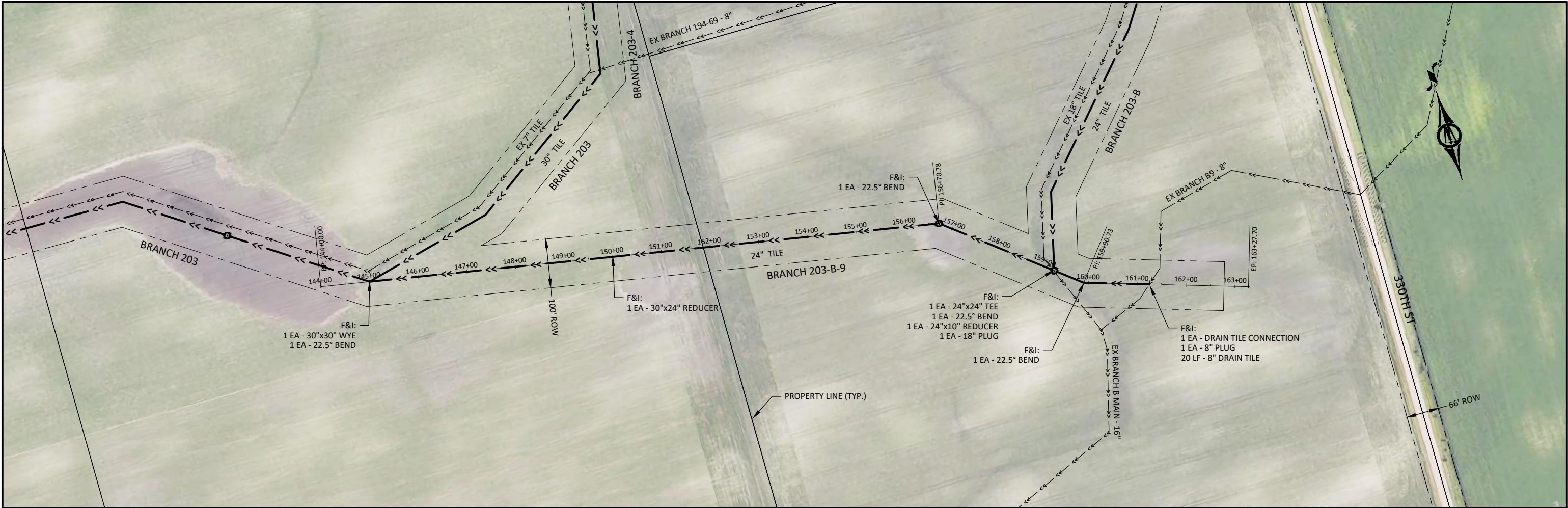
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MINNCO051130654 CD 59 BRANCH B, 203 & 194 - IMPROVEMENT 6/25/2026 7:33:15 PM







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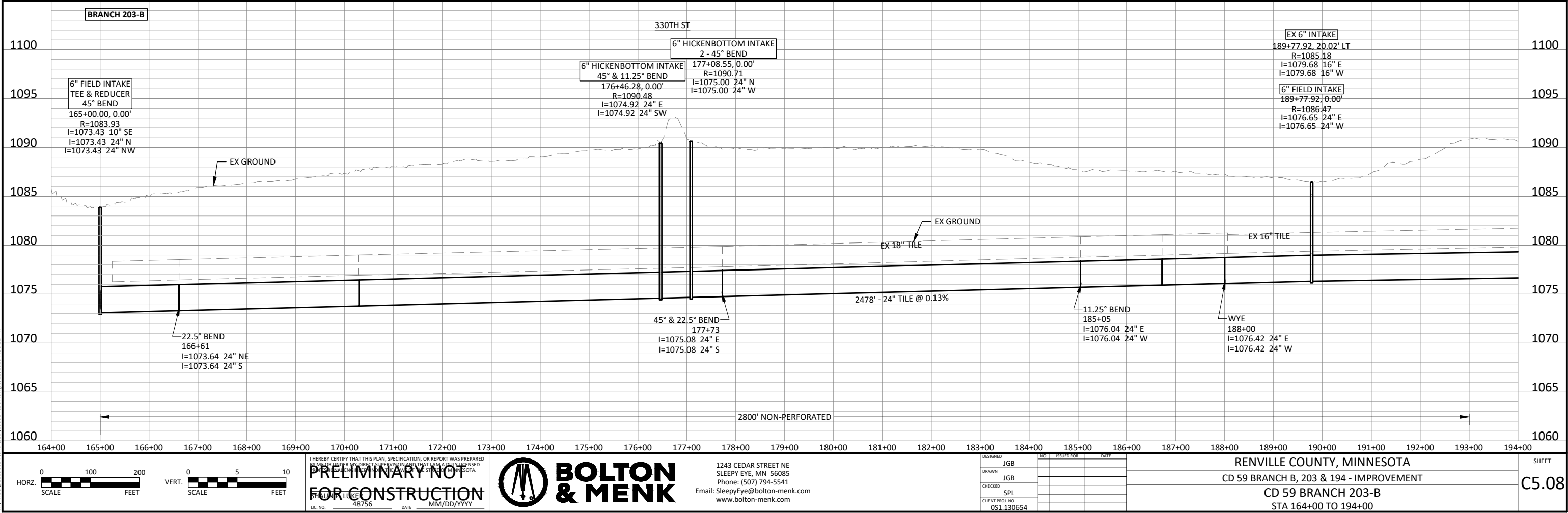
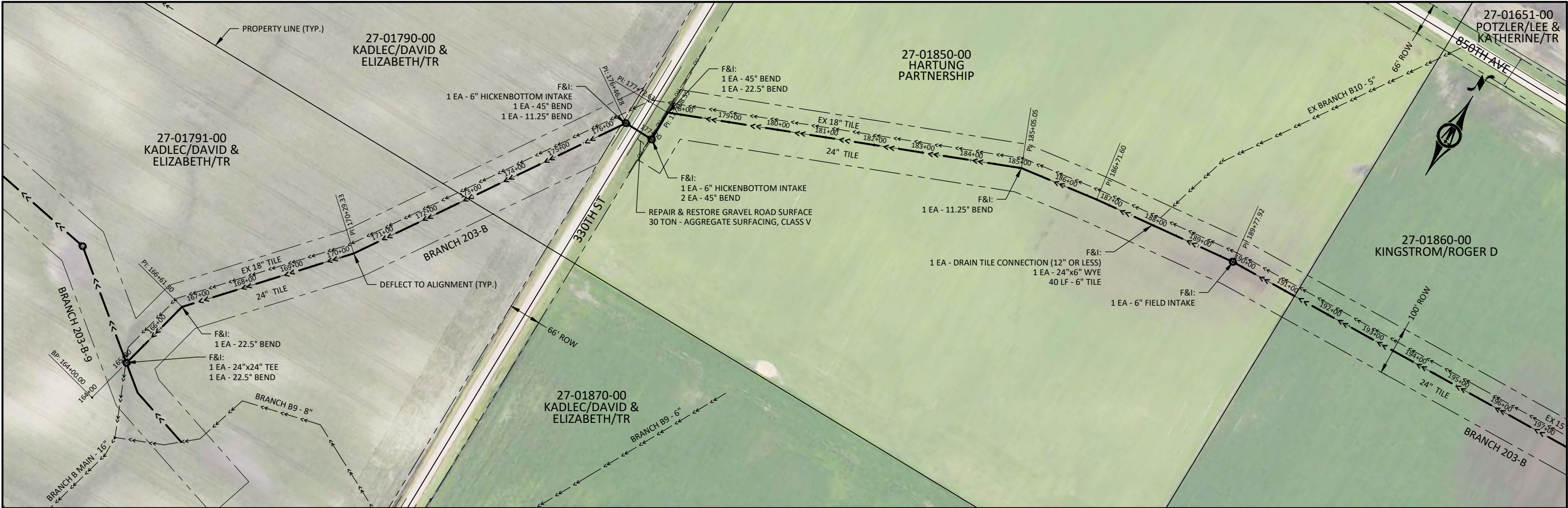
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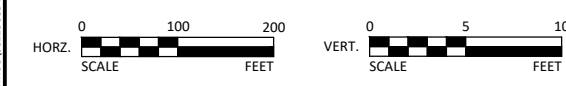
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CD 59 BRANCH 203-B9
STA 145+00 TO 162+00

SHEET

C5.07



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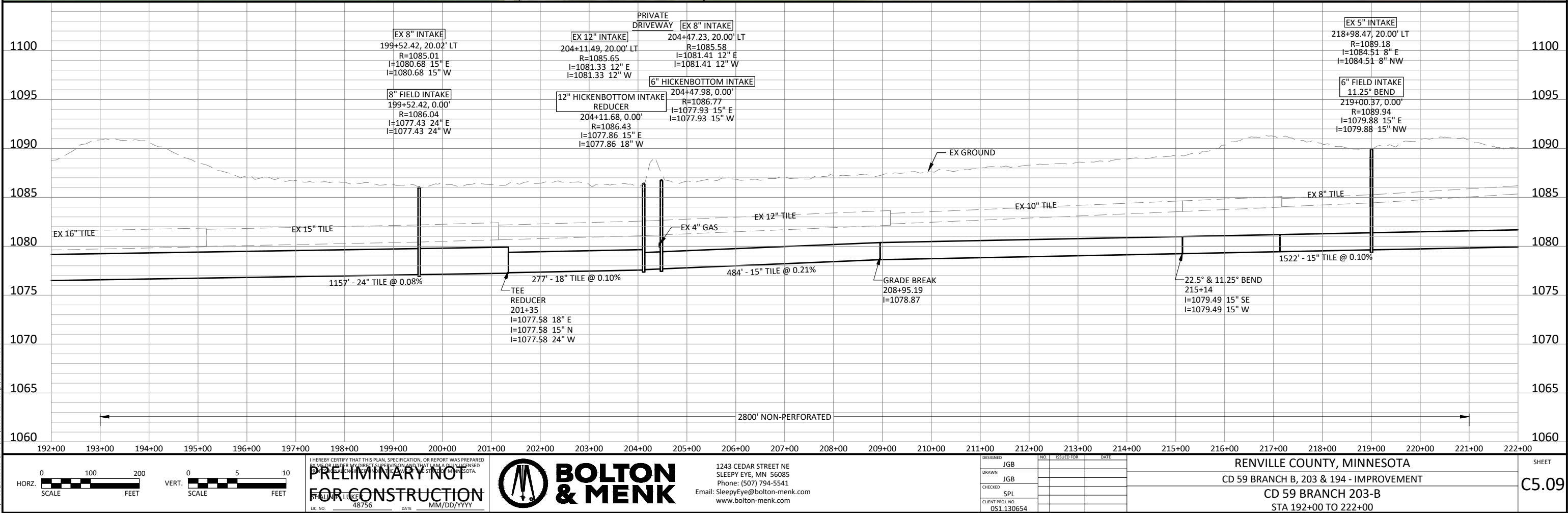
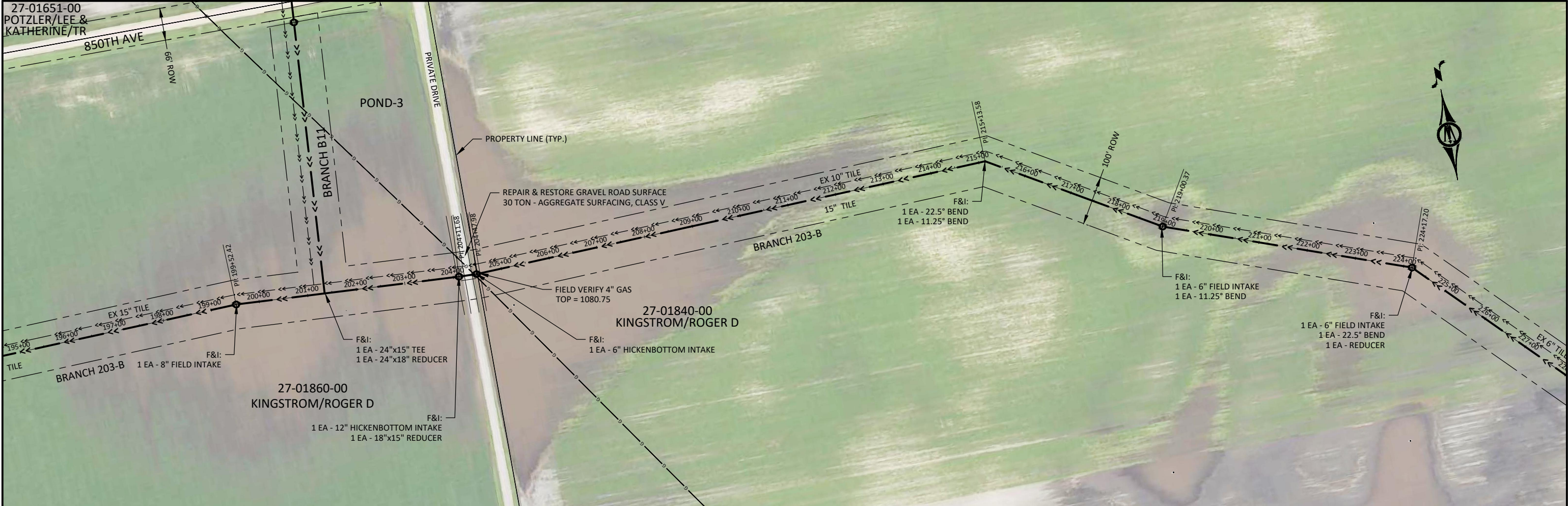


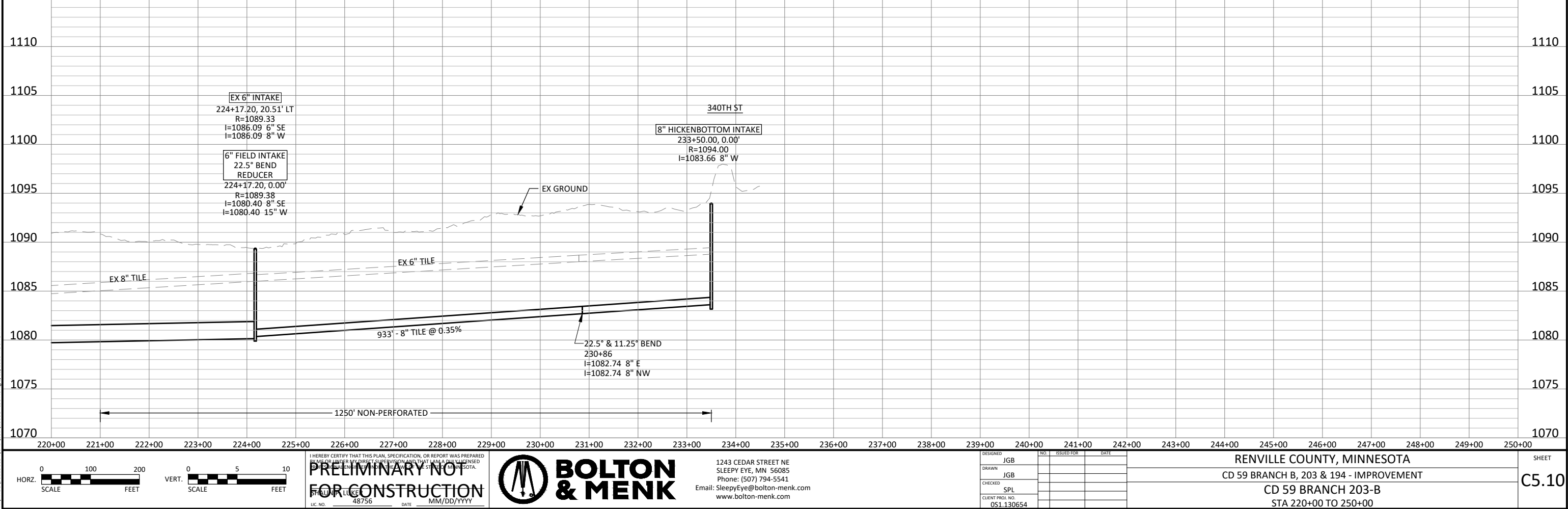
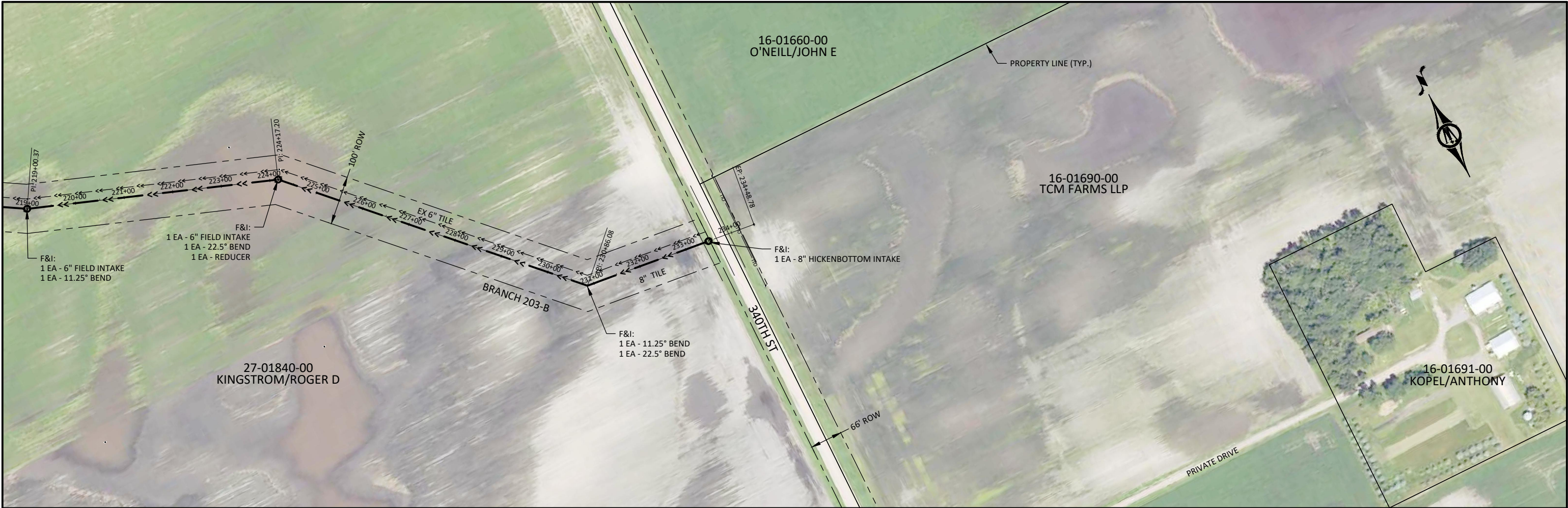
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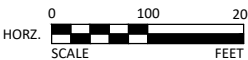
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STA 164+00 TO 194+00

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C5.08





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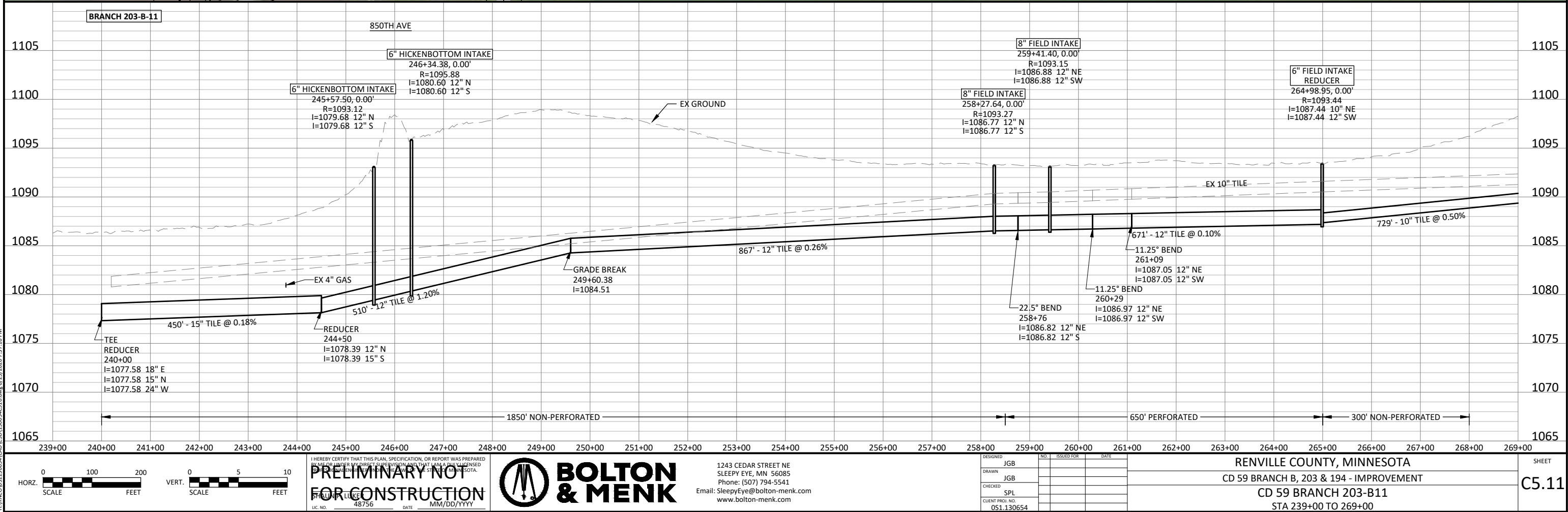
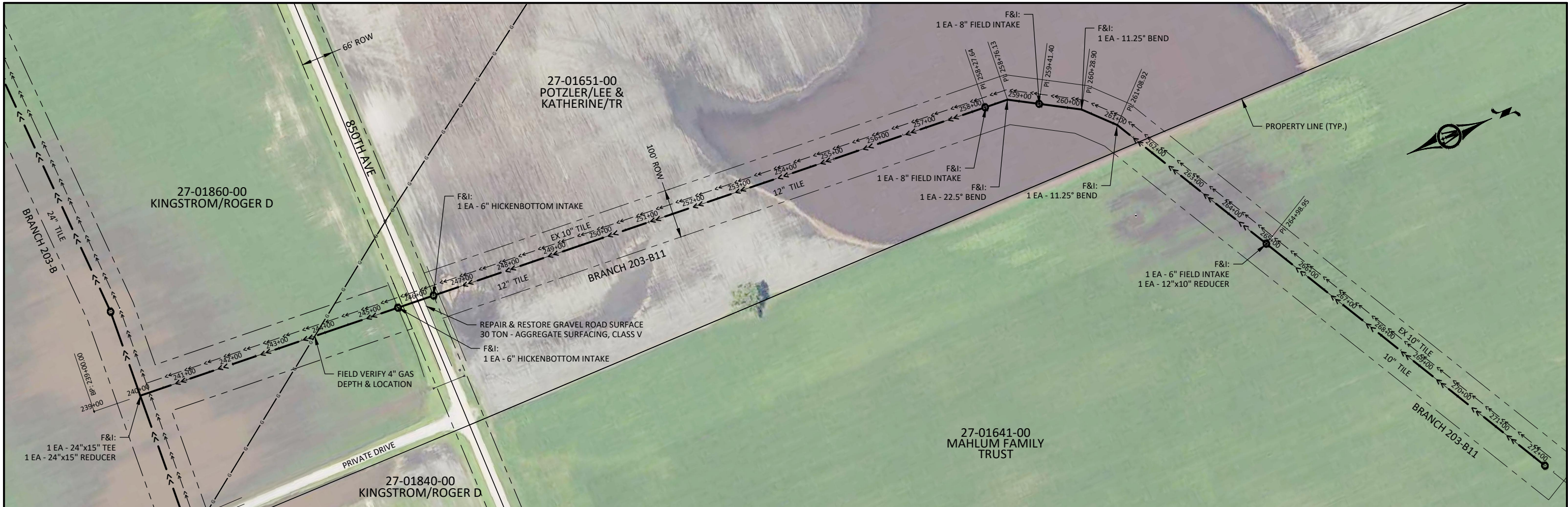


