STATE OF MINNESOTA COUNTY OF RENVILLE

In Re:

Renville County Ditch No. 59, Renville County, Minnesota.

PETITION FOR IMPROVEMENT OF DRAINAGE SYSTEM

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

Petitioners respectfully represent, state and request the following:

1. Jurisdiction.

The undersigned Petitioners constitute: (1) at least 26% of the owners of the property affected by the proposed improvement; (2) at least 26% of the owners of property that the proposed improvement passes over; (3) the owners of at least 26% of the property area affected by the proposed improvement; or (4) the owners of at least 26% of the property area that the proposed improvement passes over.

Designation of Drainage System.

This Petition requests the improvement of the drainage system known by and designated as County Ditch No. 59 located in Renville County, Minnesota.

3. Need for Improvement.

The drainage system has insufficient capacity or needs enlarging or extending to furnish sufficient capacity or a better outlet.

4. <u>Description of Proposed Improvement.</u>

Attached as **Exhibit A** is a map which shows the general location of the proposed improvement. Exhibit A also depicts the approximate watershed limits in the area of the proposed improvement, the parcels over which the proposed improvement will pass, and the approximate location of the properties affected by the proposed improvement. The proposed improvement would include improvement of the Main Ditch, Branch C and various sub-branches thereof as identified below, and Branch 309 and various sublaterals thereof as designated below. The general location of the Main Ditch, Branch C and its sublaterals and Branch 309 and its sublaterials are, to the best of Petitioners' information, depicted on the attached Exhibit A.

The proposed improvement would be constructed in Sections 1 and 2 of Township 115 North, Range 36 West (Emmet Township), Sections 2, 3, 4, 5, and 6 of Township 115 North, Range 35 West (Troy Township), Sections 35 and 36 of Township 116 North, Range 36 West (Crooks Township), and Sections 27, 28, 32, 33, 34, and 35 of Township 116 North, Range 35 West (Winfield Township), all in Renville County, Minnesota.

The starting point and general course of the proposed improvement are as follows:

Main Ditch

Beginning at the outlet of the Main open ditch in the Southeast Quarter of Section 2, Township 115 North, Range 36 West, said point of beginning being approximately 2,240 feet north and 1,400 feet west of the Southeast Corner of said Section 2; thence northerly and northeasterly along the Main ditch across the Southeast and Northeast Quarters of said Section 2 and the Southeast Quarter of Section 35, Township 116 North, Range 36 West to the east line of said Section 35, said point being approximately 60 feet north of the Southeast Corner of said Section 35; thence easterly across the Southwest Quarter of Section 36-116-36, the North Half of Section 1-115-36, the North Half of Sections 6, 5, and 4 of Township 115 North, Range 35 West to the Northeast Corner of said Section 4; thence northeasterly across the Southwest, Southeast and Northeast Quarter of Section 34-116-35 and the Northwest Quarter of Section 35-116-35 to the Northwest Corner of said Section 35; thence northwesterly across the Southeast Quarter of Section 27-116-35 to the north-south ½ line, said point being approximately 1,150 feet north of the South Quarter Corner and there terminating.

Branch C

Beginning at the outlet of the Branch C tile into the Main open ditch in the Northeast Quarter of the Northeast Quarter of Section 4, Township 115 North, Range 35 West, said point of beginning being approximately 130 feet west and 130 feet south of the Northeast Corner of said Section 4, thence southeasterly and easterly generally following the current alignment of Branch C of County Ditch 59, across the Northeast Quarter of the Northeast Quarter of Section 4, across the West Half and the Southeast Quarter of the Northwest Quarter of Section 3, across the North Half of the Northeast Quarter of Section 2, across the Southwest Quarter of the Northeast Quarter of Section 2; and into the Northeast Quarter of the Southeast Quarter of Section 2 and there terminating, said point of termination being about 110 feet west and 30 feet south of the east Quarter Corner of said Section 2.

Branch C-1

Beginning at the outlet of the Branch C-1 tile into the Branch C tile in the Southwest Quarter of the Northwest Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 1,150 feet east and 1,740 feet south of the Northwest Corner of said Section 3, thence southerly and southeasterly generally following the current alignment of Branch C-1 of County Ditch 59, across the South Half of the Northwest Quarter of Section 3, and into the Northeast Quarter of the Southwest Quarter of Section 3 and there terminating, said point of termination being

approximately 1,400 feet east and 270 feet south of the west Quarter Corner of said Section 3.

Branch C-2

Beginning at the outlet of the Branch C-2 tile into the Branch C tile in the Northwest Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 2,520 feet west and 1,280 feet south of the Northeast Corner of said Section 3, thence northerly generally following the current alignment of Branch C-2 of County Ditch 59 across the Northwest Quarter of the Northwest Quarter of Section 3; and into the Northeast Quarter of the Northwest Quarter of Section 3 and there terminating, said point of termination being approximately 2,580 feet east and 90 feet south of the Northwest Corner of said Section 3.

Branch C-3

Beginning at the outlet of the Branch C-3 tile into the Branch C tile in the Northeast Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 600 feet west and 1,070 feet south of the Northeast Corner of said Section 3, thence northeasterly generally following the current alignment of Branch C-3 of County Ditch 59 across the Northeast Quarter of the Northeast Quarter of Section 3; and into the Southeast Quarter of the Southeast Quarter of Section 34, Township 116 North, Range 35 West, said point of termination being approximately 200 feet west and 110 feet north of the Southeast Corner of said Section 34.

Branch C-3-1

Beginning at the outlet of the Branch C-3-1 tile into the Branch C-3 tile in the Northeast Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 280 feet west and 400 feet south of the Northeast Corner of said Section 3, thence easterly and southeasterly generally following the current alignment of Branch C-3-1 of County Ditch 59 across the Northeast Quarter of the Northeast Quarter of Section 3; and into the Northwest Quarter of the Northwest Quarter of Section 2 and there terminating, said point of termination being approximately 540 feet east and 670 feet south of the Northwest Corner of said Section 2.

Branch C-3-2

Beginning at the outlet of the Branch C-3-2 tile into the Branch C-3 tile in the Northeast Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 240 feet west and 30 feet south of the Northeast Corner of said Section 3, thence westerly generally following the current alignment of Branch C-3-2 of County Ditch 59 across the North Half of the Northeast Quarter of Section 3 and there terminating, said point of termination being approximately 1,960 feet west and 220 feet south of the Northeast Corner of said Section 3.

Branch C-4

Beginning at the outlet of the Branch C-4 tile into the Branch C tile in the Southwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 2,210 feet west and 1,680 feet south of the Northeast Corner of said Section 2, thence northerly and easterly generally following the current alignment of Branch C-4 of County Ditch 59 across the West Half of the Northeast Quarter of Section 2; and into the Northeast Quarter of the Northeast Quarter of Section 2 and there terminating, said point of termination being 1,120 feet west and 910 feet south of the Northeast Corner of said Section 2.

Branch C-4-1

Beginning at the outlet of the Branch C-4-1 tile into the Branch C-4 tile in the Northwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 2,210 feet west and 1,030 feet south of the Northeast Corner of said Section 2, thence northwesterly generally following the current alignment of Branch C-4-1 of County Ditch 59 across the Northwest Quarter of the Northeast Quarter of Section 2; and into the Northeast Quarter of the Northwest Quarter of Section 2 and there terminating, said point of termination being approximately 1,990 feet east and 770 feet south of the Northwest Corner of said Section 2

Branch C-4-2

Beginning at the outlet of the Branch C-4-2 tile into the Branch C-4 tile in the Northwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 1,530 feet west and 870 feet south of the Northeast Corner of said Section 2, thence southeasterly generally following the current alignment of Branch C-4-2 of County Ditch 59 across the Northwest Quarter of the Northeast Quarter of Section 2 and there terminating, said point of termination being approximately 1,400 feet west and 1,360 feet south of the Northeast Corner of said Section 2.

Branch C-5

Beginning at the outlet of the Branch C-5 tile into the Branch C tile in the Southwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 1,480 feet west and 2,540 feet south of the Northeast Corner of said Section 2, thence southerly generally following the current alignment of Branch C-5 of County Ditch 59 across the Southwest Quarter of the Northeast Quarter of Section 2; and into the Northwest Quarter of the Southeast Quarter of Section 2 and there terminating, said point of termination being approximately 1,550 feet west and 2,440 feet north of the Southeast Corner of said Section 2.

Branch 309

Beginning at the outlet of the Branch 309 tile into the Main open ditch in the Northeast Quarter of the Northwest Quarter of Section 4, Township 115 North, Range 35 West, said point of beginning being approximately 2,200 feet east and 60 feet south of the Northwest Corner of said Section 4, thence northerly and westerly generally following the current alignment of Branch 309 of County Ditch 59 across

the Northeast Quarter of the Northwest Quarter of Section 4, across the East Half and the Northwest Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, across the Northeast Quarter of the Southeast Quarter of Section 32, and into the Southeast Quarter of the Northeast Quarter of Section 32 and there terminating, said point of termination being approximately 100 feet west and 1,960 feet south of the Northeast Corner of said Section 32.

Branch 309-1

Beginning at the outlet of the Branch 309-1 tile into the Branch 309 tile in the Southeast Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, said point of beginning being approximately 2,340 feet east and 560 feet north of the Southwest Corner of said Section 33, thence northeasterly generally following the current alignment of Branch 309-1 of County Ditch 59 across the Southeast Quarter of the Southwest Quarter of Section 4, and into the Southwest Quarter of the Southeast Quarter of Section 33 and there terminating, said point of termination being approximately 2,550 feet west and 770 feet north of the Southeast Corner of said Section 33.

Branch 309-2

Beginning at the outlet of the Branch 309-2 tile into the Branch 309 tile in the Northeast Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, said point of beginning being approximately 2,550 feet east and 1,440 feet north of the Southwest Corner of said Section 33, thence northeasterly generally following the current alignment of Branch 309-2 of County Ditch 59 across the Northeast Quarter of the Southwest Quarter of Section 33, and into the Northwest Quarter of the Southeast Quarter of Section 33 and there terminating, said point of termination being approximately 1,790 feet west and 1,810 feet north of the Southeast Corner of said Section 33.

Branch 309-3

Beginning at the outlet of the Branch 309-3 tile into the Branch 309 tile in the Northeast Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, said point of beginning being approximately 2,550 feet east and 1,440 feet north of the Southwest Corner of said Section 33, thence northerly across the Northeast Quarter of the Southwest Quarter of Section 33, across the East Half of the Northwest Quarter of Section 33, then northeasterly across the Northeast Quarter of the Northeast Quarter of the Northeast Quarter of Section 33, and into the Southwest Quarter of the Southeast Quarter of Section 28 and there terminating, said point of termination being approximately 2,350 feet west and 110 feet north of the Southeast Corner of said Section 28.

Set forth on **Exhibit B** is a list of the 40-acre tracts or government lots that the proposed improvement would pass over, together with the names and addresses of the owners of those tracts.

5. Public Utility and Health.

The proposed improvement will be of public utility and will promote the public health.

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 improvement proceedings are dismissed.

7. Cost Bond.

One or more petitioners shall cause a bond to be filed in the amount of at least \$10,000.00 payable to the drainage authority. The bond will be conditioned to pay the costs incurred if the proceedings are dismissed or if a contract is not awarded to construct the proposed improvement described in the petition.

WHEREFORE, the Petitioners respectfully request the following:

- a. That the drainage authority accept this Petition, review it and determine that it is legally adequate; and
- b. That the drainage authority appoint an engineer for purposes of the proposed improvement and direct the engineer to prepare an engineer's preliminary report for the proposed improvement, including allowing the engineer to analyze other potential routes for the proposed improvement.

Dated this 14th day of December, 2016.

Jeff C. Braegelmann #174701 jbraegelmann@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]

Ownership (check one):				
X Individual				
Co-Owners (# of co-owner	s:)	.)
Partner (name of partnershi Corporation or limited 1	iability compan	y (name of	corporation	or LLC:
Trust (complete name of tr	ust:)
Other (explanation:)
Statement of Authority: The undersigned states and represe capacity, he or she has the authori	ty to execute on	behalf of the		
The above-named Petitioner(s)	owns the follow	wing tract(s)	which the ment.	proposed
The above-named Petitioner(s) improvement will pass over or which is aff	owns the followected by the prop	wing tract(s) osed improve	ment.	proposed
The above-named Petitioner(s)	owns the follow	wing tract(s)	ment.	proposed
The above-named Petitioner(s) improvement will pass over or which is aff	owns the followected by the prop	wing tract(s) osed improve	ment.	proposed
The above-named Petitioner(s) improvement will pass over or which is aff <u>Tract Description</u>	owns the followected by the prop	wing tract(s) osed improve Township	ment. Range	proposed
The above-named Petitioner(s) improvement will pass over or which is aff Tract Description SE% NW%	owns the followected by the properties Section 2	wing tract(s) osed improve Township 115	Range 35	proposed
The above-named Petitioner(s) improvement will pass over or which is aff Tract Description SE'4 NW'4 SW'4 NE'4	owns the followected by the properties Section 2	wing tract(s) osed improve Township 115 115	Range , 35 35	proposed

Name of Petitioner(s) (please print or ty	pe):
Carol J. Lippert	
Corporation or limite X Trust (complete name of	ners:) rship:) d liability company (name of corporation or LLC:) f trust:)
Statement of Authority:	
	resents that if he or she is executing in a representative ority to execute on behalf of the respective partnership, apany, trust or other such entity.
The above-named Petitioner(simprovement will pass over or which is) owns the following tract(s) which the proposed affected by the proposed improvement.
Tract Description	Section Township Range
SW1/4 SE1/4	28 116 35
Dated:	Carol J. Lippert, Trustee

Name of Petitioner(s) (please print or type):				
Aakre Famil	y Farms, LLC				
Ownership (check o					
	vidual				
	Owners (# of co-owners:				
Part	tner (name of partnership:		0)
	poration or limited liability	company (nam	ne of corporation	n or LLC	Aakre
Fan	nily Farms, LLC				
Tru	st (complete name of trust:				
Oth	er (explanation:)
capacity, he	rity: gned states and represents t or she has the authority to limited liability company, tr	execute on bel	nalf of the resp		
	named Petitioner(s) owns ass over or which is affected		• • • • • • • • • • • • • • • • • • • •		roposed
Tr	act Description	Section	<u>Township</u>	Range	
NW ¹ / ₄ NE ¹ / ₄		3	115	35	
Part of the N	IE¼ NE¼	3	115	35	
Dated: <u>//-9-/</u>	·	Sally Jo Aakfe	J. Ask.		

Name of Petitioner(s) (please print or type):				
Wat Family Farms LC				
Ownership (check one): Individual Co-Owners (# of co-owners:) X Partner (name of partnership: W Corporation or limited liabili	Vat Family Fat ty company			_) _c: _)
Statement of Authority:				
The undersigned states and represents to capacity, he or she has the authority to corporation, limited liability company, to the above-named Petitioner(s) owns improvement will pass over or which is affected	execute on lust or other state the follow	behalf of the resuch entity. ving tract(s) w	spective partnersly	iip,
Tract Description	Section	Township	Range	
Part of NE¼ SW¼	33	116	35	
Part of NW1/4 SW1/4	33	116	35	
SE¼ NW¼	33	116	35	
Part of NE ¹ / ₄ NW ¹ / ₄	33	116	35	
Dated:	Saw EAWA MAN	FAMILY FA White Who D. M IAGER OF	el ITCHELL, DEVON LC,	MANAGEN

RICHMOND, UA 23219

Name of Petitioner(s) (please pr	int or type):				
James Zenk					
Ownership (check one):					
X Individual					
Co-Owners (# c	of co-owners:)				
Partner (name o	f partnership:				
	limited liability co)			C:
Trust (complete	name of trust:)
Other (explanat	ion:)
The undersigned states capacity, he or she has corporation, limited liab The above-named Pet improvement will pass over or versions.	the authority to execulity company, trust of itioner(s) owns the	other such en	of the respect tity. act(s) which	tive partnershi	ip,
Tract Descript	ion Sec	tion Tow	nship <u>R</u>	Range	
SW1/4 NW1/4	3	5 1	16	35	
NW ¹ / ₄ NW ¹ / ₄	3	5 1	16	35	
Dated: Duc, 接1, 20	I G	Jamus Zenk	Rul	2	

Name of Petitioner(s) (please print or type):				
James Zenk				
Dianne Zenk				
Ownership (check one):				
Individual				
X Co-Owners (# of co-owners: 2)				`
Partner (name of partnership: Corporation or limited liability	ity company	(name of o	eornoration (or IIC.
Corporation of limited habit	ity company		orporation (n LLC.
Trust (complete name of trust:				
Other (explanation:				
Statement of Authority:				
The undersigned states and represents t capacity, he or she has the authority to corporation, limited liability company, tr	execute on be	ehalf of the re		
The above-named Petitioner(s) owns improvement will pass over or which is affected	the following by the propos	ng tract(s) sed improvem	which the pent.	proposed
Tract Description	Section	Township	Range	
NE¼ SE¼	34	116	35	
Part of SE ¹ / ₄ NE ¹ / ₄	34	116	35	
Dated: Dec, 1, 2016		Somes	- Rul	
	James Zenk	1		
Dated:	Dianne Zenk	nne,	Benk	

	(name of cor	rnoration or LLC:
ity company		Political de la
execute on b	ehalf of the res	in a representative pective partnership,
s the follow d by the propo	ing tract(s) what sed improvement	nich the proposed
Section	Township	Range
3	115	35
Daniel W. R	W Four	Int last
	that if he or so execute on because or other so the followed by the proposition of the pr	that if he or she is executing execute on behalf of the restruct or other such entity. It is the following tract(s) will do not be the proposed improvement to the propos

Name of Petitioner(s) (please print or type):				
Daniel W. Rauenhorst				
Ownership (check one):				
X Individual	`			
Co-Owners (# of co-owners: _				`
Partner (name of partnership: Corporation or limited liabi	lity company	u (nome of oo	moration	or IIC:
Corporation of infinited flat-	inty compan	y (name or co	троганон (of LLC;
Trust (complete name of trust:)
Other (explanation:	-			
The undersigned states and represents capacity, he or she has the authority to corporation, limited liability company, The above-named Petitioner(s) own improvement will pass over or which is affected.	o execute on trust or other as the follow	behalf of the result such entity. wing tract(s) w	spective par which the	tnership,
Tract Description	Section	Township	Range	
NW¼ NE¼	4	115	35	
NE¼ NE¼	4	115	35	
Dated: 12-3-16	Daniel W. 1	2 W Fores	here	<u></u>

Name of Petitioner(s) (please print or type):	
Robb J. Zenk Megan C. Zenk	
Ownership (check one): Individual X Co-Owners (# of co-owners: 2) Partner (name of partnership: Corporation or limited liability company (name of corporation) Trust (complete name of trust: Other (explanation:	
Statement of Authority:	
The undersigned states and represents that if he or she is executing in a recapacity, he or she has the authority to execute on behalf of the respective corporation, limited liability company, trust or other such entity.	-
The above-named Petitioner(s) owns the following tract(s) which t improvement will pass over or which is affected by the proposed improvement.	he proposed
Tract Description Section Township Ran	<u>ige</u>
Part of SE ¹ / ₄ NE ¹ / ₄ 34 116 35	5
Dated: 12-8-16 Roll 5 Mil	7
Dated: 12-8-16 Robb J. Zenk My CM	
Megan C. Zenk	

Name of Petitioner(s) (please print or type):				
Ruth Heller Naomi Endter				
Ownership (check one): Individual Co-Owners (# of co-owners: 2 Partner (name of partnership: Corporation or limited liabil Trust (complete name of trust: Other (explanation:	ity company))
Statement of Authority: The undersigned states and represents to capacity, he or she has the authority to	that if he or	she is execution	ng in a repre	esentative
Corporation, limited liability company, to The above-named Petitioner(s) owns improvement will pass over or which is affected	rust or other the follow	such entity. ving tract(s)	which the	
Tract Description	Section	Township	Range	
NE½ SE¼	2	115	35	
SE1/4 NE1/4	2	115	35	
Part of NE¼ NE¼	2	115	35	
Dated: 11/15/2016	Duth Heller	& Jaomi End	ter	

Ruth Heller & Naomi Endter

By: Roger Heller, Power of Attorney

EXHIBIT A

[Map – attached]

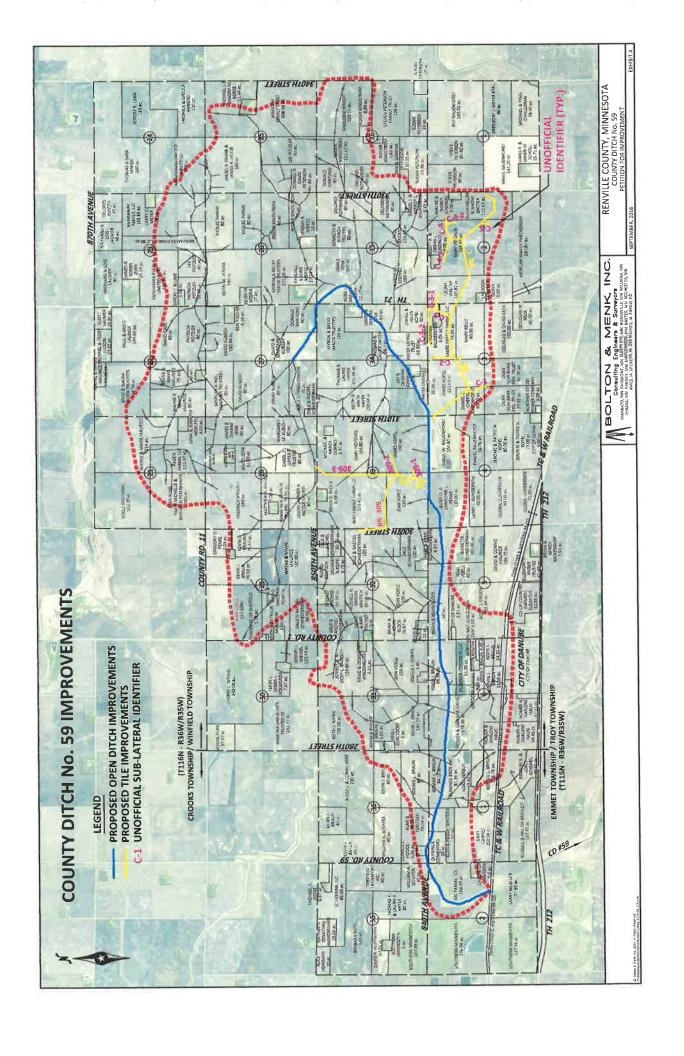


EXHIBIT B

[Tract Descriptions - attached]