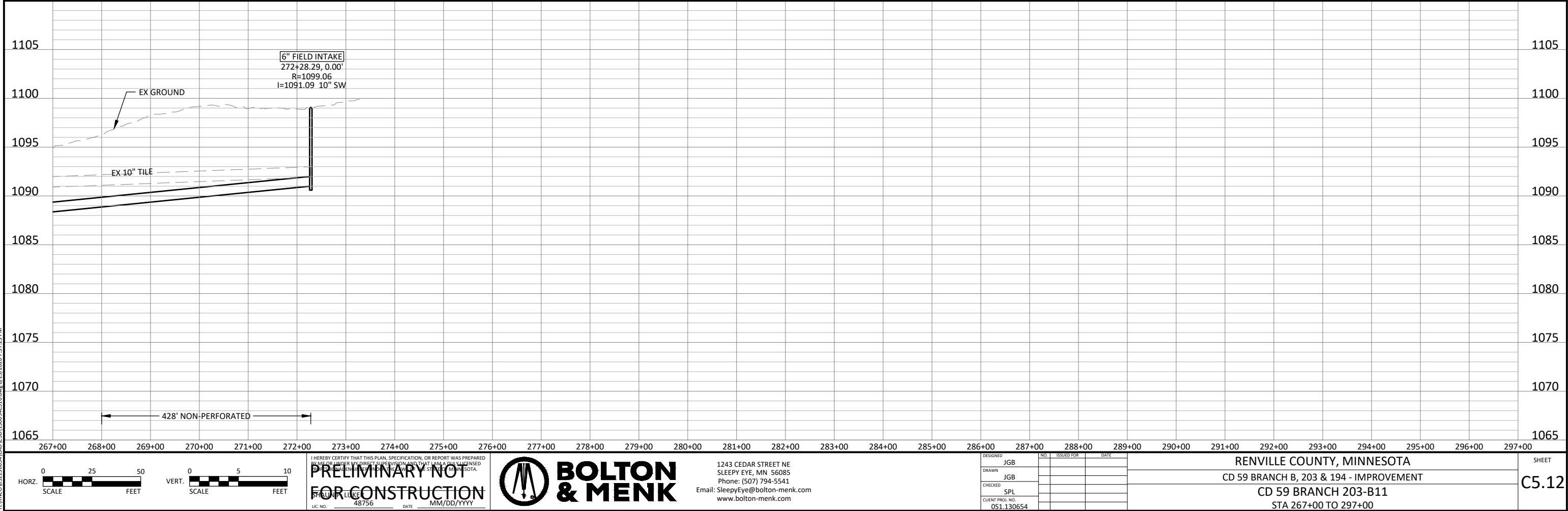
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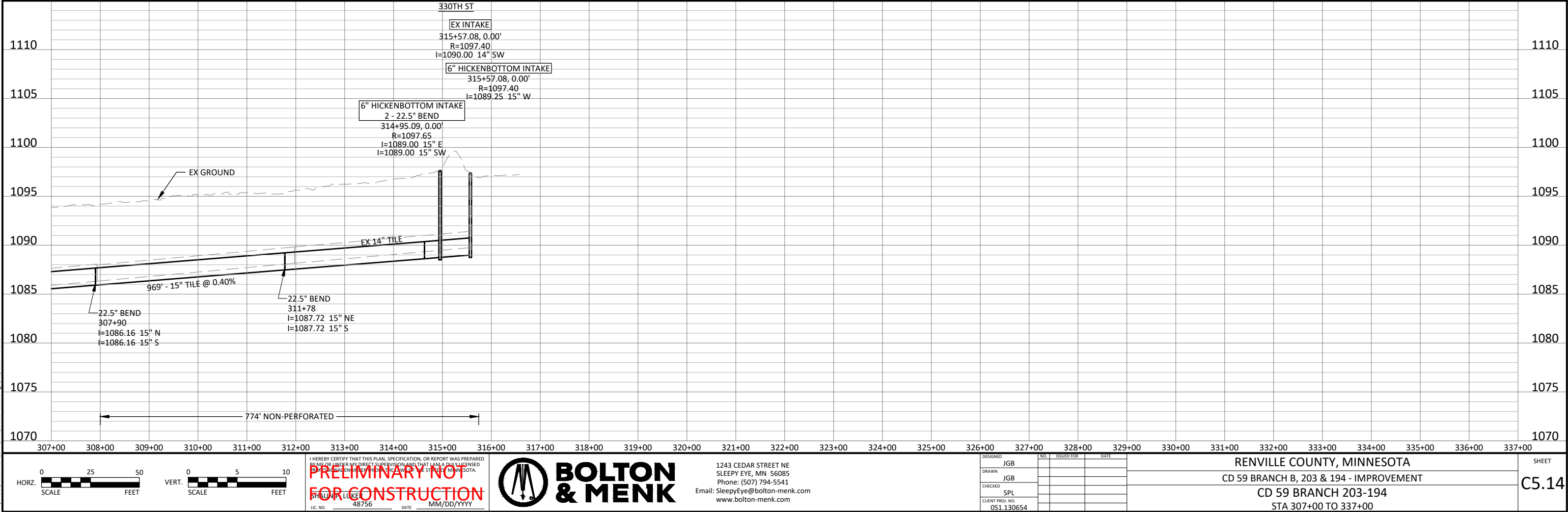
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0 5 10
SCALE FEET

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LUKE SHUMWAY
LIC. NO. 48756 DATE MM/DD/YYYY

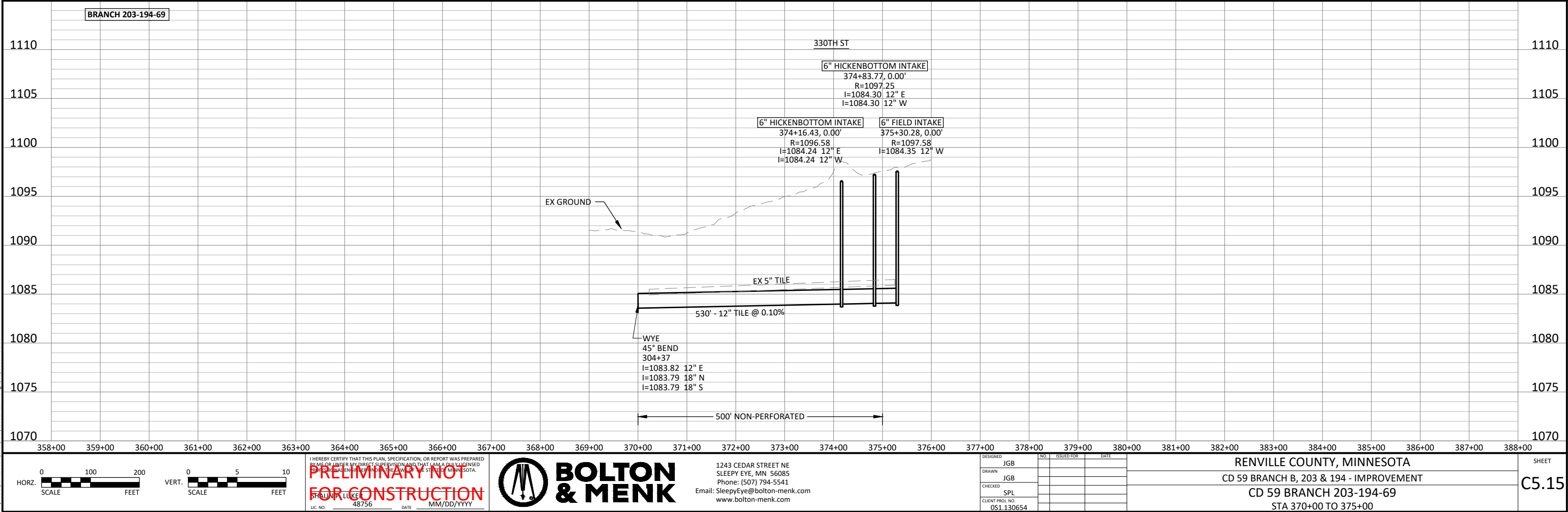
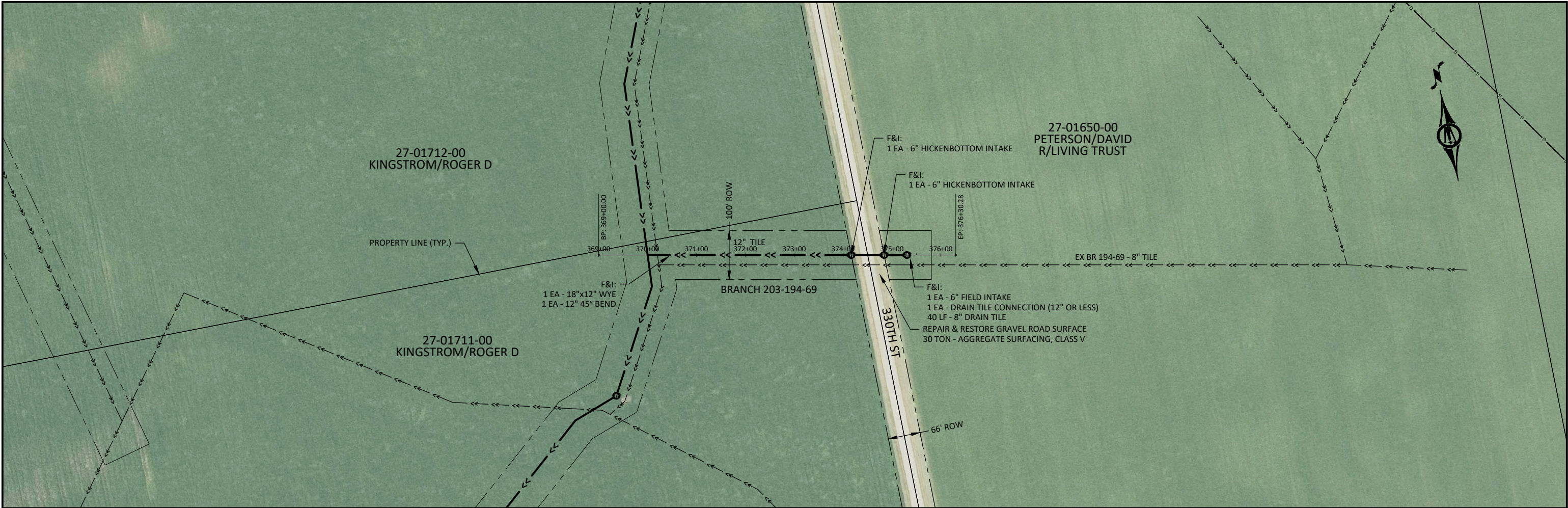


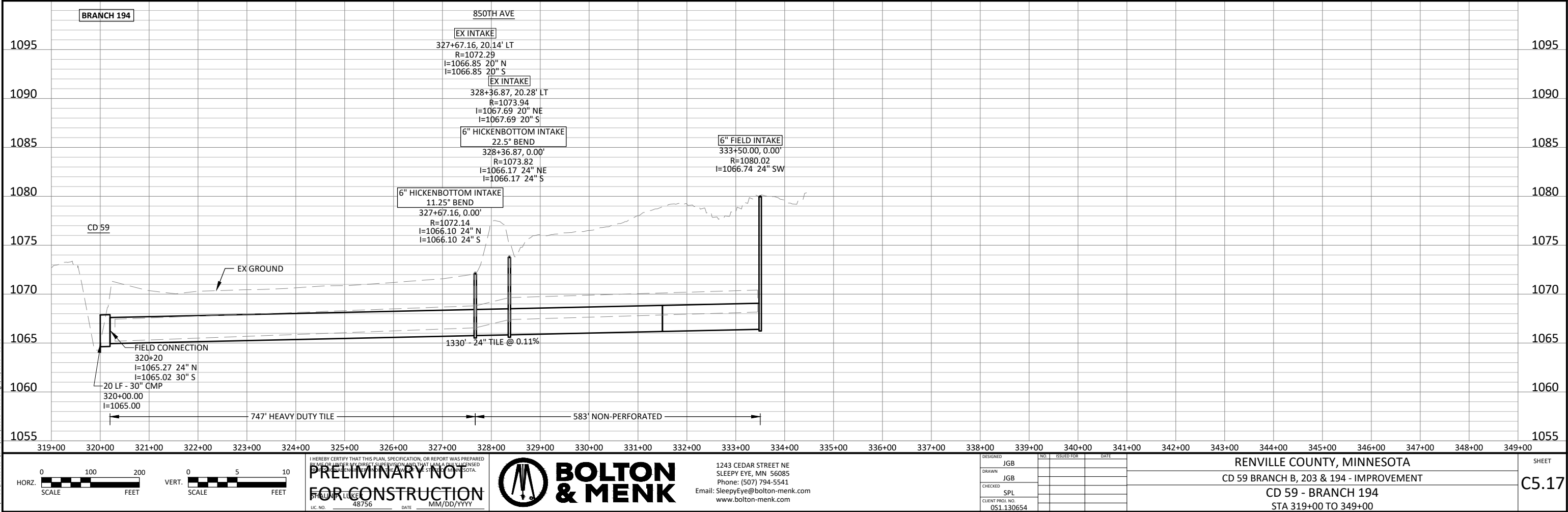
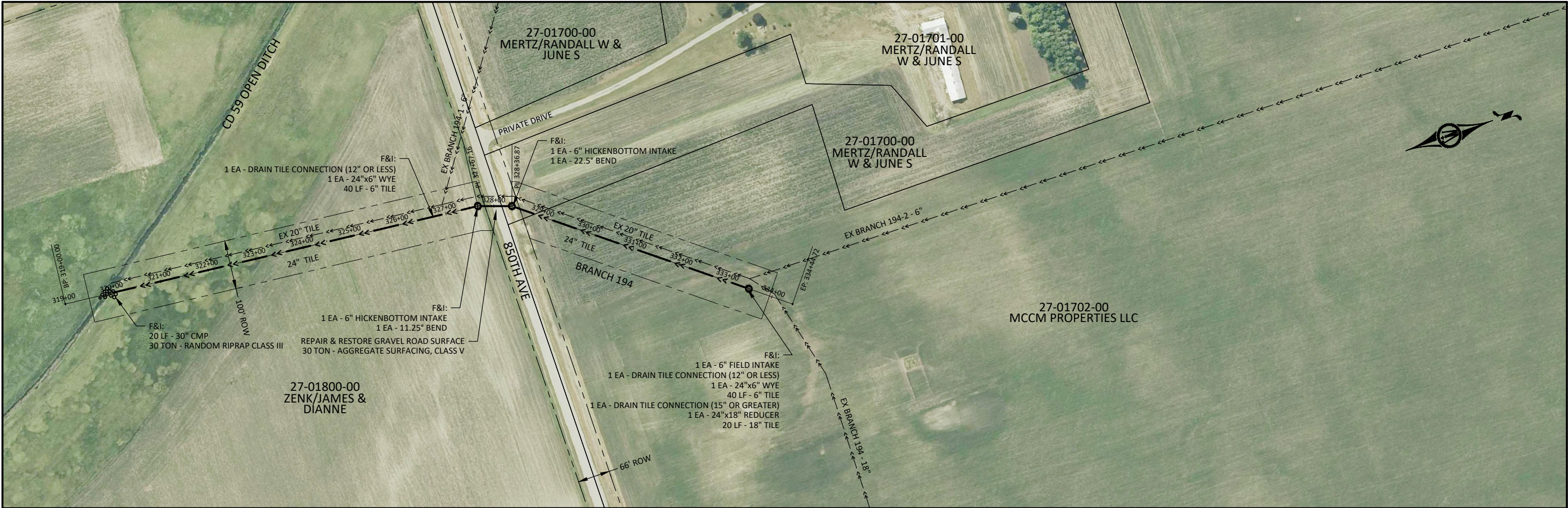
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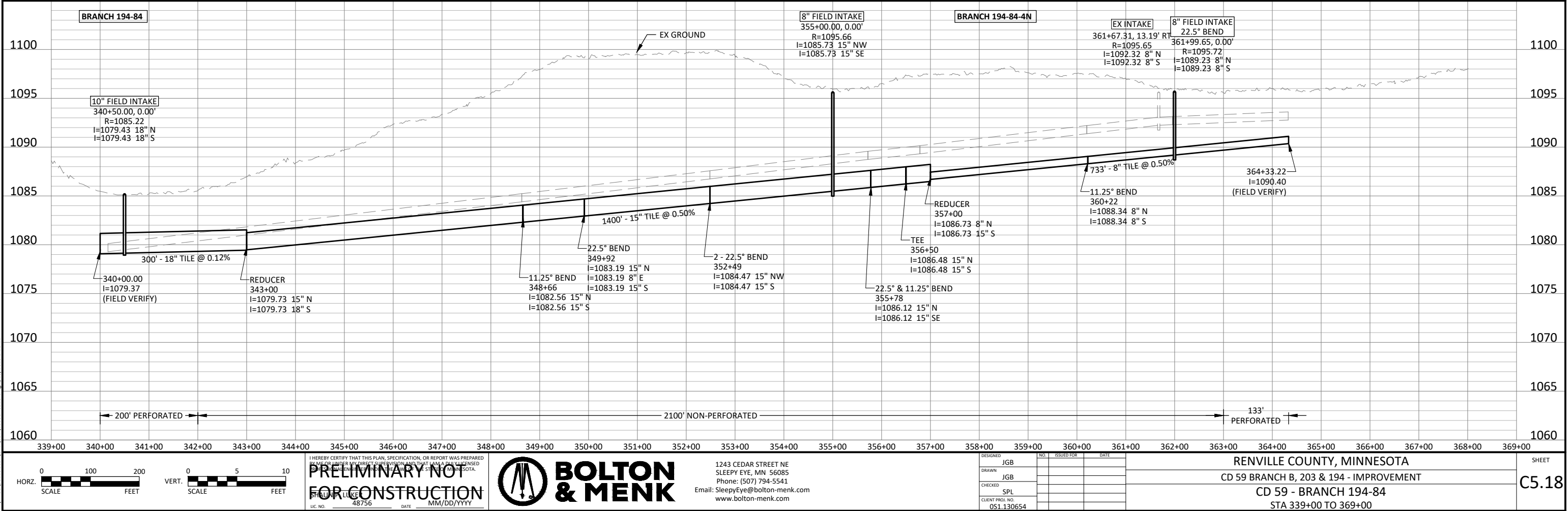
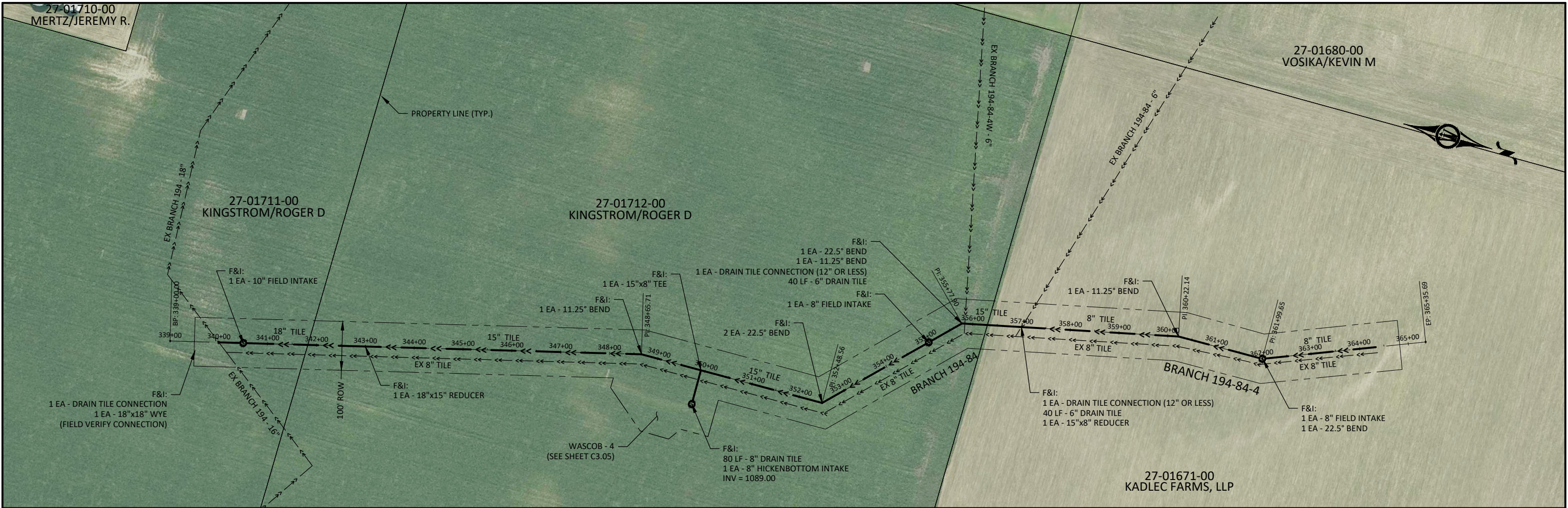
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CD 59 BRANCH 203-194
STA 307+00 TO 337+00

SHEET
C5.14

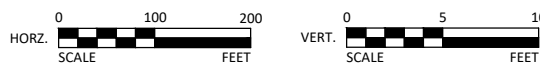




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RENNVILLE COUNTY, MINNESOTA
CD 59 BRANCH B, 203 & 194 - IMPROVEMENT
CD 59 - BRANCH 194-84
STA 339+00 TO 369+00

SHEET
C5.18

EXHIBIT 2: PETITION FOR CD 59 IMPROVEMENT

GISLASON & HUNTER LLP
ATTORNEYS AT LAW

April 9, 2025

Dean M. Zimmerli
507-354-3111
dzimmerli@gislason.com

VIA E-MAIL AND US MAIL

Lisa.Meints@renvillecountymn.gov

Ms. Lisa Meints
Renville County Auditor
500 E Depue Ave
Olivia, MN 56277

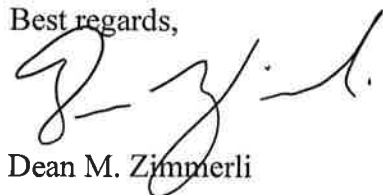
Re: Renville County Ditch 59 Branch B Improvement
Our File No. 35240-1

Dear Ms. Meints:

In consultation with Bolton & Menk, the project engineer appointed for the CD 59 Branch B improvement petition, the petitioners desire to amend their petition to accomplish a more cost-effective and efficient project. Accordingly, enclosed herein please find an Amended Petition for Improvement of Renville County Ditch 59, which the petitioners desire to supersede the petition they previously filed. The amended petition is signed by a majority of the petitioners who subscribed to the original petition, who also represent more than 26% of the land passed over by the proposed amended project.

I would ask that the drainage authority's attorney review the petition to determine it is sufficient and present the petition to the drainage authority for consideration at the soonest available opportunity.