1 2 8 4 2	Loration			ON CIA	Description	Section	diusumoi	19118
1 2 8 4 2		Owner	Address	00 02000 01	NW 1/4 SF 1/4	+	115	36
7 m 4 m	Main Ditch	Larry Mueller	26826 US Hwy 212, Danube, MN 56230	10-0000-01	CW 1/4 3C 1/4	, ,	115	36
w 4 v	Main Ditch	WC Farms, LLC	18105 31st Ave. N, Plymouth, MN 55447	10-00060-00	NW 1/4 NE 1/4	7	115	3,4
4 0	Main Ditch	WC Farms, LLC	18105 31st Ave. N, Plymouth, MN 55447	10-00060-00	NW 1/4 NE 1/4	1,	115	36
2	Main Ditch	WC Farms, LLC	18105 31st Ave. N, Plymouth, MN 55447	10-00060-00	NE 1/4 NE 1/4	7 20	115	3 4
1	Main Ditch	William A. Schafer	84213 270th St., Renville, MN 56284	09-00480-00	St 1/4 St 1/4	20	116	3,45
9	Main Ditch	Alan & Peggy Tersteeg	PO Box 163, Olivia, MN 56277	00-00200-60	Pt SW 1/4 SW 1/4	30	110	36
-	Main Ditch	Donald J Hodge	110 Chestnut Ave SE., Renville, MN 56284	09-00520-00	Pt SW 1/4 SW 1/4	36	TIP	90
00	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00020-00	Pt NW 1/4 NW 1/4	1,	115	200
0	Main Ditch	Alan & Peggy Tersteeg	PO Box 163, Olivia, MN 56277	10-00040-00	Pt NE 1/4 NW 1/4	1,	15	36
, 5	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00020-00	Pt NE 1/4 NE 1/4	-	CII;	000
= =	Main Ditch	Bonnie L. Braun	80197 Co Rd 1, Danube, MN 56230	10-00020-00	Pt NW 1/4 NE 1/4	1	115	30
1 2	Main Ditch	Bonnie L. Braun	80197 Co Rd 1, Danube, MN 56230	10-00020-00	Pt NE 1/4 NE 1/4	1	TIS	25
7 7	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00021-00	Pt NW 1/4 NE 1/4	1	115	92
14	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00021-00	Pt NE 1/4 NE 1/4	1,	115	8 5
1 5	Main Ditch	Homer & Darlene Haug	PO Box 356, Danube, MN 56230	24-00170-00	NW 1/4 NW 1/4	9	SIL	ر در
19	Main Oitch	Homer & Darlene Haug	PO Box 356, Danube, MN 56230	24-00170-00	NE 1/4 NW 1/4	9	115	2 2
7	Main Ditch	Kevin J. Braun	80197 Co. Rd 1, Danube, MN 56230	24-00160-00	NW 1/4 NE 1/4	9	115	ξ,
2 2	Main Ditch	Kevin Braun	80197 Co. Rd 1, Danube, MN 56230	24-00160-00	NE 1/4 NE 1/4	9	115	C L
1 0	Main Ditch	Brian Block & Kevin Block	30325 850th Ave., Danube, MN 56230	24-00130-00	NW 1/4 NW 1/4	2	115	č,
2	Main Ditch	Brian Block & Kevin Block	30325 850th Ave., Danube, MN 56230	24-00130-00	NE 1/4 NW 1/4	0 1	115	25
2 5	Main Oitch	lean Voelz	29438 840th Ave., Danube MN 56230	24-00110-00	Pt NW 1/4 NE 1/4	٠, ١	115	S F
2 5	Main Ditch	Jeanette Schneiderman	29688 840th Ave., Danube, MN 56230	24-00120-00	Pt NW 1/4 NE 1/4	2	CII	5
1 5	Majo Ditch	Banette Schneiderman	29688 840th Ave., Danube, MN 56230	24-00120-00	NE 1/4 NE 1/4	ς.	115	CS L
2 2	Main Ditch	Floid O & Christine Penke	29677 800th Avenue, Danube, MN 56230	24-00100-00	NW 1/4 NW 1/4	4	TIS	ξ. F.
, K	Main Ditch: Branch 309	Floid O & Christine Penke	29677 800th Avenue, Danube, MN 56230	24-00100-00	NE 1/4 NW 1/4	4	TIS	C .
26	Main Ditch; Branch 309;	Jean Voelz	29438 840th Ave., Danube, MN 56230	27-01040-00	SE 1/4 SW 1/4	33	116	C C
	Branch 309-1			27 01050.00	SW 1/4 SF 1/4	33	116	35
27	Main Ditch; Branch 309-1	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, MN 50277	27-01060-01	SF 1/4 SF 1/4	33	116	35
28	Main Ditch	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W. Clivia, Min 50277	27-01000 DE	NW 1/4 NF 1/4	4	115	35
29	Main Ditch	Daniel W. Rauenhorst	81961 320th St., Olivia, MN 56277	24-00041-00	NE 1/4 NE 1/4	4	115	35
30	Main Ditch; Branch C	Daniel W. Rauenhorst	81961 320th St., Olivia, MN 56277	24-00041-00	NW 1/4 NW 1/4	· m	115	35
31	Main Ditch; Branch C	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, Ivin 56277	27 04070 00	D+ CW 1 /4 CW 1 /4	34	116	35
32	Main Ditch	Keith J. & Anita M. Hayek	1422 University Ave. Nt. Minneapolis, MN 55413	00.0350.55	D+ SW 1/4 SW 1/4	34	116	35
33	Main Ditch	Hayek Living Trust	3300 149th Ave., Ham Lake, MN 55304	00-05/10-77	FLSVV 1/4 SVV 1/4	;		
34	Main Ditch	Hayek Living Trust	3300 149th Ave., Ham Lake, MN 55304	27-01750-00	Pt SE 1/4 SW 1/4	34	116	35
		c/o Mark & Ruth Hayek	TOTAL PART COLOR	22-01101-00	Pt SF 1/4 SW 1/4	34	116	35
33		Jay L. & Deannea L. Johnson	314Ub 84Uth Ave., Olivia, Ivin 30277	27-01100-00	Pt SE 1/4 SW 1/4	34	116	35
36		Thomas R. and Laurie A. Hayek	ZOLDO CO. No. 4, NEIVIIIE, ININ JOZOG	27.01751.00	SW 1/4 SF 1/4	34	116	35
37	Main Ditch	Hayek Living Trust	3300 149th Ave., Ham Lake, Min 55304	00-10/10-77				
38	Main Ditch	Hayek Living Trust	3300 149th Ave., Ham Lake, MN 55304	27-01751-00	Pt NW 1/4 SE 1/4	34	116	35
		c/o Mark & Kuth Hayek	26158 Co Rd 4 Renville MN 56284	27-01102-00	Pt NW 1/4 SE 1/4	34	116	35
39		Thomas R. and Laurie A. Hayek	CASON IIS LIMIT TO DOWNER MAN SCOOL	27-01770-00	NE 1/4 SE 1/4	34	116	35
9		James & Dianne Zenk	OACOA HE DAME 24 Describe MN 56230	27-01770-00	Pt. SE 1/4 NE 1/4	34	116	35
41		James & Dianne Zenk	04604 LIS Huss 21 Depute MN 56230	27-01771-00	Pt. SE 1/4 NE 1/4	34	116	35
42		Robb J. & Megan C. Zenk	94691 US Hwy 71 Danube MN 56230	27-01800-00	SW 1/4 NW 1/4	35	116	35
43		James Zenk	84691 IS Hww 71 Danube, MN 56230	27-01800-00	NW 1/4 NW 1/4	35	116	35
44	Main Ditch	James Zenk	04031 O3 HWY 71, COLORS, HILLS COLORS					

	Location	Owner	Address	PID No.	Description	Section	Township	Range
45	Main Ditch	Donald L. Hartung	14941 St. Hwy 4, Cosmos, MN 56228	27-01730-00	SE 1/4 SE 1/4	27	116	35
46	Main Ditch	David & Margaret Kubesh	85554 310th St., Danube, MN 56230	27-01720-00	SW 1/4 SE 1/4	27	116	35
47	Branch C; Branch C-1	Daniel & Cheryl Rauenhorst	81961 320th St., Olivia, MN 56277	24-00030-00	SW 1/4 NW 1/4	3	115	35
48	Branch C	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, MN 56277	24-00010-00	SE 1/4 NW 1/4	6	115	35
49	Branch C; Branch C-2; Branch	Aakre Family Farms, LLC	80664 350th St., Olivia, MN 56277	24-01130-00	NW 1/4 NE 1/4	ന	115	35
20	Branch C; Branch C-3; Branch	Agkre Family Farms, LLC	80664 350th St., Olivia, MN 56277	24-01130-00	Pt. NE 1/4 NE 1/4	m	115	35
51	Branch C; Branch C-3-1;	Leone Welter C/O Virginia Hartmann	331 2nd Ave. SW, Forest Lake, MN 55025	24-01110-00	NW 1/4 NW 1/4	2	115	35
52	Branch C	Leone Welter C/O Virginia Hartmann	331 2nd Ave. SW, Forest Lake, MN 55025	24-01110-00	Pt SW 1/4 NW 1/4	2	115	35
53	Т		15937 Cascade Path, Rosemount, MN 55068	24-01090-00	SE 1/4 NW 1/4	2	115	35
24	Branch C; Branch C-4; Branch C-5		15937 Cascade Path, Rosemount, MN 55068	24-01090-00	SW 1/4 NE 1/4	2	115	35
25	Branch C	Ruth Heller & Naomi Endter, TR C/O Roger Heller	PO Box 26, Olivia, MN 56277	24-01100-00	NE 1/4 SE 1/4	2	115	35
29	Branch C-1	Dean Von Bank & Susan Von Bank Revocable Trust	725 Forrest Road, Glenview, IL 60025	24-00020-00	NE 1/4 SW 1/4	m	115	35
57	Branch C-3	Bernard & Norma Balderston	509 10th St. S, Olivia, MN 56277	24-01131-00	Pt. NE 1/4 NE 1/4	3	115	35
58	Branch C-3	James & Helen Kopel	1107 Park Ave W, Olivia, MN 56277	27-01780-00	SE 1/4 SE 1/4	34	116	35
59	Branch C-4; Branch C-4-1; Branch C-4-2	Gary Verzalik	15937 Cascade Path, Rosemount, MN 55068	24-01090-00	NW 1/4 NE 1/4	2	115	35
09	Branch C-4	Ruth Heller & Naomi Endter, TR C/O Roger Heller	PO Box 26, Olivia, MN 56277	24-01100-00	Pt NE 1/4 NE 1/4	2	115	35
61	Branch C-4-1	Gary Verzalik	15937 Cascade Path, Rosemount, MN 55068	24-01090-00	Pt NE 1/4 NW 1/4	2	115	35
62	Branch C-5	Morgan Family Partnership C/O Patrick & Rita Morgan	PO Box 107, Elmore, MN 56027	24-01120-00	NW 1/4 SE 1/4	2	115	35
63	Branch 309; Branch 309-2; Branch 309-3	Jean Voelz	29438 840th Ave., Danube, MN 56230	27-01040-00	Pt. NE 1/4 SW 1/4	33	116	35
64	Branch 309: Branch 309-3	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	Pt. NE 1/4 SW 1/4	33	116	35
65	Branch 309	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	Pt. NW 1/4 SW 1/4	33	116	35
99	Branch 309	Dale & Rachel Schneiderman	31034 850th Ave., Danube, MN 56230	27-00981-00	NE 1/4 SE 1/4	32	116	35
29	Branch 309	Dale & Rachel Schneiderman	31034 850th Ave., Danube, MN 56230	27-00981-00	SE 1/4 NE 1/4	32	116	35
89	Branch 309-2	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W., Olivia, MIN 56277	27-01060-00	NW 1/4 SE 1/4	33	116	35
69	Branch 309-3	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	SE 1/4 NW 1/4	33	116	35
70	Branch 309-3	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	Pt. NE 1/4 NW 1/4	33	116	35
71	Branch 309-3	Gary Hotovec ETAL	87308 US Hwy 71, Danube, MN 56230	27-01050-00	NW 1/4 NE 1/4	33	116	35
72	Branch 309-3	Carol J. Lippert, Trustee	89118 Co. Rd 1, Danube, MN 56230	27-00801-00	SW 1/4 SE 1/4	78	116	35

Minnesota



Effective Date: January 4th, 2017

Western Surety Company

OFFICIAL BOND AND OATH

KNOW ALL PERSONS BY THESE PRESENTS: That we, Bill L. Helget	Bond No63024171
	ration duly licensed to do business in the State of Minnesota,
as Surety, are jointly and severally held and firmly bound to	
of Renville	
	, State of Minnesota in the sum of
Ten Thousand and 00/100	DOLLARS (\$ 10,000.00),
	h, well and truly to be made, we hereby bind ourselves, and
each of us, our, and each of our heirs, executors, administrat	
Sealed with our seals and dated this4th day	
THE CONDITION OF THIS OBLIGATION IS SUCH,	That whereas, the above bounden Principal was heretofore
dulyAppointed to the office of	Engineer in and for the and State of Minnesota.
County of Renville	and State of Minnesota.
NOW THEREFORE, if the said Principal shall faithful	lly and impartially, in all things during his continuance in
	ppression, and pay over without delay to the officer entitled
	ands by virtue thereof, then this obligation shall be void,
otherwise to remain in full force and effect.	The control of the co
Witness to Principal	
"Otto Januaria"	n'adall
Principal	Bell L. Hilys
	Principal
	WESTERN SURETY COMPANY
Witness to Surety	111/11/11
ΛII .	By at 1. Bright
a. Viexor	Paul T. Brufat, Vice President
	MYRA J. SIMON \$
J. nelson	
	Notary Public-Minnesota §
Leave blank and X out word "of" when State of Minnesota is	Obligee. My Commission Expires Jan. 81, 2020
STATE OF MINNESOTA	ACKNOWLEDGMENT OF PRINCIPAL
County of Brown (ss.	
On this 4th day of January	, 2017 , personally came
	, to me well known to be the identical person described in
Bill Helget and who executed the foregoing instrument, and he severally	, to me wen known to be the identical person described in
	acknowledged the same to be his own free act and deed.
My commission expires	Maria Dalaman
JANUARY 31, 2020,	Myra Jamon Notary Public
) Notary rubhe
STATE OF SOUTH DAKOTA	ACKNOWLEDGMENT OF SURETY
County of Minnehaha	(Corporate Officer)
On this24thday ofOcto	ber,2014, before me appeared
Paul T. Bruflat	, to me personally known and being
by me duly sworn, did say that he is the aforesaid officer	of WESTERN SURETY COMPANY, the corporate Surety
당하는 이용 없는 그렇게 하고싶어요. 소리는 아이를 가게 없는 그러워 하는 이렇게 하는데 하다. 그 사람이 모든데 하는데 하는데 그리고 있다.	to the foregoing instrument is the corporate seal of the
그리고 그 그림에는 그는 그 그 아무슨 그는 아니는 이 아니는 이 아니는	of the corporation by authority of its Board of Directors, and
the said aforesaid officer acknowledged the instrument to be	
+ % % % % % % % % % % % % % % % % % % %	100
M. BENT	M Kat
NOTARY PUBLIC SEAL S	1.1. Wen
SEAL SOUTH DAKOTA (SEAL)	Notary Public, Minnehaha County
, - 0	
* ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	

COMPANY ONE OF AMERICA SOLDEST BONDING COMPANY . ONE OF AMERICA SOLDEST BONDING COMPANIES

My Commission Expires March 2, 2020

Form 878-A-10-2014

OATH OF OFFICE

STATE OF MINNESOTA	SS			
County of				
I,			, do solemnly sw	ear that I will support the
Constitution of the United States, the Cons	titution of the Sta	ate of Minnesota	and that I will	faithfully and impartially
discharge the duties of the office of to the best of my judgment and ability, so he	elp me God.			
Subscribed and sworn to before me this	day	v of	,	
My commission expires	· -		,	
	Notar	v Public		County. Minnesota
,				
We, the undersigned members of the Sch				
ofCounty, I	Minnesota, do her	eby approve of th	ne within bond an	nd of the Surety thereon.
			_, ,	
,			,	
I hereby certify that before the within bo	ond was approved	by the	<u></u>	,
it was made to appear to the satisfaction of				
Commissioner of the State of Minnesota, sh contract as such.	nowing that, at th	ne time of the ex	ecution of the s	ame, it was authorized to
oomingo ab baom	-			County Auditor
				County Muntor
m ::1: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. 7			
The within bond and Surety approved by, this				
Attest		<u> </u>	,	
110000	-			C1:
(Seal) County Au	iditor - Secretary			Chairman
The form and execution of the within bo	nd is hereby, this	d	ay of	
, approved.				
	-			County Attorney
The form and execution of the within bo	nd approved this	da	v of	
·	na approved unio		y 01	,
	-			Attorney General
	J	Зу		Assistant Attorney General

STATE OF MINNESOTA Before the RENVILLE COUNTY BOARD OF COMMISSIONERS SITTING AS THE DRAINAGE AUTHORITY FOR RENVILLE COUNTY DITCH NO. 59

	T
In the Matter of: the Petition for Improvement of Renville County Ditch No. 59	ENGINEER'S BOND
Commissioners, sitting as the drainage a (Drainage Authority) in an amount equal to commercial general liability and professional per claim respectively, of not less than	at Bill Lifelget (Engineer), as bound to the Renville County Board of authority for Renville County Ditch No. 59, \$5,000 for which the Engineer will maintain all liability coverage limits, per occurrence and that amount during the entire term of the roven claim by any person or the Drainage

The condition of the above obligation is such: Engineer was appointed by the Drainage Authority as the Drainage Engineer for the petition to improve Renville County Ditch No. 59. Minnesota Statutes Section 103E.241, subd. 2 requires the Engineer to file a bond of at least \$5,000 with the District upon appointment. The bond must be conditioned to pay any person or the Drainage Authority for damages and injuries resulting from negligence of the Engineer while the Engineer is acting in the proceedings or construction and provide that the Engineer will diligently and honestly perform the Engineer's duties. The aggregate liability of the Engineer for all proven claims shall not exceed the amount of the Engineer's bond, for which the Engineer acknowledges being held and firmly bound in the amount of \$100,000 to be underwritten by the Engineer's obligation to provide commercial general liability and professional liability insurance during the term of the Engineer's appointment.

Authority for damages and injuries resulting from negligence of the Engineer while the Engineer is acting in the proceedings or construction for the improvement to Renville

Signed this 19 day of January	, 2017.
Bolton + Menk, Inc.	_(Name of Engineering Firm)
By Bill L. Helgt	_
Its P.E.	-

County Ditch No. 59.

STATE OF MINNESOTA Before the RENVILLE COUNTY BOARD OF COMMISSIONERS SITTING AS THE DRAINAGE AUTHORITY FOR RENVILLE COUNTY DITCH NO. 59

In the Matter of: the Petition for Improvement of Renville County Ditch No. 59	ENGINEER'S OATH
Bill L. Helget (Engineer), having Board of Commissioners, drainage authority for Drainage Engineer for the Petition for Improve pursuant to Minnesota Statutes Chapter 103E, perform the assigned duties in the best manner perform the Engineer's duties as set forth in Chapter 103E, standards required of professional engineers.	or Renville County Ditch No. 59, as the ement of Renville County Ditch No. 59, does hereby swear or affirm to faithfully er possible and to diligently and honestly
Signed this 19 day of January, 2017 Bolton + Menk, Inc. (Name of	<u>7</u> .
By Bill I. Helgst Its P.E.	of Engineering Firm)

Renville County

Renville County Office Building 105 South 5th Street, Room 319 Olivia, MN 56277

Receipt

Receipt Date: 12/9/2016

Date	Name	Description		
12/9/2016	Rev. Gary J. Verzalik	Surety Deposit for Renville CD 59		\$9,200.00
			Total Dua	\$9,200.00
			Total Due	\$!

Total Sunety Deposit # 48,700.00

Date	Name	Description		
12/9/2016	Mrs. James	Surety Deposit for		\$2,200,00
12/9/2010	Lippert	Renville CD 59		\$2,300.00
			Total Due	\$2,300.00

Date	Name	Description		
12/9/2016	Aakre Family	Surety Deposit for		\$4,600.00
		Renville CD 59		+ 1,00000
			Total Due	\$4,600.00

Date	Name	Description		
12/9/2016	Devon Mgmt.	Surety Deposit for Renville CD 59		\$9,600.00
	×			
			Total Due	\$9,600.00

Date	Name	Description		
12/9/2016	James Zenk	Surety Deposit for Renville CD 59		\$6,900.00
			Total Due	\$6,900.00

Date	Name	Description		
12/9/2016	Daniel Rauenhorst	Surety Deposit for Renville CD 59		\$2,300.00
			Total Dua	62 200 00
			Total Due	\$2,300.00

Date	Name	Description		
12/9/2016	Daniel Rauenhorst	Surety Deposit for Renville CD 59		\$4,600.00
			W . I D	04 (00 00
			Total Due	\$4,600.00

Date	Name	Description		
12/9/2016	Robb Zenk	Surety Deposit for		\$2,200,00
12/9/2010	Kooo Zelik	Renville CD 59		\$2,300.00
			Total Due	\$2,300.00

Date	Name	Description		
12/9/2016	Heller Farms	Surety Deposit for Renville CD 59		\$6,900.00
				24,000,00
			Total Due	\$6,900.00





APR 2 3 7019

Renville County Auditor-Treasurer

Nationwide Mutual Insurance Company Bond Department 1100 Locust Department 2006 Des Moines, IA 50391-2006 Phone: 866-387-0457

Email: bondcomm@nationwide.com

License and Permit Bond

Bond No. 7901006944

KNOW ALL MEN BY TH	ESE PRESENTS:
--------------------	---------------

That we, Roger Heller			
of Olivia	State of	MN	, as Principal, and
Nationwide Mutual Insurance Comp as Surety, are held and firmly bound	any, a corporation duly licer	nsed to do business ir	the State of MN
•			
lawful money of the United States, t	al sum of One Hundred Twent		
we bind ourselves and our legal representations			
THE CONDITION OF THE ABOVE a license or permit described as follo the said Obligee.			d Principal has been issued by
NOW THEREFORE, if the said Prilaws and ordinances, including all Alobligation to be void, otherwise to re until April 18, 2020	mendments thereto, appertai	ning to the license or from April 19, 2019	permit described then this
This bond may be terminated at any this bond is filed and to the Principal mailing of said notice, this bond shall liability for any acts or omissions of	, at the last known address, all ipso facto terminate and t	and at the expiration of the Surety shall there	of thirty (30) days from the
Dated this19thday of	April ,	2019	
Shall save and keep harmless the Re loss or damage which it may sustain			, from all he issuance of said license
or permit.	Roger	- Alle	
		Prin	ncipal
	Natio	nwidę Mutual Insura	nge Company