Best regards,



Dean M. Zimmerli

DMZ:JH

cc: Kale Van Bruggen (via e-mail)
Seth Sparks (via e-mail)
Dave Kadlec (via e-mail)
Roger Kingstrom (via e-mail)

4926-5614-4948

**AMENDED PETITION FOR
IMPROVEMENT OF DRAINAGE SYSTEM
RENVILLE COUNTY DITCH NO. 59**

TO: THE RENVILLE COUNTY BOARD OF COMMISSIONERS, ACTING AS THE
DRAINAGE AUTHORITY FOR RENVILLE COUNTY DITCH NO. 59

Petitioners respectfully represent, state and request the following:

1. Designation of Drainage System.

This Petition requests the completion of a drainage project consisting of improvements to the drainage system designated as County Ditch No. 59 ("CD 59") located in Renville County, Minnesota. This Petition amends that Petition for Improvement of County Ditch 59 Branch B filed with the Renville County Auditor on or about January 15, 2024.

2. Necessity for Drainage Project.

The existing drainage system has insufficient capacity or needs enlarging or extending to furnish sufficient capacity or a better outlet. Minn. Stat. § 103E.215, Subd. 4(c)(2). The proposed improvements are necessary to prevent flooding, erosion, and adverse effects on agricultural land.

The drainage system is out of repair and the drainage project petitioned for herein is for a separable portion of the drainage system. Therefore, a portion of the cost may be assessed as a repair. Minn. Stat. § 103E.215, Subd. 6.

3. Description of Proposed Improvement.

The proposed drainage project would consist of improving CD 59 Branch B along its entire length, together with lateral branches thereof; CD 59 Branch 203 along its entire length, together with lateral branch thereof; CD 59 Branch from its outlet to a point immediately east of 330th Street, together with lateral branches thereof. This proposed project would involve enlarging some tile lines and rerouting other lines to create a more efficient and effective drainage system, as well as installing storage ponds to provide for additional capacity and water quality benefits.

The location of the proposed improvements, subject to any alterations deemed prudent or necessary by the project engineer, are depicted on the map attached hereto as **Exhibit A** and are located in Troy and Winfield Townships in Renville County. Portions of the drainage system proposed to be improved are highlighted in White on Exhibit A, and proposed pond sizes and locations are depicted on Exhibit A.

The Branch B Tile Line, Branch 203 Tile Line, and Branch 194 Tile Line all consist of buried tile. The Branch B Tile Line, Branch 203 Tile Line, and Branch 194 Tile Line would all be enlarged and their capacity increased to meet the NRCS recommended standard ½ inch per day drainage coefficient. The improvement to the Branch B Tile Line, Branch 203 Tile Line, and

Branch 194 Tile Line would be improved along where necessary to meet a ½ inch per day drainage coefficient.

If deemed prudent and practical by the Engineer, additional or different water storage ponds or other features may be included in the project design to improve water quality, reduce erosion, or increase capacity.

4. **Jurisdiction.**

The undersigned Petitioners constitute: (1) at least 26% of the owners of the property affected by the proposed improvements; (2) at least 26% of the owners of property that the proposed improvements pass over; (3) the owners of at least 26% of the property area affected by the proposed improvements; or (4) the owners of at least 26% of the property area that the proposed improvements pass over. Minn. Stat. § 103E.215, Subd. 4(a).

Pursuant to Minn. Stat. § 103E.215, Subd. 4(c)(4), set forth below is a list of the 40-acre tracts or government lots that the proposed improvements would pass over, together with the names and addresses of the owners of those tracts; to-wit:

	Owner	Address	PID	Description	Sec	Twp	Rge	County
1	Lee & Katherine Potzler Trust	2017 Northshore Dr. Bellingham, WA 98226	27-01651-00	NE ¼ SW ¼	25	116N	35W	Renville
2	Lee & Katherine Potzler Trust	2017 Northshore Dr. Bellingham, WA 98226	27-01651-00	SE ¼ SW ¼	25	116N	35W	Renville
3	Mahlum Family Trust	805 Main St. S. Chatfield, MN 55923	27-01640-00	NW ¼ SE ¼	25	116N	35W	Renville
4	David & Elizabeth Kadlec Trust	88111 330 th Street Olivia, MN 56277	27-01790-00	NE ¼ NE ¼	35	116N	35W	Renville
5	David & Elizabeth Kadlec Trust	88111 330 th Street Olivia, MN 56277	27-01791-00	SE ¼ NE ¼	35	116N	35W	Renville
6	David & Elizabeth Kadlec Trust	88111 330 th Street Olivia, MN 56277	27-01791-00	NE ¼ SE ¼	35	116N	35W	Renville
7	David & Elizabeth Kadlec Trust	88111 330 th Street Olivia, MN 56277	27-01870-00	NW ¼ SW ¼	36	116N	35W	Renville
8	Hartung Partnership	c/o Don Hartung 14941 State Hwy 4 Cosmos, MN 56228	27-01850-00	NW ¼ NW ¼	36	116 N	35W	Renville
9	Roger Kingstrom	33493 850 th Ave Olivia, MN 56277	27-01860-00	NE ¼ NW ¼	36	116N	35W	Renville
10	Roger Kingstrom	33493 850 th Ave Olivia, MN 56277	27-01840-00	NW ¼ NE ¼	36	116N	35W	Renville

	Owner	Address	PID	Description	Sec	Twp	Rge	County
11	Roger Kingstrom	33493 850 th Ave Olivia, MN 56277	27-01840-00	NE ¼ NE ¼	36	116 N	35W	Renville
12	Roger Kingstrom	33493 850 th Ave Olivia, MN 56277	27-18040-00	SE ¼ NE ¼	36	116N	35W	Renville
13	Roger Kingstrom	33493 850 th Ave Olivia, MN 56277	27-01711-00	SW ¼ SE ¼	26	116N	35W	Renville
14	Roger Kingstrom	33493 850 th Ave Olivia, MN 56277	27-01711-00	SE ¼ SE ¼	26	116N	35W	Renville
15	Roger Kingstrom	33493 850 th Ave Olivia, MN 56277	27-01712-00	NW ¼ SE ¼	26	116N	35W	Renville
16	Roger Kingstrom	33493 850 th Ave Olivia, MN 56277	27-01712-00	NE ¼ SE ¼	26	116N	35W	Renville
17	James & Dianne Zenk	501 10 th St N Olivia, MN 56277	27-01800-00	SE ¼ NW ¼	35	116 N	35W	Renville
18	James & Dianne Zenk	501 10 th Street North Olivia, MN 56277	27-01800-00	NW ¼ NW ¼	35	116N	35W	Renville
19	James & Dianne Zenk	501 10 th Street North Olivia, MN 56277	27-01800-00	SW ¼ NW ¼	35	116N	35W	Renville
20	Kenneth Tellers Family Trust	504 Adams Circle Cologne, MN 55322	27-01801-00	SW ¼ NE ¼	35	116N	35W	Renville
21	Kenneth Tellers Family Trust	504 Adams Circle Cologne, MN 55322	27-01801-00	NW ¼ NE ¼	35	116N	35W	Renville
22	Robb & Megan Zenk	84691 US Hwy 71 Danube, MN 56230	27-01770-00	NE ¼ SE ¼	34	116N	35W	Renville
23	Karen Steffel	34636 880 th Ave Olivia, MN 56277	27-01820-00	NW ¼ SW ¼	35	116N	35W	Renville
24	Karen Steffel	34636 880 th Ave Olivia, MN 56277	27-01820-00	NE ¼ SW ¼	35	116N	35W	Renville
25	Paul Erickson	82698 330 th Street Olivia, MN 56277	27-01810-00	NW ¼ SE ¼	35	116N	35W	Renville
26	Randall & June Mertz	32118 850 th Ave Olivia, MN 56277	27-01700-00	SW ¼ SW ¼	26	116N	35W	Renville
27	MCCM Properties LLC	44291 Kandi-Renville Line SE Hector, MN 55342	27-01702-00	SW ¼ SW ¼	26	116N	35W	Renville
28	MCCM Properties LLC	44291 Kandi-Renville Line SE Hector, MN 55342	27-01702-00	SE ¼ SW ¼	26	116N	35W	Renville
29	Kadlec Farms, LLP	88111 330 th Street Olivia, MN 56277	27-01671-00	SW ¼ NE ¼	26	116N	35W	Renville

	Owner	Address	PID	Description	Sec	Twp	Rge	County
30	Jamie L. Kubesh Living Trust	35104 County Rd. 11 Olivia, MN 56277	27-01650-00	NW ¼ SW ¼	25	116N	35W	Renville

5. Public Utility and Health.

The proposed improvements will be of public benefit and utility because they will (1) protect property and roads from overflow and flooding and (2) render property suitable for cultivation. Minn. Stat. § 103E.215, Subd. 4(c)(5); Minn. Stat. § 103E.005, Subd. 27. Further, the proposed improvements will promote the public health because they will (1) improve the general sanitary condition of property by drainage and (2) prevent overflow that produces or tends to produce unhealthful conditions on agricultural land. Minn. Stat. § 103E.215, Subd. 4(c)(5); Minn. Stat. § 103E.005, Subd. 25.

6. Agreement by Petitioners.

The undersigned Petitioners have been informed and understand that they may not withdraw as a petitioner at any time after this Petition is accepted by the drainage authority, except with the written consent of all other Petitioners on the filed Petition. Also, the undersigned Petitioners acknowledge and agree that they will pay all costs and expenses that may be incurred if the proceedings for this drainage project are dismissed. Minn. Stat. § 103E.215, Subd. 4(c)(6).

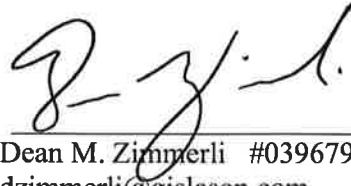
7. Cost Bond.

One or more petitioners shall cause a bond to be filed or a check to be delivered in the amount of at least \$10,000.00 payable to the drainage authority. Minn. Stat. § 103E.202, Subd. 5. The bond or payment will be conditioned to pay the costs incurred if the proceedings are dismissed or if a contract is not awarded to construct the proposed improvements described in the petition. *Id.*

WHEREFORE, the Petitioners respectfully request the following:

- a. That the drainage authority accepts this Petition, review it and determine that it is legally adequate;
- b. That the drainage authority directs the engineer previously appointed for the prior Petition for Improvement of County Ditch 59 Branch B amended hereinto evaluate the proposed drainage project and direct the engineer to update and prepare an engineer's preliminary report for the proposed drainage project as amended, including allowing the engineer to analyze other potential routes for the proposed improvements and whether separable maintenance may be employed. Petitioners request Shaun Luker and Bolton & Menk be appointed as project engineer; and
- c. That the proposed improvements be established and constructed as part of the CD 59 drainage system.

Dated: April 9th, 2025



Dean M. Zimmerli #0396791
dzimmerli@gislason.com
GISLASON & HUNTER LLP
Attorneys for Petitioners
2700 South Broadway
P. O. Box 458
New Ulm, MN 56073-0458
Phone: 507-354-3111

[Signature pages to follow]

SIGNATURE PAGES FOR
AMENDED PETITION FOR NEW DRAINAGE PROJECT:
IMPROVEMENT OF DRAINAGE SYSTEM
RENVILLE COUNTY DITCH NO. 59

Name of Petitioner(s) (please print or type):

Roger D. Kingstrom

Ownership (check one):

- ☒ Individual
☐ Co-Owners (# of co-owners: _____)
☐ Partner (name of partnership: _____)
☐ Corporation or limited liability company (name of corporation or LLC: _____)
☐ Trust (complete name of trust: _____)
☐ Other (explanation: _____)

Statement of Authority:

The undersigned states and represents that if he or she is executing in a representative capacity, he or she has the authority to execute on behalf of the respective partnership, corporation, limited liability company, trust or other such entity.

The above-named Petitioner(s) owns the following tract(s) which the proposed improvement will pass over or which is affected by the proposed improvement.

Tract Description	Section	Township	Range	County
SW 1/4 SE 1/4	26	116N	35W	Renville
SE 1/4 SE 1/4	26	116N	35W	Renville
NW 1/4 SE 1/4	26	116N	35W	Renville
NE 1/4 SE 1/4	26	116N	35W	Renville

Dated:

4-7-25

Roger D. Kingstrom
(signature)

Dated: _____

(signature)

Dated: _____

(signature)

SIGNATURE PAGES FOR
AMENDED PETITION FOR NEW DRAINAGE PROJECT:
IMPROVEMENT OF DRAINAGE SYSTEM
RENVILLE COUNTY DITCH NO. 59

Name of Petitioner(s) (please print or type):

Roger D. Kings from

Ownership (check one):

☒ Individual
☐ Co-Owners (# of co-owners: _____)
☐ Partner (name of partnership: _____)
☐ Corporation or limited liability company (name of corporation or LLC: _____)
☐ Trust (complete name of trust: _____)
☐ Other (explanation: _____)

Statement of Authority:

The undersigned states and represents that if he or she is executing in a representative capacity, he or she has the authority to execute on behalf of the respective partnership, corporation, limited liability company, trust or other such entity.

The above-named Petitioner(s) owns the following tract(s) which the proposed improvement will pass over or which is affected by the proposed improvement.

Tract Description	Section	Township	Range	County
<u>NE 1/4 NW 1/4</u>	<u>36</u>	<u>116N</u>	<u>35W</u>	<u>Renville</u>
<u>NW 1/4 NE 1/4</u>	<u>36</u>	<u>116N</u>	<u>35W</u>	<u>Renville</u>
<u>NE 1/4 NE 1/4</u>	<u>36</u>	<u>116N</u>	<u>35W</u>	<u>Renville</u>
<u>SE 1/4 NE 1/4</u>	<u>36</u>	<u>116N</u>	<u>35W</u>	<u>Renville</u>

Dated:

4-7-25

(signature)

Roger D. Kings from

Dated: _____

(signature)

Dated: _____

(signature)

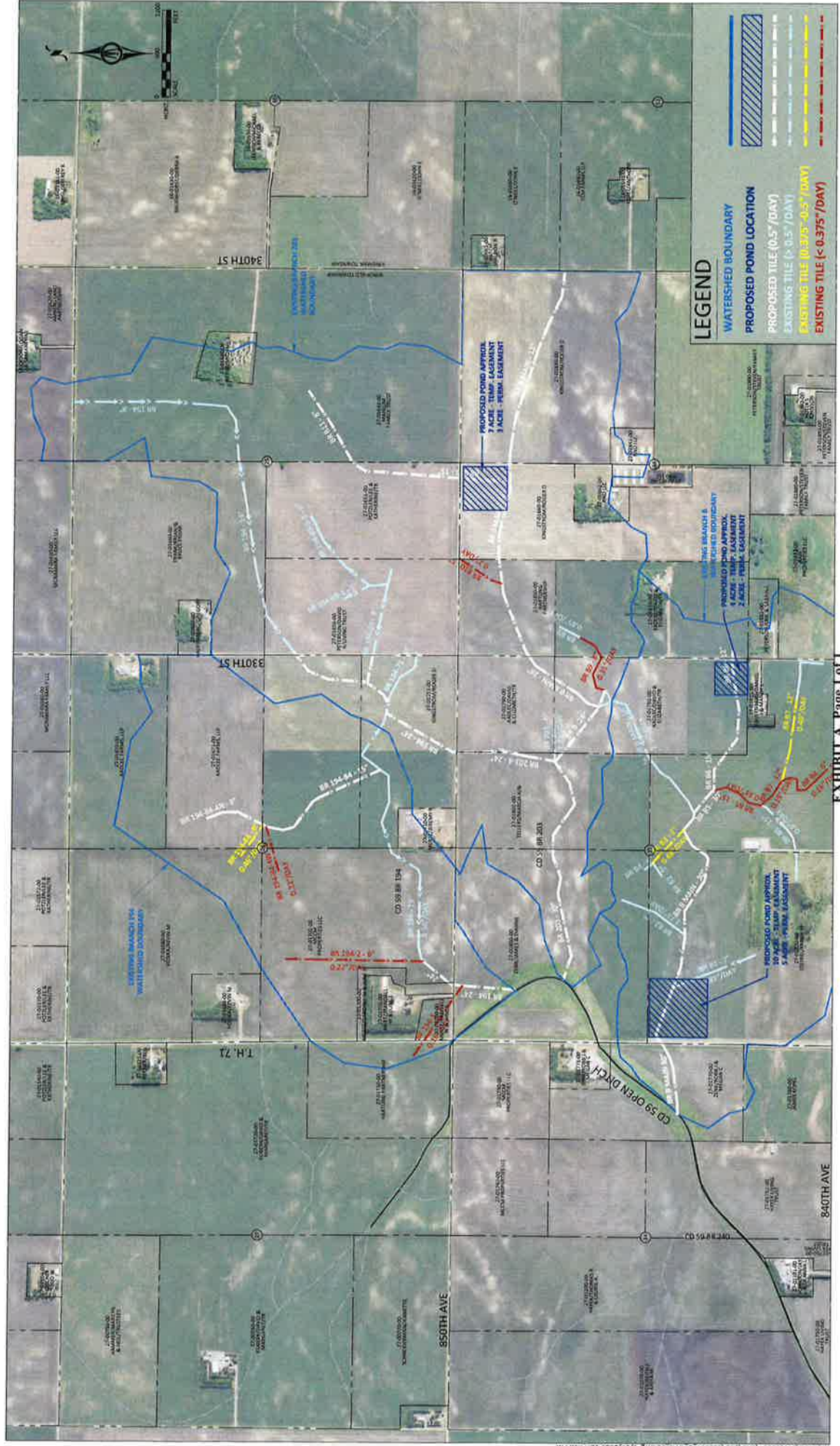


EXHIBIT 3: ENGINEER'S ESTIMATE

ENGINEER'S ESTIMATE

COUNTY DITCH #59 BRANCH B IMPROVEMENTS

RENNVILLE COUNTY

BMI PROJECT NO: 051.130654



Real People. Real Solutions.

Date: 6/25/2026

Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount
BASE BID					
1	Mobilization	1	Lump Sum	\$45,000.00	\$45,000.00
2	Aggregate Surfacing, Class 5	240	Ton	\$30.00	\$7,200.00
3	Exploratory Excavation	176	Hour	\$225.00	\$39,600.00
4	Common Excavation, P (CV)	15400	Cubic Yard	\$4.00	\$61,600.00
5	Common Embankment, (CV)	15400	Cubic Yard	\$5.00	\$77,000.00
6	Drain Tile Connection (12" or Less)	148	Each	\$500.00	\$74,000.00
7	Drain Tile Connection (15" or Greater)	5	Each	\$1,000.00	\$5,000.00
8	6" Field Intake	15	Each	\$800.00	\$12,000.00
9	6" Hickenbottom Intake	14	Each	\$1,000.00	\$14,000.00
10	8" Field Intake	6	Each	\$1,250.00	\$7,500.00
11	8" Hickenbottom Intake	5	Each	\$1,400.00	\$7,000.00
12	10" Field Intake	2	Each	\$1,500.00	\$3,000.00
13	12" Field Intake	1	Each	\$1,750.00	\$1,750.00
14	12" Hickenbottom Intake	4	Each	\$2,000.00	\$8,000.00
15	Granular Foundation Rock	30910	Linear Foot	\$5.00	\$154,550.00
16	Trench Foundation Rock	2570	Ton	\$35.00	\$89,950.00
17	6" Drain Tile, Non-Perforated	300	Linear Foot	\$20.00	\$6,000.00
18	8" Drain Tile, Non-Perforated	2420	Linear Foot	\$24.00	\$58,080.00
19	8" Drain Tile, Perforated	140	Linear Foot	\$24.00	\$3,360.00
20	10" Drain Tile, Non-Perforated	1420	Linear Foot	\$26.00	\$36,920.00
21	12" Drain Tile, Non-Perforated	1400	Linear Foot	\$28.00	\$39,200.00
22	12" Drain Tile, Perforated	860	Linear Foot	\$28.00	\$24,080.00
23	15" Drain Tile, Non-Perforated	5550	Linear Foot	\$32.00	\$177,600.00
24	15" Drain Tile, Perforated	740	Linear Foot	\$32.00	\$23,680.00
25	18" Drain Tile, Non-Perforated	640	Linear Foot	\$38.00	\$24,320.00
26	18" Drain Tile, Perforated	500	Linear Foot	\$38.00	\$19,000.00
27	24" Drain Tile, Non-Perforated	6880	Linear Foot	\$44.00	\$302,720.00
28	24" Drain Tile, Perforated	1000	Linear Foot	\$44.00	\$44,000.00
29	24" Drain Tile, Heavy Duty	760	Linear Foot	\$90.00	\$68,400.00
30	30" Drain Tile, Non-Perforated	6160	Linear Foot	\$58.00	\$357,280.00
31	30" Drain Tile, Heavy Duty	2280	Linear Foot	\$120.00	\$273,600.00
32	30" Trenchless Drain Tile	140	Linear Foot	\$500.00	\$70,000.00
33	30" Alumanized CM Pipe Culvert	20	Linear Foot	\$150.00	\$3,000.00
34	36" Alumanized CM Pipe Culvert	40	Linear Foot	\$180.00	\$7,200.00
35	Random Riprap, Class III	90	Ton	\$115.00	\$10,350.00
36	Inlet Protection	48	Each	\$150.00	\$7,200.00
37	Mulch Material, Type 1	161	Ton	\$275.00	\$44,275.00
38	Rapid Stabilization Method 4	5800	Square Yard	\$3.50	\$20,300.00
39	Rapid Stabilization Method 3	1.2	Acre	\$1,500.00	\$1,800.00
40	Permanent Seeding 1	1.9	Acre	\$2,750.00	\$5,225.00
41	Permanent Seeding 2	2.3	Acre	\$3,500.00	\$8,050.00
42	Stabilized Construction Exit	1	Lump Sum	\$2,500.00	\$2,500.00
SUBTOTAL:					\$2,245,290.00
20% CONTINGENCY:					\$449,140.00
TEMPORARY CROP DAMAGES (TILE):					\$41,034.00
TEMPORARY CROP DAMAGES (GRADING):					\$16,944.00
PERMANENT EASEMENT					\$55,360.00
TOTAL ESTIMATED CONSTRUCTION COST:					\$2,807,768.00
DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:					\$561,410.00
TOTAL ESTIMATED PROJECT COST:					\$3,369,178.00

ENGINEER'S ESTIMATE

COUNTY DITCH #59 BRANCH B IMPROVEMENTS
RENVILLE COUNTY
BMI PROJECT NO: OS1.130654



Real People. Real Solutions.

Date: 6/30/2026

Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount	BRANCH B MAIN		BRANCH B5		BRANCH B6		BRANCH B6 (POND)		BRANCH B (WASCOB - 2)	
						Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price
BASE BID															
1	Mobilization	1.00	Lump Sum	\$45,000.00	\$45,000.00	0.24	\$10,800.00	0.02	\$900.00	0.01	\$450.00	0.06	\$2,700.00	0.01	\$450.00
2	Aggregate Surfacing, Class 5	240	Ton	\$30.00	\$7,200.00	0	\$0.00	0	\$0.00	30	\$900.00	0	\$0.00	0	\$0.00
3	Exploratory Excavation	176	Hour	\$225.00	\$39,600.00	26	\$5,850.00	2	\$450.00	5	\$1,125.00	0	\$0.00	0	\$0.00
4	Common Excavation, P (CV)	15,400	Cubic Yard	\$4.00	\$61,600.00	0	\$0.00	0	\$0.00	0	\$0.00	15,400	\$61,600.00	0	\$0.00
5	Common Embankment, (CV)	15,400	Cubic Yard	\$5.00	\$77,000.00	0	\$0.00	0	\$0.00	0	\$0.00	11,970	\$59,850.00	1,650	\$8,250.00
6	Drain Tile Connection (12" or Less)	148	Each	\$500.00	\$74,000.00	20	\$10,000.00	1	\$500.00	6	\$3,000.00	0	\$0.00	0	\$0.00
7	Drain Tile Connection (15" or Greater)	5	Each	\$1,000.00	\$5,000.00	1	\$1,000.00	1	\$1,000.00	0	\$0.00	0	\$0.00	0	\$0.00
8	6" Field Intake	15	Each	\$800.00	\$12,000.00	1	\$800.00	0	\$0.00	1	\$800.00	0	\$0.00	0	\$0.00
9	6" Hickenbottom Intake	14	Each	\$1,000.00	\$14,000.00	2	\$2,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
10	8" Field Intake	6	Each	\$1,250.00	\$7,500.00	1	\$1,250.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
11	8" Hickenbottom Intake	5	Each	\$1,400.00	\$7,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
12	10" Field Intake	2	Each	\$1,500.00	\$3,000.00	1	\$1,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
13	12" Field Intake	1	Each	\$1,750.00	\$1,750.00	1	\$1,750.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
14	12" Hickenbottom Intake	4	Each	\$2,000.00	\$8,000.00	0	\$0.00	0	\$0.00	1	\$2,000.00	1	\$2,000.00	1	\$2,000.00
15	Granular Foundation Rock	30910	Linear Foot	\$5.00	\$154,550.00	4540	\$22,700.00	340	\$1,700.00	1000	\$5,000.00	20	\$100.00	0	\$0.00
16	Trench Foundation Rock	2570	Ton	\$35.00	\$89,950.00	380	\$13,300.00	30	\$1,050.00	80	\$2,800.00	0	\$0.00	0	\$0.00
17	6" Drain Tile, Non-Perforated	300	Linear Foot	\$20.00	\$6,000.00	40	\$800.00	0	\$0.00	0	\$0.00	20	\$400.00	0	\$0.00
18	8" Drain Tile, Non-Perforated	2420	Linear Foot	\$24.00	\$58,080.00	60	\$1,440.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
19	8" Drain Tile, Perforated	140	Linear Foot	\$24.00	\$3,360.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
20	10" Drain Tile, Non-Perforated	1420	Linear Foot	\$26.00	\$36,920.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
21	12" Drain Tile, Non-Perforated	1400	Linear Foot	\$28.00	\$39,200.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
22	12" Drain Tile, Perforated	860	Linear Foot	\$28.00	\$24,080.00	0	\$0.00	0	\$0.00	200	\$5,600.00	0	\$0.00	0	\$0.00
23	15" Drain Tile, Non-Perforated	5550	Linear Foot	\$32.00	\$177,600.00	0	\$0.00	40	\$1,280.00	100	\$3,200.00	0	\$0.00	0	\$0.00
24	15" Drain Tile, Perforated	740	Linear Foot	\$32.00	\$23,680.00	0	\$0.00	0	\$0.00	700	\$22,400.00	0	\$0.00	0	\$0.00
25	18" Drain Tile, Non-Perforated	640	Linear Foot	\$38.00	\$24,320.00	40	\$1,520.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
26	18" Drain Tile, Perforated	500	Linear Foot	\$38.00	\$19,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
27	24" Drain Tile, Non-Perforated	6880	Linear Foot	\$44.00	\$302,720.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
28	24" Drain Tile, Perforated	1000	Linear Foot	\$44.00	\$44,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
29	24" Drain Tile, Heavy Duty	760	Linear Foot	\$90.00	\$68,400.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
30	30" Drain Tile, Non-Perforated	6160	Linear Foot	\$58.00	\$357,280.00	2440	\$141,520.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
31	30" Drain Tile, Heavy Duty	2280	Linear Foot	\$120.00	\$273,600.00	1980	\$237,600.00	300	\$36,000.00	0	\$0.00	0	\$0.00	0	\$0.00
32	30" Trenchless Drain Tile	140	Linear Foot	\$500.00	\$70,000.00	140	\$70,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
33	30" Aluminized CM Pipe Culvert	20	Linear Foot	\$150.00	\$3,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
34	36" Aluminized CM Pipe Culvert	40	Linear Foot	\$180.00	\$7,200.00	20	\$3,600.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
35	Random Riprap, Class III	90	Ton	\$115.00	\$10,350.00	30	\$3,450.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
36	Inlet Protection	48	Each	\$150.00	\$7,200.00	6	\$900.00	1	\$150.00	2	\$300.00	1	\$150.00	1	\$150.00
37	Mulch Material, Type 1	161	Ton	\$275.00	\$44,275.00	12	\$3,300.00	1	\$275.00	7	\$1,925.00	14	\$3,850.00	3	\$825.00
38	Rapid Stabilization Method 4	5800	Square Yard	\$3.50	\$20,300.00	1200	\$4,200.00	0	\$0.00	500	\$1,750.00	0	\$0.00	0	\$0.00
39	Rapid Stabilization Method 3	1.2	Acre	\$1,500.00	\$1,800.00	0	\$0.00	0	\$0.00	0	\$0.00	1.2	\$1,800.00	0	\$0.00
40	Permanent Seeding 1	1.9	Acre	\$2,750.00	\$5,225.00	0.7	\$1,925.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
41	Permanent Seeding 2	2.3	Acre	\$3,500.00	\$8,050.00	0	\$0.00	0	\$0.00	0	\$0.00	2.3	\$8,050.00	0	\$0.00
42	Stabilized Construction Exit	1.00	Lump Sum	\$2,500.00	\$2,500.00	0.24	\$600.00	0.02	\$50.00	0.01	\$25.00	0.06	\$150.00	0.01	\$25.00
ESTIMATED CONSTRUCTION SUBTOTAL:					\$2,245,290.00	\$541,805.00		\$43,355.00		\$51,275.00		\$140,650.00		\$11,700.00	
20% CONTINGENCY:					\$449,140.00	\$108,370.00		\$8,680.00		\$10,260.00		\$28,130.00		\$2,340.00	
TEMPORARY CROP DAMAGES (TILE):					68.39 Acres \$600.00 \$41,034.00	9.75	\$5,850.00	0.66	\$396.00	1.69	\$1,014.00	0.00	\$0.00	0.00	\$0.00
TEMPORARY CROP DAMAGES (GRADING):					14.12 Acres \$1,200.00 \$16,944.00	0.00	\$0.00	0.00	\$0.00	2.42	\$2,904.00	7.17	\$8,604.00	1.49	\$1,788.00
PERMANENT EASEMENT:					3.46 Acres \$16,000.00 \$55,360.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	3.46	\$55,360.00	0.00	\$0.00
TOTAL ESTIMATED CONSTRUCTION COST:					\$2,807,768.00	\$656,025.00		\$52,431.00		\$65,453.00		\$232,744.00		\$15,828.00	
DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:					\$561,410.00	\$131,180.00		\$10,460.00		\$13,070.00		\$46,520.00		\$3,140.00	
TOTAL ESTIMATED PROJECT COST:					\$3,369,178.00	\$787,205.00		\$62,891.00		\$78,523.00		\$279,264.00		\$18,968.00	

ENGINEER'S ESTIMATE

COUNTY DITCH #59 BRANCH B IMPROVEMENTS
RENVILLE COUNTY
BMI PROJECT NO: OS1.130654



Date: 6/30/2026

Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount	BRANCH B1-A (WASCOB - 1)		BRANCH 203		BRANCH 203-4		BRANCH B (203)		BRANCH B9 (203)		BRANCH B11 (203)	
						Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price
BASE BID																	
1	Mobilization	1.00	Lump Sum	\$45,000.00	\$45,000.00	0.01	\$450.00	0.11	\$4,950.00	0.02	\$900.00	0.16	\$7,200.00	0.05	\$2,250.00	0.07	\$3,150.00
2	Aggregate Surfacing, Class 5	240	Ton	\$30.00	\$7,200.00	0	\$0.00	0	\$0.00	0	\$0.00	60	\$1,800.00	0	\$0.00	30	\$900.00
3	Exploratory Excavation	176	Hour	\$225.00	\$39,600.00	3	\$675.00	20	\$4,500.00	4	\$900.00	35	\$7,875.00	10	\$2,250.00	20	\$4,500.00
4	Common Excavation, P (CV)	15,400	Cubic Yard	\$4.00	\$61,600.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
5	Common Embankment, (CV)	15,400	Cubic Yard	\$5.00	\$77,000.00	1,080	\$5,400.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
6	Drain Tile Connection (12" or Less)	148	Each	\$500.00	\$74,000.00	2	\$1,000.00	20	\$10,000.00	4	\$2,000.00	30	\$15,000.00	8	\$4,000.00	15	\$7,500.00
7	Drain Tile Connection (15" or Greater)	5	Each	\$1,000.00	\$5,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
8	6" Field Intake	15	Each	\$800.00	\$12,000.00	0	\$0.00	2	\$1,600.00	1	\$800.00	3	\$2,400.00	2	\$1,600.00	2	\$1,600.00
9	6" Hickenbottom Intake	14	Each	\$1,000.00	\$14,000.00	0	\$0.00	0	\$0.00	0	\$0.00	2	\$2,000.00	0	\$0.00	2	\$2,000.00
10	8" Field Intake	6	Each	\$1,250.00	\$7,500.00	0	\$0.00	0	\$0.00	0	\$0.00	1	\$1,250.00	0	\$0.00	2	\$2,500.00
11	8" Hickenbottom Intake	5	Each	\$1,400.00	\$7,000.00	2	\$2,800.00	0	\$0.00	0	\$0.00	1	\$1,400.00	0	\$0.00	0	\$0.00
12	10" Field Intake	2	Each	\$1,500.00	\$3,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
13	12" Field Intake	1	Each	\$1,750.00	\$1,750.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
14	12" Hickenbottom Intake	4	Each	\$2,000.00	\$8,000.00	0	\$0.00	0	\$0.00	0	\$0.00	1	\$2,000.00	0	\$0.00	0	\$0.00
15	Granular Foundation Rock	30910	Linear Foot	\$5.00	\$154,550.00	480	\$2,400.00	3240	\$16,200.00	620	\$3,100.00	6920	\$34,600.00	1640	\$8,200.00	3250	\$16,250.00
16	Trench Foundation Rock	2570	Ton	\$35.00	\$89,950.00	40	\$1,400.00	270	\$9,450.00	50	\$1,750.00	580	\$20,300.00	140	\$4,900.00	270	\$9,450.00
17	6" Drain Tile, Non-Perforated	300	Linear Foot	\$20.00	\$6,000.00	0	\$0.00	0	\$0.00	40	\$800.00	40	\$800.00	0	\$0.00	0	\$0.00
18	8" Drain Tile, Non-Perforated	2420	Linear Foot	\$24.00	\$58,080.00	0	\$0.00	0	\$0.00	0	\$0.00	940	\$22,560.00	0	\$0.00	0	\$0.00
19	8" Drain Tile, Perforated	140	Linear Foot	\$24.00	\$3,360.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
20	10" Drain Tile, Non-Perforated	1420	Linear Foot	\$26.00	\$36,920.00	480	\$12,480.00	0	\$0.00	0	\$0.00	0	\$0.00	200	\$5,200.00	740	\$19,240.00
21	12" Drain Tile, Non-Perforated	1400	Linear Foot	\$28.00	\$39,200.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	1400	\$39,200.00
22	12" Drain Tile, Perforated	860	Linear Foot	\$28.00	\$24,080.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	660	\$18,480.00
23	15" Drain Tile, Non-Perforated	5550	Linear Foot	\$32.00	\$177,600.00	0	\$0.00	0	\$0.00	0	\$0.00	2020	\$64,640.00	0	\$0.00	450	\$14,400.00
24	15" Drain Tile, Perforated	740	Linear Foot	\$32.00	\$23,680.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
25	18" Drain Tile, Non-Perforated	640	Linear Foot	\$38.00	\$24,320.00	0	\$0.00	0	\$0.00	0	\$0.00	280	\$10,640.00	0	\$0.00	0	\$0.00
26	18" Drain Tile, Perforated	500	Linear Foot	\$38.00	\$19,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
27	24" Drain Tile, Non-Perforated	6880	Linear Foot	\$44.00	\$302,720.00	0	\$0.00	0	\$0.00	620	\$27,280.00	3640	\$160,160.00	940	\$41,360.00	0	\$0.00
28	24" Drain Tile, Perforated	1000	Linear Foot	\$44.00	\$44,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
29	24" Drain Tile, Heavy Duty	760	Linear Foot	\$90.00	\$68,400.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
30	30" Drain Tile, Non-Perforated	6160	Linear Foot	\$58.00	\$357,280.00	0	\$0.00	3220	\$186,760.00	0	\$0.00	0	\$0.00	500	\$29,000.00	0	\$0.00
31	30" Drain Tile, Heavy Duty	2280	Linear Foot	\$120.00	\$273,600.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
32	30" Trenchless Drain Tile	140	Linear Foot	\$500.00	\$70,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
33	30" Aluminized CM Pipe Culvert	20	Linear Foot	\$150.00	\$3,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
34	36" Aluminized CM Pipe Culvert	40	Linear Foot	\$180.00	\$7,200.00	0	\$0.00	20	\$3,600.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
35	Random Riprap, Class III	90	Ton	\$115.00	\$10,350.00	0	\$0.00	30	\$3,450.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
36	Inlet Protection	48	Each	\$150.00	\$7,200.00	3	\$450.00	2	\$300.00	1	\$150.00	8	\$1,200.00	2	\$300.00	6	\$900.00
37	Mulch Material, Type 1	161	Ton	\$275.00	\$44,275.00	6	\$1,650.00	19	\$5,225.00	4	\$1,100.00	31	\$8,525.00	8	\$2,200.00	15	\$4,125.00
38	Rapid Stabilization Method 4	5800	Square Yard	\$3.50	\$20,300.00	0	\$0.00	0	\$0.00	0	\$0.00	1400	\$4,900.00	0	\$0.00	800	\$2,800.00
39	Rapid Stabilization Method 3	1.2	Acre	\$1,500.00	\$1,800.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
40	Permanent Seeding 1	1.9	Acre	\$2,750.00	\$5,225.00	0	\$0.00	0.5	\$1,375.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
41	Permanent Seeding 2	2.3	Acre	\$3,500.00	\$8,050.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
42	Stabilized Construction Exit	1.00	Lump Sum	\$2,500.00	\$2,500.00	0.01	\$25.00	0.11	\$275.00	0.02	\$50.00	0.16	\$400.00	0.05	\$125.00	0.07	\$175.00
ESTIMATED CONSTRUCTION SUBTOTAL:					\$2,245,290.00	\$28,730.00		\$247,685.00		\$38,830.00		\$369,650.00		\$101,385.00		\$147,170.00	
20% CONTINGENCY:					\$449,140.00	\$5,750.00		\$49,540.00		\$7,770.00		\$73,930.00		\$20,280.00		\$29,440.00	
TEMPORARY CROP DAMAGES (TILE):		68.39	Acres	\$600.00	\$41,034.00	1.13	\$678.00	7.51	\$4,506.00	1.85	\$1,110.00	15.43	\$9,258.00	4.05	\$2,430.00	7.21	\$4,326.00
TEMPORARY CROP DAMAGES (GRADING):		14.12	Acres	\$1,200.00	\$16,944.00	1.72	\$2,064.00	0.76	\$912.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00
PERMANENT EASEMENT:		3.46	Acres	\$16,000.00	\$55,360.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00
TOTAL ESTIMATED CONSTRUCTION COST:					\$2,807,768.00	\$37,222.00		\$302,643.00		\$47,710.00		\$452,838.00		\$124,095.00		\$180,936.00	
DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:					\$561,410.00	\$7,420.00		\$60,530.00		\$9,540.00		\$90,570.00		\$24,820.00		\$36,190.00	
TOTAL ESTIMATED PROJECT COST:					\$3,369,178.00	\$44,642.00		\$363,173.00		\$57,250.00		\$543,408.00		\$148,915.00		\$217,126.00	

ENGINEER'S ESTIMATE

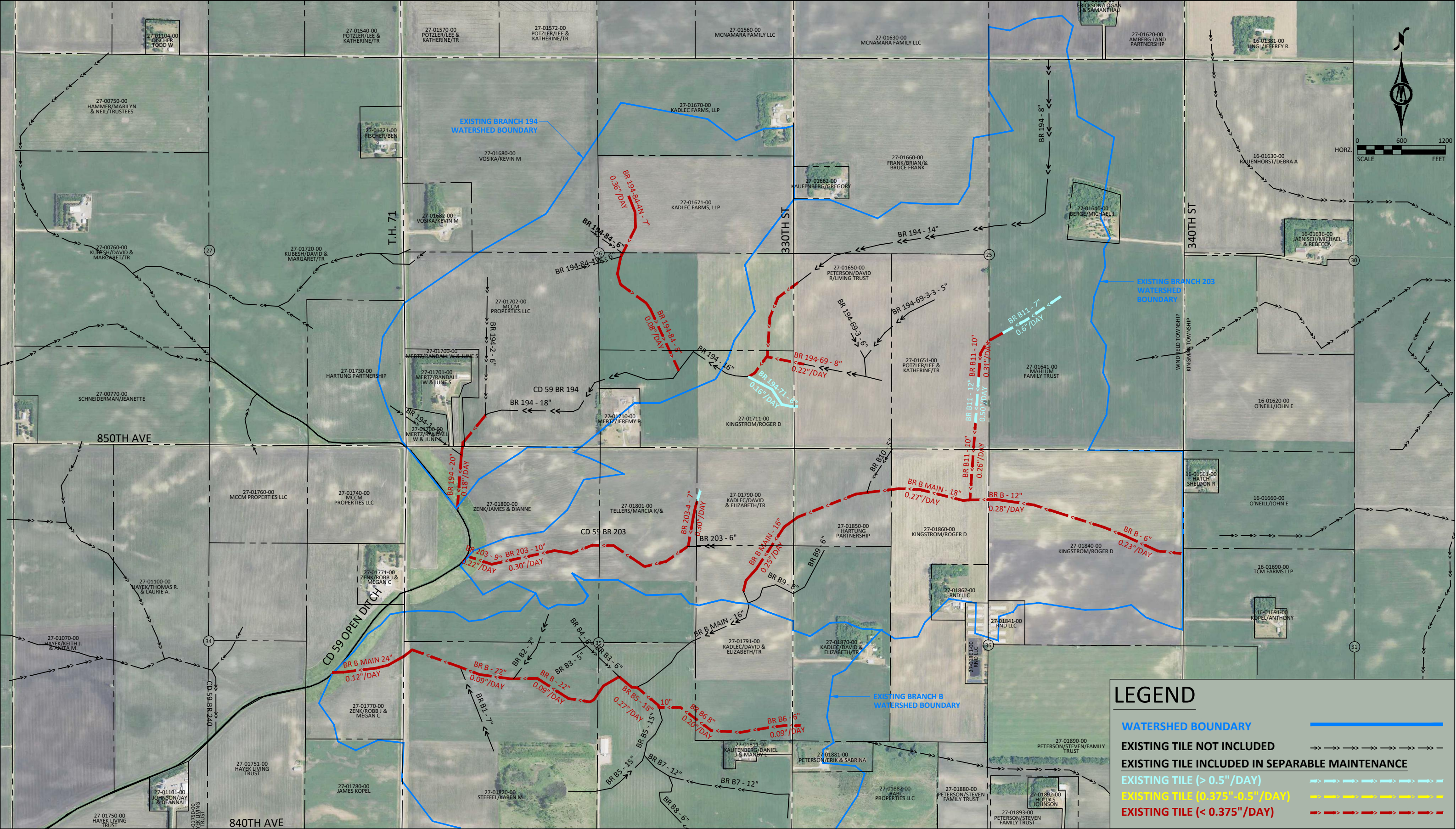
COUNTY DITCH #59 BRANCH B IMPROVEMENTS
RENVILLE COUNTY
BMI PROJECT NO: OS1.130654