STATE OF MINNESO County of RENUITE	
STATE OF THINK 250	to 1
0	180
County of KENVILLE)
On this 23 day of H	prid
to me well known to be the id	dentical person described in and who executed the foregoing bond andhe
acknowledged the same to be	<u>his</u> own free act and deed
(SFALM	
PATRICIA M. KE	I william I'll helde
Notary Public-Mi	nnesota Signature of Notary Public
My Commission Expires	lan. 31, 2020 §
Language and the contract of t	V COD A CIVICINI ED CHENT OF CODE OF THE THREE OF THREE OF THE THREE OF THE THREE OF THRE
USE ON	LY FOR ACKNOWLEDGMENT OF CORPORATE PRINCIPAL
STATE OF	A.
017(12 0)) SS.
County of	
Upon this day of	, 20, before me personally appeared, to me personally known, who being by me duly sworn, did say that he
in the	, to me personally known, who being by me duly sworn, did say that he
is theof	cornerations that the seal officed to the foresting board in
Corporate Seal of the corporati	corporation; that the seal affixed to the foregoing bond is the on, and that said instrument was executed in behalf of the corporation by authority of
its Board of Directors: that he a	acknowledged said instrument to be the free act and deed of the corporation.
	removed god odd modalinem to be the need dot and does of the compensation.
(SEAL)	
	Signature of Notary Public
	ACKNOWLEDGMENT OF CORPORATE SURETY
	The state of the s
lowa	
STATE OFlowa)
DOIL)) ss.
STATE OF)
County of Polk)) ss.
County of Polk On this 19th day of)) ss. April , 2019 . before me personally appeared <u>Larry D. Slegh</u>
County of Polk On this 19th day of N/A and N/A attorney in fact, of the Nationw	April, 2019 before me personally appeared <u>Larry D. Slegh</u> to me personally known, who being by me duly sworn, did say that he is the ide Mutual Insurance Co, the corporation whose name is affixed to the foregoing
Polk County of Polk On this 19th day of and N/A attorney in fact, of the Nationw nstrument; that the sealaffin	April, 2019 before me personally appeared <u>Larry D. Slegh</u> to me personally known, who being by me duly sworn, did say that he is the ide Mutual Insurance Co, the corporation whose name is affixed to the foregoing ked to the foregoing instrument is the corporate seal of the said corporation; and that
County of Polk On this 19th day of and N/A attorney in fact, of the Nationw instrument; that the seal affixing and instrument was executed instrument.	April, 2019 before me personally appeared Larry D. Slegh to me personally known, who being by me duly sworn, did say that he is the ide Mutual Insurance Co, the corporation whose name is affixed to the foregoing ked to the foregoing instrument is the corporate seal of the said corporation; and that in behalf of said corporation by authority of its board of directors and said
County of Polk On this 19th day of and N/A attorney in fact, of the Nationw instrument; that the seal affixing said instrument was executed in Larry D. Slegh	April, 2019 before me personally appeared Larry D. Slegh to me personally known, who being by me duly sworn, did say that he is the ide Mutual Insurance Co, the corporation whose name is affixed to the foregoing ked to the foregoing instrument is the corporate seal of the said corporation; and that n behalf of said corporation by authority of its board of directors and said acknowledged that he executed said instrument as attorney in fact as the free
County of Polk On this 19th day of Mationw and N/A attorney in fact, of the Nationw astrument; that the seal affinition and instrument was executed in Larry D. Slegh act and deed of said corporation	April, 2019 before me personally appeared Larry D. Slegh to me personally known, who being by me duly sworn, did say that he is the ide Mutual Insurance Co, the corporation whose name is affixed to the foregoing ked to the foregoing instrument is the corporate seal of the said corporation; and that n behalf of said corporation by authority of its board of directors and said acknowledged that he executed said instrument as attorney in fact as the free
County of Polk On this 19th day of and N/A attorney in fact, of the Nationw instrument; that the seal affixing said instrument was executed in Larry D. Slegh	April, 2019 before me personally appeared Larry D. Slegh to me personally known, who being by me duly sworn, did say that he is the ide Mutual Insurance Co, the corporation whose name is affixed to the foregoing ked to the foregoing instrument is the corporate seal of the said corporation; and that n behalf of said corporation by authority of its board of directors and said acknowledged that he executed said instrument as attorney in fact as the free
County of Polk On this 19th day of Mationw and N/A attorney in fact, of the Nationw astrument; that the seal affinition and instrument was executed in Larry D. Slegh act and deed of said corporation	April, 2019 before me personally appeared Larry D. Slegh to me personally known, who being by me duly sworn, did say that he is the ide Mutual Insurance Co, the corporation whose name is affixed to the foregoing ked to the foregoing instrument is the corporate seal of the said corporation; and that n behalf of said corporation by authority of its board of directors and said acknowledged that he executed said instrument as attorney in fact as the free n.
County of Polk On this 19th day of And N/A attorney in fact, of the Nationw instrument; that the seal affinition and instrument was executed in Larry D. Slegh act and deed of said corporation (SEAL)	April, 2019 before me personally appeared Larry D. Slegh to me personally known, who being by me duly sworn, did say that he is the ide Mutual Insurance Co, the corporation whose name is affixed to the foregoing ked to the foregoing instrument is the corporate seal of the said corporation; and that n behalf of said corporation by authority of its board of directors and said acknowledged that he executed said instrument as attorney in fact as the free
County of	April, 2019 before me personally appeared Larry D. Slegh to me personally known, who being by me duly sworn, did say that he is the ide Mutual Insurance Co, the corporation whose name is affixed to the foregoing ked to the foregoing instrument is the corporate seal of the said corporation; and that n behalf of said corporation by authority of its board of directors and said acknowledged that he executed said instrument as attorney in fact as the free n. Signature of Notary Public are Weiland Notarial Seal
County of	April, 2019 before me personally appeared Larry D. Slegh to me personally known, who being by me duly sworn, did say that he is the ide Mutual Insurance Co, the corporation whose name is affixed to the foregoing ked to the foregoing instrument is the corporate seal of the said corporation; and that n behalf of said corporation by authority of its board of directors and said acknowledged that he executed said instrument as attorney in fact as the free n.

KNOW ALL MEN BY THESE PRESENTS THAT:

Nationwide Mutual Insurance Company, an Ohio corporation Allied Property and Casually Insurance Company, an Iowa corporation

AMCO Insurance Company, an Iowa corporation

hereinafter referred to severally as the "Company" and collectively as "the Companies" does hereby make, constitute and appoint:

Larry D Slegh

each in their individual capacity, its true and lawful attorney in-fact, with full power and authority to sign, seal, and execute on its behalf any and all bonds and undertakings, and other obligatory instruments of similar nature, in penalties not exceeding the sum of

One Hundred Twenty Five Thousand and no/100 dollars (\$125,000.00)

and to bind the Company thereby, as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Company; and all acts of said Attorney pursuant to the authority given are hereby ratified and confirmed.

This power of attorney is made and executed pursuant to and by authorily of the following resolution duly adopted by the board of directors of the Company:

"RESOLVED, that the president, or any vice president be, and each hereby is, authorized and empowered to appoint attorneys-in-fact of the Company, and to authorize them to execute and deliver on behalf of the Company any and all bonds, forms, applications, memorandums, undertakings, recognizances, transfers, contracts of indemnity, policies, contracts guaranteeing the fidelity of persons holding positions of public or private trust, and other writings obligatory in nature that the business of the Company may require; and to modify or revoke, with or without cause, any such appointment or authority; provided, however, that the authority granted hereby shall in no way limit the authority of other duly authorized agents to sign and countersign any of said documents on behalf of the Company."

"RESOLVED FURTHER, that such attorneys-in-fact shall have full power and authority to execute and deliver any and all such documents and to bind the Company subject to the terms and limitations of the power of attorney issued to them, and to affix the seal of the Company thereto; provided, however, that said seal shall not be necessary for the validity of any such documents."

This power of attorney is signed and sealed under and by the following bylaws duly adopted by the board of directors of the Company.

Execution of Instruments. Any vice president, any assistant secretary or any assistant treasurer shall have the power and authority to sign or attest all approved documents, instruments, contracts, or other papers in connection with the operation of the business of the company in addition to the chairman of the board, the chief executive officer, president, treasurer or secretary; provided, however, the signature of any of them may be printed, engraved, or stamped on any approved document, contract, instrument, or other papers of the Company.

IN WITNESS WHEREOF, the Company has caused this instrument to be sealed and duly attested by the signature of its officer the 27th day of February, 2019.



ACKNOWLEDGMENT

Company, Allied Property and Casualty Insurance Company

STATE OF NEW YORK, COUNTY OF NEW YORK: \$s

On this 27th day of February, 2019, before me came the above-named officer for the Company aforesaid, to me personally known to be the officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, deposes and says, that he is the officer of the Company aforesaid, that the seal affixed hereto is the corporate seal of said Company, and the said corporate seal and his signature were duly affixed and subscribed to said instrument by the authority and direction of said Company,

Antonio C. Albanese, Vice President of Nationwide Mutual Insurance Company, AMCO Insurance

Suzanne C Delio Notary Public, State of New York No. 02DE5126549 Qualified in Westchester County Commission Expires September 16, 2021

Suzunne Chlelid

CERTIFICATE

I, Laura B. Guy, Assistant Secretary of the Company, do hereby certify that the foregoing is a full, true and correct copy of the original power of attorney issued by the Company; that the resolution included therein is a true and correct transcript from the minutes of the meetings of the boards of directors and the same has not been revoked or amended in any manner; that said Antonio C. Albanese was on the date of the execution of the foregoing power of attorney the duly elected officer of the Company, and the corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority of said board of directors; and the foregoing power of attorney is still in full force and effect.

IN WITNESS WHEREOF, Thave hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of said Company this 19th day of April 2019 Lama B. Gry.
Assistant Secretary

BDJ 1(02-19)00

BEFORE THE RENVILLE COUNTY BOARD OF COMMISSIONERS, ACTING AS DRAINAGE AUTHORITY FOR RENVILLE CD #59 IMPROVEMENT OF MAIN OPEN DITCH, BRANCH 309 & BRANCH C

Findings of Fact and Order Approving
Preliminary Engineer's Report and Ordering
Final Engineer's Report and Appointment of
Viewers

WHEREAS, a Petition was received by the Renville County Board of Commissioners, acting as Drainage Authority for Renville CD #59 Improvement of Main Open Ditch, Branch 309 & Branch C; and

WHEREAS, Bill Helget of Bolton & Menk was appointed the engineer to prepare a Preliminary Engineer's Report; and

WHEREAS, pursuant to proper notice, a Preliminary Hearing was held on February 27, 2018, at 9:00 a.m. in the Commissioners' Room of the Renville County Administration Building; and

WHEREAS, at the public hearing, the engineer presented the Preliminary Engineer's Report; and

WHEREAS, the DNR Commissioners' Advisory Report was read into the record; and WHEREAS, during the public portion of the hearing, several individuals indicated their support for the project.

NOW, THEREFORE, based on all evidence made part of the record and evidence presented at the Preliminary Hearing, the Renville County Board of Commissioners, acting as Drainage Authority for the Renville CD #59 Improvement of Main Open Ditch, Branch 309 & Branch C, makes the following Findings of Fact and Order:

FINDINGS OF FACT

- 1. The proposed drainage project outlined in the Petition or modified and recommended by the engineer is feasible.
- 2. There is a necessity for the proposed drainage project.
- 3. The proposed drainage project will be of public benefit and promote the public health, after considering the environmental and land use criteria in Minnesota Statutes 103E.015, Subd. 1.
- 4. The outlet is adequate.

ORDER

NOW, THEREFORE, it is hereby ordered as follows:

- A. The engineer is directed to prepare a Final Engineer's Report and respond in the report to the DNR issues raised in their Advisory Report.
- B. The engineer is directed to review the use of potential separable maintenance.
- C. The engineer is directed to look at any potential areas for storage.

D.	That RON RINGGUIST	John Dotolo	,
	and Merlin Beekman	are appointed viewers, with	
	Alkerber	and John Schweller	, as
	alternates		

E. That the duly appointed viewers are to prepare a Viewers' Report for the potential Renville CD #59 Improvement of Main Open Ditch, Branch 309 & Branch C.

Dated this 27 day of February, 2018.

RENVILLE COUNTY BOARD OF COMMISSIONERS, ACTING AS DRAINAGE AUTHORITY FOR RENVILLE CD #59 IMPROVEMENT OF MAIN OPEN DITCH, BRANCH 309 & BRANCH C

Its Chairperson



CERTIFICATE OF LIABILITY INSURANCE

BOLTO-1 OP ID: MP

01/20/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

	\' /				
PRODUCER		CONTACT Mary Portner			
530 W Plea	Brown of MN/Mkto Assant St	PHONE (A/C, No, Ext): 507-344-4505 FAX (A/C, No): 866-800			
Mankato, I		E-MAIL ADDRESS: mportner@bbmankato.com			
Mary E. Portner		INSURER(S) AFFORDING COVERAGE		NAIC #	
		INSURER A: Westfield Insurance Company	1	24112	
INSURED	Bolton and Menk, Inc.	INSURER B: Continental Casualty Co		20443	
	1960 Premier Dr Mankato, MN 56001	INSURER C:			
		INSURER D:			
		INSURER E :			
		INSURER F:			

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR		TYPE OF INSURANCE	ADDL INSD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	3	
Α	Х	COMMERCIAL GENERAL LIABILITY				,	EACH OCCURRENCE	\$	1,000,000
		CLAIMS-MADE X OCCUR		CMM 3 406 737	07/01/2016	07/01/2017	DAMAGE TO RENTED PREMISES (Ea occurrence)	\$	1,000,000
Α	Х	XCU Coverage		BLKT CONTRACTUAL LIAB	07/01/2016	07/01/2017	MED EXP (Any one person)	\$	10,000
Α	Х	Blkt AI & Waiv of		& BLKT ADD'L INSURED	07/01/2016	07/01/2017	PERSONAL & ADV INJURY	\$	1,000,000
	GEI	N'L AGGREGATE LIMIT APPLIES PER:					GENERAL AGGREGATE	\$	2,000,000
		POLICY X PRO- JECT LOC					PRODUCTS - COMP/OP AGG	\$	2,000,000
		OTHER:					Emp Ben.	\$	1M/2M
	AUT	OMOBILE LIABILITY					COMBINED SINGLE LIMIT (Ea accident)	\$	1,000,000
Α	Х	ANY AUTO		CMM 3 406 737	07/01/2016	07/01/2017	BODILY INJURY (Per person)	\$	
		ALL OWNED SCHEDULED AUTOS					BODILY INJURY (Per accident)	\$	
	Х	HIRED AUTOS AUTOS Of Subro					PROPERTY DAMAGE (Per accident)	\$	
	Х	Blkt Waive of Subro					,	\$	
		UMBRELLA LIAB X OCCUR					EACH OCCURRENCE	\$	7,000,000
Α	Х	EXCESS LIAB CLAIMS-MADE		CMM 3 406 737	07/01/2016	07/01/2017	AGGREGATE	\$	7,000,000
		DED X RETENTION\$ -0-						\$	
		RKERS COMPENSATION EMPLOYERS' LIABILITY					X PER OTH- STATUTE ER		
Α	ANY	PROPRIETOR/PARTNER/EXECUTIVE TAIL	N/A	WCP 5 080 987	07/01/2016	07/01/2017	E.L. EACH ACCIDENT	\$	500,000
	(Mar	ndatory in NH)	N/A	BLANKET WAIVER OF SUBR			E.L. DISEASE - EA EMPLOYEE	\$	500,000
	If yes	s, describe under CRIPTION OF OPERATIONS below					E.L. DISEASE - POLICY LIMIT	\$	500,000
В	Pro	fessional Liabi		AFE 11 401 97 18	12/31/2016	12/31/2017	Claim		5,000,000
	E&0	D/Ded \$50,000		RETROACTIVE DATE 12/31/97			Aggregate		10,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) Improvement of Renille County Ditch No. 59

CERTIFICATE HOLDER	CANCELLATION
	OANOLLLATION

Renville Co. Auditor/Treasurer

Renville Co. Courthouse 500 E. DePue Ave Ste 202 Olivia. MN 56277-3005

Marc Iverson

RENVIL5

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Mary E. Portner

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STATE OF MINNESOTA

Before the

Renville County Board of Commissioners SITTING AS THE DRAINAGE AUTHORITY FOR County Ditch 59

In the Matter of:

Petition for Renville County Ditch 59 for Improvement of Main Open Ditch, Branch 309, & Branch C

AMENDMENT TO FINDINGS AND
ORDER APPROVING PRELIMINARY
ENGINEER'S REPORT AND
ORDERING FINAL ENGINEER'S
REPORT AND APPOINTMENT OF
VIEWERS

At a public meeting conducted by the Renville County Board of Commissioners, sitting as the drainage authority for County Ditch 59, on August 20, 2019 Pursuant to Minn. Stat. § 103E.202, Commissioner ________ moved, seconded by Commissioner _______ for adoption of the following Findings and Order:

Findings:

- 1. The Renville County Board of Commissioners is the drainage authority for County Ditch 59.
- 2. On February 27, 2018, the drainage authority adopted findings and an order approving the preliminary engineer's report and ordering final engineer's report and appointing Ron Ringquist, John Dotolo, and Merlin Beekman as appointed viewers with John Schueller and Al Kerber as alternates.
- 3. On July 24, 2019 Lead Viewer Ron Ringquist notified the Drainage Authority that the viewers would not be able to complete the Appointment.

Order:

Based on the foregoing Findings and the entire record of proceedings before the Board, the Board, acting as the drainage authority for County Ditch 59, hereby orders as follows:

Α.	The Board appoints James (Jim) Weidemann, John Schueller, and Luke Olson as
	viewers with Kevin Vickerman and Blake Garberich as Alternates to replace Ron
	Ringquist, John Dotolo, Merlin Beekman, and Al Kerber, and to determine the
	benefits and damages to all property affected by the proposed drainage project
	and make a viewer's report.

- B. The viewers shall subscribe to an oath to faithfully perform their duties.
- C. The Board directs the viewers, once qualified, to work with the engineer and to commence viewing as soon as practical upon receipt of the engineer's design plans and specifications indicating the efficiency of the drainage system improvement.
- D. The engineer is directed to assist the viewers in identifying properties receiving a hydrological improvement from the project and in identifying properties responsible for increased sedimentation in downstream areas of the watershed, are responsible for increased drainage system maintenance or increased drainage system capacity because the natural drainage on the properties has been altered or modified to accelerate the drainage of water from the property.

After discussion, the of the foregoing fin absent, anda	dings and orde	er, and there were	_ '	s on the adoption nays,
Erickson Schmidt Snow Fox Kramer	Yea	Nay	Absent	Abstain

Upon vote, the Chair declared the motion passed and the Findings and Order adopted.

Doug Erickson, Chairperson

Dated: 8-20-2019

* * * * * * * * * *

I, Marc Iverson, Renville County Auditor, do hereby certify that I have compared the above Findings and Order with the original thereof as the same appears of record and on file with the County and find the same to be a true and correct transcript thereof.

IN TESTIMONY WHEREOF, I hereunto set my hand this 20th day of August, 2019.

Marc Iverson, Auditor



Division of Ecological & Water Resources 21371 Highway 15 South New Ulm, MN 56073

February 6, 2018

Larry Zupke Renville County Drainage Authority 105 South 5th Street, Room 319 Olivia, MN 56277

Subject: County Ditch 59 Branch 309 & Branch C Improvements

Preliminary Engineering Report

Renville County, MN

Dear Mr. Zupke:

On behalf of the Director of the Division of Ecological and Water Resources of the Department of Natural Resources (MNDNR), I offer the following comments on the Preliminary Engineer's Report (PER) for the project referenced above, in accordance with Minnesota Statutes Section 103E.255.

Of general concern in all proposed ditch improvement projects is the cumulative effect that the project may have upon downstream water resources, natural resources, and property owners in terms of quantity and quality of water that is received. Project specific and cumulative impacts from ditch projects can result in downstream flooding, erosion, and a decrease in water quality. For these reasons, we urge careful evaluation of the project to ensure it is consistent with the Goals identified in the Renville County Comprehensive Local Water Management Plan (Water Plan). The Water Plan Goals include reducing erosion and sediment loadings to surface waters, protecting and improving surface water management, and protecting and improving biodiversity and recreational opportunities.

The Water Plan emphasizes the use of Best Management Practices to control erosion and reduce excess nutrients from entering surface waters. During peak flow periods (i.e. spring runoff) runoff from agricultural lands can be reduced through the use of cover crops. Cover crops help retain topsoil on the land, improve soil structure, aid in the infiltration and storage of soil moisture, and improve water quality. The retention and health of topsoil is vital to long-term agricultural production. The use of cover crops in the watershed would reduce the need to expand ditch systems, stabilize ditch and stream banks, and decrease the frequency of ditch cleanouts resulting in lower landowner costs for ditch maintenance.

The Preliminary Construction Plans contained within the PER have not been signed by the project engineer. According to MN Administrative Rule 1800.4200-Certification and Signature on Plans, subp.1 states: Requirement. The certification and signature on plans, specifications, plats, reports, etc., is mandatory, as provided by Minnesota Statutes, section 326.12, subdivision 3. A person in direct supervision of work as referred to in the foregoing subdivision is construed to mean the person whose professional skill and judgment are embodied in the document signed, and who assumes responsibility for the accuracy and adequacy thereof.

Mr. Larry Zupke February 6, 2018 Page 2

Based on Table 7 the outlet flows will increase for all storm events without storage options being included. The 10-year storm event is modeled to increase outlet flows by 15%. Table 9 indicates a 6% increase in the 10-year storm event for outlet flows with storage options included. Increased outlet flows will increase the amount of sediment and excess nutrients being transported downstream. This system is located in the Beaver Creek sub watershed and discharges ultimately to the Minnesota River. Both Beaver Creek and the Minnesota River are currently listed by the Minnesota Pollution Control Agency as impaired for turbidity. Any increase in discharge from upstream areas as a result of drainage system improvements will result in more erosive flows in downstream receiving waters, which will result in additional sediment contributions to existing impaired waters from stream bed and banks.

The PER (page 15, paragraphs 2 and 3) states that increasing flows at the outlet as a result of the improvement without storage will not result in increased peak flows in CD 17A, the immediately downstream receiving water, due to decreased time of concentration. There are no hydrologic models constructed of the larger Ditch 17A system to confirm these results, and this assumption relies on increased peak discharges from the system as a result of improvements, which were discussed above as having negative impacts to downstream receiving waters.

While the PER included information on peak flow elevations it did not include a discussion on flow duration or annual flows. Model results should include information on duration of peak flows/elevated flows in order to assess how all elements of the stream hydrograph will be impacted. Are lower peak flow elevation model results a result of lower ditch and culvert bottoms, larger culverts with resulting decreases in headwater restriction, and more in-channel area from deepening and widening over any type of flow mitigation?

Our agency recommends further consideration be given to assessing additional options and addressing issues associated with the proposed project in the Final Engineer Report (FER) as indicated below:

- 1) Explore the use of a two-stage ditch as a mechanism to reduce flow velocity, trap sediment, and remove excess nutrients.
- 2) Explore the use of wetland restorations to reduce outlet flows, trap sediment, and remove excess nutrients. Storage Area #2 contains a drained wetland that could be restored/enhanced to provide water storage, nutrient uptake, and remove sediment. The FER should include detailed information on the number of landowners contacted about wetland restorations and their responses.
- 3) Explore the use of stacked or dual culverts to temporarily store water within the ditch system.
- 4) Explore the use of weir(s) as a mechanism to temporarily store water within the ditch system prior to discharge.
- 5) Explore more economically feasible locations and designs of storage basins.
- 6) According to 103E.015 Subdivision 1 (4) the project is supposed to address flooding characteristics of property in the drainage project or system and downstream for the 5-, 10-, 25-, and 50-year flood events. What are the increased outlet flow effects on downstream flooding, structures, and erosion of the drainage system immediately downstream of the outlet? 1 mile downstream?
- 7) According to 103E.015 Subdivision 1 (6) the project is supposed to address effects on water quality. Increased outlet flows will increase sediment and nutrient transport. The drainage authority needs to require the use of Hickenbottom risers (or approved equal) on all intakes.

Mr. Larry Zupke February 6, 2018 Page 3

- 8) The FER should include a full explanation on how increasing the outlet flows and the resulting increase of sediments and excess nutrients transported downstream is consistent with the Water Plan Goal of reducing erosion and sediment loadings to surface waters and protecting and improving surface water management.
- 9) The FER needs to include options that combine wetland restoration, two-stage ditch, storage basins, weirs and other techniques to reduce outlet flows. The inclusion of water retention to reduce outlet flows will be necessary to achieve an adequate outlet.

The MNDNR requests that responses to our comments on the PER be included as part of the FER in order to improve the coordination and understanding of decisions made on ditch projects. The FER should identify our comment and specifically respond to each item.

Please contact Kevin Mixon, Regional Environmental Assessment Ecologist, at (507-359-6073; email: kevin.mixon@state.mn.us) if you have any questions about this letter.

Jim Sehl

EWR Assistant Regional Manager

Ec: Bill Helget, Bolton & Menk Kevin Mixon, EWR REAE Ethan Jenzen, EWR Skip Wright, EWR Jeff Zajac, Wildlife Dave Coahran, Fisheries ERDB#20180268



ATTORNEYS AT LAW

NEW ULM

MINNEAPOLIS

MANKATO

DES MOINES

Jeff C. Braegelmann 507-354-3111 jbraegelmann@gislason.com

December 14, 2016

Renville County Auditor Renville County Courthouse 500 East DePue Avenue, Suite 202 Olivia, MN 56277

Re:

Improvement to Renville County Ditch No. 59

Our File No. 29926-002

Dear Sir or Madam:

Enclosed for filing, please find a Petition for Improvement of Drainage System regarding Renville County Ditch No. 59. I believe that Mr. Roger Heller has contacted either your office or perhaps has contacted Larry Zupke to deliver cash deposits for the requisite security in lieu of a petitioners' bond. Therefore, I am requesting that the Petition be referred to the county attorney or the drainage authority's other counsel, pursuant to Minn. Stat. § 103E.238, for review by that counsel. Assuming counsel refers the Petition to the drainage authority under Minn. Stat. § 103E.238(2), then this is to request that within 30 days thereafter, the drainage authority appoint an engineer to make a preliminary survey within a prescribed time, as specified by Minn. Stat. § 103E.241, subd. 1. Please contact me if you have questions or need anything else at this time. Thank you for your consideration.

Yours truly,

eff C. Braegelmann

JCB:slo Enclosure

cc:

Mr. Larry Zupke (w/enc.)(via email only)

Mr. Roger Heller (w/enc.)(via email only)

Mr. James Zenk (w/enc.)(via email only)





December 29, 2016

320-656-3522 Kvanbruggen@RinkeNoonan.com

FOR YOUR INFORMATION

David Torgelson, Esq. Renville County Attorney 105 S 5th St., Suite 320 Olivia, MN 56277

SENT VIA U.S. MAIL AND EMAIL TO: ATTORNEYS@RENVILLECOUNTYMN.COM

Re: Petition for Improvement of Renville County Ditch No. 59 Our File No. 11726-0089

Dear Mr. Torgelson:

As you know, the Renville County Board of Commissioners, sitting as the public drainage authority under Minnesota Statutes, chapter 103E, has hired Rinke Noonan to provide special legal counsel on the repair and maintenance of its public drainage systems and on petitions for new public drainage projects with the concurrence of the Renville County Attorneys' office.

By letter dated December 14, 2016, a petition for improvement to Renville County Ditch No. 59 ("CD 59") was filed by attorney Jeff C. Braegelmann on behalf of petitioners Gary Verzalik; Carol J. Lippert as trustee of the Carol J. Lippert Trust; Aakre Family Farms, LLC; Wat Family Farms LLC; James Zenk; Dianne Zenk; Daniel W. Rauenhorst; Cheryl Rauenhorst; Robb J. Zenk; Megan C. Zenk; Ruth Heller; and Naomi Endter. The petition was submitted with a cash bond in the amount of \$48,750.00. The bond and petition were received by the Renville County Auditor on December 16, 2016.

Minn. Stat. § 103E.238 requires the county attorney to review each petition and bond filed with the county to determine if it meets the requirement of the proceedings for which it is intended. The county attorney must review the petition and bond within 30 days after it is filed. If the petition and bond do not meet the requirements of Minn. Stat. ch. 103E, the petition and bond must be referred back to the petitioners with the county attorney's opinion describing the deficiencies of the petition. If the petition and bond do meet the requirements of Minn. Stat. ch. 103E, the petition must be referred to the drainage authority.

The petition and bond must meet the requirements of Minn. Stat. §§ 103E.202 and 103E.215, subd 4. I have reviewed the petition and bond and concluded that it meets the requirements for a petition for improvement under Minn. Stat. ch. 103E. I base my conclusion on the following:

- 1. The petition must be signed by:
 - (1) at least 26% of the owners of the property affected by the proposed improvement;

Suite 300 US Bank Plaza 1015 W. St. Germain St. P.O. Box 1497 St. Cloud, MN 56302 320,251,6700

[2538183] Letter to Torgelson (review of petition and bond) 12/29/2016 12:08 PM

- at least 26% of the owners of property that the proposed improvement passes over;
- (3) the owners of at least 26% of the property area affected by the proposed improvement; or
- (4) the owners of at least 26% of the property area that the proposed improvement passes over.

Minn. Stat. § 103E.215, subd. 4(a).

The proposed improvement passes over 72 parcels. The petitioners own 21 of those 72 parcels, or 29.16% of the property that the proposed improvement passes over. Thus, the petitioners represent at least 26% of the property area that the proposed improvement passes over.

- 2. The petition must designate the drainage system proposed to be improved by number or another description that identifies the drainage system. Minn. Stat. § 103E.215, subd. 4(c)(1). The petition designates CD 59 as the drainage system proposed for improvement, including tile improvements to branches and sublaterals of CD 59, each designated by the existing branch number or an unofficial identifier.
- 3. The petition must state that the 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). This statement is contained in paragraph 3 of the petition.
- 4. The petition must describe the starting point, general course, and terminus of any extensions. Minn. Stat. § 103E.215, subd. 4(c)(3). The descriptions of the starting point, general course, and terminus of the improvement are contained in paragraph 4, pages 2 through 5 of the petition.
- The petition must describe the improvement, including the names and addresses of owners of the 40-acre tracts or government lots and property that the improvement passes over. Minn. Stat. § 103E.215, subd. 4(c)(4). The improvement is described in paragraph 4, page 1 of the petition as an improvement to the Main Ditch; Branch 3 and various sub-branches as identified in the petition; and, Branch 309 and various sublaterals as identified in the petition. Exhibit A shows a map of the location of the proposed improvement and Exhibit B describes the 40-acre tracts or government lots and property that the improvement passes over.
- 6. The petition must state that the proposed improvement will be of public utility and promote the public health. Minn. Stat. § 103E.215, subd. 4(c)(5). This statement is contained in paragraph 5 of the petition.
- 7. The petition must contain an agreement by the petitioners that they will pay all costs and expenses that may be incurred if the improvement proceedings are dismissed. Minn. Stat. § 103E.215, subd. 4(c)(6). Paragraph 6 of the petition contains an agreement by the petitioners that they will pay all costs and expenses that may be incurred if the improvement proceedings are dismissed.

David Torgelson, Esq. December 29, 2016 Page 3

> 8. Minn. Stat. § 103E.202 requires a bond of at least \$10,000.00 payable to Renville County be filed and provided for adequate surety, conditioned to pay the costs incurred if the proceedings are dismissed or a contract is not awarded to construct the drainage system proposed in the petition. Renville County Drainage Inspector, Larry Zupke, confirmed that a cash bond in the amount of \$48,750.00 was filed with the petition.

Based on the foregoing information, I have concluded that the petition and bond meet the requirements of improvement proceedings under Minn. Stat. ch. 103E and recommend that you refer the petition to the drainage authority. Enclosed is a template letter from your office confirming that the petition and bond meet the requirements of improvement proceedings and referring the same to the drainage authority. The correspondence from your office will become part of the record of proceedings for this drainage project. Once the correspondence from your office is received by the Renville County Auditor, the petition and bond will be presented to the drainage authority at its next meeting and an engineer will be appointed to examine the drainage system and make an improvement report.

Please do not hesitate to contact me if you have any questions.

Sincerely,

KRV

Enclosures

- Petition for Improvement to Renville County Ditch 59
- Draft Letter to Marc Iverson, Auditor/Treasurer

Larry Zupke (w/out encls.) cc:

Marc Iverson (w/out encls.)

RENVILLE COUNTY ATTORNEY

David J. Torgelson
County Attorney
Glen M. Jacobsen
Laurence J. Stratton
Assistant County Attorneys
Dawn M. Walkow
Carrie Jo Leal

Paralegals

Renville County Office Building Suite 320 105 South 5th Street Olivia, Minnesota 56277



Wendee M. VanderVoort
Legal Administrative Assistant

Dec. 30, 2016 Marc Iverson Auditor/Treasurer Renville County Courthouse 500 E. DePue Ave. - Ste 202 Olivia, MN 56277-3005

SENT VIA U.S. MAIL AND EMAIL TO: MARCI@RENVILLECOUNTYMN.COM

Re: Petition & Bond for Improvement to Renville County Ditch 59

Dear Mr. Iverson:

By letter dated December 14, 2016, a petition for improvement to Renville County Ditch No. 59 ("CD 59") was filed by attorney Jeff C. Braegelmann on behalf of petitioners Gary Verzalik; Carol J. Lippert as trustee of the Carol J. Lippert Trust; Aakre Family Farms, LLC; Wat Family Farms LLC; James Zenk; Dianne Zenk; Daniel W. Rauenhorst; Cheryl Rauenhorst; Robb J. Zenk; Megan C. Zenk; Ruth Heller; and Naomi Endter. The petition was submitted with a cash bond in the amount of \$48,750.00. The bond and petition were received by the Renville County Auditor on December 16, 2016.

I have received and reviewed the petition and find it to contain all the necessary elements required by Minn. Stat. § 103E.255. I based these findings on the following information:

- 1. The proposed improvement passes over 72 parcels. The petitioners own 21 of those 72 parcels, or 29.16% of the property that the proposed improvement passes over. Thus, the petitioners represent at least 26% of the property area that the proposed improvement passes over.
- 2. The petition designates CD 59 as the drainage system proposed for improvement, including tile improvements to branches and sub-laterals of CD 59, each designated by the existing branch number or an unofficial identifier.
- 3. The petition states that the drainage system has insufficient capacity or needs enlarging or extending to furnish sufficient capacity or a better outlet.
- 4. The descriptions of the starting point, general course, and terminus of the improvement are contained in paragraph 4, pages 2 through 5 of the petition.

- 5. The improvement is described in paragraph 4, page 1 of the petition as an improvement to the Main Ditch; Branch 3 and various sub-branches as identified in the petition; and, Branch 309 and various sublaterals as identified in the petition. Exhibit A shows a map of the location of the proposed improvement and Exhibit B describes the 40-acre tracts or government lots and property that the improvement passes over.
- 6. The petition states that the proposed improvement will be of public utility and promote the public health.
- 7. Paragraph 6 of the petition contains an agreement by the petitioners that they will pay all costs and expenses that may be incurred if the improvement proceedings are dismissed.

Further, I find that the cash bond of \$48,750.00 provides adequate surety that if the proceedings are dismissed or a contract is not awarded to construct the improvement proposed in the system, the costs to the drainage authority will be covered.

Minn. Stat. § 103E.202, subd. 6 requires that the costs incurred before a proposed drainage project is established may not exceed the amount of the petitioners' bond. A claim for expenses greater than the bond may not be paid unless an additional bond is filed. Please monitor the expenses of the proposed improvement project to ensure that the expenses do not exceed the bond. If you determine that the expenses are approaching the amount filed in the cash bond, please immediately notify the Board, Drainage Inspector Larry Zupke, legal counsel Kale R. Van Bruggen, and myself. In such a situation, the proceedings will be stopped and an additional bond will be required to cover the expenses.

Based on the findings contained herein, I conclude that the petition and bond for establishment of the improvement to Renville County Ditch No. 59 are adequate for improvement proceedings. Please present the petition and bond to the board at its next meeting for appointment of an engineer to examine the drainage system and make an improvement report.

Sincerely,

cc:

Larry Zupke, Drainage Inspector Kale R. Van Bruggen, Attorney Jeff C. Braegelmann, Attorney



District 8 2505 Transportation Road Willmar, MN 56201 320-231-5195

Date: March 22, 2018

To: Larry Zupke, Ditch/Ag. Inspector, Renville County

From: Emily Randt, Transportaion Generalist Hydraulics, MnDOT District 8, Willmar

Re: CD 59 Improvements

I am writing this letter to you to notify you that I have reviewed the preliminary plan for the CD 59 improvements. In reviewing I have noticed that there is a plan to replace the southern TH 71 culvert with a salvage pipe. It is standard MnDOT procedure to replace a culvert with a new culvert. We would like to review the hydraulic computations of the new pipe that will be placed.

Please feel free to contact me with any questions at: emily.randt@state.mn.us or 320-214-6371.

Sincerely,

Emily Randt/Transportaion Generalist Hydraulics, MnDOT District 8, Willmar

c: Allen Schmitz – Engineering Specialist, MnDOT Distritct 8, Willmar

Minnesota Wetland Conservation Act Technical Evaluation Panel Findings Report

Visit/Meeting: County: Renville Renville Ditch #59 Wetland Delineation Phone #: 320-523-1559 Location of Project: (attach map if possible) Cody.dale@mn.nacdnet TEP ATTENDEES: LGU: Diane Mitchell SWCD: Cody Dale BWSR: Lynda Ponting DNR: PROJECT DESCRIPTION AND PURPOSE OF MEETING: Renville County proposed improvements to CD #59 along 8 miles of open ditch and 4 miles of drain tile. A wed delineation was conducted to locate and quanity wetlands within the area of potential impact. TYPE OF MEETING: Check all applicable Office On-Site Phone Conference E-Mail Other: TEP FINDINGS AND RECOMMENDATIONS 1:	
Delineation	
Location of Project: (attach map if possible) TEP ATTENDEES: LGU: Diane Mitchell Matt Steel SWCD: Cody Dale BWSR: Lynda Ponting DNR: PROJECT DESCRIPTION AND PURPOSE OF MEETING: Renville County proposed improvements to CD #59 along 8 miles of open ditch and 4 miles of drain tile. A we delineation was conducted to locate and quanity wetlands within the area of potential impact. TYPE OF MEETING: Check all applicable Office On-Site Phone Conference E-Mail Other: TEP FINDINGS AND RECOMMENDATIONS 1:	
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TEP approves the wetland delineation for everything East of 270 th ave. The strech of CD#59 to the west of 270 (Emmet Township Section 2) was not viewed as there is no ditch work proposed in that area. In the event ditch improvements are proposed west of 270 th ave in section 2 of Emmet Township the TEP will view those areas.	ch l
SIGNATURES	
SWCD Representative O Aa 18 A Ce Current C	<u>D-18-18</u>
LGU Representative Date DNR Representative Do not concur	

Rev. 12/17/2013

¹ TEP Findings should be a meaningful concise summary detailing the project conditions, technical data, and what rules apply. The TEP recommendation should be clear, based on rule and best professional judgement.

Minnesota Wetland Conservation Act **Notice of Decision**

Local Government Unit (LGU) Renville SWCD		Address 1008 W Line Olivia, MN			
1.	PROJECT INFORMA	ATION			
Applicant Name Bill Helget	Project Name Renville Ditch 59 Wetl Delineation		Date of Application 08-24-2018	Application Number 18-06	
Attach site locator map.					
Type of Decision:					
	☐ No-Loss	☐ Exemptio	n 🔲	Sequencing	
Replacement	Plan	Banking Pl	an		
	1.D 1.: ('C				
Technical Evaluation Panel Findings					
Approve	Approve with conditi	ons		☐ Deny	
Summary (or attach): TEP report attach	cned				
2. LOCAL	GOVERNMENT UN	IT DECISIO	ON		
Date of Decision: 10/22/02018					
⊠ Approved □ Ap	proved with conditions (i	nclude below)		☐ Denied	
LGU Findings and Conclusions (attach additional sheets as necessary): Approve CD #59 wetland delineation, excluding area of ditch located in Emmet Township Section 2 as					
			et Township So	ection 2 as	
			et Township So	ection 2 as	
Approve CD #59 wetland delineation			et Township So	ection 2 as	
Approve CD #59 wetland delineation			et Township So	ection 2 as	
Approve CD #59 wetland delineation			et Township So	ection 2 as	
Approve CD #59 wetland delineation			et Township So	ection 2 as	
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Approve CD #59 wetland delineation			et Township So	ection 2 as	
Approve CD #59 wetland delineation			et Township So	ection 2 as	

BWSR Forms 7-1-10 Page 1 of 3

For Replacement Plans using credits from the State Wetland Bank: Bank Account # Bank Service Area County Credits Approved for Withdrawal (sq. ft. or nearest .01 acre) Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following: Financial Assurance: For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings). Deed Recording: For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located. Credit Withdrawal: For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan. Wetlands may not be impacted until all applicable conditions have been met! LGU Authorized Signature: Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request. Title Name **Cody Dale** Water Resource Tech. Signature Date Phone Number and E-mail 10/22/2018 320-523-1559 alter cody.dale@mn.nacdnet.net THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands. Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts. This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision. 3. APPEAL OF THIS DECISION Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated: Check one: Appeal of an LGU staff decision. Send Appeal of LGU governing body decision. Send petition and \$_____ fee (if applicable) to: petition and \$500 filing fee to: **Executive Director** Minnesota Board of Water and Soil Resources 520 Lafayette Road North

BWSR Forms 7-1-10 Page 2 of 3

St. Paul, MN 55155

4. LIST OF ADDRESSEES

 SWCD TEP member: Cody Dale BWSR TEP member: Lynda Ponting LGU TEP member (if different than LGU Contact): Diane Mitchell DNR TEP member: DNR Regional Office (if different than DNR TEP member) WD or WMO (if applicable): Applicant and Landowner (if different) Members of the public who requested notice: Corps of Engineers Project Manager BWSR Wetland Bank Coordinator (wetland bank plan decisions only) 						
·						
	5. MAILING INFO	ORMATION				
➤ For a list of BWSR TEP repre			kareas/WCA areas ndf			
For a list of DNR TEP represe			- · · · · · ·			
		iiiii,us/wetiaiius/wca/DN	K_TEF_contacts.put			
Department of Natural Resou NW Region:	rces Regional Offices: NE Region:	Central Region:	Coutham Basian			
Reg. Env. Assess. Ecol.	Reg. Env. Assess. Ecol.	Reg. Env. Assess, Ecol.	Southern Region: Reg. Env. Assess. Ecol.			
Div. Ecol. Resources	Div. Ecol. Resources	Div. Ecol. Resources	Div. Ecol. Resources			
2115 Birchmont Beach Rd.	1201 E. Hwy. 2	1200 Warner Road	261 Hwy. 15 South			
NE Danisti MAN 56601	Grand Rapids, MN 55744	St. Paul, MN 55106	New Ulm, MN 56073			
Bemidji, MN 56601 For a map of DNR Administr	ative Regions, see http://fi	llac dor state mo us/abou	tdnr/dnr ragions ndf			
For a list of Corps of Project I or send to:						
	rps of Engineers					
	ict, ATTN: OP-R					
	East, Suite 700		•			
St. Paul, MN	The state of the s					
For Wetland Bank Plan applic	eations, also send a convior	f the application to:				
	oard of Water and Soil Res					
	k Coordinator					
520 Lafayette	Road North					
St. Paul, MN 55155						
	C A TOTAL CITY	ACT NEED CO.				
	6. ATTACHN					
In addition to the site locator i	nap, list any other attachm	ents:				
🔀 TEP Findings Report						

BWSR Forms 7-1-10 Page 3 of 3

		·		
			1	



Transmittal

Real People. Real Solutions.

PROJECT: Renville Co/CD 59 Open

Ditch/Br309 Imp

DATE: 2/6/2018

S15.112473

SUBJECT: TRANSMITTAL ID: CD 59 PER 00004

PURPOSE: VIA: Info Exchange For your use

FROM

NAME	COMPANY	EMAIL	PHONE
Judy Johnson	Bolton & Menk, Inc.	judyjo@bolton-menk.com	(507) 794- 5541x2780

TO

NAME	COMPANY	EMAIL	PHONE
ReneeH@renvillecounty		ReneeH@renvillecountymn.c	
mn.com		om	

REMARKS: This link will be available for 10 days.

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NOTES
1	1/11/2018	112473_PER.pdf	

COPIES:

Billy Helget (Bolton & Menk, Inc.) Judy Johnson (Bolton & Menk, Inc.)

STATE OF MINNESOTA

Before the

In the Matter of: the Petition for the Improvement of Main Open Ditch, Branch 309 & Branch C to County Ditch 59	VIEWER'S OATH
I, James Weidemann, having been ap Commissioners, drainage authority for the Im & Branch C to Renville County Ditch 59, and damages for said drainage system Improve Stat. ch. 103E, do hereby swear or affirm to sand the State of Minnesota and to discharge law and to the best of my judgment and ability 20, 2019, and expiring upon completion of metallic states.	nprovement of Main Open Ditch, Branch 309 viewer for the determination of benefits and ement of County Ditch 59 pursuant to Minn. support the constitutions of the United States a faithfully the duties of Viewer, according to ity, my appointment commencing on August
Signed this 5 day of December, 2	017
James Weidemann	
Witnessed this 5 th day of <u>December</u> Manager of Renville County, drainage author Branch 309 & Branch C of Renville County D	nty for the improvement of Main Open Ditch,
	Seth Sparks

STATE OF MINNESOTA Before the

In the Matter of: the Redetermination of County Ditch 59	VIEWER'S OATH
I, James Weidemann, having been ap Commissioners, drainage authority for the In & Branch C to Renville County Ditch 59, and damages for said drainage system Improve Stat. ch. 103E, do hereby swear or affirm to sand the State of Minnesota and to discharge law and to the best of my judgment and abili 20, 2019, and expiring upon completion of m	inprovement of Main Open Ditch, Branch 309 viewer for the determination of benefits and ement of County Ditch 59 pursuant to Minn. Support the constitutions of the United States a faithfully the duties of Viewer, according to ity, my appointment commencing on August
Signed this 5th day of December, 2	<u>0/9.</u>
James Weidemann	
Witnessed this 5 th day of <u>December</u> Manager of Renville County, drainage autho 59.	, 2019 by Seth Sparks, Drainage Systems rity for the Redetermination of County Ditch
	Seth Spuls Seth Sparks

STATE OF MINNESOTA

Before the

In the Matter of: the Petition for the Improvement of Main Open Ditch, Branch 309 & Branch C to County Ditch 59	VIEWER'S OATH
I, John Schueller, having been appointed by drainage authority for the Improvement of M Renville County Ditch 59, a viewer for the def drainage system Improvement of County Dithereby swear or affirm to support the constit Minnesota and to discharge faithfully the dubest of my judgment and ability, my appoint expiring upon completion of my duties to the	lain Open Ditch, Branch 309 & Branch C to termination of benefits and damages for said tch 59 pursuant to Minn. Stat. ch. 103E, do tutions of the United States and the State of uties of Viewer, according to law and to the ment commencing on August 20, 2019, and
Signed this $\frac{5\%}{2}$ day of <u>December</u> , $\frac{26}{2}$	3/7
John Schueller	
Witnessed this <u>5</u> day of <u>Dec caber</u> Manager of Renville County, drainage author Branch 309 & Branch C of Renville County D	ity for the Improvement of Main Open Ditch,
	SothSpala
	Seth Sparks

STATE OF MINNESOTA Before the

In the Matter of: the Redetermination of County Ditch 59	VIEWER'S OATH
I John Schuller, having been appointed by drainage authority for the Improvement of M Renville County Ditch 59, a viewer for the det drainage system Improvement of County Dithereby swear or affirm to support the constit Minnesota and to discharge faithfully the dubest of my judgment and ability, my appoint expiring upon completion of my duties to the	Main Open Ditch, Branch 309 & Branch C to termination of benefits and damages for said tch 59 pursuant to Minn. Stat. ch. 103E, do tutions of the United States and the State of uties of Viewer, according to law and to the ment commencing on August 20, 2019, and
Signed this 5th day of December, 2	019
John Schuller	
Witnessed this 5th day of December Manager of Renville County, drainage autho 59.	, 2019 by Seth Sparks, Drainage Systems rity for the Redetermination of County Ditch
	Seth Spuls Seth Sparks

STATE OF MINNESOTA

Before the

Renville County Board of Commissioners SITTING AS THE DRAINAGE AUTHORITY FOR County Ditch 59

In the Matter of:

the Petition for the Improvement of Main Open Ditch, Branch 309 & Branch C to County Ditch 59 VIEWER'S OATH

I, Blake Garberich, having been appointed by Renville County Board of Commissioners, drainage authority for the Improvement of Main Open Ditch, Branch 309 & Branch C to Renville County Ditch 59, a viewer for the determination of benefits and damages for said drainage system Improvement of County Ditch 59 pursuant to Minn. Stat. ch. 103E, do hereby swear or affirm to support the constitutions of the United States and the State of Minnesota and to discharge faithfully the duties of Viewer, according to law and to the best of my judgment and ability, my appointment commencing on August 20, 2019, and expiring upon completion of my duties to the drainage authority.