Date: 6/30/2026

Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount	BRANCH 194 (203)		BRANCH 194-69 (203)		BRANCH 203-A (WASCOB - 3)		BRANCH 194		BRANCH 194-84		BRANCH 194-84 (WASCOB - 4)	
						Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price
BASE BID																	
1	Mobilization	1.00	Lump Sum	\$45,000.00	\$45,000.00	0.10	\$4,500.00	0.01	\$450.00	0.01	\$450.00	0.06	\$2,700.00	0.05	\$2,250.00	0.01	\$450.00
2	Aggregate Surfacing, Class 5	240	Ton	\$30.00	\$7,200.00	60	\$1,800.00	30	\$900.00	0	\$0.00	30	\$900.00	0	\$0.00	0	\$0.00
3	Exploratory Excavation	176	Hour	\$225.00	\$39,600.00	20	\$4,500.00	3	\$675.00	4	\$900.00	10	\$2,250.00	14	\$3,150.00	0	\$0.00
4	Common Excavation, P (CV)	15,400	Cubic Yard	\$4.00	\$61,600.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
5	Common Embankment, (CV)	15,400	Cubic Yard	\$5.00	\$77,000.00	0	\$0.00	0	\$0.00	550	\$2,750.00	0	\$0.00	0	\$0.00	150	\$750.00
6	Drain Tile Connection (12" or Less)	148	Each	\$500.00	\$74,000.00	15	\$7,500.00	2	\$1,000.00	2	\$1,000.00	8	\$4,000.00	15	\$7,500.00	0	\$0.00
7	Drain Tile Connection (15" or Greater)	5	Each	\$1,000.00	\$5,000.00	2	\$2,000.00	0	\$0.00	0	\$0.00	1	\$1,000.00	0	\$0.00	0	\$0.00
8	6" Field Intake	15	Each	\$800.00	\$12,000.00	1	\$800.00	1	\$800.00	0	\$0.00	1	\$800.00	0	\$0.00	0	\$0.00
9	6" Hickenbottom Intake	14	Each	\$1,000.00	\$14,000.00	4	\$4,000.00	2	\$2,000.00	0	\$0.00	2	\$2,000.00	0	\$0.00	0	\$0.00
10	8" Field Intake	6	Each	\$1,250.00	\$7,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	2	\$2,500.00	0	\$0.00
11	8" Hickenbottom Intake	5	Each	\$1,400.00	\$7,000.00	0	\$0.00	0	\$0.00	1	\$1,400.00	0	\$0.00	0	\$0.00	1	\$1,400.00
12	10" Field Intake	2	Each	\$1,500.00	\$3,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	1	\$1,500.00	0	\$0.00
13	12" Field Intake	1	Each	\$1,750.00	\$1,750.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
14	12" Hickenbottom Intake	4	Each	\$2,000.00	\$8,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
15	Granular Foundation Rock	30910	Linear Foot	\$5.00	\$154,550.00	3640	\$18,200.00	500	\$2,500.00	640	\$3,200.00	1460	\$7,300.00	2620	\$13,100.00	0	\$0.00
16	Trench Foundation Rock	2570	Ton	\$35.00	\$89,950.00	300	\$10,500.00	40	\$1,400.00	50	\$1,750.00	120	\$4,200.00	220	\$7,700.00	0	\$0.00
17	6" Drain Tile, Non-Perforated	300	Linear Foot	\$20.00	\$6,000.00	0	\$0.00	0	\$0.00	0	\$0.00	80	\$1,600.00	80	\$1,600.00	0	\$0.00
18	8" Drain Tile, Non-Perforated	2420	Linear Foot	\$24.00	\$58,080.00	0	\$0.00	0	\$0.00	640	\$15,360.00	0	\$0.00	700	\$16,800.00	80	\$1,920.00
19	8" Drain Tile, Perforated	140	Linear Foot	\$24.00	\$3,360.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	140	\$3,360.00	0	\$0.00
20	10" Drain Tile, Non-Perforated	1420	Linear Foot	\$26.00	\$36,920.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
21	12" Drain Tile, Non-Perforated	1400	Linear Foot	\$28.00	\$39,200.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
22	12" Drain Tile, Perforated	860	Linear Foot	\$28.00	\$24,080.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
23	15" Drain Tile, Non-Perforated	5550	Linear Foot	\$32.00	\$177,600.00	1000	\$32,000.00	540	\$17,280.00	0	\$0.00	0	\$0.00	1400	\$44,800.00	0	\$0.00
24	15" Drain Tile, Perforated	740	Linear Foot	\$32.00	\$23,680.00	40	\$1,280.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
25	18" Drain Tile, Non-Perforated	640	Linear Foot	\$38.00	\$24,320.00	200	\$7,600.00	0	\$0.00	0	\$0.00	20	\$760.00	100	\$3,800.00	0	\$0.00
26	18" Drain Tile, Perforated	500	Linear Foot	\$38.00	\$19,000.00	300	\$11,400.00	0	\$0.00	0	\$0.00	0	\$0.00	200	\$7,600.00	0	\$0.00
27	24" Drain Tile, Non-Perforated	6880	Linear Foot	\$44.00	\$302,720.00	1100	\$48,400.00	0	\$0.00	0	\$0.00	580	\$25,520.00	0	\$0.00	0	\$0.00
28	24" Drain Tile, Perforated	1000	Linear Foot	\$44.00	\$44,000.00	1000	\$44,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
29	24" Drain Tile, Heavy Duty	760	Linear Foot	\$90.00	\$68,400.00	0	\$0.00	0	\$0.00	0	\$0.00	760	\$68,400.00	0	\$0.00	0	\$0.00
30	30" Drain Tile, Non-Perforated	6160	Linear Foot	\$58.00	\$357,280.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
31	30" Drain Tile, Heavy Duty	2280	Linear Foot	\$120.00	\$273,600.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
32	30" Trenchless Drain Tile	140	Linear Foot	\$500.00	\$70,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
33	30" Aluminized CM Pipe Culvert	20	Linear Foot	\$150.00	\$3,000.00	0	\$0.00	0	\$0.00	0	\$0.00	20	\$3,000.00	0	\$0.00	0	\$0.00
34	36" Aluminized CM Pipe Culvert	40	Linear Foot	\$180.00	\$7,200.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
35	Random Riprap, Class III	90	Ton	\$115.00	\$10,350.00	0	\$0.00	0	\$0.00	0	\$0.00	30	\$3,450.00	0	\$0.00	0	\$0.00
36	Inlet Protection	48	Each	\$150.00	\$7,200.00	5	\$750.00	3	\$450.00	1	\$150.00	3	\$450.00	3	\$450.00	0	\$0.00
37	Mulch Material, Type 1	161	Ton	\$275.00	\$44,275.00	15	\$4,125.00	2	\$550.00	3	\$825.00	7	\$1,925.00	13	\$3,575.00	1	\$275.00
38	Rapid Stabilization Method 4	5800	Square Yard	\$3.50	\$20,300.00	900	\$3,150.00	460	\$1,610.00	0	\$0.00	540	\$1,890.00	0	\$0.00	0	\$0.00
39	Rapid Stabilization Method 3	1.2	Acre	\$1,500.00	\$1,800.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
40	Permanent Seeding 1	1.9	Acre	\$2,750.00	\$5,225.00	0	\$0.00	0	\$0.00	0	\$0.00	0.7	\$1,925.00	0	\$0.00	0	\$0.00
41	Permanent Seeding 2	2.3	Acre	\$3,500.00	\$8,050.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
42	Stabilized Construction Exit	1.00	Lump Sum	\$2,500.00	\$2,500.00	0.10	\$250.00	0.01	\$25.00	0.01	\$25.00	0.06	\$150.00	0.05	\$125.00	0.01	\$25.00
ESTIMATED CONSTRUCTION SUBTOTAL:					\$2,245,290.00	\$206,755.00		\$29,640.00		\$27,810.00		\$134,220.00		\$119,810.00		\$4,820.00	
20% CONTINGENCY:					\$449,140.00	\$41,360.00		\$5,930.00		\$5,570.00		\$26,850.00		\$23,970.00		\$970.00	
TEMPORARY CROP DAMAGES (TILE):		68.39	Acres	\$600.00	\$41,034.00	7.85	\$4,710.00	0.99	\$594.00	1.35	\$810.00	3.10	\$1,860.00	5.82	\$3,492.00	0.00	\$0.00
TEMPORARY CROP DAMAGES (GRADING):		14.12	Acres	\$1,200.00	\$16,944.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	0.56	\$672.00
PERMANENT EASEMENT:		3.46	Acres	\$16,000.00	\$55,360.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00	0.00	\$0.00
TOTAL ESTIMATED CONSTRUCTION COST:					\$2,807,768.00	\$252,825.00		\$36,164.00		\$34,190.00		\$162,930.00		\$147,272.00		\$6,462.00	
DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:					\$561,410.00	\$50,570.00		\$7,230.00		\$6,840.00		\$32,590.00		\$29,450.00		\$1,290.00	
TOTAL ESTIMATED PROJECT COST:					\$3,369,178.00	\$303,395.00		\$43,394.00		\$41,030.00		\$195,520.00		\$176,722.00		\$7,752.00	

EXHIBIT 4: SEPERABLE MAINTENANCE



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SEPERABLE MAINTENANCE

COUNTY DITCH #59 BRANCH B IMPROVEMENTS
 RENVILLE COUNTY
 BMI PROJECT NO: 0S1.130654



Real People. Real Solutions.

Date: 6/19/2026

Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount	BRANCH B MAIN		BRANCH B5		BRANCH B6		BRANCH 203		BRANCH 203-4	
						Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price
BASE BID															
1	Mobilization	1	Lump Sum	\$45,000.00	\$45,000.00	0.25	\$11,250.00	0.01	\$450.00	0.06	\$2,700.00	0.09	\$4,050.00	0.03	\$1,350.00
2	Aggregate Surfacing, Class 5	210	Ton	\$1,000.00	\$210,000.00	0	\$0.00	0	\$0.00	30	\$30,000.00	0	\$0.00	0	\$0.00
3	Exploratory Excavation	185	Hour	\$800.00	\$148,000.00	20	\$16,000.00	5	\$4,000.00	20	\$16,000.00	20	\$16,000.00	10	\$8,000.00
4	12" Aluminized CM Pipe Culvert	40	Linear Foot	\$120.00	\$4,800.00	0	\$0.00	0	\$0.00	0	\$0.00	20	\$2,400.00	20	\$2,400.00
5	30" Aluminized CM Pipe Culvert	20	Linear Foot	\$150.00	\$3,000.00	20	\$3,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
6	6" Intake	22	Each	\$1,000.00	\$22,000.00	3	\$3,000.00	0	\$0.00	2	\$2,000.00	2	\$2,000.00	1	\$1,000.00
7	8" Intake	3	Each	\$1,250.00	\$3,750.00	1	\$1,250.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
8	10" Intake	1	Each	\$1,500.00	\$1,500.00	1	\$1,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
9	12" Intake	2	Each	\$1,750.00	\$3,500.00	1	\$1,750.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
10	6" Drain Tile	2400	Linear Foot	\$20.00	\$48,000.00	40	\$800.00	0	\$0.00	420	\$8,400.00	0	\$0.00	760	\$15,200.00
11	8" Drain Tile	8050	Linear Foot	\$24.00	\$193,200.00	60	\$1,440.00	0	\$0.00	1360	\$32,640.00	1980	\$47,520.00	0	\$0.00
12	10" Drain Tile	2360	Linear Foot	\$26.00	\$61,360.00	0	\$0.00	0	\$0.00	0	\$0.00	1220	\$31,720.00	0	\$0.00
13	12" Drain Tile	2240	Linear Foot	\$28.00	\$62,720.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
14	15" Drain Tile	2600	Linear Foot	\$32.00	\$83,200.00	0	\$0.00	400	\$12,800.00	0	\$0.00	0	\$0.00	0	\$0.00
15	18" Drain Tile	3680	Linear Foot	\$38.00	\$139,840.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
16	24" Drain Tile	3120	Linear Foot	\$44.00	\$137,280.00	2420	\$106,480.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
17	24" Heavy Duty Tile	1980	Linear Foot	\$80.00	\$158,400.00	1980	\$158,400.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
18	24" Trenchless Drain Tile	140	Linear Foot	\$400.00	\$56,000.00	140	\$56,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
19	Drain Tile Connection	170	Each	\$44.00	\$7,480.00	20	\$880.00	0	\$0.00	20	\$880.00	20	\$880.00	10	\$440.00
20	Random Riprap, Class III	60	Ton	\$44.00	\$2,640.00	30	\$1,320.00	0	\$0.00	0	\$0.00	30	\$1,320.00	0	\$0.00
21	Inlet Protection	28	Each	\$90.00	\$2,520.00	6	\$540.00	0	\$0.00	2	\$180.00	2	\$180.00	1	\$90.00
22	Mulch Material, Type 1	123	Ton	\$58.00	\$7,134.00	21	\$1,218.00	2	\$116.00	8	\$464.00	15	\$870.00	3	\$174.00
23	Rapid Stabilization Method 4	2750	Square Yard	\$120.00	\$330,000.00	500	\$60,000.00	0	\$0.00	250	\$30,000.00	500	\$60,000.00	0	\$0.00
24	Stabilized Construction Exit	1	Lump Sum	\$2,500.00	\$2,500.00	0.25	\$625.00	0.01	\$25.00	0.06	\$150.00	0.09	\$225.00	0.03	\$75.00
ESTIMATED CONSTRUCTION SUBTOTAL:					\$1,733,824.00	\$425,453.00		\$17,391.00		\$123,414.00		\$167,165.00		\$28,729.00	
30% CONTINGENCY:					\$518,680.00	\$127,640.00		\$5,220.00		\$37,020.00		\$50,150.00		\$8,620.00	
TEMPORARY CROP DAMAGES:		56.15	Acres	\$600.00	\$33,690.00	5.79	\$3,474.00	0.92	\$552.00	4.09	\$2,454.00	7.35	\$4,410.00	1.74	\$1,044.00
TOTAL ESTIMATED CONSTRUCTION COST:					\$2,286,194.00	\$556,567.00		\$23,163.00		\$162,888.00		\$221,725.00		\$38,393.00	
DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:					\$456,270.00	\$111,320.00		\$4,630.00		\$32,580.00		\$44,350.00		\$7,680.00	
TOTAL ESTIMATED PROJECT COST:					\$2,742,464.00	\$667,887.00		\$27,793.00		\$195,468.00		\$266,075.00		\$46,073.00	

SEPERABLE MAINTENANCE

COUNTY DITCH #59 BRANCH B IMPROVEMENTS
RENVILLE COUNTY
BMI PROJECT NO: 0S1.130654



Real People. Real Solutions.

Date: 6/19/2026

Item No.	Item	Estimated Quantity	Unit	Unit Price	Total Amount	BRANCH B (203)		BRANCH B11 (203)		BRANCH 194 (203)		BRANCH 194		BRANCH 194-84		
						Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price	Qty.	Price	
BASE BID	1	Mobilization	1	Lump Sum	\$45,000.00	\$45,000.00	0.23	\$10,350.00	0.1	\$4,500.00	0.1	\$0.03	0.06	\$2,700.00	0.07	\$3,150.00
	2	Aggregate Surfacing, Class 5	210	Ton	\$1,000.00	\$210,000.00	60	\$60,000.00	30	\$30,000.00	30	\$0.00	30	\$30,000.00	30	\$30,000.00
	3	Exploratory Excavation	185	Hour	\$800.00	\$148,000.00	40	\$32,000.00	20	\$16,000.00	20	\$400.00	10	\$8,000.00	20	\$16,000.00
	4	12" Aluminized CM Pipe Culvert	40	Linear Foot	\$120.00	\$4,800.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	5	30" Aluminized CM Pipe Culvert	20	Linear Foot	\$150.00	\$3,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	6	6" Intake	22	Each	\$1,000.00	\$22,000.00	6	\$6,000.00	2	\$2,000.00	2	\$2,000.00	2	\$2,000.00	2	\$2,000.00
	7	8" Intake	3	Each	\$1,250.00	\$3,750.00	2	\$2,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	8	10" Intake	1	Each	\$1,500.00	\$1,500.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	9	12" Intake	2	Each	\$1,750.00	\$3,500.00	1	\$1,750.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	10	6" Drain Tile	2400	Linear Foot	\$20.00	\$48,000.00	1100	\$22,000.00	0	\$0.00	0	\$0.00	0	\$0.00	80	\$1,600.00
	11	8" Drain Tile	8050	Linear Foot	\$24.00	\$193,200.00	700	\$16,800.00	1170	\$28,080.00	0	\$0.00	80	\$1,920.00	2700	\$64,800.00
	12	10" Drain Tile	2360	Linear Foot	\$26.00	\$61,360.00	620	\$16,120.00	520	\$13,520.00	0	\$0.00	0	\$0.00	0	\$0.00
	13	12" Drain Tile	2240	Linear Foot	\$28.00	\$62,720.00	560	\$15,680.00	1680	\$47,040.00	0	\$0.00	0	\$0.00	0	\$0.00
	14	15" Drain Tile	2600	Linear Foot	\$32.00	\$83,200.00	680	\$21,760.00	0	\$0.00	1520	\$0.00	0	\$0.00	0	\$0.00
	15	18" Drain Tile	3680	Linear Foot	\$38.00	\$139,840.00	3020	\$114,760.00	0	\$0.00	0	\$0.00	660	\$25,080.00	0	\$0.00
	16	24" Drain Tile	3120	Linear Foot	\$44.00	\$137,280.00	0	\$0.00	0	\$0.00	0	\$0.00	700	\$30,800.00	0	\$0.00
	17	24" Heavy Duty Tile	1980	Linear Foot	\$80.00	\$158,400.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	18	24" Trenchless Drain Tile	140	Linear Foot	\$400.00	\$56,000.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	19	Drain Tile Connection	170	Each	\$44.00	\$7,480.00	40	\$1,760.00	10	\$440.00	20	\$400.00	10	\$440.00	20	\$880.00
	20	Random Riprap, Class III	60	Ton	\$44.00	\$2,640.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	21	Inlet Protection	28	Each	\$90.00	\$2,520.00	9	\$810.00	2	\$180.00	2	\$12.00	2	\$180.00	2	\$180.00
	22	Mulch Material, Type 1	123	Ton	\$58.00	\$7,134.00	31	\$1,798.00	16	\$928.00	7	\$147.00	7	\$406.00	13	\$754.00
	23	Rapid Stabilization Method 4	2750	Square Yard	\$120.00	\$330,000.00	500	\$60,000.00	250	\$30,000.00	250	\$125,000.00	250	\$30,000.00	250	\$30,000.00
	24	Stabilized Construction Exit	1	Lump Sum	\$2,500.00	\$2,500.00	0.23	\$575.00	0.1	\$250.00	0.1	\$0.03	0.06	\$150.00	0.07	\$175.00
	ESTIMATED CONSTRUCTION SUBTOTAL:					\$1,733,824.00	\$384,663.00		\$172,938.00		\$127,959.05		\$131,676.00		\$149,539.00	
30% CONTINGENCY:					\$518,680.00	\$115,400.00		\$51,880.00		\$38,390.00		\$39,500.00		\$44,860.00		
TEMPORARY CROP DAMAGES:					56.15 Acres \$600.00 \$33,690.00	15.34	\$9,204.00	7.74	\$4,644.00	3.49	\$2,094.00	3.31	\$1,986.00	6.38	\$3,828.00	
TOTAL ESTIMATED CONSTRUCTION COST:					\$2,286,194.00	\$509,267.00		\$229,462.00		\$168,443.05		\$173,162.00		\$198,227.00		
DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:					\$456,270.00	\$101,860.00		\$45,890.00		\$33,690.00		\$34,630.00		\$39,640.00		
TOTAL ESTIMATED PROJECT COST:					\$2,742,464.00	\$611,127.00		\$275,352.00		\$202,133.05		\$207,792.00		\$237,867.00		

EXHIBIT 5: RIGHT OF WAY TABLE

County Ditch 59 Branch B, 203 & 194 Improvement

Renville County, MN

Right-of-way Table



Real People. Real Solutions.

Date: 6/25/2026

Parcel No.	Property Owner	Legal Description	Improvement Right-of-Way					Temporary		Permanent
			Station to Station	Length	Width	Area (Acres)	\$600	\$1,200	\$16,000	
Branch B Main - Tile										
27-01770-00	ZENK/ROBB J & MEGAN C	NE 1/4, SE 1/4	-0+40	9+62	1002	100	2.30	\$1,380.00		
27-01820-00	STEFFEL/KAREN M	NW 1/4, SW 1/4	11+17	24+68	1351	100	3.10	\$1,860.00		
		WASCOB - 2 (ACCESS ROUTE)			209	40	0.19	\$114.00		
		WASCOB - 2 (TILE)	499+50	502+91	341	100	0.78	\$468.00		
		WASCOB - 2	502+91	504+80	189		1.72		\$2,064.00	
		WASCOB - 2 (TILE)	504+80	505+49	69	100	0.16	\$96.00		
		NE 1/4, SW 1/4	24+68	31+00	632	100	1.45	\$870.00		
		WASCOB - 1	31+00	32+84	184		1.49		\$1,790.03	
		NE 1/4, SW 1/4	32+84	38+63	579	100	1.33	\$798.00		
27-01810-00	ERICKSON/PAUL	NW 1/4, SE 1/4	38+63	45+46	683	100	1.57	\$942.00		
Branch B5 - Tile										
27-01810-00	ERICKSON/PAUL	NW 1/4, SE 1/4	50+00	52+89	289	100	0.66	\$396.00		
Branch B6 - Tile										
27-01810-00	ERICKSON/PAUL	NW 1/4, SE 1/4	60+00	66+23	623	100	1.43	\$858.00		
27-01791-00	KADLEC/DAVID & ELIZABETH/TR	NW 1/4, SE 1/4	66+23	76+79	1056	100	2.42		\$2,904.00	
		POND	76+79	79+81	302	N/A	3.46			\$55,360.00
		DISPOSAL SITE	66+23	79+81	1358		7.17		\$8,604.00	
27-01870-00	KADLEC/DAVID & ELIZABETH/TR	SW 1/4, SE 1/4	80+47	81+62	115	100	0.26	\$156.00		
Branch B TOTAL			Total Branch B Improvement Right-of-Way Damages =					\$7,938.00	\$15,362.03	\$55,360.00
Branch 203 - Tile										
27-01800-00	ZENK/JAME & DIANNE	SW 1/4, NW 1/4	99+60	104+73	513	100	1.18	\$708.00		
		WASCOB - 3 (TILE)	510+50	516+39	589	100	1.35	\$810.00		
		WASCOB - 3					0.76		\$912.00	
		SE 1/4, NW 1/4	104+73	118+51	1378	100	3.16	\$1,896.00		
27-01801-00	TELLERS/MARCIA K/8	SW 1/4, NE 1/4	118+51	132+33	1382	100	3.17	\$1,902.00		
Branch 203-4 - Tile										
27-01801-00	TELLERS/MARCIA K/8	NW 1/4, NE 1/4	135+00	140+85	585	100	1.34	\$804.00		
27-01790-00	KADLEC/DAVID & ELIZABETH/TR	NW 1/4, NE 1/4	140+85	143+09	224	100	0.51	\$306.00		
Branch B9 (203) - Tile										
27-01801-00	TELLERS/MARCIA K/8	SW 1/4, NE 1/4	145+00	151+86	686	100	1.57	\$942.00		
27-01791-00	KADLEC/DAVID & ELIZABETH/TR	SE 1/4, NE 1/4	151+86	162+68	1082	100	2.48	\$1,488.00		
Branch B (203) - Tile										
27-01791-00	KADLEC/DAVID & ELIZABETH/TR	SE 1/4, NE 1/4	165+00	172+87	787	100	1.81	\$1,086.00		
27-01790-00	KADLEC/DAVID & ELIZABETH/TR	SE 1/4, NE 1/4	172+87	176+34	347	100	0.80	\$480.00		
27-01850-00	HARTUNG PARTNERSHIP	NW 1/4, NW 1/4	177+05	191+22	1417	100	3.25	\$1,950.00		
27-01860-00	KINGSTROM/ROGER D	NE 1/4, NW 1/4	191+22	204+07	1285	100	2.95	\$1,770.00		
27-01840-00	KINGSTROM/ROGER D	NW 1/4, NE 1/4	204+56	218+54	1398	100	3.21	\$1,926.00		
		NE 1/4, NE 1/4	218+54	233+39	1485	100	3.41	\$2,046.00		
Branch B11 (203) - Tile										
27-01860-00	KINGSTROM/ROGER D	NE 1/4, NW 1/4	240+40	245+57	517	100	1.19	\$714.00		
27-01651-00	POTZLER/LEE & KATHERINE/TR	SE 1/4, SW 1/4	246+44	258+95	1251	100	2.87	\$1,722.00		
		NE 1/4, SW 1/4	258+95	261+65	270	100	0.62	\$372.00		
27-01641-00	MAHLUM FAMILY TRUST	NW 1/4, SE 1/4	261+65	272+68	1103	100	2.53	\$1,518.00		

County Ditch 59 Branch B, 203 & 194 Improvement

Renville County, MN

Right-of-way Table



Real People. Real Solutions.