Signed this 5th day of December, 2019.

Blake Garberich

Witnessed this 5th day of December, 2019 by Seth Sparks, Drainage Systems Manager of Renville County, drainage authority for the Improvement of Main Open Ditch, Branch 309 & Branch C of Renville County Ditch 59.

Seth Sparks

STATE OF MINNESOTA Before the County Board of Commission

In the Matter of: the Redetermination of County Ditch 59	VIEWER'S OATH
I Blake Garberich, having been appointed by drainage authority for the Improvement of M Renville County Ditch 59, a viewer for the det drainage system Improvement of County Dithereby swear or affirm to support the constit Minnesota and to discharge faithfully the dubest of my judgment and ability, my appoint expiring upon completion of my duties to the	Tain Open Ditch, Branch 309 & Branch C to termination of benefits and damages for said tch 59 pursuant to Minn. Stat. ch. 103E, do tutions of the United States and the State of ties of Viewer, according to law and to the ment commencing on August 20, 2019, and
Signed this 5th day of December, 2	019
Blake Garberich	
Witnessed this 5th day of <u>December</u> Manager of Renville County, drainage author 59.	, 2019 by Seth Sparks, Drainage Systems rity for the Redetermination of County Ditch
	Seth Sparks

STATE OF MINNESOTA Before the

In the Matter of: the Redetermination of County Ditch 59	VIEWER'S OATH
I Luke Olson, having been appointed by drainage authority for the Improvement of M Renville County Ditch 59, a viewer for the dedrainage system Improvement of County Dithereby swear or affirm to support the constituent Minnesota and to discharge faithfully the dubest of my judgment and ability, my appoint expiring upon completion of my duties to the	Main Open Ditch, Branch 309 & Branch C to termination of benefits and damages for said tch 59 pursuant to Minn. Stat. ch. 103E, do tutions of the United States and the State of uties of Viewer, according to law and to the ment commencing on August 20, 2019, and
Signed this 5 TH day of DECEMBER, 20	p(<u>9</u> .
Luke Olson	ii.
Witnessed this 5th day of December Manager of Renville County, drainage autho 59.	, 2019 by Seth Sparks, Drainage Systems rity for the Redetermination of County Ditch
	Seth Sparks

STATE OF MINNESOTA

In the Matter of: the Petition for the Improvement of Main Open Ditch, Branch 309 & Branch C to County Ditch 59	VIEWER'S OATH
I, Luke Olson, having been appointed by drainage authority for the Improvement of M Renville County Ditch 59, a viewer for the def drainage system Improvement of County Dithereby swear or affirm to support the constit Minnesota and to discharge faithfully the dubest of my judgment and ability, my appoint expiring upon completion of my duties to the	lain Open Ditch, Branch 309 & Branch C to termination of benefits and damages for said tch 59 pursuant to Minn. Stat. ch. 103E, do tutions of the United States and the State of uties of Viewer, according to law and to the ment commencing on August 20, 2019, and
Signed this S^{TH} day of $\Delta \varepsilon c \varepsilon m \delta \varepsilon R$, Z_0	<u>19</u> -
Luke Olson	
Witnessed this 5th day of <u>December</u> Manager of Renville County, drainage author Branch 309 & Branch C of Renville County D	, 2019 by Seth Sparks, Drainage Systems ity for the Improvement of Main Open Ditch, bitch 59.
	Self Spaks
	Seth Sparks

STATE OF MINNESOTA Before the

In the Matter of: the Redetermination of County Ditch 59	VIEWER'S OATH
I Kevin Vickerman, having been appointed by drainage authority for the Improvement of M Renville County Ditch 59, a viewer for the design drainage system Improvement of County Ditchereby swear or affirm to support the constitution Minnesota and to discharge faithfully the dubest of my judgment and ability, my appoint expiring upon completion of my duties to the	Main Open Ditch, Branch 309 & Branch C to termination of benefits and damages for said tch 59 pursuant to Minn. Stat. ch. 103E, do tutions of the United States and the State of uties of Viewer, according to law and to the ment commencing on August 20, 2019, and
Signed this standard day of Dacenton, ac	<u>979</u> .
Witnessed this 5% day of 6 Manager of Renville County, drainage autho 59.	, 2019 by Seth Sparks, Drainage Systems rity for the Redetermination of County Ditch
	Seth Sparks

STATE OF MINNESOTA

Before the Renville County Board of Commissioners SITTING AS THE DRAINAGE AUTHORITY FOR

County Ditch 59

1	41	Matter	- £.

the Petition for the Improvement of Main Open Ditch, Branch 309 & Branch C to County Ditch 59 **VIEWER'S OATH**

I, Kevin Vickerman, having been appointed by Renville County Board of Commissioners, drainage authority for the Improvement of Main Open Ditch, Branch 309 & Branch C to Renville County Ditch 59, a viewer for the determination of benefits and damages for said drainage system Improvement of County Ditch 59 pursuant to Minn. Stat. ch. 103E, do hereby swear or affirm to support the constitutions of the United States and the State of Minnesota and to discharge faithfully the duties of Viewer, according to law and to the best of my judgment and ability, my appointment commencing on August 20, 2019, and expiring upon completion of my duties to the drainage authority.

Witnessed this 5th day of 0cc 2019 by Seth Sparks, Drainage Systems Manager of Renville County, drainage authority for the Improvement of Main Open Ditch, Branch 309 & Branch C of Renville County Ditch 59.

Seth Sparks

STATE OF MINNESOTA)	
)	AFFIDAVIT OF MAILING
COUNTY OF RENVILLE)	

The below signed, being duly sworn, states that on the gth day of February, 2013 the following:

- 1. Notice of Hearing
- 2. Copy of map for proposed ditch project

to the persons listed on the attached list by mailing to them a copy thereof, enclosed in an postage prepaid, and by depositing same in the post office at Olivia, Minnesota, direct persons at their last known address.

LarryZupke

STATE OF MINNESOTA)) SS

COUNTY OF RENVILLE)

Signed and sworn to before me this 8th day of February 2018, by Larry Zupk.

Wayn & Stonelys Notary Public

8, I mailed		
envelope, ted to said		

STATE OF MINNESOTA) COUNTY OF RENVILLE)

In the Matter of Preliminary Hearing on the Petition of Gary Verzalik; Carol J. Lippert Trust; Aakre Family Farms LLC; Wat Family Farms LLC; James Zenk; Diane Zenk; Daniel W. Rauenhorst; Cheryl Rauenhorst; Robb Zenk; Megan C. Zenk; Ruth Heller; and Naomi Endter; for the Improvement of a Portion of County Ditch 59 Pursuant to Minnesota Statutes 103E

NOTICE IS HEREBY GIVEN That the Renville County Board of Commissioners acting, as the Drainage Authority for County Ditch 59, will meet in the Commissioners Room, Renville County Government Services Center, Room #313, 105 South 5th Street, Olivia, Minnesota, on Tuesday, February 27^{th,} 2018 at 9:00 a.m. for the Preliminary Hearing on the Improvement Petition submitted by the above listed property owners for the Renville County Ditch 59 system.

All interested persons are invited to attend and be heard in this matter. A complete set of preliminary project plans may be picked up at the Renville County Public Works Office, 105 South 5th St., Room 319, Olivia, Minnesota 56277.

Dated this 6th day of February, 2018 at Olivia, Minnesota.

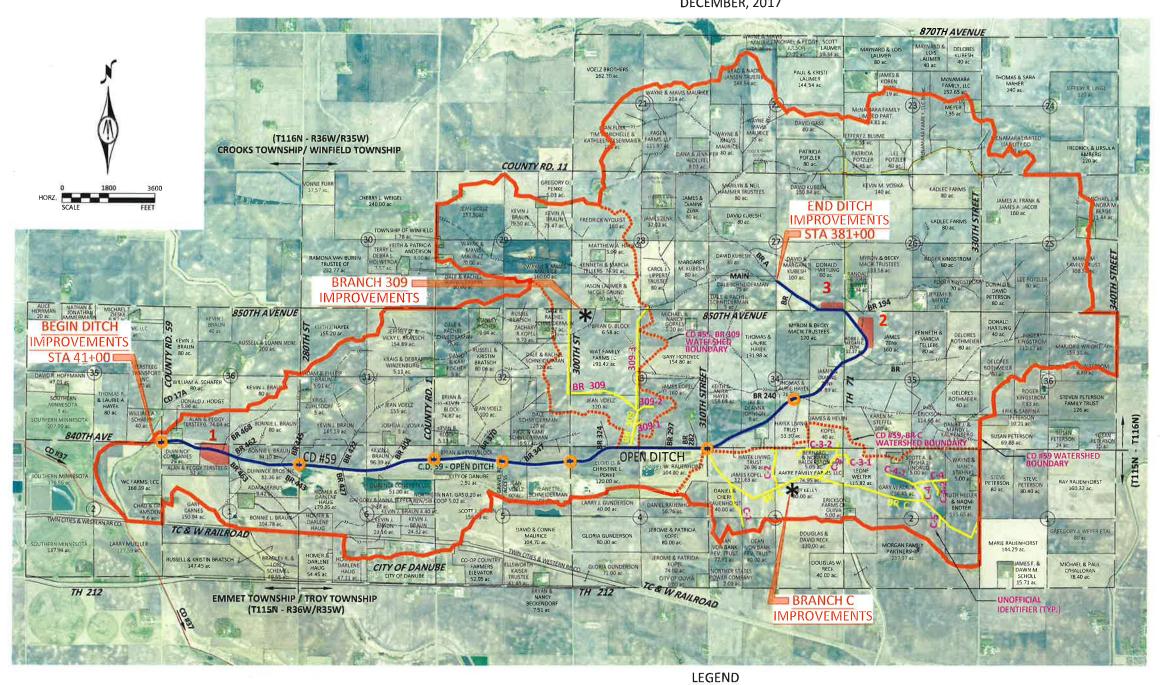
Larry Zupke Renville County Drainage Systems Inspector

PLAN REVISIONS REV ISSUED FOR DATE

PRELIMINARY CONSTRUCTION PLANS FOR

COUNTY DITCH No. 59 IMPROVEMENTS RENVILLE COUNTY, MINNESOTA

DITCH IMPROVEMENTS, CULVERT REPLACEMENTS, TILE AND INTAKE IMPROVEMENTS DECEMBER, 2017



SHEET INDEX

G0.01 - G0.02 TITLE, LEGEND & NOTES **EXISTING CONDITIONS & REMOVALS** C0.01 SECTION NOT USED TABLES, DETAILS & PHASING C1.01 **TYPICAL SECTIONS & DETAILS** C1.02 DETAILS C1.03 **DETAILS EROSION CONTROL** C2.01 SECTION NOT USED GRADING **GRADING PLAN - STORAGE AREA 1 GRADING PLAN - STORAGE AREAS 2 & 3** SANITARY AND WATER SECTION NOT USED C4.01 STORM SEWER C5.01-C5.12 COUNTY DITCH 59 - STORM PLAN & PROFILES CD 59, BRANCH 309 - STORM PLAN & PROFILES C5.21-C5.26 C5.31-C5.43 CD 59, BRANCH C - STORM PLAN & PROFILES STREETS C6.01 SECTION NOT USED STANDARD DETAILS C7.01 SECTION NOT USED TRAFFIC CONTROL SECTION NOT USED

CROSS SECTIONS

COUNTY DITCH 59- CROSS SECTIONS

GENERAL

SHEET NO.

THIS PLAN SET CONTAINS 70 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

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

PROJECT DATUM: RENVILLE CO COORDINATES HORIZONTAL: RENVILLE CO - NAD83 (2007ADJ) VERTICAL: NAVD88

C.D. #59 OVERALL WATERSHED BOUNDARY PROPOSED OPEN DITCH IMPROVEMENTS PROPOSED TILE IMPROVEMENTS **IXXX** OFFICIAL LATERAL IDENTIFIER **III** UNOFFICIAL SUB-LATERAL IDENTIFIER

***** C.D. #59 BRANCH 309 & C WATERSHED BOUNDARIES STORAGE AREAS STORAGE AREAS IDENTIFIER PROPOSED CULVERT REPLACEMENT

BENCHMARK DISC RAILROAD BOX CULVERT

♦ BM=1058.62 | ♦ BM=1079.90 | REFERENCE MARK DISC, NE QUAD COUNTY RD 1 & 840TH AVENUE

+ BM=1077.05 BENCHMARK DISC NE QUAD TH #71 & 850TH AVENUE



1243 CEDAR STREET NE SLEEPY EYE MINNESOTA 56085 Phone: (507) 794-5541 www.bolton-menk.com

	CATE	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.	Γ
ŀ	-		
İ		BILL L. HELGET, P.E.	H

RENVILLE COUNTY, MINNESOTA RENVILLE COUNTY DITCH No. 59 IMPROVEMENTS

TITLE SHEET

G0.01

AAKRE FAMILY FARMS, LLC C/O SALLY JO AAKRE .: 1106 W PARK ST - #426 . LIVINGSTON MT 59047	KEITH & PATRICIA ANDERSON 85326 CO RD 1 DANUBE MN 56230	BERNARD & NORMA BALDERSTON 509 10TH ST S OLIVIA MN 56277
MICHAEL J. & SANDRA M. BER 85531 340TH ST OLIVIA MN 56277	GE BETHANY & DANIEL BLOCK 29130 840TH AVE DANUBE MN 56230	BRIAN D BLOCK 30325 850TH AVE DANUBE MN 56230
BRIAN BLOCK & KEVIN BLOCK C/O BRIAN BLOCK 30325 850TH AVE DANUBE MN 56230	JEFFREY J BLUME 86226 US HWY 71 DANUBE MN 56230	JEFFREY & VICKY BRATSCH TR JEFFREY & VICKY BRATSCH TRUST 23284 800TH AVE RENVILLE MN 56284
RUSSELL & KRISTIN BRATSCH JEFFREY & VICKY BRATSCH TR 80250 240TH ST RENVILLE MN 56284		BONNIE L. BRAUN 80197 CO RD 1 DANUBE MN 56230
KEVIN J BRAUN 80197 CO RD 1 DANUBE MN 56230	BARRY N. & RYLEY L. CARNES 5590 KANDI-MEEKER RD SE ATWATER MN 56209	GARY & LORI CARNES TRUSTEES CARNES FAMILY REV LIVING TRUST 5590 KANDI-MEEKER RD SE ATWATER MN 56209
CITY OF DANUBE PO BOX 397 DANUBE MN 56230	TODD W DISCHER 31378 CO RD 11 DANUBE MN 56230	DUININCK BROS, INC PO BOX 208 PRINSBURG MN 56281
DUININCK CONCRETE LLC PO BOX 1867 WILLMAR MN 56201-1867	ERICKSON FARMS OF OLIVIA INC 82698 330TH ST OLIVIA MN 56277	PAUL ERICKSON 82698 330TH ST OLIVIA MN 56277-2609
FAGEN FARMS, LLP PO BOX D GRANITE FALLS MN 56241	BEN FISCHER 85789 US HWY 71 DANUBE MN 56230-9749	DAVID & KARI FISCHER 84568 CO RD 1 DANUBE MN 56230
DAVID CHARLES FISCHER RR 1 BOX 83 DANUBE MN 56230	STANLEY FISCHER 29331 850TH AVE DANUBE MN 56230	BRIAN FRANK & BRUCE FRANK 82769 330TH ST OLIVIA MN 56277
JOAN, TIM & MICHELLE FURR &	YVONNE FURR	DAVID L GASS

PO BOX 310

BIRD ISLAND MN 55310

87150 405TH ST BIRD ISLAND MN 55310

KATHLEEN FESENMAIER

BIRD ISLAND MN 55310

PO BOX 310



	MICHAEL & NANCY GORRES 30879 850TH AVE DANUBE MN 56230	SCOTT J. GROEN 5100 KANDI-RENVILLE LINE RD BLOMKEST MN 56216	MARILYN & NEIL HAMMER TRUSTEES OF MARILYN HAMMER REV. TRUST 714 6TH AVE NW BUFFALO MN 55313
	DONALD L HARTUNG 14941 ST HWY 4 COSMOS MN 56228	DARLENE HAUG TRUSTEE HAUG FAMILY TRUST 804 OAK ST PO BOX 356 DANUBE MN 56230	MATTHEW A. HAUKOS 85374 300TH ST DANUBE MN 56230
	HAYEK LIVING TRUST C/O MARK & RUTH HAYEK 3300 149TH AVE HAM LAKE MN 55304	KEITH J HAYEK 27454 CO RD 4 RENVILLE MN 56284	KEITH J. & ANITA M. HAYEK 1422 UNIVERSITY AVE NE MINNEAPOLIS MN 55413
	THOMAS R. & LAURIE A. HAYEK 26158 CO RD 4 RENVILLE MN 56284	RUTH HELLER & NAOMI ENDTER.TR C/O ROGER HELLER PO BOX 26 OLIVIA MN 56277	DONALD J HODGE 110 CHESTNUT AVE SE PO BOX 581 RENVILLE MN 56284
	GARY HOTOVEC TRUST ETAL 87308 US HWY 71 DANUBE MN 56230	BRAD & NAOMI JANSEN TRUSTEES BRADLEY F & NAOMI C JANSEN RLT 38362 870TH AVE BIRD ISLAND MN 55310	JAY L & DEANNA L JOHNSON 31406 840TH AVE OLIVIA MN 56277
*	KADLEC FARMS, LLP 88111 330TH ST OLIVIA MN 56277	JAMES & SHARON KADLEC 85845 330TH ST OLIVIA MN 56277-9645	DANIEL J & MANDY L KAUFENBERG 84221 330TH ST OLIVIA MN 56277
7.	GREGORY KAUFENBERG 85652 330TH ST OLIVIA MN 56277	MARY KELLY 1165 PRENTICE ST GRANITE FALLS MN 56241-1526	ROGER D KINGSTROM 33493 850TH AVE OLIVIA MN 56277
	JAMES KOPEL & JAMES KOPEL & KATHY DILLON TR OF HELEN TRUST 1107 PARK AVE W OLIVIA MN 56277	ZACHARY R KOPEL 29853 850TH AVE DANUBE MN 56230	DAVID & MARGARET KUBESH TR DAVID & MARGARET KUBESH TRUSTS 85554 310TH ST DANUBE MN 56230
a 3	MARDELL LARSON C/O ELOID & CHRISTINE PENKE 29677 800TH AVE DANUBE MN 56230	JASON LAUMER & NICOLE GRUND 30238 850TH AVE DANUBE MN 56230	ORDELL & VICKY LAUMER 30238 850TH AVE DANUBE MN 56230
	SCOTT A. & TRISHA L. LINDRUD 32429 840TH AVE OLIVIA MN 56277	CAROL J. LIPPERT TRUSTEE CAROL J LIPPERT REV. TRUST 89118 CO RD 1 DANUBE MN 56230	MYRON & BECKY MACIK TRUSTEES MYRON & BECKY MACIK TRUSTS 44291 KAND-RENVILLE LINE SE

DANUBE MN 56230

HECTOR MN 55342



MAHLUM FAMILY TRUST WAYNE & MAVIS MAURICE MC NAMARA FAMILY LIMITED PART MARY MARK PATTEN, TRUSTEE 86526 310TH ST LAWRENCE & MARJORIE MC NAMARA 805 MAIN STREET S DANUBE MN 56230 470 CHERRY AVE CHATFIELD MN 55923 BIRD ISLAND MN 55310 MC NAMARA FAMILY LLC JEREMY R. MERTZ RANDALL W & JUNE S MERTZ OF FLORIDA-C/O LARRY MC NAMARA 32562 850TH AVE 32118 850TH AVE 20060 WOLFEL TRL OLIVIA MN 56277 OLIVIA MN 56277 ESTERO FL 33928 LARRY D MEYER MORGAN FAMILY PARTNERSHIP RUSSELL & LUANN NERE & 86511 330TH ST C/O PAUL MORGAN DARLENE NERE OLIVIA MN 56277 70 EAST 4TH ST 28744 CO RD 11 WINONA MN 55989 DANUBE MN 56230 " NORTHERN NATURAL GAS CO. FREDRICK NYQUIST ELOID O & CHRISTINE L PENKE & PROPERTY TAX DEPT JEANETTE NYQUIST LORNA J STAEDY PO BOX 3330 85740 300TH ST 29677 800TH AVE MAHA NE 68103-0330 DANUBE MN 56230 DANUBE MN 56230 GREGORY O. PENKE DAVID R PETERSON LIVING TRUST SUSAN A PETERSON 85769 300TH ST C/O DAVID R PETERSON 420 S 11TH ST. APT B DANUBE MN 56230 PO BOX 497 BIRD ISLAND MN 55310 ARNOLDS PARK IA 51331 LEE POTZLER PATRICIA POTZLER DANIEL & CHERYL RAUENHORST 2017 NORTH SHORE DR C/O LOIS HAGAN 81961 320TH ST BELLINGHAM WA 98226-7819 PO BOX 1469 OLIVIA MN 56277 WALKER MN 56484 1.0 DOUGLAS & DAVID RECK RENVILLE COUNTY RENVILLE SIBLEY 80603 300TH ST 105 5TH ST S COOP POWER ASSN DANUBE MN 56230 OLIVIA MN 56277 PO BOX 68 DANUBE MN 56230 DOLORES K ROTHMEIER GEORGE E ROTHMEIER ETAL DALE SCHNEIDERMAN 603 FAIRVIEW AVE E - APT 105 2142 HIGHLAND AVE 31034 850TH AVE OLIVIA MN 56277-1381 ALBERT LEA MN 56007 DANUBE MN 56230 DALE & RACHEL SCHNEIDERMAN JEANETTE SCHNEIDERMAN ADAM M SERBUS 31034 850TH AVE PO BOX 213 83467 280TH ST DANUBE MN 56230 DANUBE MN 56230 DANUBE MN 56230 WAYNE & NANCY STAHNKE STATE OF MINNESOTA - MN DOT KAREN M STEFFEL