Date: 6/25/2026

Parcel No.	Property Owner	Legal Description	Improvement Right-of-Way				Temporary		Permanent	
			Station to Station	Length	Width	Area (Acres)	\$600	\$1,200	\$16,000	
Branch 194 (203) - Tile										
27-01801-00	TELLERS/MARCIA K/&	NW 1/4, NE 1/4	280+50	287+06	656	50	0.75	\$450.00		
27-01790-00	KADLEC/DAVID & ELIZABETH/TR	NE 1/4, NE 1/4	280+50	287+06	656	50	0.75	\$450.00		
27-01711-00	KINGSTROM/ROGER D	SE 1/4, SE 1/4	287+72	304+65	1693	100	3.89	\$2,334.00		
27-01712-00	KINGSTROM/ROGER D	NE 1/4, SE 1/4	304+65	314+93	1028	100	2.36	\$1,416.00		
27-01650-00	PETERSON/DAVID R/LIVING TRUST	NW 1/4, SW 1/4	315+60	316+05	45	100	0.10	\$60.00		
Branch 194-69 (203) - Tile										
27-01711-00	KINGSTROM/ROGER D	SE 1/4, SE 1/4	370+50	373+86	336	100	0.77	\$462.00		
27-01650-00	PETERSON/DAVID R/LIVING TRUST	SW 1/4, SW 1/4	374+53	375+50	97	100	0.22	\$132.00		
Branch 203 TOTAL			Total Branch 203 Improvement Right-of-Way Damages =					\$27,744.00	\$912.00	\$0.00
Branch 194 - Tile										
27-01800-00	ZENK/JAMES & DIANNE	NW 1/4, NW 1/4	319+60	327+81	821	100	1.88	\$1,128.00		
27-01700-00	MERTZ/RANDALL W & JUNE S	SW 1/4, SW 1/4	328+54	328+86	32	100	0.07	\$42.00		
27-01702-00	MCCM PROPERTIES LLC	SW 1/4, SW 1/4	328+86	333+85	499	100	1.15	\$690.00		
Branch 194-84										
27-01711-00	KINGSTROM/ROGER D	SW 1/4, SE 1/4	339+50	341+82	232	100	0.53	\$318.00		
27-01712-00	KINGSTROM/ROGER D	NW 1/4, SE 1/4	341+82	356+00	1418	100	3.26	\$1,956.00		
		WASCOB - 4	348+16	350+42	226		0.56		\$672.00	
Branch 194-84-4N										
27-01712-00	KINGSTROM/ROGER D	NW 1/4, SE 1/4	356+00	356+30	30	100	0.07	\$42.00		
27-01671-00	KADLEC FARMS, LLP	SW 1/4, NE 1/4	356+30	364+82	852	100	1.96	\$1,176.00		
Branch 194 TOTAL			Total Branch 194 Improvement Right-of-Way Damages =					\$5,352.00	\$0.00	\$0.00

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EXHIBIT 6: TILE TYPE MAP



EXHIBIT 7: HYDROGRAPHS

130654_Proposed Conditions

Prepared by Bolton & Menk, Inc

HydroCAD® 10.20-7a s/n 00709 © 2025 HydroCAD Software Solutions LLC

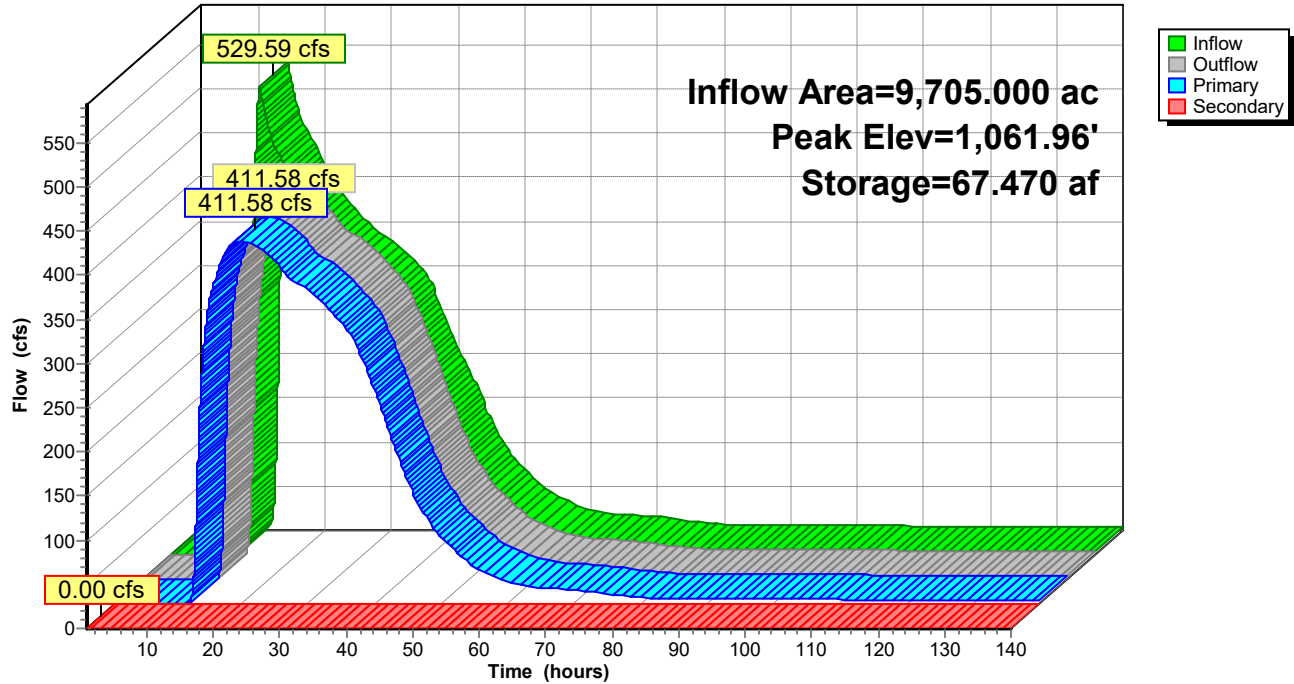
MSE 24-hr 3 2 Year Rainfall=2.69"

Printed 6/10/2026

Page 1

Pond C8: CSAH 59

Hydrograph



84" CULVERT VELOCITY = 10.7 FPS

130654_Proposed Conditions

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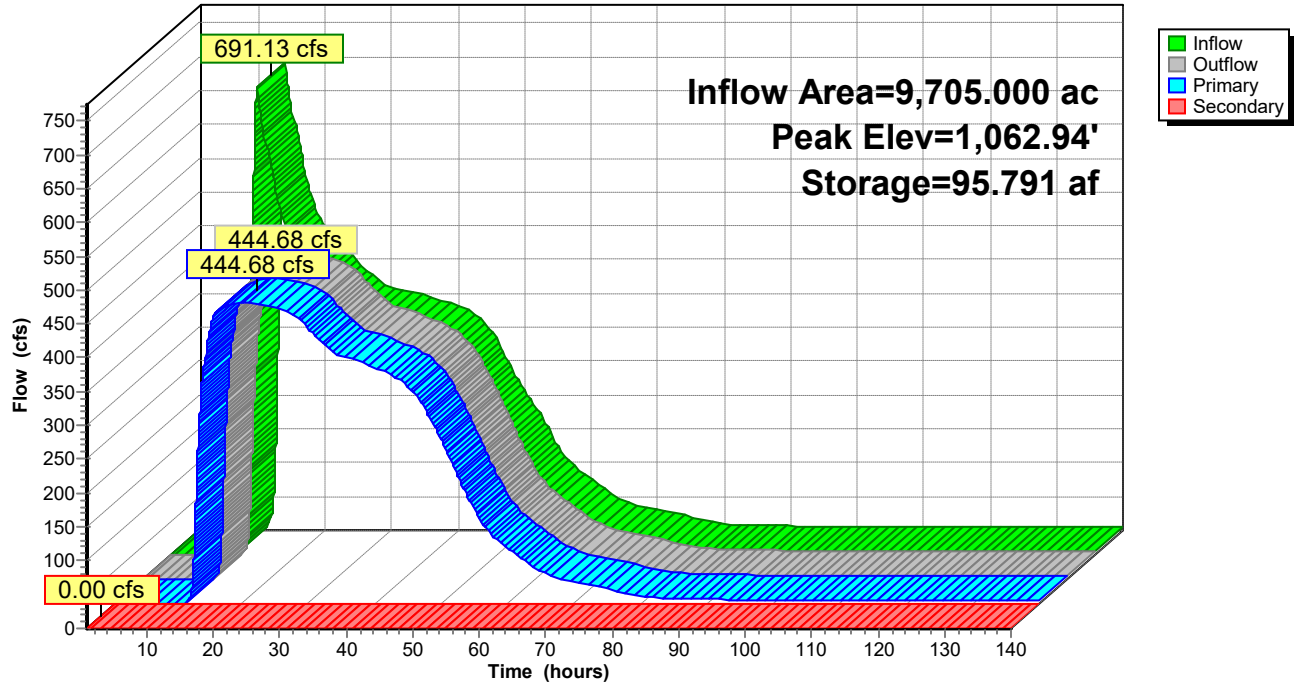
MSE 24-hr 3 5 Year Rainfall=3.31"

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84" CULVERT VELOCITY = 11.6 FPS

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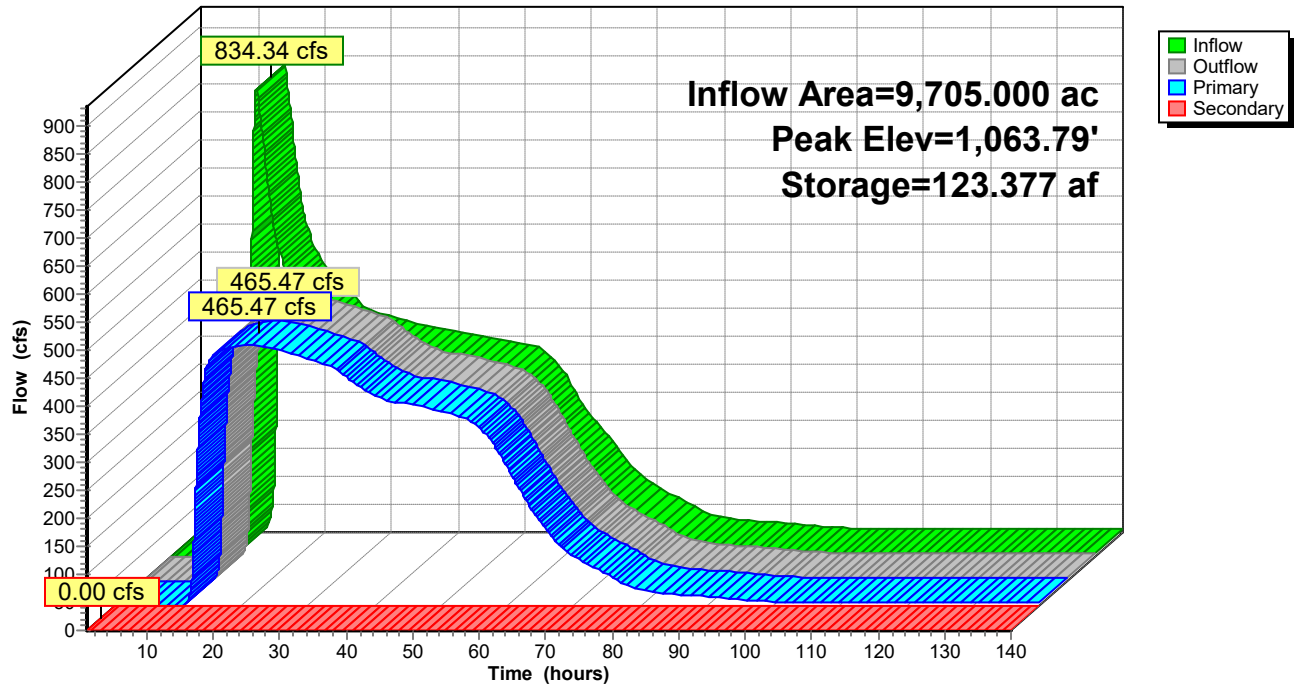
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Pond C8: CSAH 59

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84" CULVERT VELOCITY = 12.1 FPS

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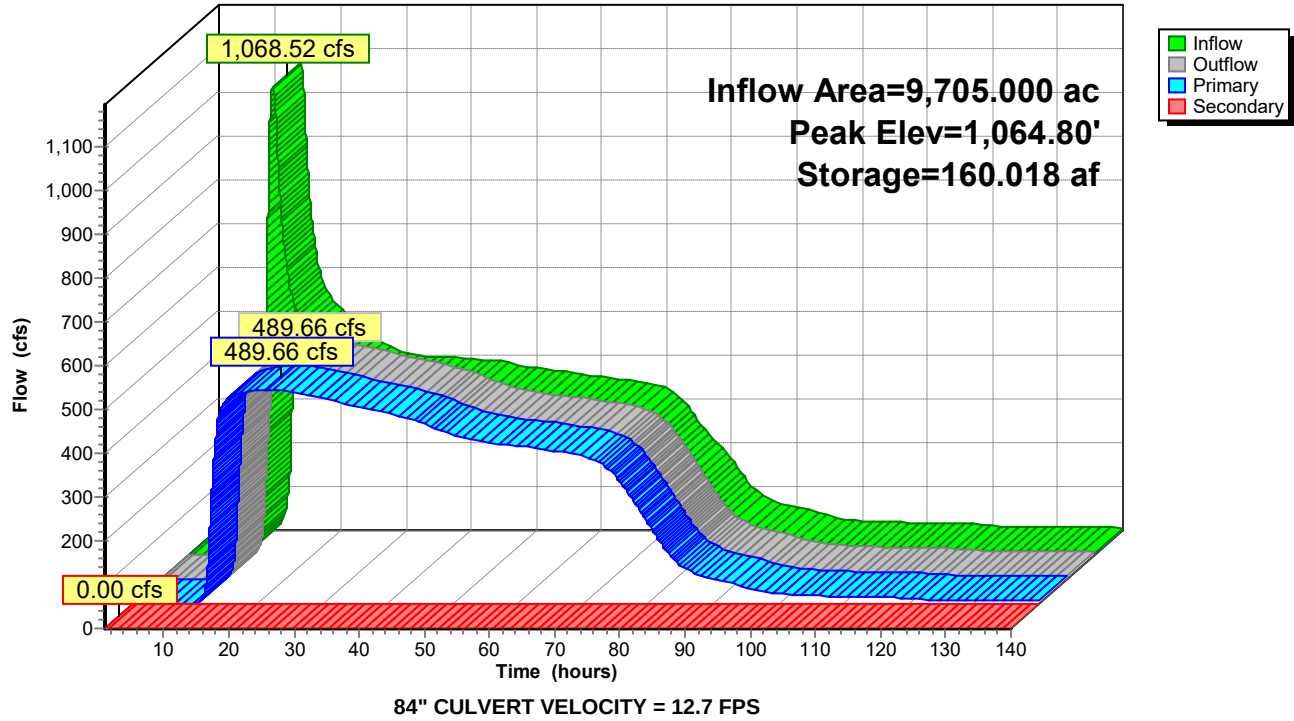
MSE 24-hr 3 25 Year Rainfall=4.84"

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Pond C8: CSAH 59

Hydrograph



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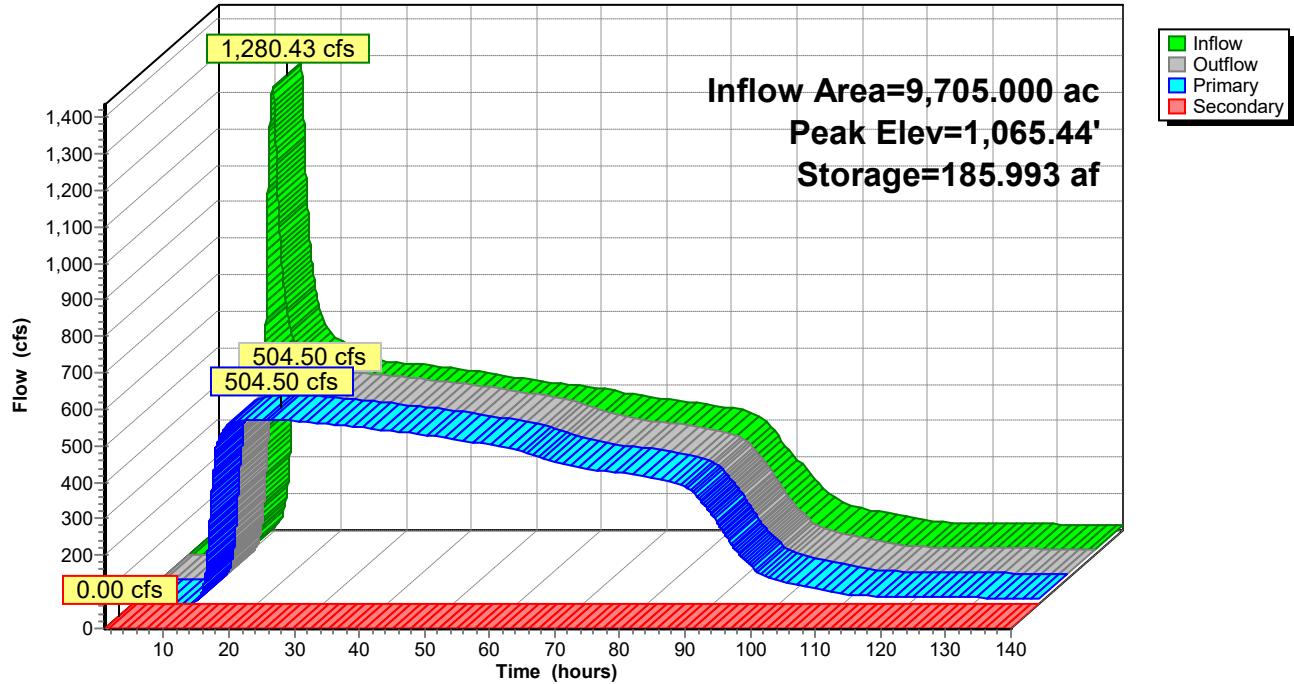
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Pond C8: CSAH 59

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84" CULVERT VELOCITY = 13.1 FPS

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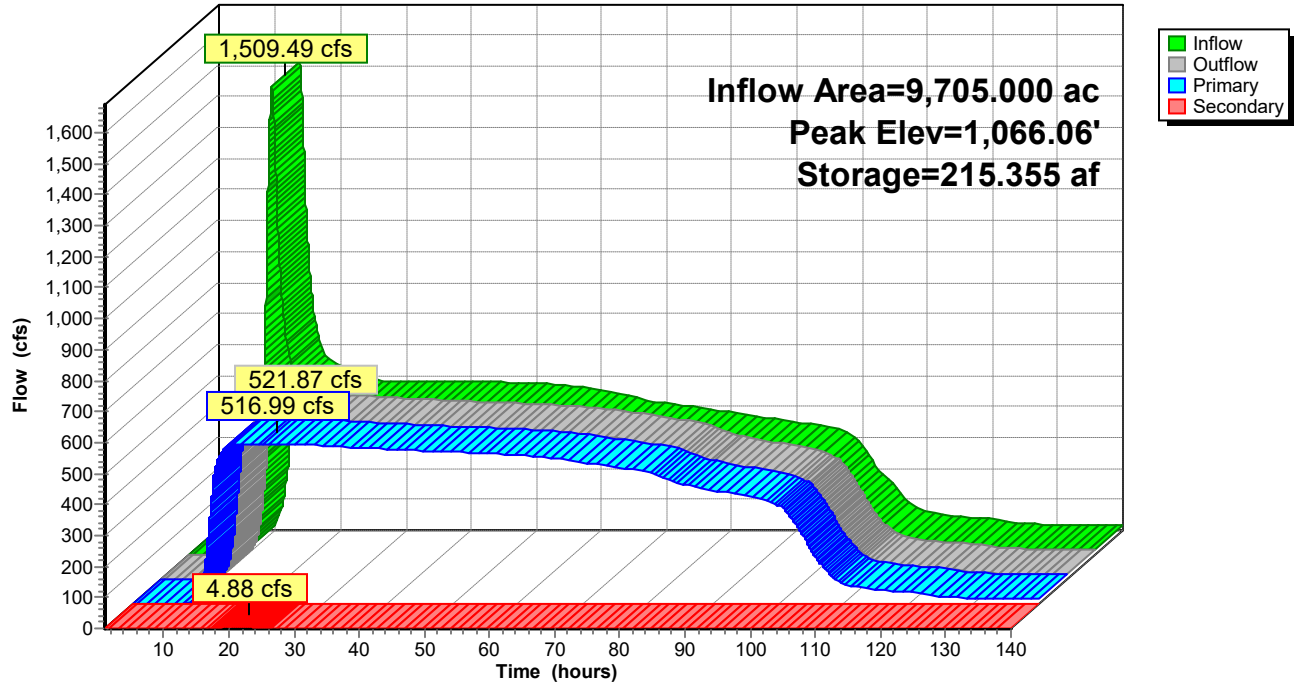
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Pond C8: CSAH 59

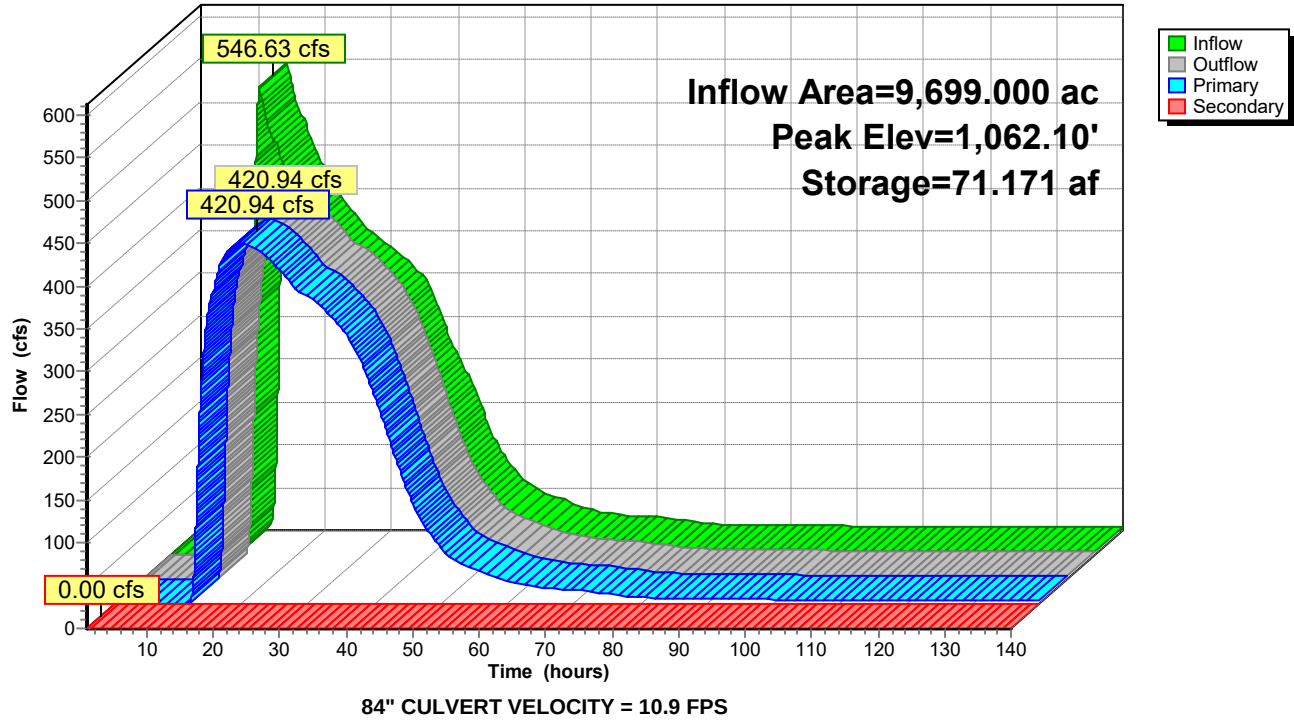
Hydrograph



84" CULVERT VELOCITY = 13.4 FPS

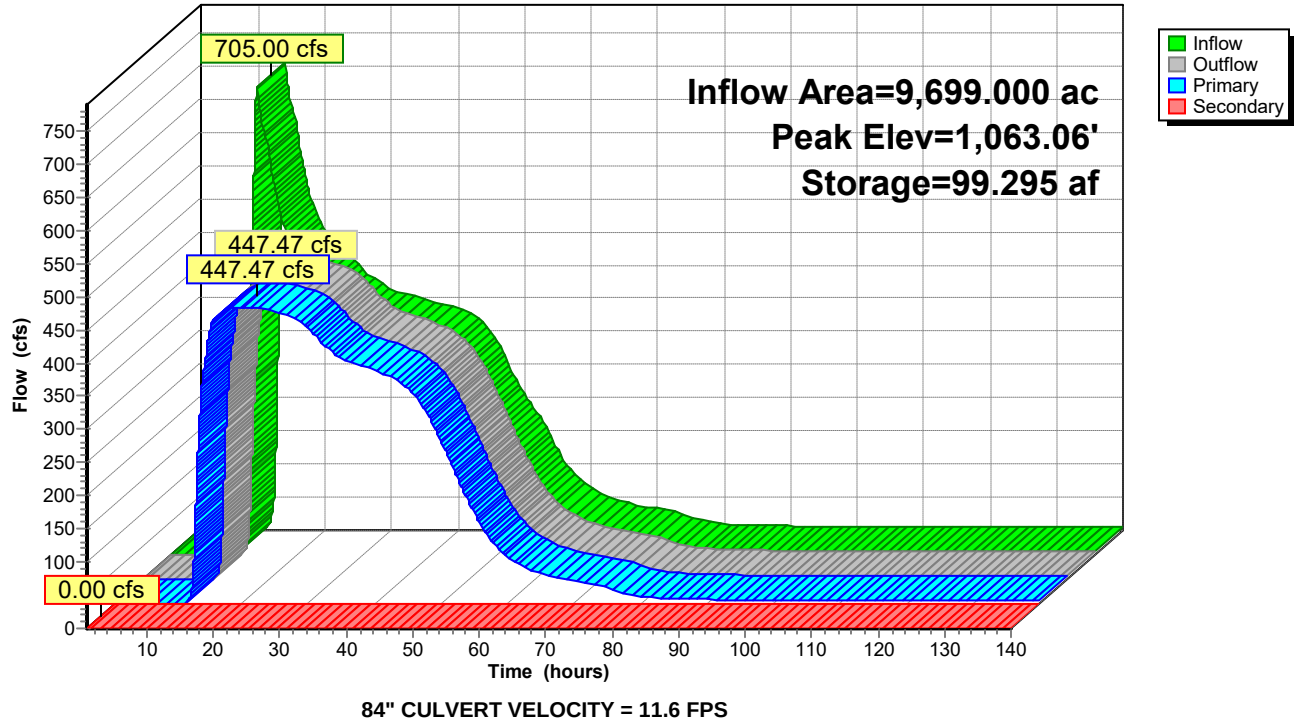
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Hydrograph



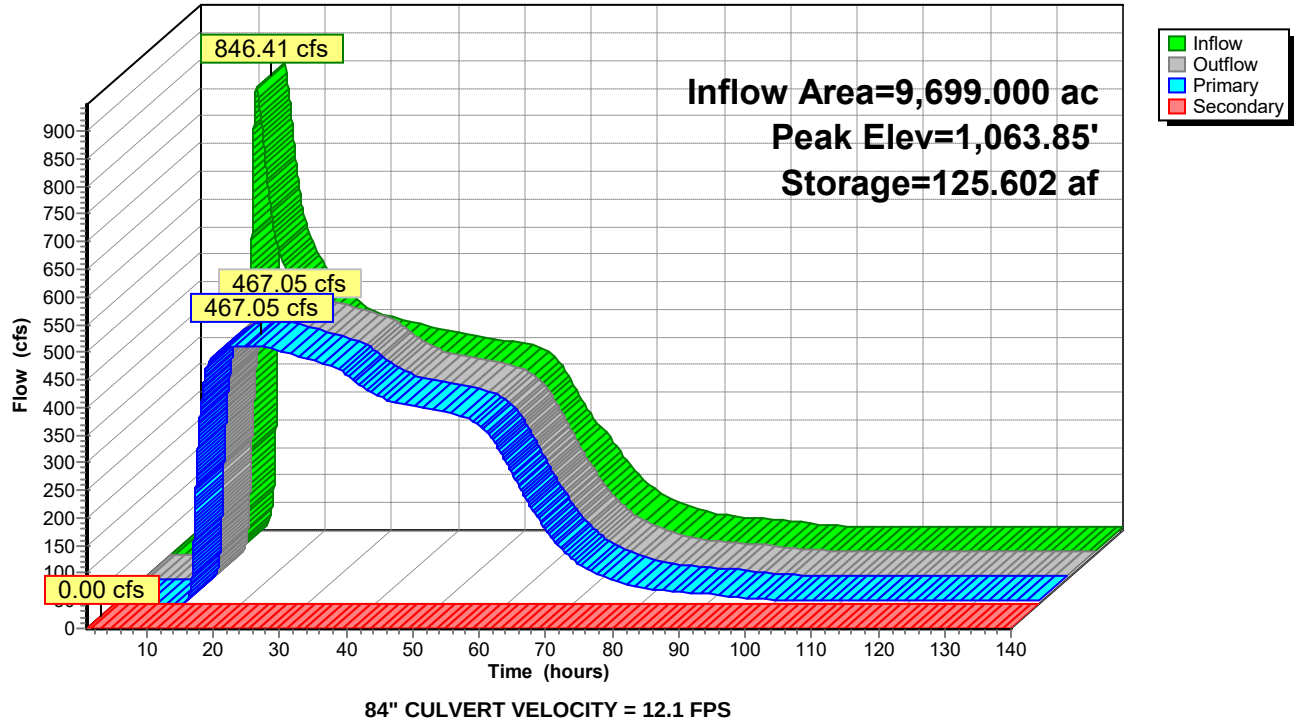
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Hydrograph



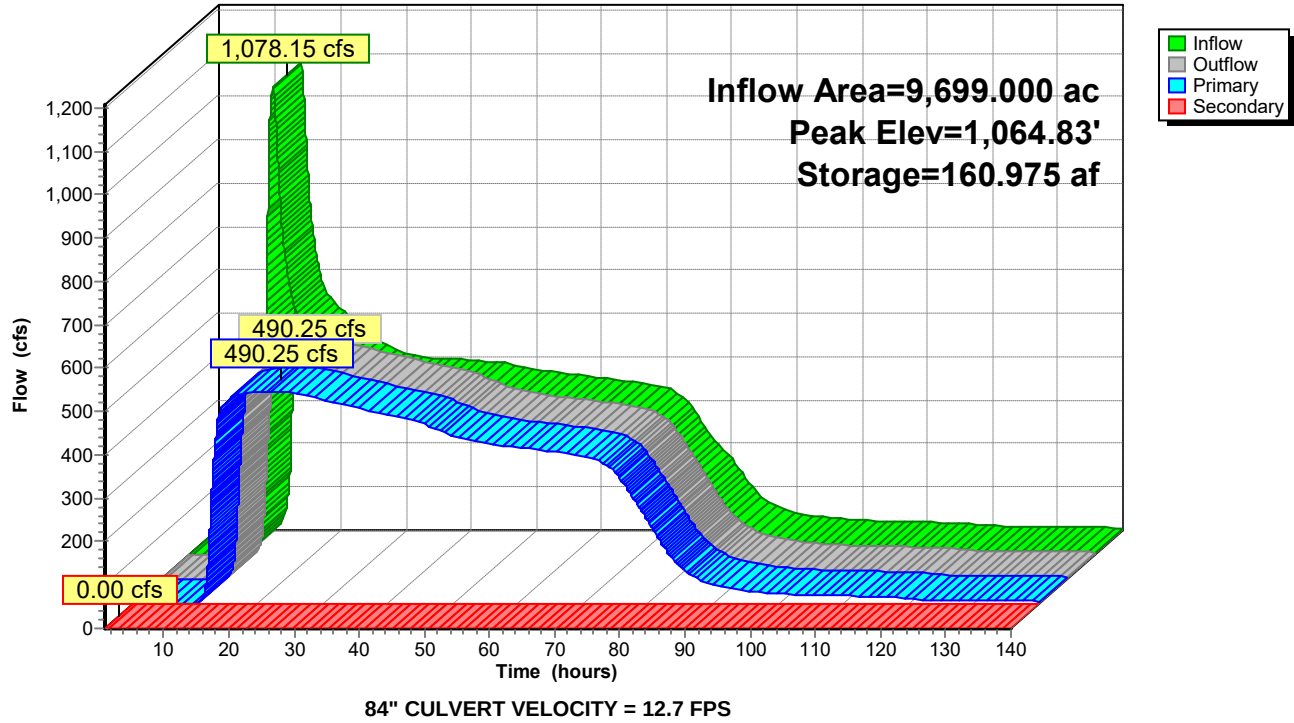
Pond C8: CSAH 59

Hydrograph



Pond C8: CSAH 59

Hydrograph



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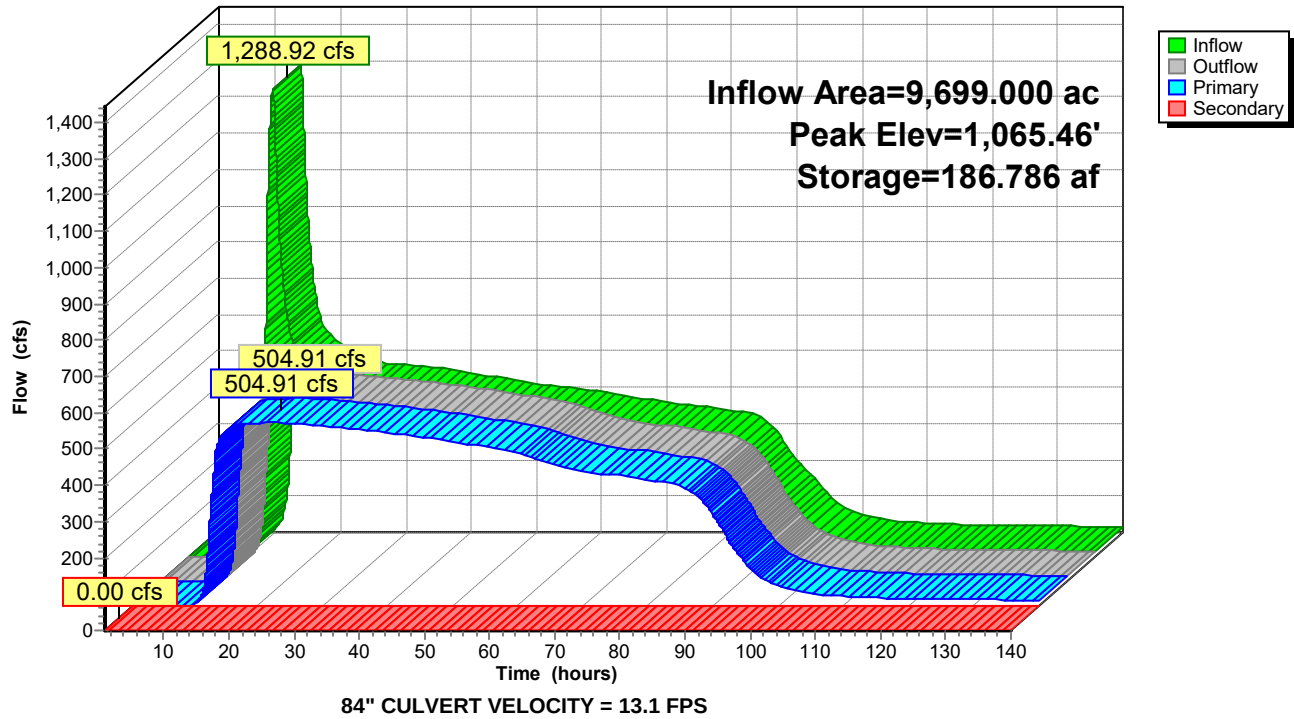
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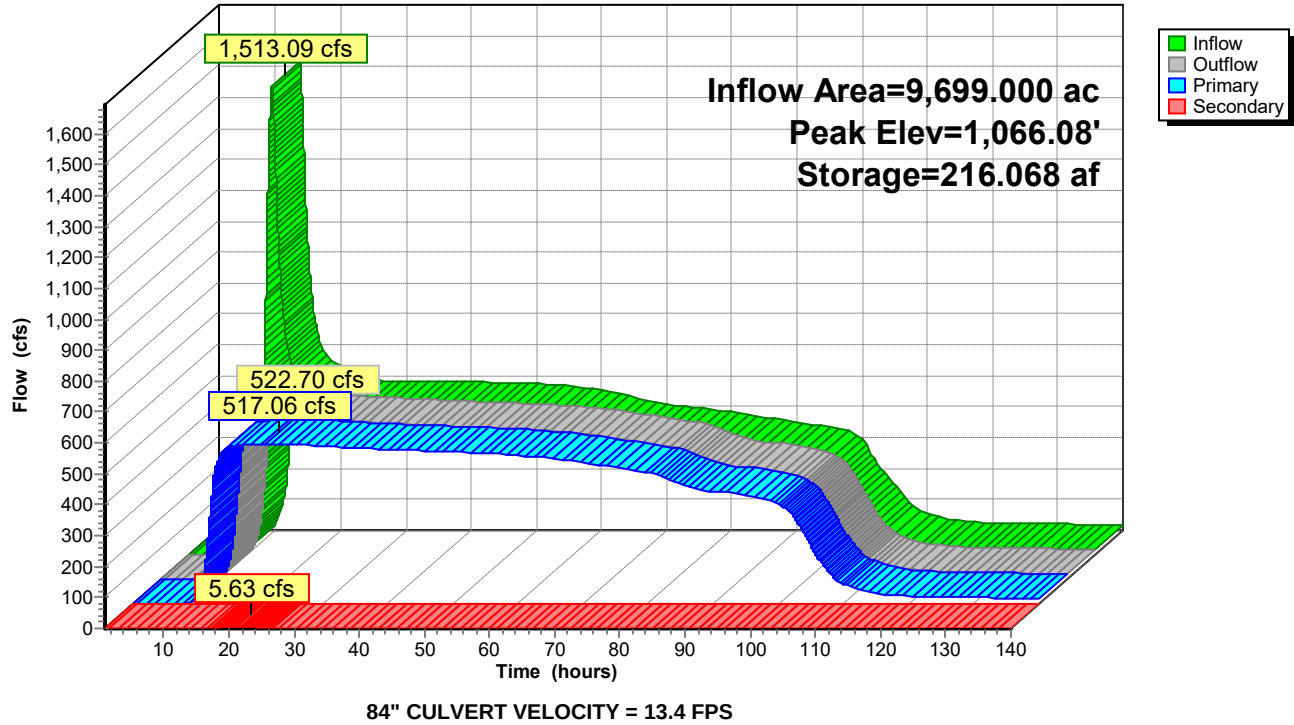
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Pond C8: CSAH 59

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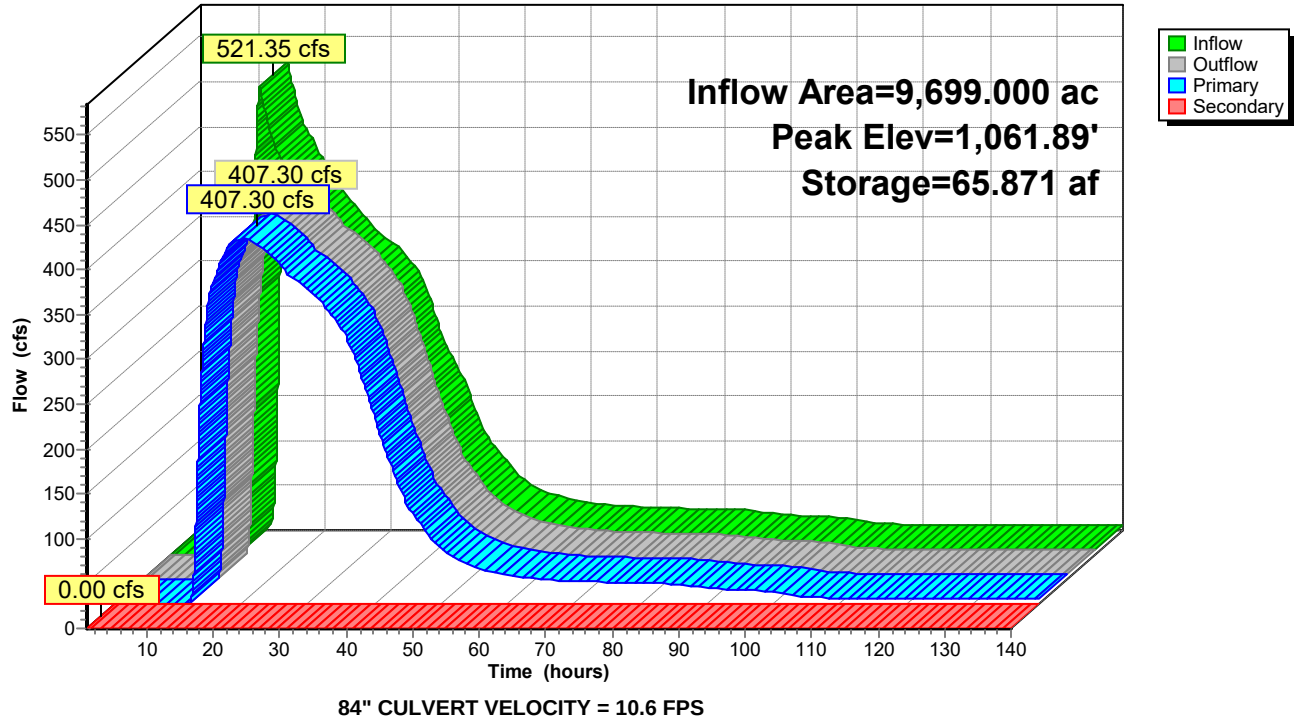
MSE 24-hr 3 2 Year Rainfall=2.69"

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Pond C8: CSAH 59

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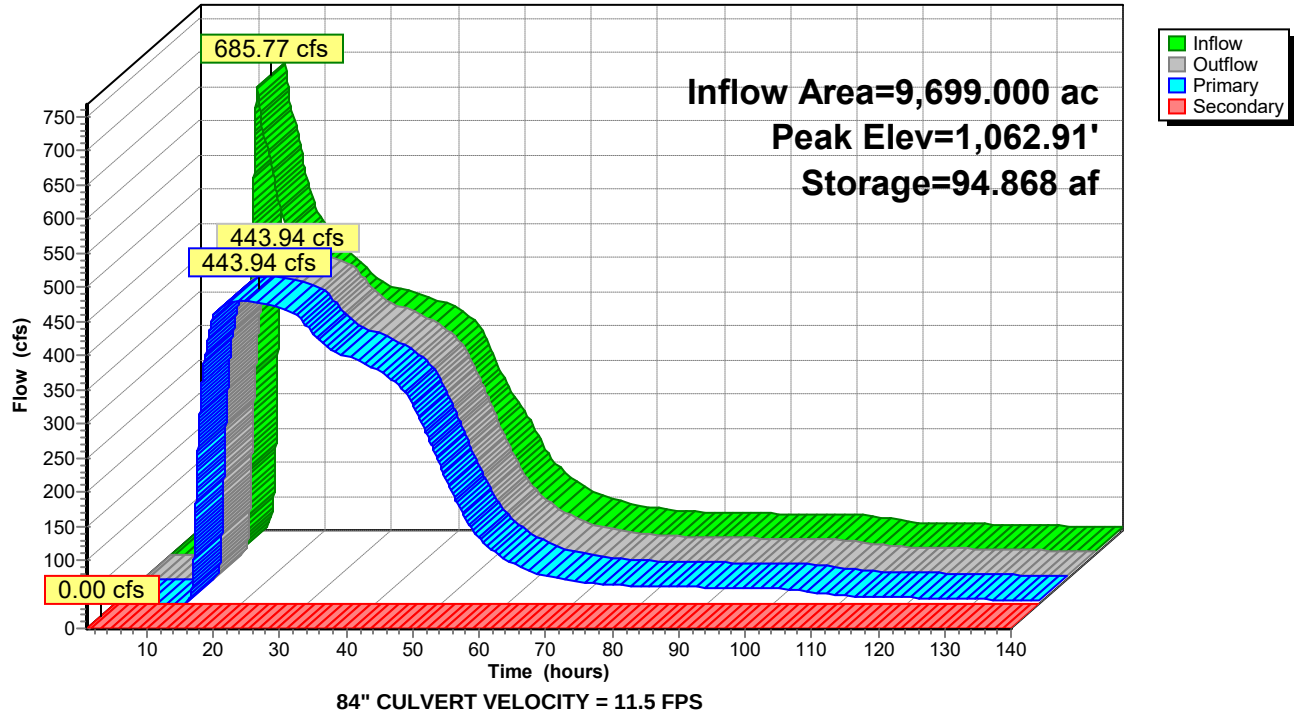
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Pond C8: CSAH 59

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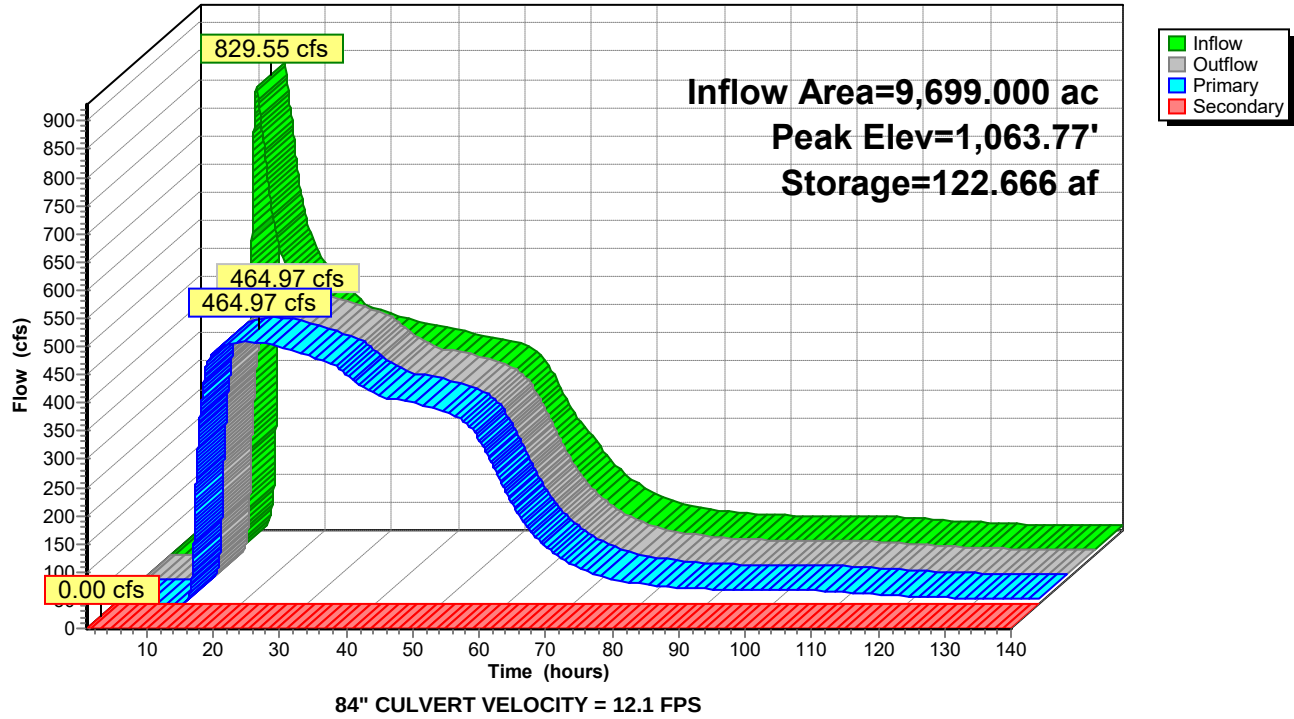
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Pond C8: CSAH 59