C/O HYDRAULIC DEPARTMENT

2505 TRANSPORTATION RD

WILLMAR MN 56201

34636 880TH AVE

OLIVIA MN 56277

83735 330TH ST

OLIVIA MN 56277

KENNETH & MARCIA TELLERS GREGORY & ANNA TEPFER ALAN & PEGG 504 ADAMS CIR S PO BOX 244 PO BOX 163 COLOGNE MN 55322-9693 DANUBE MN 56230 OLIVIA MN TOWNSHIP OF CROOKS TOWNSHIP OF EMMET TOWNSHIP OF 00000 00000 TOWNSHIP OF WINFIELD TROJAN FAMILY FARMS LLLP GARY VERZAL 81961 320TH ST 15937 CASCA 00000 OLIVIA MN 56277 ROSEMOUNT M VOELZ BROTHERS JEAN VOELZ JEAN VOELZ C/O ROBERT VOELZ 29438 840TH AVE ROBERT, WIL 29438 840TH AVE DANUBE MN 56230 29438 840TH DANUBE MN 56230 DANUBE MN 5 ROBERT VOELZ & WILLIAM VOELZ & JOSHUA J VOSIKA KEVIN M VOS JOHN VOELZ 602 E CEDAR AVE 700 WALNUT 29438 840TH AVE OLIVIA MN 56277 OLIVIA MN 5 DANUBE MN 56230 WAT FAMILY FARMS LC WC FARMS, LLC LEONE WELTER 1415 E MAIN ST 18105 31ST AVE N C/O VIRGINIA RICHMOND VA 23219 PLYMOUTH MN 55447 331 2ND AVE FOREST LAKE KRAIG & DEBRA WINZENBURG DANA & JENNIFER WOELFEL MARJORIE WR · 84585 CO RD 1 86257 310TH ST 3125 FREAR DANUBE MN 56230 DANUBE MN 56230-1226 MINNETONKA JAMES ZENK JAMES & DIANNE ZENK ROBB J. & ME 501 10TH ST N 501 10TH ST N 84691 US HWY OLIVIA MN 56277 OLIVIA MN 56277 DANUBE MN 56 STEPHEN & MARIA ZENK STEPHEN P ZENK KRIS J ZUHLS 30635 CO RD 11 30635 CO RD 11 84342 280TH

DANUBE MN 56230

DANUBE MN 56230

ALAN & PEGGY TERSTEEG PO BOX 163 OLIVIA MN 56277-0163	
TOWNSHIP OF TROY	
GARY VERZALIK 15937 CASCADE PATH ROSEMOUNT MN 55068	
JEAN VOELZ & ROBERT, WILLIAM & JOHN VOELZ 29438 840TH AVE DANUBE MN 56230	
KEVIN M VOSIKA 700 WALNUT AVE E OLIVIA MN 56277	
LEONE WELTER C/O VIRGINIA HARTMANN 331 2ND AVE SW FOREST LAKE MN 55025	
MARJORIE WRIGHT 3125 FREAR DR MINNETONKA MN 55305	
ROBB J. & MEGAN C. ZENK 84691 US HWY 71 DANUBE MN 56230	
KRIS J ZUHLSDORF 84342 280TH ST DANUBE MN 56230	

STATE OF MINNESOTA RENVILLE COUNTY BOARD OF COMMISSIONERS SEATED AS DRAINAGE AUTHORITY UNDER STATUTES CHAPTER 103E FOR RENVILLE COUNTY DITCH 59

Notice of Preliminar Improvement of Renv	-	AFFIDAVIT OF POSTING			
STATE OF MINNESOTA)) SS				
COUNTY OF RENVILLE	133				
caused the Notice of Impattached hereto as EXHIB Courthouse in the require hearing for the Improven	provement Project, Pre I T A to be prominently of d manner giving notice nent of County Ditch 5	ounty, being duly sworn, depose and state that I eliminary Hearing for Renville County Ditch 59, displayed at the front door of the Renville County to the public of the date, time, and place of the 9 and that I make this affidavit knowing that it as proof of compliance with the requirements of			
Further affiant saith not.					
I SWEAR OR AFFIRM THA CORRECT TO THE BEST OF		OREGOING REPRESENTATIONS ARE TRUE AND ORMATION, AND BELIEF.			
February 8, 2019	8 Larry Zupke	, prainage Inspector			
STATE OF MINNESOTA)				
COUNTY OF RENVILLE) SS)				
I, the undersigned Notary me on this day of and voluntary act and dee	Februares	m that Larry Zupke personally appeared before , 2018, and signed the above affidavit as his free			
	4	James & Stonly			
	Nota 1	WAYNE G. STOMBERG Notary Public-Minnesota My Commission Expires Jan. 31, 2020			

STATE OF MINNESOTA) COUNTY OF RENVILLE)

In the Matter of Preliminary Hearing on the Petition of Gary Verzalik; Carol J. Lippert Trust; Aakre Family Farms LLC; Wat Family Farms LLC; James Zenk; Diane Zenk; Daniel W. Rauenhorst; Cheryl Rauenhorst; Robb Zenk; Megan C. Zenk; Ruth Heller; and Naomi Endter; for the Improvement of a Portion of County Ditch 59 Pursuant to Minnesota Statutes 103E

NOTICE IS HEREBY GIVEN That the Renville County Board of Commissioners acting, as the Drainage Authority for County Ditch 59, will meet in the Commissioners Room, Renville County Government Services Center, Room #313, 105 South 5th Street, Olivia, Minnesota, on Tuesday, February 27th, 2018 at 9:00 a.m. for the Preliminary Hearing on the Improvement Petition submitted by the above listed property owners for the Renville County Ditch 59 system.

All interested persons are invited to attend and be heard in this matter. A complete set of preliminary project plans may be picked up at the Renville County Public Works Office, 105 South 5th St., Room 319, Olivia, Minnesota 56277.

Dated this 6th day of February, 2018 at Olivia, Minnesota.

Larry Zupke Renville County Drainage Systems Inspector

Preliminary Hearing

In the Matter of Preliminary Hearing on the Petition of Gary Verzalik; Carol J. Lippert Trust; Aakre Family Farms LLC; Wat Family Farms LLC; James Zenk; Diane Zenk; Daniel W. Rauenhorst; Cheryl Rauenhorst; Robb Zenk; Megan C. Zenk; Ruth Heller; and Naomi Endter; for the Improvement of a Portion of County Ditch 59 Pursuant to Minnesota Statutes 103E

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Dated this 6th day of February, 2018 at Olivia, Minnesota. Larry Zupke Renville County Drainage Systems Inspector

(Pub. Feb. 15 and 22)

AFFIDAVIT OF PUBLICATION

State of Minnesota,

COUNTY OF RENVILLE

}ss

RENVILLE COUNTY REGISTER RENVILLE, MINNESOTA 56284 OLIVIA, MINNESOTA 56277

TERESA IHNEN, being duly sworn, on oath says that she is the General Manager/Publisher or designated agent of the newspaper known as the *Renville County Register*, and has full knowledge of the facts which are stated below:

- (A) The newspaper has complied with all of the requirements constituting qualification as a qualified newspaper, as provided by Minnesota Statute 331A.02, 331A.07, and other applicable laws, as amended. B) The printed
- (B) Renville County Ditch: Preliminary Hearing Ditch 59 of said newspaper, and was printed and published once each week, for 2successive weeks it was first published on the 15th day of, February, 2018; and was thereafter printed and published on every Thursday to and including the 22nd day of February, 2018; and printed below is a copy of the lower case alphabet from A to Z, both inclusive, which is hereby acknowledged as being the size and kind of type used in the composition and publication of the notice:

Pursuant to Minnesota Statutes §580.033 relating to the publication of mortgage foreclosure notices: The newspaper's known office of issue is located in <u>Renville County</u>. The newspaper complies with the conditions described in §580.033, subd. 1, clause (1) or (2). If the newspaper's known office of issue is located in a county adjoining the county where the mortgaged premises or some part of the mortgaged premises described in the notice are located, a substantial portion of the newspaper's circulation is in the latter county.

FURTHER YOUR AFFIANT SAITH NOT.

By: Publisher or designated agent

Subscribed and sworn to before me on this 22 day of

Notary Public, Renville County, Minnesota

Signed:

BARBARA JUNNIGES

State of Minnesota My Commission Expires January 31, 2019

RATE INFORMATION

Lowest classified rate paid by commercial users for comparable space

\$ 9.96 column inch.

STATE OF MINNESOTA

Before the

RENVILLE COUNTY BOARD OF COMMISSIONERS SITTING AS THE DRAINAGE AUTHORITY FOR RENVILLE COUNTY DITCH NO. 59

In the Matter of:

the Petition for Improvement of Renville County Ditch No. 59

PRELIMINARY FINDINGS AND ORDER APPOINTING PROJECT ENGINEER

The Renville County Board of Commissioners, sitting as the drainage authority for Renville County Ditch No. 59, convened on January 10, 2017 at the Commissioners Room, Suite 313 of the Renville County Government Services Center, 105 South 5th Street, Olivia, Minnesota. Based on the record and proceedings, Commissioner Randy Kramer moved, seconded by Commissioner Doug Erickson to adopt the following Findings and Order:

Findings:

- 1. A petition dated December 14, 2016 was received by the Renville County Auditor requesting to improve a portion of Renville County Ditch No. 59 pursuant to Minn. Stat. § 103E.215.
- 2. A cash bond in the amount of \$48,750 was filed by the petitioners concurrent with the petition.
- Renville County Attorney, David Torgelson, and special legal counsel for the drainage authority, Kale R. Van Bruggen, reviewed the petition and bond filed with the county and determined that the petition and bond met the requirement of the proceedings for an improvement to Renville County Ditch No. 59.
- The drainage authority finds that it has jurisdiction over these proceedings and pursuant to Minn. Stat. § 103E.241, subd. 1 desires to appoint an engineer to make a preliminary survey.

Order:

the B		-	ind the entire record authority for Renv		· ·
A.	appointed a	is the project	of <u>Bolton</u> engineer for these eed in conformance	proceedings a	ind shall make a
B.	perform the	assigned dutie t least \$5,000 v	ork, the engineer mus s in the best manne vith the Renville Co	er possible and	file a bond in the
C.	complete the		t assistant enginee les. The engineer sha them.		
D.	of the engine must show engineer's of engineer, en and every its report with the expenses for	eer's work until to costs incurred lirection relating gineer assistant em of expense he Renville Controller the proceeding	n expense report eventhe construction of the by the engineer are to the proceeding to the employees a incurred by the engineer as soon greater than the permission of the engineer than the permission.	ne contract is awand expenses in and include in and the time earlineer. The enging as possible attitioner's bond.	varded. The report neurred under the the names of the ch was employed, neer must file this and may not incur
of the	foregoing fir		alled the question. T er, and there were _ follows:	-	•
	KRAMER	Yea	Nay	Absent	Abstain
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E	RICKSON	×		ä	ñ
	STAHL				ā
	SCHMIDT	İΣ			
Upon	vote, the Cha	ir declared the r	motion passed and tl	he Findings and	l Order adopted.
Bob Fo	ox, Chairpers	√)		Dated:/	-10-17
	,	-			

[11726-0089/2538614/1]

* * * * * * * * * * *

I, Marc Iverson, Renville County Auditor/Treasurer, do hereby certify that I have compared the above motion; findings and order with the original thereof as the same appears of record and on file with the Renville County Board of Commissioners, the drainage authority for Renville County Ditch No. 59, and find the same to be a true and correct transcript thereof. The above order was filed with me, the Renville County Auditor/Treasurer, on $\frac{19-16-2016}{2016}$

IN TESTIMONY WHEREOF, I hereunto set my hand this day of December, 2016.

DEC 2016

LE OE 67.82 LE OE 67.82 LA ST. LE OE 67.8

Marc Iverson, Auditor/Treasurer Renville County, Minnesota

STATE OF MINNESOTA Before the RENVILLE COUNTY BOARD OF COMMISSIONERS SITTING AS THE DRAINAGE AUTHORITY FOR RENVILLE COUNTY DITCH NO. 59

In the Matter of: the Petition for Improvement of Renville County Ditch No. 59	ENGINEER'S OATH
Board of Commissioners, drainage authorit Drainage Engineer for the Petition for Imperpursuant to Minnesota Statutes Chapter 103 perform the assigned duties in the best man perform the Engineer's duties as set forth in Castandards required of professional engineers	by for Renville County Ditch No. 59, as the rovement of Renville County Ditch No. 59, 3E, does hereby swear or affirm to faithfully nner possible and to diligently and honestly Chapter 103E and according the professional
Signed this 19 day of January, 2 Bolton + Menk, Inc, (Nan	ol7. ne of Engineering Firm)
By Bill I. Helget Its P.E.	

STATE OF MINNESOTA Before the RENVILLE COUNTY BOARD OF COMMISSIONERS SITTING AS THE DRAINAGE AUTHORITY FOR RENVILLE COUNTY DITCH NO. 59

In the Matter of: the Petition for Improvement of Renville County Ditch No. 59	ENGINEER'S BOND
KNOW BY ALL THESE PRESENTS, the principal and surety, is held and firmly	

KNOW BY ALL THESE PRESENTS, that Similar to the Renville County Board of Commissioners, sitting as the drainage authority for Renville County Ditch No. 59, (Drainage Authority) in an amount equal to \$5,000 for which the Engineer will maintain commercial general liability and professional liability coverage limits, per occurrence and per claim respectively, of not less than that amount during the entire term of the Engineer's appointment, to pay on any proven claim by any person or the Drainage Authority for damages and injuries resulting from negligence of the Engineer while the Engineer is acting in the proceedings or construction for the improvement to Renville County Ditch No. 59.

The condition of the above obligation is such: Engineer was appointed by the Drainage Authority as the Drainage Engineer for the petition to improve Renville County Ditch No. 59. Minnesota Statutes Section 103E.241, subd. 2 requires the Engineer to file a bond of at least \$5,000 with the District upon appointment. The bond must be conditioned to pay any person or the Drainage Authority for damages and injuries resulting from negligence of the Engineer while the Engineer is acting in the proceedings or construction and provide that the Engineer will diligently and honestly perform the Engineer's duties. The aggregate liability of the Engineer for all proven claims shall not exceed the amount of the Engineer's bond, for which the Engineer acknowledges being held and firmly bound in the amount of \$100,000 to be underwritten by the Engineer's obligation to provide commercial general liability and professional liability insurance during the term of the Engineer's appointment.

Signed this 19 day of January, 2017.
Bolton + Menk, Inc. (Name of Engineering Firm)
By Bill L. Helgt
Its



Real People. Real Solutions.

Preliminary Engineer's Report for

Improvement of Main Open Ditch, Branch 309 & Branch C of Renville County Ditch No. 59

S15.112473

January 2018

Submitted by:

Bolton & Menk, Inc. 1243 Cedar Street NE Sleepy Eye, MN 56085 P: 507-794-5541

F: 507-794-5542

Certification

Preliminary Engineer's Report

For

Improvement

Of

Main Open Ditch, Branch 309, & Branch C

Of

Renville County Ditch No. 59

January 2018

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:

Bill L. Helget, P.E. License No. 42046

late:

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Exhibits

EXHIBIT 1: PRELIMINARY PLANS AND PROFILES

EXHIBIT 2: PETITION FOR CD 1B IMPROVEMENT

EXHIBIT 3: PRELIMINARY COST ESTIMATE

STATE OF MINNESOTA

RENVILLE COUNTY, MINNESOTA

IN THE MATTER OF THE PETITION FOR AN IMPROVEMENT OF RENVILLE COUNTY DITCH NO 59 IN RENVILLE COUNTY, MINNESOTA:

In January 2017, the Renville County Board, acting as the Ditch Authority for County Ditch No. 59 (CD 59) in Renville County, in accordance with Minnesota Statute 103E.215, accepted a petition for the improvement of portions of CD 59. 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.

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

I. LOCATION AND SCOPE OF IMPROVEMENT

County Ditch No. 59 lies within and provides drainage to a large watershed in the north-central portion of Renville County. The open ditch system is about seven miles long and drains generally from east to west. The system provides drainage to:

- portions of two Sections in Crooks Township.
- portions of fifteen Sections in Winfield Township.
- portions of two Sections in Emmet Township.
- portions of five Sections in Troy Township.

County Ditch No. 59 serves as an outlet for County Ditch No. 17A at their confluence about two miles northwest of Danube, approximately 850 feet southwest of the CD 59 crossing of County Road 59. CD 17A drains portions of Crooks and Winfield Township. The total estimated watershed for CD 17A from USGS Streamstats data is 42.2 square miles.

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 the Main open ditch, Branch 309, and Branch C, of CD 59. The main open ditch initially drains from west to east and then forms a loop to drain to the west. The loop crosses US Highway 71 (TH 71) twice.

Branch 309 drains portions of Sections 32 and 33 in Winfield Township. The branch drains in general from north to south and discharges into the Main open ditch of CD 59. The existing watershed for Branch 309 is approximately 229 acres. Included in the scope of the petitioned improvements to Branch 309, is to extend the Branch tile to the north approximately 3,800 feet, and intercept the Main tile of CD 59. The goal of this portion of the improvement is to reroute the water drained by the upper portion of the system in a more direct route to the Main open ditch, and relieve the stress on the existing open ditch crossings of TH 71. The drainage area proposed to be re-routed is 628 acres.

Branch C drains portions of Sections 2, 3, and 4 in Troy Township and Section 34 in Winfield Township and drains in general from east to west. The existing watershed for Branch C is approximately 786 acres.

Bolton & Menk, Inc. collected field survey information in November of 2011 for a repair of the main open ditch conducted in 2014. This field survey information included the elevation of the

bottom of the ditch, and the top of one side of the ditch. The survey also included establishing the elevation and size of the culvert crossings, as well as centerline information of the roadway, railroad, or field crossing at the culvert crossings. Additional field survey information was collected by our firm in July of 2017, which included the top of the second side of the ditch, tile intakes near the Branch 309 and Branch C improvements, as well as ground elevations in potential storage areas.

The design of the improvements has also utilized 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 plans obtained from Renville County files. However, the County plans do not show existing tile grades. Thus, it was necessary to use information gathered through intakes to make some interpretations regarding the existing tile grades. The existing plans, and other available information, do not identify the nomenclature of sub-branches of the CD 59 system. As a result, we have given the sub-branches unique identifiers, but only for the purposes of this improvement.

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.

An extensive repair of the existing system, known as Repair F occurred in 1967.

III. CAPACITY OF THE EXISTING DRAINAGE SYSTEM

The portion of the proposed system improvements consists of an open ditch and 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 existing drainage system analysis used standard engineering methods. The estimated capacity of the existing open ditch used the Manning equation. The capacity calculations for the culvert crossings used HY-8, a culvert modeling software developed by the Federal Highway Administration. The amount of drainage needed for modern crop production has been compared to standards recommended by the Natural Resources Conservation Service (NRCS). The NRCS Engineering Field Handbook Minnesota Supplement 650.0703 for Grassed Waterways Curve 2 was used to determine the design discharge for the ditch watershed at each of the culvert crossings within the study area. The watershed contributing flow to the open ditch at each of the culverts was delineated using the USGS Streamstats program and confirmed using LIDAR data.

The exiting capacity of the culverts within the study area was calculated by determining the headwater (upstream) elevation for each of the culverts at the design flow. NRCS Code 608 guidance states that one-foot of freeboard should be provided between the design water surface profile in the open ditch, and the ground elevation of the low areas being served by the open ditch. The headwater elevation was then compared to the maximum elevation for one-foot of freeboard for each of the culverts.

A summary of the existing headwater elevations for the culverts within and downstream of the area of the Improvement is in Table 1.

			Table 1	. – Existir	ng Ditch (Capacity	Compu	tations			
Culvert Location	Culvert Size and Material	Upstream Watershed (Acres)	NRCS Ditch Flow (cfs)	NRCS Ditch Flow (In./ Day)	Ditch Bottom Width (ft)	Est. Max Depth (ft)	Ditch Grade (%)	Ditch Capacity (cfs) (n= 0.035)	Culvert Capacity (cfs) at Max Depth	Limiting Capacity (cfs)	Ditch Efficiency Ratio
TH 71 Crossing North	6' x 4' Cattle Pass	2,309	74	0.76	6	5.6	0.05	128	99	99	1.34
TH 71 Crossing South	6' x 4' Cattle Pass	4,016	125	0.74	6	5.0	0.05	102	85	85	0.68
Field Crossing Section 34	72" RCP	5060	157	0.74	8	6.6	0.03	167	139	139	0.89
310th Street	72" RCP	5,890	182	0.74	8	7.1	0.03	193	154	154	0.85
300th Street	72" RCP	7,154	220	0.73	8	8.1	0.03	250	194	194	0.88
Field Road Section 5	72" RCP	7,335	225	0.73	8	7.8	0.03	232	253	232	1.03
CSAH 1	84" RCP	8,202	251	0.73	8	8.5	0.03	276	233	233	0.93
280th Street	84" RCP	9,090	278	0.73	8	9.5	0.03	346	278	278	1.00
County Road 59	84" RCP	9,702	296	0.73	8	8.1	0.10	457	319	319	1.08
CD 59 at TC&W Crossing w/o CD 17A or CD 37	Dual 16'x10' Box Culverts	9,858	301	0.73	20	7.3	0.10	772	735	735	1.78
CD 59 with CD 17A	Dual 16'x10' Box Culverts	36,858	1111	0.72	20	7.3	0.10	772	735	735	0.48
CD 59 with CD 37	Dual 16'x10' Box Culverts	41,008	1235	0.72	20	7.3	0.10	772	735	735	0.43

As can be seen in Table 1, the culverts are generally the limiting factor that determines the capacity of the ditch. The south Highway 71 crossing has the lowest efficiency upstream of County Road 59, and the addition of the CD 17A and CD 37 watersheds have a dramatic impact on the efficiency of the TC&W crossing. The limiting factor at the TC&W crossing is the relatively low ground adjacent to the open ditch on the upstream side of the TC&W crossing. The crossing consists of dual sixteen foot wide by ten-foot tall box culverts, but the maximum depth that can be attained in the ditch while maintaining one-foot of freeboard is 7.3 feet.

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 inch of runoff per day. Watershed areas have been estimated using LIDAR data. The capacity of the existing tiles in Branch 309 is shown in Table 2 and the capacity

of the existing tiles in Branch C is shown in Table 3.

	Table 2 – Branch 309 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)
309	Br. 309 west of 300th St.	44	0.92	10	0.10*	0.69	0.75	0.38
	Br. 309 east of 300th St.	88	1.85	10	0.10*	0.69	0.38	0.19
	Low area in E1/2 of W/12 Section 33	149	3.13	12	0.10	1.13	0.36	0.18
	Br. 309 prior to Br. 309-2	167	3.51	12	0.10	1.13	0.32	0.16
	Br. 309 meets Br. 309-2	193	4.05	14	0.16	2.16	0.53	0.27
	Br. 309 meets Br. 309-1	219	4.60	14	0.16	2.16	0.47	0.23
	Br. 309 meets CD 59 Open Ditch	229	4.81	14	2.48	8.49	1.76	0.88
309-2	Br. 309-2	26	0.55	10	0.19	0.96	1.75	0.88
309-1	Br. 309-1	11	0.23	5	0.10*	0.11	0.47	0.24
*Denotes	Assumed Tile Grade							

As shown in Table 2, the majority of Branch 309 is capable of draining the watershed at a rate of about 3/16" to ¼" per day. When compared to the NRCS recommended standard of ½" per day, the tile system is delivering about 32% to 50% of the recommended flow. Thus, there is inadequate capacity in the existing drainage system to provide for the efficient production of row crops.

As shown in Table 3, the majority of Branch C is Capable of draining the watershed at a rate of about 3/32" to 3/16" per day. When compared to the NRCS recommended standard of ½" per day, the tile system is delivering about 18% to 35% of the recommended flow. Thus, there is inadequate capacity in the existing drainage system to provide for the efficient production of row crops.

Many of the existing tiles have been televised by Renville County. The existing tile systems were found to be in poor condition, showing offset joints and collapsed pipes in some areas. Since there is evidence that the pipe system is in poor repair, the system is likely delivering even less flow than has been calculated. A few of the tiles have been reconstructed at the original size and grade.

Another limitation of the existing Branch 309 and Branch C tile system is the very shallow depths at which the exiting tiles are installed. The shallow tile is prone to damage from modern farming equipment.