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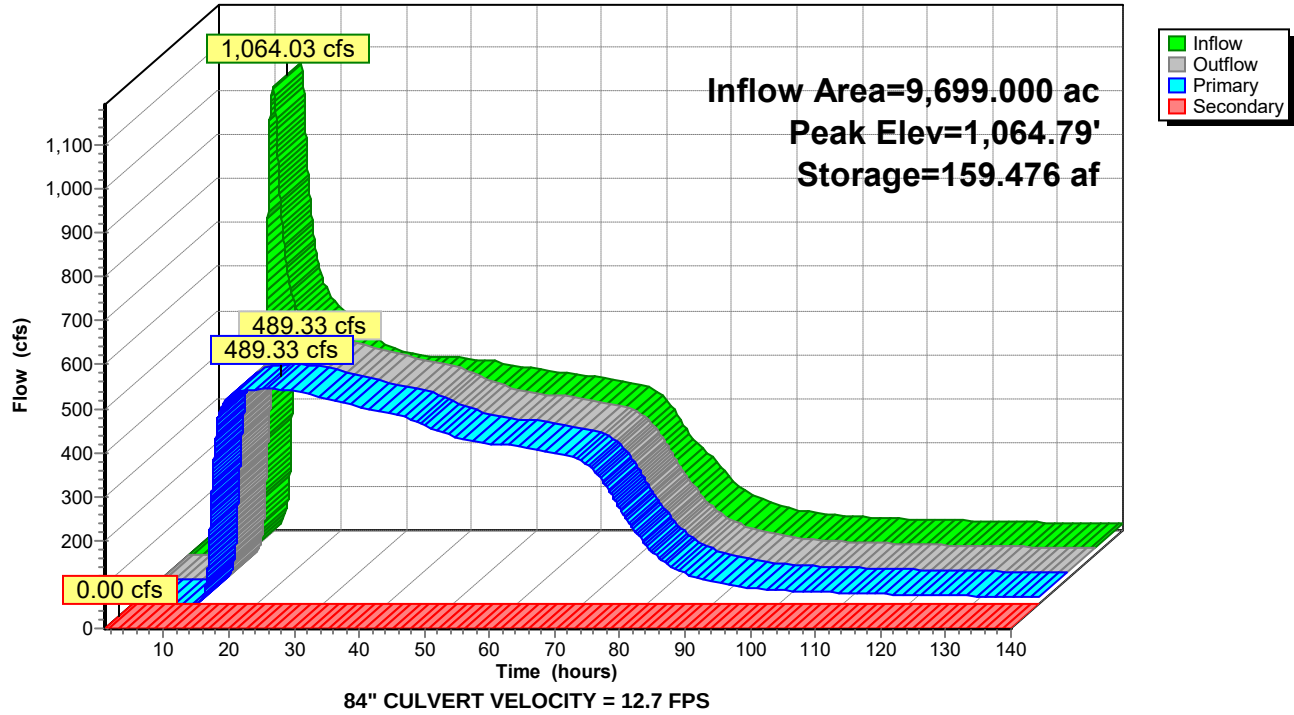
MSE 24-hr 3 25 Year Rainfall=4.84"

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Pond C8: CSAH 59

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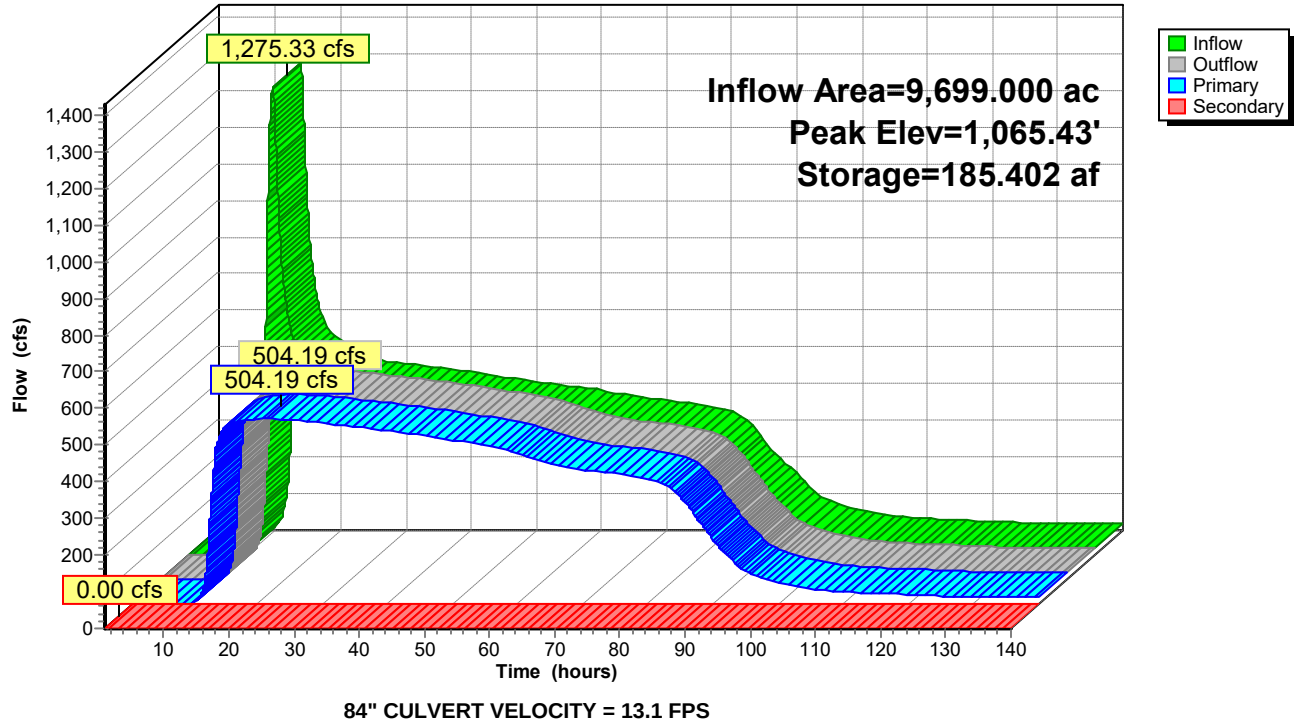
MSE 24-hr 3 50 Year Rainfall=5.65"

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Pond C8: CSAH 59

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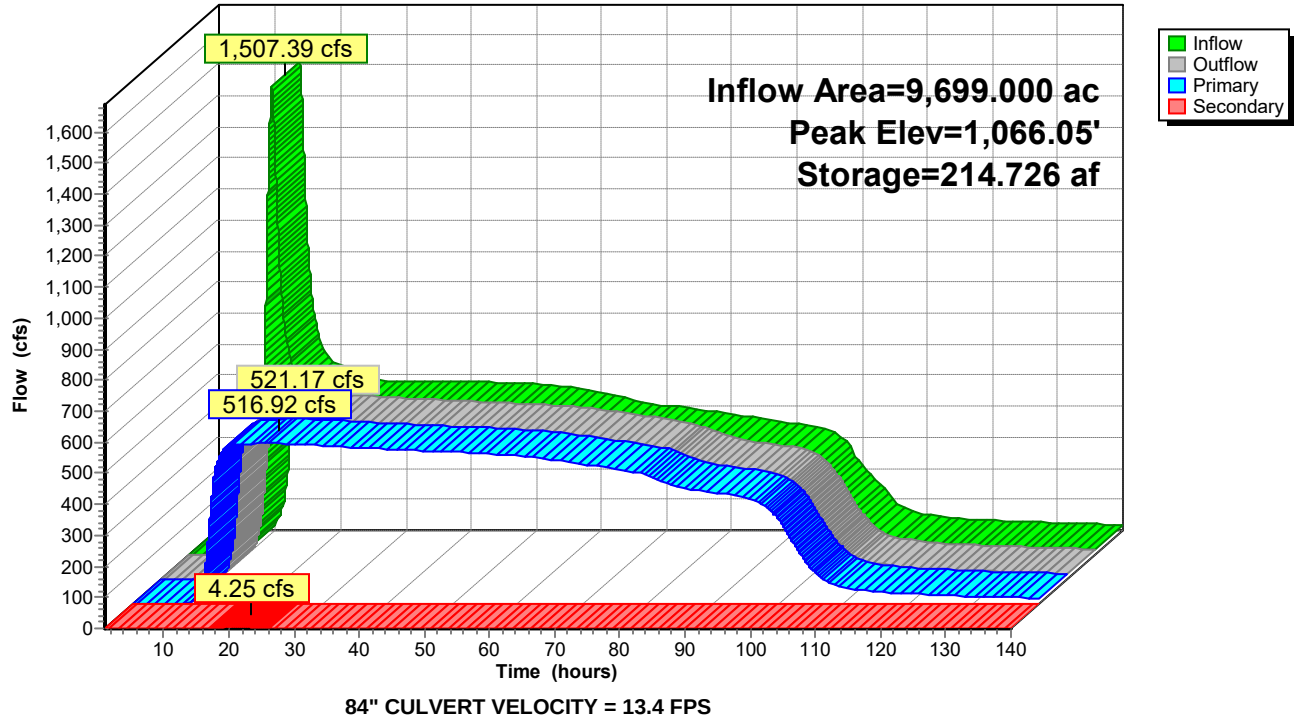
MSE 24-hr 3 100 Year Rainfall=6.56"

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Pond C8: CSAH 59

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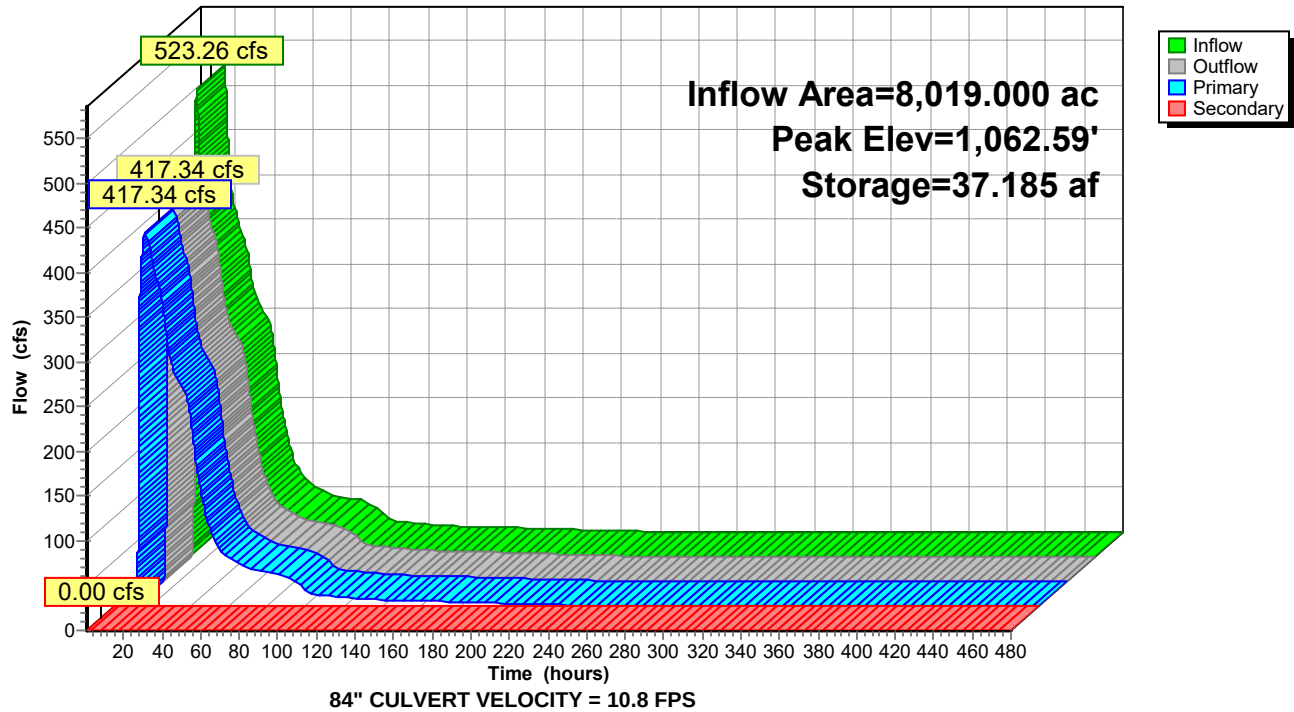
MSE 24-hr 3 2 Year Rainfall=2.69"

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Pond C8: CSAH 59

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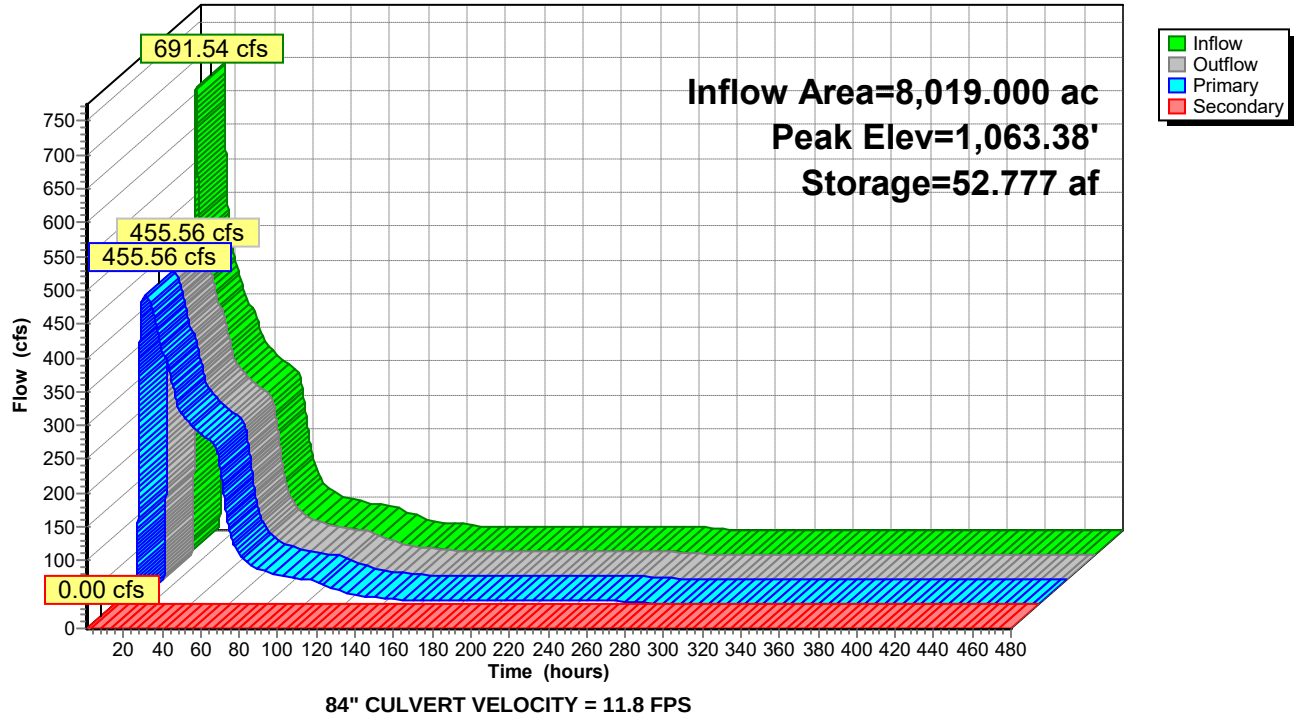
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Pond C8: CSAH 59

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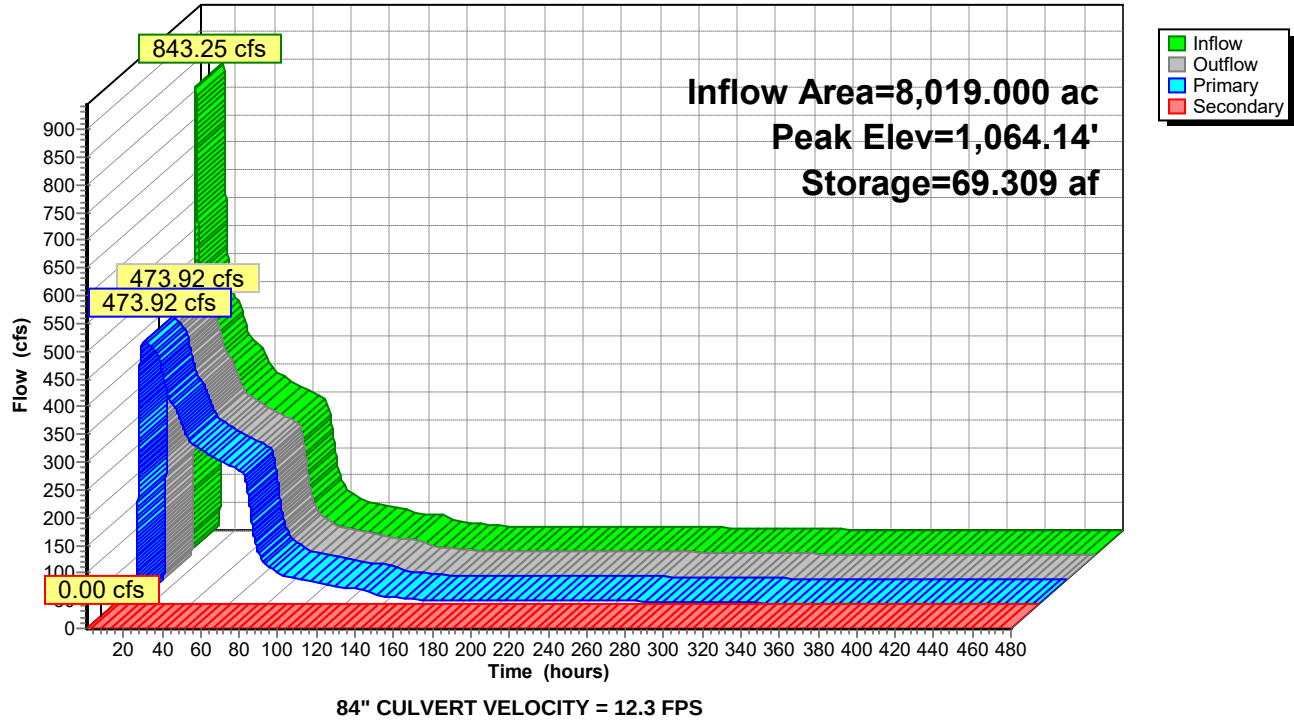
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Pond C8: CSAH 59

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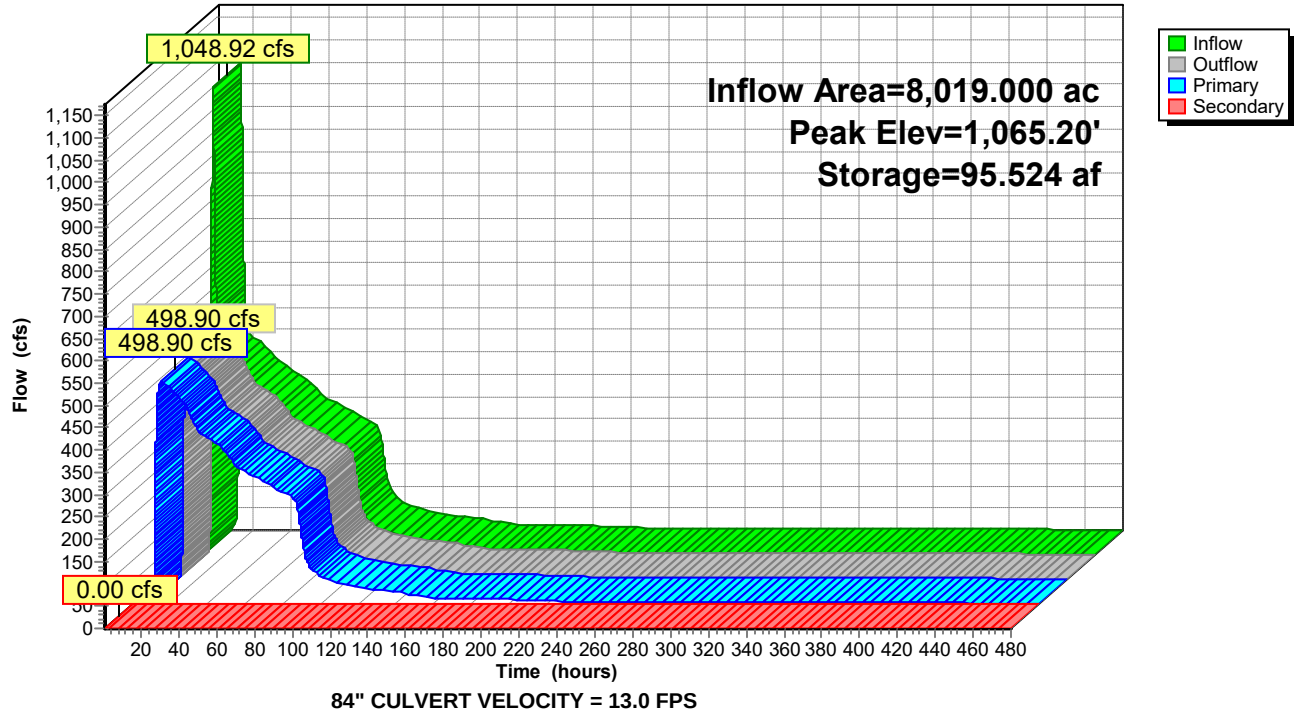
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Pond C8: CSAH 59

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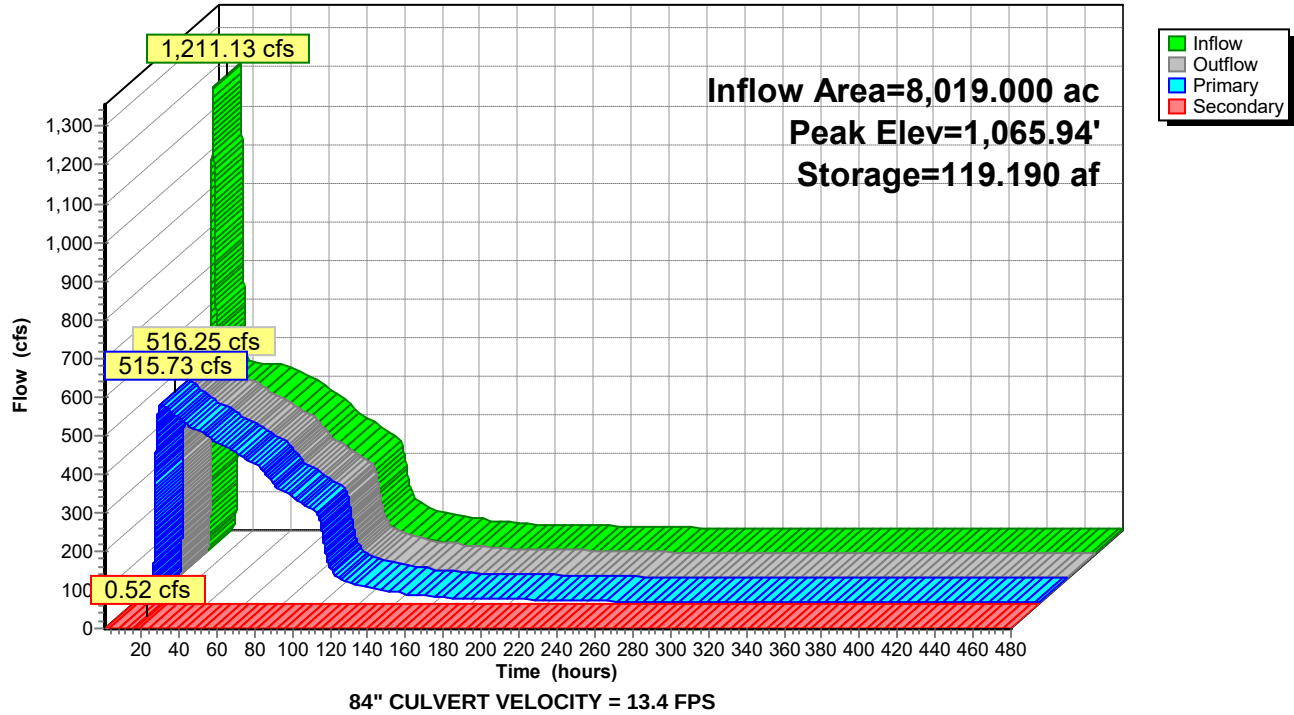
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