Label Location Area (Acres) (cfs) (1/2" Per Day) Size (in.) Grade (in.) (cfs) (n = 0.013) Efficiency Ratio (in./I C Br C East 1/2 of E 1/2 of Section 2 21 0.44 6 0.40 0.36 0.81 0.4 Br. C prior to Br. C5 78 1.64 8 0.15 0.47 0.29 0. Br. C meets Br. C5 102 2.14 10 0.04 0.44 0.21 0.	efficient Day) 40
C Section 2 21 0.44 6 0.40 0.36 0.81 0.4 Br. C prior to Br. C5 78 1.64 8 0.15 0.47 0.29 0. Br. C meets Br. C5 102 2.14 10 0.04 0.44 0.21 0.	14
Br. C meets Br. C5 102 2.14 10 0.04 0.44 0.21 0.	
Br. C meets Br. C5 102 2.14 10 0.04 0.44 0.21 0.	
	10
Br. C meets Br. C-4 228 4.79 15 0.04 1.30 0.27 0.	14
Br. C meets Br. C-3 476 10.00 18 0.03 1.82 0.18 0.0	09
Br. C meets Br. C-2 585 12.29 20 0.03 2.42 0.20 0.	10
Br. C meets Br. C-1 685 14.39 18 0.17 4.34 0.30 0.	15
	19
C-5 Br. C-5 24 0.50 6 0.20* 0.25 0.50 0.3	25
C-4 Br. C-4 beginning 34 0.71 6 0.15* 0.22 0.31 0.	15
Br. C-4 meets Br. C-4-2 40 0.84 6 0.15* 0.22 0.26 0.	
Br. C-4 meets Br. C-4-1 102 2.14 12 0.16* 1.43 0.67 0	33
Br. C-4 meets Br. C 109 2.29 12 0.16* 1.43 0.62 0	31
C-4-2 Br. C-4-2 meets Br. C-4 6 0.13 6 0.15* 0.22 1.73 0.8	86
	2.1
C-4-1 Br. C-4-1 meets Br. C-4 41 0.86 8 0.20 0.54 0.63 0.3	31
Br. C-3 north of 840th	
C-3 Avenue 23 0.48 6 0.07* 0.15 0.31 0.	15
	08
	23
Br. C-3 north of driveway 71 1.49 8 0.28 0.64 0.43 0.2	21
Br. C-3 meets Br. C 79 1.66 8 0.28 0.64 0.39 0.	19
	1.4
C-3-2 Br. C-3-2 meets Br. C-3 25 0.53 6 0.07* 0.15 0.28 0.	14
C-3-1 Br. C-3-1 East of TH 71 17 0.36 5 0.10* 0.11 0.31 0.	15
C-2 Br. C-2 meets Br. C 29 0.61 6 0.18 0.24 0.39 0.20	20
C-1 Br. C-1 53 1.11 8 0.05* 0.27 0.24 0.	
*Denotes Assumed Tile Grade	12

IV. DISCUSSION OF IMPROVEMENT

The petitioners for the Improvement of the Main Open Ditch, Branch 309, and Branch C 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 of the proposed improved ditch and culverts, and the preliminary grades, sizes, and depths of the tile systems, and to analyze the outlet. 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. **Main Open Ditch** – The improvement will consist of widening and lowering the Main Open Ditch from the downstream side of County Road 59 to the downstream side of the southerly TH 71 crossing. The remaining open ditch upstream of the Southerly TH 71 crossing will be cleaned.

The existing culvert crossings at County Road 59, 280th Street, and CSAH 1 are to be replaced with 96-inch diameter reinforced concrete pipe culverts with aprons. The existing culvert crossings at the Field Road east of CSAH 1, and the field crossing between 310th Street and the southerly TH 71 crossing are to be replaced with salvaged 84-inch diameter reinforced concrete pipe culverts without aprons. The existing culverts at 300th Street and 310th Street are to be replaced with new 84" reinforced concrete pipe culverts with aprons. The crossings of the roadways would preferably be made by open cut methods.

The existing open ditch is proposed to be reconstructed from the upstream end of County Road 59 to 280th Street at a 0.03% slope with a ten foot wide bottom and 1V:2H side slopes and from 280th Street to the southerly TH 71 crossing at a 0.03% slope with an eight foot wide bottom and 1V:2H side slopes. The improvement includes cleaning out the existing open ditch from the southerly TH 71 to the upstream end of the open ditch at the previously established ditch grade.

- 2. **Branch 309** The improvement will consist of new tile to replace the existing system. The proposed tiles are offset from the existing tiles in Exhibit 1 for clarity only. The improvement will also include a new tile to the north to intercept the existing CD 59 Main Tile, and bring the runoff from a majority of the Main Tile watershed directly to the lower portion of the Main Open Ditch. The improvement also consists of an extension of Branch 309 into the Northeast Quarter of the Northeast Quarter of Section 32 of Winfield Township.
- 3.**Branch** C The improvement will consist of new tiles to replace the existing system. The proposed tiles are offset from the existing tiles in Exhibit 1 for clarity only. The TH 71 crossing will be made by boring and jacking methods, and the route of Branch C-3-1 may be adjusted in the final design to avoid a second crossing of TH 71.
- 4. Other components of the proposed Improvement include:
 - a) Reconstructing the outlets of existing tiles coming into the open ditch, and any intakes adjacent to the spoil berm impacted by the work.
 - b) Construct riprap as erosion protection on the outlet side of the culverts, and at the inlet side of the culverts if warranted.
 - c) Construct riprap slope stabilization along the ditch slopes where side slope stability has been an issue.
 - d) Reseed the ditch slopes, a minimum of a one-rod buffer (16.5 feet), and any portions of the spoil bank that exceed a one rod width.
 - e) Reconstructing the surface above the culvert crossings.
 - f) Generally the new tiles will be constructed lower in elevation than the existing pipe so that all existing tiles will have an outlet.
 - g) Existing tiles cut by the new tile line will be connected to the new tile.

B. DESIGN DATA

As shown on Exhibit 1, the proposed improvements to the Main Open Ditch CD 59 consists

of improving the open ditch and replacing or reinstalling the culvert crossings. The type of pipe that should be used for the improvement is as follows:

1. Precast Reinforced Concrete Pipe (RCP) meeting the requirements of the Minnesota Department of Transportation (MnDOT).

The criteria for the design of the open ditch system are based on Natural Resources Conservation Service (NRCS) methodology. The NRCS Engineering Field Handbook Minnesota Supplement 650.0703 for Grassed Waterways Curve 2 was used to determine the design discharge for the ditch watershed at each of the culvert crossings within the study area and then sizing the culverts to provide 1-foot of freeboard as stated in NRCS Code 608 guidance.

The proposed improvements' efficiency of the Main open ditch is shown in Table 4

		Ī	able 4 –	Propos	ed Ditch	Capacity	Compu	tations			
Culvert Location	Culvert Size and Material	Upstream Watershed (Acres)	NRCS Ditch Flow (cfs)	NRCS Ditch Flow (In./ Day)	Ditch Bottom Width (ft)	Est. Max Depth (ft)	Ditch Grade (%)	Ditch Capacity (cfs) (n= 0.035)	Culvert Capacity (cfs) at Max Depth	Limiting Capacity (cfs)	Ditch Efficiency Ratio
TH 71 Crossing North	6' x 4' Cattle Pass	1,683	55	0.78	6	5.6	0.05	128	99	99	1.80
TH 71 Crossing South	6' x 4' Cattle Pass	3,390	107	0.75	6	5.0	0.05	102	102	102	0.95
Field Crossing Section 34	84" RCP	4,434	138	0.74	8	8.4	0.03	422	282	282	2.04
310th Street	84" RCP	5,264	163	0.74	8	9.0	0.03	493	314	314	1.93
300th Street	84" RCP	7,154	220	0.73	8	10.2	0.03	656	370	370	1.68
Field Road Section 5	84" RCP	7,335	225	0.73	8	10.0	0.03	627	356	356	1.58
CSAH 1	96" RCP	8,202	251	0.73	8	10.3	0.03	671	424	424	1.69
280th Street	96" RCP	9,090	278	0.73	8	11.9	0.03	937	519	519	1.87
County Road 59	96" RCP	9,702	296	0.73	10	9.0	0.03	543	417	417	1.41
CD 59 at TC&W Crossing w/o CD 17A or CD 37	Dual 16' x 10' Box Culverts	9,858	301	0.73	20	7.3	0.10	772	735	735	1.78
CD 59 with CD 17A	Dual 16' x 10' Box Culverts	36,858	1111	0.72	20	7.3	0.10	772	735	735	0.48
CD 59 with CD 37	Dual 16' x 10' Box Culverts	41,008	1235	0.72	20	7.3	0.10	772	735	735	0.43

The proposed grades for the Branch 309 and Branch C tile improvements are shown on Exhibit 1. The type of pipe to be used for the construction will be specified as one of the following:

- Dual Wall Polyethylene Drain Tile meeting the requirements of the American Association of State Highway Transportation Officials (AASHTO) Specification No. M294. Pipe will be bedded in granular material as shown on Exhibit 1 and will be both non-perforated and perforated with a geotextile sock.
- 2. Reinforced concrete pipe meeting the specifications of MnDOT Specification 3352. The joints of the pipe will be covered with geotextile fabric in order to allow some infiltration.
- 3. Polyvinyl Chloride Sewer Pipe for the deep cut areas, meeting the Specifications of ASTM D 3034.
- 4. Concrete drain tile meeting the specifications of ASTM C412.

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 309 and Branch C are shown in Table 5 and Table 6. The tables also show the resulting runoff coefficient provided for the watershed served.

	Table 5 –	Branch 309	Proposed T	ile Cap	acity Co	mputations		
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)
309	SW & SE 850th Ave. & 300th St.	91	1.91	12	0.30	2.12	1.11	0.55
	Br. 309 Upper End	114	2.39	12	0.50	2.74	1.14	0.57
	Br. 309 West of 300th Street	136	2.86	15	0.20	3.14	1.10	0.55
	Br. 309 East of 300th Street	180	3.78	18	0.15	4.42	1.17	0.58
	Low Area in E1/2 of W1/2 Section 33	241	5.06	18	0.20	5.10	1.01	0.50
	Br. 309 Prior to Br. 309-2	259	5.44	24	0.10	7.77	1.43	0.71
	Br. 309 meets Br. 309-2 & 309-3	996	20.92	36	0.10	22.91	1.10	0.55
	Br. 309 meets Br. 309-1	1022	21.47	36	0.10	22.91	1.07	0.53
	Br. 309 meets Open Ditch 59	1032	21.68	36	0.10	22.91	1.06	0.53
New 309-3	Connection to Main Tile	628	13.19	30	0.10	14.09	1.07	0.53
	Connection to Branch 240 Tile	711	14.94	30	0.12	15.43	1.03	0.52
309-2	Br. 309-2	26	0.55	8	0.30	0.72	1.32	0.66
309-1	Br. 309-1	11	0.23	6	0.20	0.27	1.18	0.59

	Table 6 -	- Branch C P	roposed Ti	le Capa	city Con	nputations		
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)
С	Br. C Upper End	9	0.19	6	0.20	0.27	1.44	0.72
	Br. C East 1/2 of E 1/2 of Section 2	21	0.44	8	0.30	0.72	1.63	0.81
	Br. C Prior to Br. C5 Br. C meets Br. C5	78 102	1.64 2.14	12 15	0.20	1.73 2.22	1.06 1.04	0.53 0.52
	Br. C meets Br. C-4	277	5.82	24	0.10	7.77	1.04	0.52
	Br. C meets Br. C-3-1-A	422	8.86	30	0.10	9.96	1.12	0.56
	Br. C meets Br. C-3	525	11.03	30	0.03	10.91	0.99	0.49
	Br. C meets Br. C-2	634	13.32	36	0.05	16.20	1.22	0.61
	Br. C meets Br. C-1	734	15.42	36	0.05	16.20	1.05	0.53
	Br. C meets Open Ditch 59	835	17.54	36	0.06	17.75	1.01	0.51
	Bi. 6 meets open Biten 57	033	17.51	30	0.00	17.75	1.01	0.01
C-5	Br. C-5	24	0.50	8	0.20	0.59	1.16	0.58
C-4	Br. C-4 Beginning	83	1.74	12	0.20	1.73	0.99	0.50
	Br. C-4 meets Br. C-4-2	89	1.87	15	0.10	2.22	1.19	0.59
	Br. C-4 meets Br. C-4-1	151	3.17	18	0.10	3.61	1.14	0.57
	Br. C-4 meets Br. C	158	3.32	18	0.10	3.61	1.09	0.54
C-4-2	Br. C-4-2 meets Br. C-4	6	0.13	6	0.15	0.24	1.87	0.94
C-4-1	Br. C-4-1 meets Br. C-4	41	0.86	10	0.20	1.06	1.24	0.62
C-3	Br. C-3 North of 840th							
	Avenue	23	0.48	6	0.65	0.49	1.02	0.51
	Br. C-3 Meets Br. C-3-2	48	1.01	10	0.20	1.06	1.06	0.53
	Br. C-3 Meets Br. C-3-1	49	1.03	10	0.20	1.06	1.03	0.52
	Br. C-3 North of Driveway	54	1.13	10	0.25	1.19	1.05	0.52
	Br. C-3 Meets Br. C	62	1.30	10	0.30	1.30	1.00	0.50
C-3-2	Br. C-3-2 Meets Br. C-3	25	0.53	8	0.20	0.59	1.12	0.56
C-3-1-A	Br. C-3-1-A East of TH 71	17	0.36	8	0.10	0.42	1.16	0.58
C-2	Br. C-2 Meets Br. C	29	0.61	8	0.25	0.66	1.08	0.54
C-1	Br. C-1	53	1.11	12	0.10	1.22	1.10	0.55

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 RESTORATION

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.

In order 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 380 acre feet of water cannot be discharged from the CD 59 watershed upstream of County Road 59 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 foot depth, approximately 380 acres of wetland restoration would be needed to provide sufficient storage capacity for the excess runoff.

In order to convert the 380 acres to wetlands, at least twice this many acres would need to be acquired for irregular wetland shapes and marginal damp soils. Thus, about 760 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 restoration would likely be about \$10,000 per acre, resulting in a total cost of about \$7.60 million. Wetland restoration is about 2.0 times the estimated cost for the Improvement of the Main Ditch without additional storage, or about 1.2 times the estimated cost for the Improvement of the Main Ditch with the additional storage.

Wetland restoration 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 restoration 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. ONLINE STORAGE

A third alternative would be to construct the proposed improvements and create online storage within the ditch system. This alternative would provide the storage by excavating out the low areas adjacent to the ditch to the same elevation as the bottom of the ditch. The excavated material would then be placed in the remaining surrounding low areas. This alternative would have the benefit of maintaining similar peak flows for the smaller, more frequent, rainfall events. This alternative would also allow the remaining low area near the storage to be raised up, and offer additional protection from the larger rainfall events.

Three areas, as shown on Exhibit 1, were identified as sites for potential storage basins.

Storage basin number 3 is along the open ditch north of 850th Avenue and west of TH 71, just upstream of the northerly TH 71 crossing. The storage area is approximately 7 acres in size, and is approximately 8 to 10 feet lower than the existing ground. Preliminary calculations estimate 75,000 cubic yards of excavation from this site. The excavation material would be used to raise surrounding low areas to the west, and north, higher than elevation 1073.

Storage basin number 2 is along the east side of the open ditch in between the TH 71

crossings. The storage area is approximately 13 acres in size, and is approximately 6 to 8 feet lower than the existing ground. Preliminary calculations estimate 105,000 cubic yards of excavation from this site. The excavation material would be used to raise surrounding low areas higher than elevation 1072.

Construction of these two storage basins will allow the existing TH 71 crossings to be of sufficient size for the design flow event, and freeboard limitations of the surrounding fields.

Storage basin number 1 is along the north and south side of the open ditch east of County Road 59. The storage area is approximately 20 acres in size, and is approximately 12 to 14 feet lower than the existing ground. Preliminary calculations estimate 325,000 cubic yards of excavation from this site. The excavation material would be disposed of in the surrounding areas. Construction of this third storage area will allow the peak flow rate at County Road 59 for the 2-Year and 5-Year events to be similar to the existing conditions.

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 place 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 the crossing of CR 59 and CSAH 1 from the Renville County Highway Department. This permit will be applied for after the Preliminary Hearing

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 Preliminary 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.

The estimated cost of the proposed Improvement is included in this report. The public and private benefits and damages will be available at the final hearing.

D. AGRICULTRUAL 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

Little change in measureable water quality is anticipated because of this Improvement. However, there are components of the Improvement that will mitigate erosion and help improve water quality on a micro watershed scale. Some of the existing culvert crossings are hydraulically undersized, which leads to higher velocities through the undersized culvert, which can cause scour and erosion on the outlet end of the culvert. Increasing the size of the culvert crossings will lead to lower outlet velocities. 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. The one-rod (16.5 feet) buffer strip will be acquired if not already done so, or reestablished along the Improvement limits.

As a requirement of the MPCA Erosion Control Permit, the establishment of an erosion control plan is anticipated. 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. The improvements made to the culvert crossings will reduce the water velocities through the culverts, which will allow for easier passage of fish.

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. Embankment areas will be stripped of topsoil prior to the placement of non-topsoil material in order to preserve topsoil.
- 3. 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.
- 4. 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. The re-establishment of the grass buffer along the open ditch, decreasing the outlet velocity at the culvert crossings, and the use of Hickenbottom 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. ADEQUACY OF THE OUTLET

A. GENERAL INFORMATION

As mentioned earlier, CD 59 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.

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. 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. The intent of the 0.72" runoff event in Table 7 and Table 9 is to show the change in peak flow and elevation for a rain event with a runoff amount equal to the NRCS design ditch flow. A summary of the existing and proposed peak flows and upstream water surface elevations for various frequency flow events at County Road 59 are presented in Table 7.

Table 7 – Hy	Table 7 – HydroCAD Existing vs. Proposed Model (Without Storage) Summary at County Road 59							
Flow Event	Existing Peak Flow (cfs)	Existing Peak Elevation	Proposed Peak Flow (cfs)	Proposed Peak Elevation	Change in Peak Flow (ProEx.) (cfs)	Change in Peak Elevation (ProEx.)		
0.72" Runoff	350	1061.3	366	1060.0	16	-1.3		
2-Year	418	1062.6	475	1061.7	57	-0.9		
5-Year	455	1063.4	515	1062.7	60	-0.7		
10-Year	473	1064.1	542	1063.6	69	-0.5		
25-Year	498	1065.2	576	1064.7	78	-0.5		
50-Year	516	1065.9	601	1065.5	85	-0.4		
100-Year	574	1066.5	615	1066.3	41	-0.2		

As can be seen in Table 7, the HydroCAD model shows an increase in the peak flow and a decrease in the peak headwater elevation at County Road 59.

Between the TC&W Railroad, and County Road 59, CD 17A joins with CD 59, and then CD 59 joins with CD 37. The peak flows from Streamstats was obtained at the TC&W Railroad, at CD 17A and CD 37 prior to their confluences with CD 59, and CD 59 at County Road 59.

A summary of the flows are presented in Table 8.

Table 8 – Streamstats Peak Flows							
Point Of Interest	TC&W Railroad	CD 17A Prior to CD 59	CD 59 at CR 59	CD 37 Prior to CD 59			
Area (Sq Mi)	64.07	42.15	15.88	5.6			
2-Year Peak Flood (cfs)	297	214	113	33.5			
5-Year Peak Flood (cfs)	675	483	254	74			
10-Year Peak Flood (cfs)	1030	733	383	111			
25-Year Peak Flood (cfs)	1580	1130	587	171			
50-Year Peak Flood (cfs)	2070	1480	769	224			
100-Year Peak Flood (cfs)	2650	1890	980	287			
2-Year Peak / Area (cfs/Sq Mi.)	4.64	5.08	7.12	5.98			

An analysis of Table 8 shows that the peak flow at the TC&W Railroad is not simply the sum of the peak flows of the incoming streams. Peak flow is directly proportional to the watershed area, and inversely proportional to the time of concentration. Therefore, dividing the peak flows from a single event by the watershed area will yield a relationship to the time of concentration. A higher peak flow per area value means that the time of concentration for that watershed is a smaller value (shorter duration). The last row in Table 8 shows the 2-Year peak flow divided by the watershed area for each of the points of interest.

The fact that CD 59 at CR 59 has the highest peak flow / area ratio means that the time of concentration for the upstream area is the shortest, and that the peak flow of CD 59 at CR 59 happens prior to the peak flow of CD 17A.

By increasing the peak flow from CD 59 at CR 59, and moving a larger volume of water downstream quicker from a small portion of the system, the peak flow of the entire system at the TC&W Railroad crossing, which happens later, will decrease. Therefore, it is our opinion, that the outlet for the improvements, without online storage is adequate.

A summary of the existing conditions and the proposed conditions with online storage is in Table 9.

Table 9 –	Table 9 – HydroCAD Existing vs. Proposed + Storage Model Summary at County Road 59								
Flow Event	Existing Peak Flow (cfs)	Existing Peak Elevation	Proposed+ Storage Peak Flow (cfs)	Proposed+ Storage Peak Elevation	Change in Peak Flow (Pro.+Stor. -Ex.) (cfs)	Change in Peak Elevation (Pro.+StorEx.)			
0.72" Runoff	350	1061.3	306	1059.2	-44	-2.1			
2-Year	418	1062.6	425	1060.9	7	-1.7			
5-Year	455	1063.4	471	1061.7	16	-1.7			
10-Year	473	1064.1	500	1062.3	27	-1.8			
25-Year	498	1065.2	532	1063.3	34	-1.9			
50-Year	516	1065.9	554	1064.0	38	-1.9			
100-Year	574	1066.5	573	1064.6	-1	-1.9			

As can be seen in Table 9, the HydroCAD model for the proposed conditions with online storage shows a decrease in the peak flow for the design 0.72" runoff event, and the 100-Year event. The model shows smaller increases in the peak flow for the 2-Year through 50-Year events than without storage, and decreases in the peak headwater elevations for all events at County Road 59.

Therefore, it is our opinion, that the outlet for the improvements with the online storage is adequate.

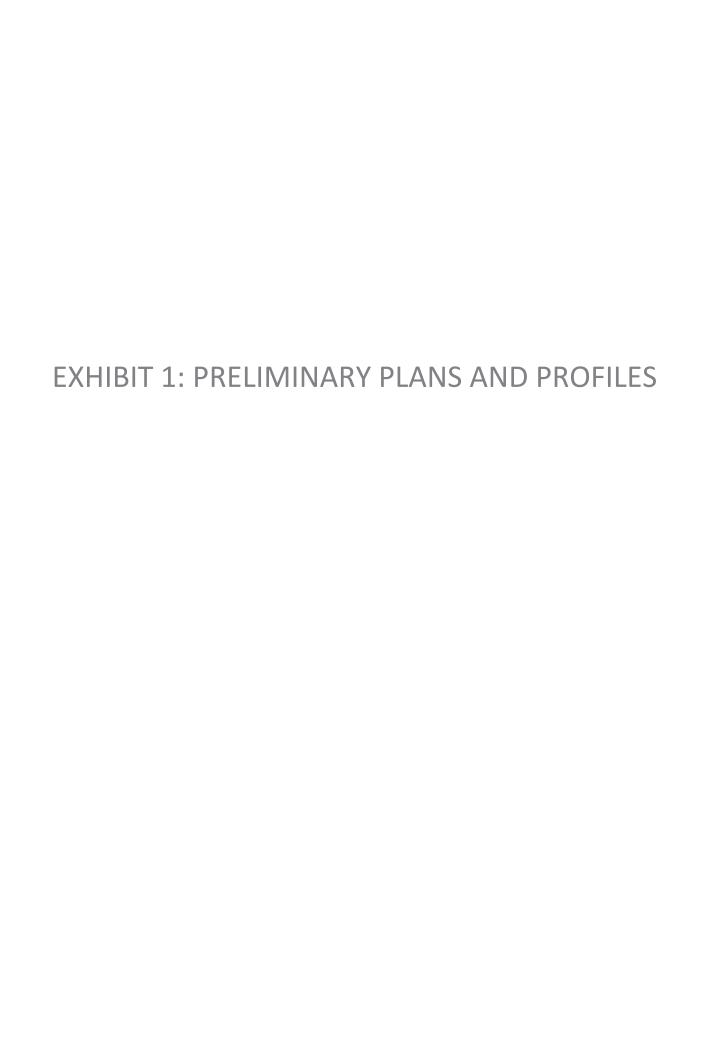
VIII. ESTIMATE OF COST

The preliminary cost estimate to construct the proposed Improvements, as described in this report is shown in Exhibit 3. The total estimated project cost without online storage is approximately \$3,841,290, and with the online storage is approximately \$6,204,290. Included in the project cost estimate are the acreages of land to be permanently taken out of production for: the widening of the ditch (18.5 acres), the establishment of a one-rod (16.5-foot) buffer strip (26 acres), and the excavation of the online storage (41 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 (191.6 acres), and disposal of the online storage excavation (102 acres). The individual landowners will be compensated for this loss through the damage process of the further ditch proceedings.

IX. RECOMMENDATIONS

The proposed Improvements to the Main Open Ditch, Branch 309, and Branch C of 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.

It is the recommendation of your engineer that the Preliminary Engineer's Report be approved, the Board determines if the online storage alternative is to be included in the scope of the improvement, that the Board appoint Viewers, and order the preparation of the Final Engineer's Report for the Improvement.

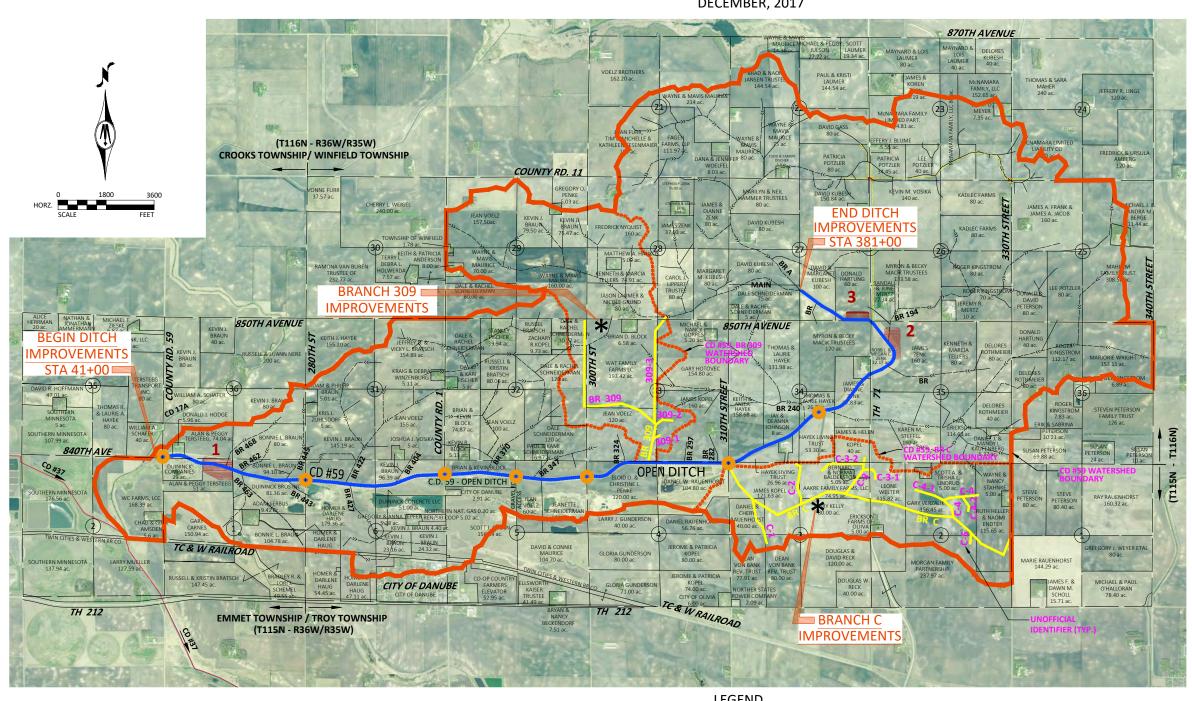


PLAN REVISIONS REV ISSUED FOR DATE

PRELIMINARY CONSTRUCTION PLANS FOR

COUNTY DITCH No. 59 IMPROVEMENTS RENVILLE COUNTY, MINNESOTA

DITCH IMPROVEMENTS, CULVERT REPLACEMENTS, TILE AND INTAKE IMPROVEMENTS DECEMBER, 2017



SHEET INDEX

GENERAL SHEET NO. G0.01 - G0.02 TITLE, LEGEND & NOTES **EXISTING CONDITIONS & REMOVALS** C0.01 SECTION NOT USED TABLES, DETAILS & PHASING TYPICAL SECTIONS & DETAILS C1.01 DETAILS C1.02 **DETAILS** C1.03 **EROSION CONTROL** C2.01 SECTION NOT USED **GRADING** C3.01 GRADING PLAN - STORAGE AREA 1 C3.02 GRADING PLAN - STORAGE AREAS 2 & 3 **SANITARY AND WATER** C4.01 SECTION NOT USED STORM SEWER **COUNTY DITCH 59 - STORM PLAN & PROFILES** C5.01-C5.12 CD 59, BRANCH 309 - STORM PLAN & PROFILES C5.21-C5.26 C5.31-C5.43 CD 59, BRANCH C - STORM PLAN & PROFILES STREETS SECTION NOT USED C6.01 STANDARD DETAILS C7.01 SECTION NOT USED TRAFFIC CONTROL C8.01 SECTION NOT USED

THIS PLAN SET CONTAINS 70 SHEETS.

C9.01-C9.32

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

CROSS SECTIONS

COUNTY DITCH 59- CROSS SECTIONS

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

LEGEND

PROJECT DATUM: RENVILLE CO COORDINATES HORIZONTAL: RENVILLE CO - NAD83 (2007ADJ) VERTICAL: NAVD88

C.D. #59 OVERALL WATERSHED BOUNDARY PROPOSED OPEN DITCH IMPROVEMENTS PROPOSED TILE IMPROVEMENTS BR OFFICIAL LATERAL IDENTIFIER

UNOFFICIAL SUB-LATERAL IDENTIFIER

C.D. #59 BRANCH 309 & C WATERSHED BOUNDARIES STORAGE AREAS

STORAGE AREAS IDENTIFIER PROPOSED CULVERT REPLACEMENT

1243 CEDAR STREET NE SLEEPY EYE, MINNESOTA 56085 Phone: (507) 794-5541 www.bolton-menk.com

TE	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 LINDER THE LAWS OF THE STATE OF MINNESOTA	D
		SI
	BILL L. HELGET, P.E.	CI
	42046 / /	SE

RENVILLE COUNTY, MINNESOTA RENVILLE COUNTY DITCH No. 59 IMPROVEMENTS TITLE SHEET

G0.01

◆ BM=1079.90 ♦ BM=1058.62 BENCHMARK DISC REFERENCE MARK DISC. NE OUAD COUNTY RD 1 RAII ROAD BOX CUI VERT & 840TH AVENUE

♦ BM=1077.05 BENCHMARK DISC NE OUAD T.H. #71

EXISTING

0	IRON PIPE MONUMENT SET		ELECTRIC TRANSFORMER	0	SEMAPHORE TRAFFIC LIGHT
•	MONUMENT FOUND		EXHAUST VENT	•	SIGNAL BOX
	CAST IRON MONUMENT FOUNI		FLAG POLE	0	SIGNAL POLE - RR
	STONE MONUMENT FOUND	0	FILL PIPE	•	SOIL BORING
<u></u>	POST SET	©	GAS MANHOLE	1	SIREN
•	BENCH MARK	©	GAS REGULATOR	Ħ	SPRINKLER HEAD
o AS	AUTO SPRINKLER	8	GAS VALVE	(D)	STORM MANHOLE
0	ANTENNA	G	GAS METER	(T)	TELEPHONE MANHOLE
\boxtimes	AIR CONDITIONER		ACCESS GRATE	D	PUBLIC TELEPHONE
(ANCHOR	Ŀ	HANDICAPPED PARKING		TILE INLET
o AP	AIR PUMP	H	HAND HOLE	— ∅	TILE RISER
>	APRON	-0	HYDRANT	0	TRAFFIC ARM BARRIER
þ	BASKETBALL HOOP	o	IRRIGATION CONTROL VALVE	Д	TRAFFIC SIGN
-B-	BIRD FEEDER	宋	LIGHT DECORATIVE	二卦"	TRANSMISSION TOWER
•	BENCH	*	LIGHT POLE	0	UTILITY POLE
0	BRACE POLE	MB	MAILBOX		VACUUM
	CATCH BASIN	M	METER	(V)	VENT PIPE
0	CLOTHES LINE POLE	®	POST	$\stackrel{\circ}{\triangle}$	DECIDUOUS TREE
Δ	CONTROL POINT	(i)	MANHOLE	₩ ₩	CONIFEROUS TREE
©	CLEAN OUT	(L)	LIFT STATION MANHOLE	\$	STUMP
⊞ CP	COMMUNICATION PEDESTAL	₩	MONITORING WELL	(ii)	BUSH
⊗	CURB STOP VALVE	_	ORDER MICROPHONE	Δ	WELL
\Diamond	DITCH TOP	A B	PARK GRILL	(W)	WATER MANHOLE
£	DRINKING FOUNTAIN		GAS PUMP	W	WATER METER
D	DOWN SPOUT	8	POST INDICATOR VALVE	⊗	WATER WETER WATER SPIGOT
(E)	ELECTRIC MANHOLE		PARKING METER	×	WATER VALVE
Ē	ELECTRIC METER	(S)	SANITARY MANHOLE	عللد	WETLAND / MARSH
⊞ E	ELECTRIC PEDESTAL	3	SATELLITE DISH	Δ	WETLAND - DELINEATED
ш-	ELLETIMETEDISTAL		SATELLITE DISTI	Δ.	WEILAND DELINEATED
	EO OVER	HEAD ELECTRIC	LINE		- EASEMENT LINE
	EU UNDE	ERGROUND ELEC	TRIC LINE — — — —		BUILDING SETBACK LINE
	GAS L	INE	xx	xx	FENCE LINE
		OPTIC LINE			GUARD RAIL
	cu UNDE	ERGROUND COM	1MUNICATIONS LINE ——————		ACCESS CONTROL LINE
		HEAD UTILITY LI			CENTERLINE
		ER SYSTEM			PROPERTY / LOT LINE
		M SEWER			ROAD RIGHT-OF-WAY LINE
	>TILE L	INE			RAILROAD RIGHT-OF-WAY LINE
	->	TARY SEWER			- GRAVEL EDGE
————		TARY FORCEMAI	N		BITUMINOUS EDGE
	====== CULV				CONCRETE EDGE
		RMEDIATE CONT	OURS —		CURB & GUTTER
		X CONTOURS	·		- WATER EDGE
		NTY LINE			- WATER CENTERLINE
		LIMITS			- HIGHWATER LINE
		ENTH LINE			- WETLAND EDGE
		RTER LINE			- SWALE CENTERLINE
		ON LINE			
	- SECTI	OIN LINE			NAILNOAD INACKS

PROPOSED

22+00	
	ALIGNMENT/CENTERLINE
	RIGHT-OF-WAY LINE
	TEMPORARY EASEMENT
	CONSTRUCTION LIMITS
	CURB & GUTTER
	CURB & GUTTER (OUT)
	BITUMINOUS EDGE
-	CONCRETE EDGE
	GRAVEL EDGE
	SILT FENCE-PREASSEMBLED
	SILT FENCE-HEAVY DUTY
()	EROSION PROTECTION AT INLET
•	MANHOLE
	CATCH BASIN
	STORM INLET
•	APRON
	STORM SEWER
	PERFORATED PIPE DRAIN
	STORM DRAIN TILE
»——»	CULVERT W/APRON
1	STORM MANHOLE NUMBER
	SANITARY SEWER
	SANITARY FORCEMAIN
	SANITARY SEWER SERVICE
0	SANITARY LIFT STATION
•	SANITARY MANHOLE
A	SANITARY MANHOLE NUMBER

	WATERMAIN
	WATERMAIN SERVICE
	WATER SYSTEM MANH
\(\rightarrow	HYDRANT
- ♦ ₩	HYDRANT W/ VALVE
H	VALVE
8	CURBSTOP
✓ -	BEND
Ħ	REDUCER
⊕	CROSS
F	TEE
С	CAP
=	SLEEVE
	SIGN
*	LIGHT POLE
•—	GUARD RAIL
∂ B-?	SOIL BORING
عللد	WETLAND
©	BUSH
*	CONIFEROUS TREE
\bigcirc	DECIDUOUS TREE

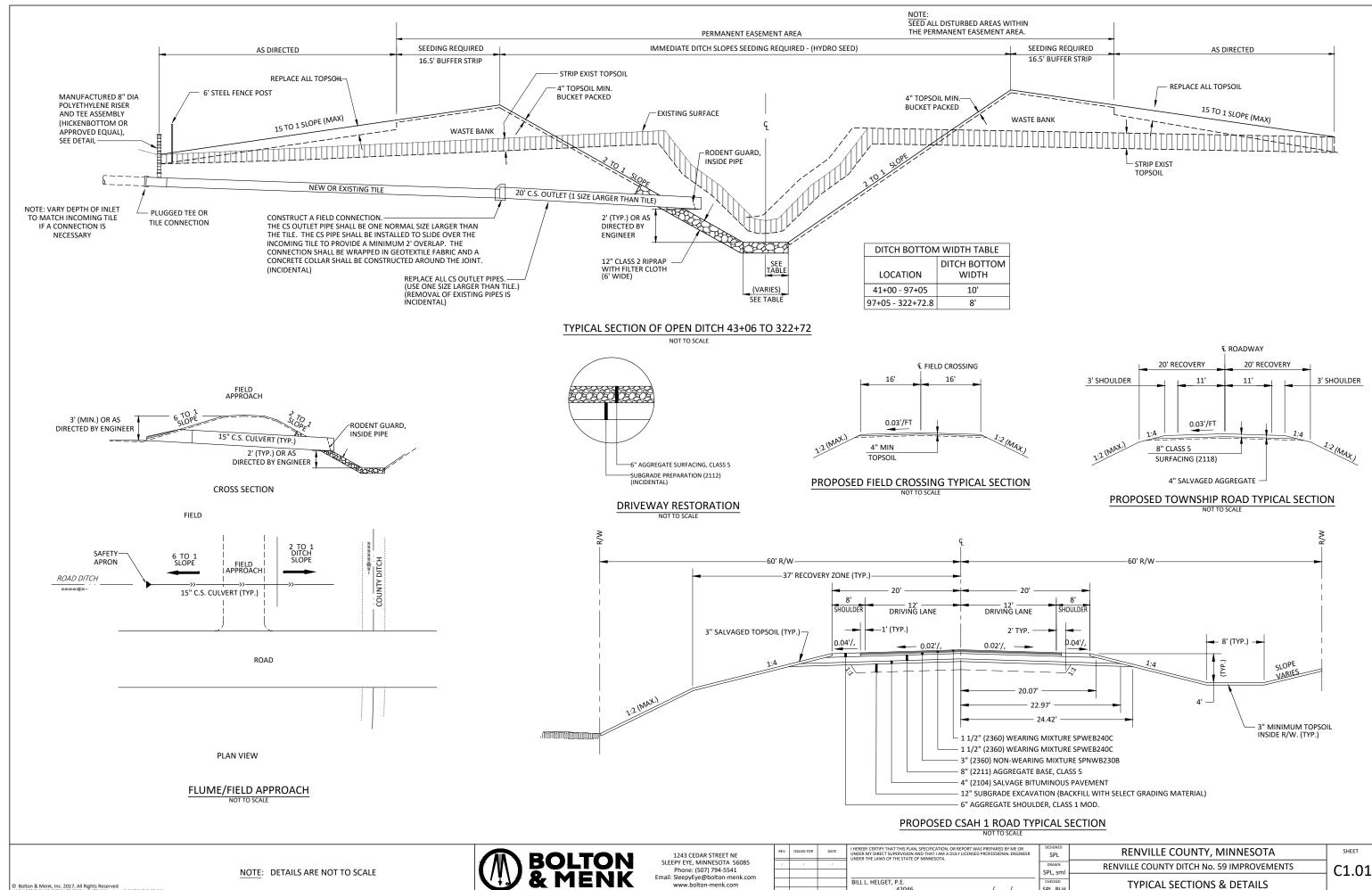


_ ~ TREE DRIP LINE

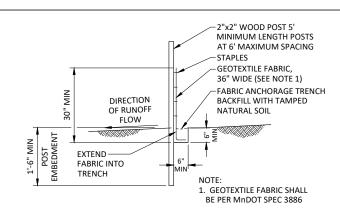
R STREET NE	REV	ISSUED FOR	DATE	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER LINDER THE LAWS OF THE STATE OF MINNESOTA.
NNESOTA 56085				ONDER THE DAWS OF THE STATE OF WINNESOTA.
7) 794-5541 Dbolton-menk.com				
n-menk.com				BILL L. HELGET, P.E.
				LIC. NO
		•		

ER	DESIGNED	RENVILLE COUNTY, MINNESOTA
	DRAWN SPL. sml	RENVILLE COUNTY DITCH No. 59 IMPROVEMENTS
_	CHECKED	LEGEND
	SPL, BLH	LEGEND

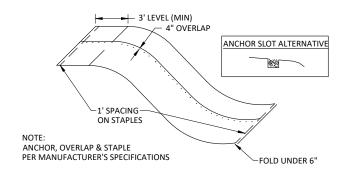
ADJACENT LINES



SPL, BLF



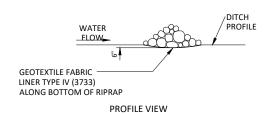
HAND PLACED SILT FENCE - PREASSEMBLED

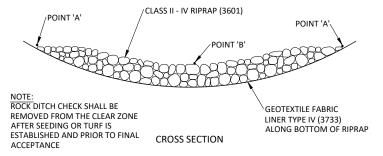


NOTE: CONSTRUCT EROSION CONTROL BLANKET AT DESIGNATED LOCATIONS AS SHOWN ON PLANS.

EROSION CONTROL BLANKET INSTALLATION

NOT TO SCALE





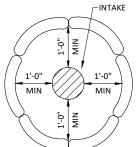
DITCH CHECK - RIPRAP

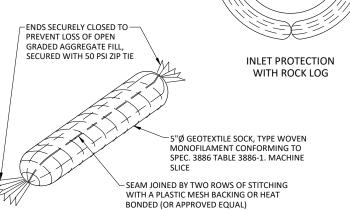
POINT 'A' MUST BE 1'-0" MINIMUM HIGHER THAN POINT 'B' TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

FILL ROCK LOG WITH 45 LBS. OF OPEN GRADED AGGREGATE CONSISTING OF SOUND, DURABLE PARTICLES OF CRUSHED QUARRY ROCK OR GRAVEL CONFORMING TO THE FOLLOWING GRADATION.

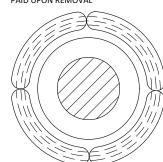
GRADATION		
SIEVE SIZE	PERCENT PASSING	
1 1/2"	100	
1"	95-100	
3/4"	65-95	
3/8"	30-65	
NO 4	10-35	
NO 10	3-20	
NO 40	0-8	
NO 200	0-3	

CRUSHED CONCRETE OR BITUMINOUS SHALL NOT BE USED FOR OPEN GRADED AGGREGATE.





PAYMENT SHALL INCLUDE ALL MATERIALS, FILLING OF LOG, PLACEMENT, MAINTENANCE & REMOVAL; 80% OF BID PRICE SHALL BE PAID UPON PROPER PLACEMENT WITH THE FINAL 20% PAID UPON REMOVAL



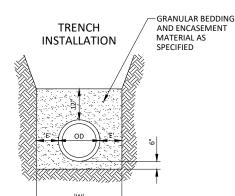
INLET PROTECTION ROCK BAG

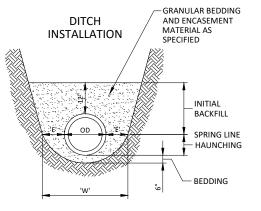
NOT TO SCALE

1. BEDDING AND EMBEDMENT MATERIAL PER SPECIFICATIONS.

- 2. CONSTRUCTION REQUIREMENTS PER SPEC 2451 MODIFIED SO THAT EMBEDMENT MATERIAL IS COMPACTED IN UNIFORM LIFTS, 8" OR LESS IN DEPTH, LOOSE MEASURE, TO 95% STANDARD PROCTOR DENSITY FROM THE BEDDING TO A MINIMUM DEPTH OF AT LEAST 12" ABOVE THE CROWN OF THE PIPE.
- 3. COST FOR FURNISHING AND INSTALLING GRANULAR BEDDING AND ENCASEMENT MATERIALS SHALL BE INCLUDED IN THE PRICE BID FOR POLYETHYLENE PIPE, PER LINEAL FOOT.

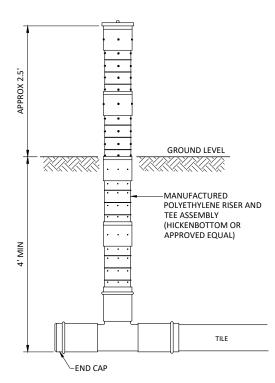
PIPE SIZE	PIPE OD (Nominal)	'E' ENVELOPE WIDTH (Minimum)	MINIMUM TRENCH WIDTH (OD+2E)
4"	4.6"	3"-4"	10"
6"	6.8"	4"-6"	14"
8"	9.5"	4"-6"	20"
10"	11.6"	5"-8"	24"
12"	14.2"	5"-8"	30"
15"	17.7"	5"-8"	34"
18"	22.0"	6"-10"	38"
24"	29.5"	8"-12"	46"
30"	35.4"	8"-12"	60"
36"	41.0"	8"-12"	65"



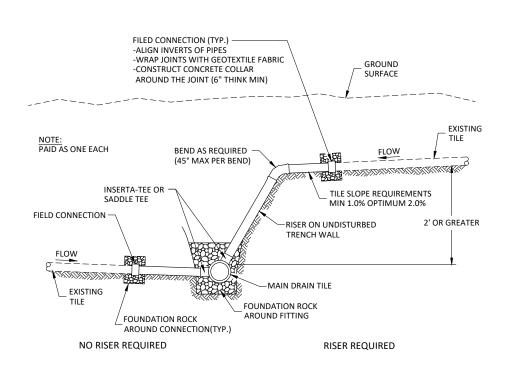


DUAL WALL POLYETHYLENE TRENCH

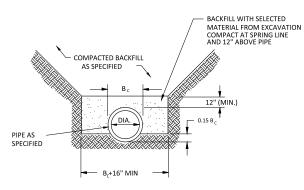
NOT TO SCALE



SURFACE WATER INTAKE RISER NOT TO SCALE



DRAIN TILE CONNECTION NOT TO SCALE



PIPE DIA.	В
36" OR LESS	B _c + 24"
42" TO 54"	1.5 x B _c
60" OR OVER	B _c + 36"

TRENCH DETAIL C.S. & REINFORCED CONCRETE PIPE CLASS "C" BEDDING CONDITION NOT TO SCALE

SHEET

C1.02

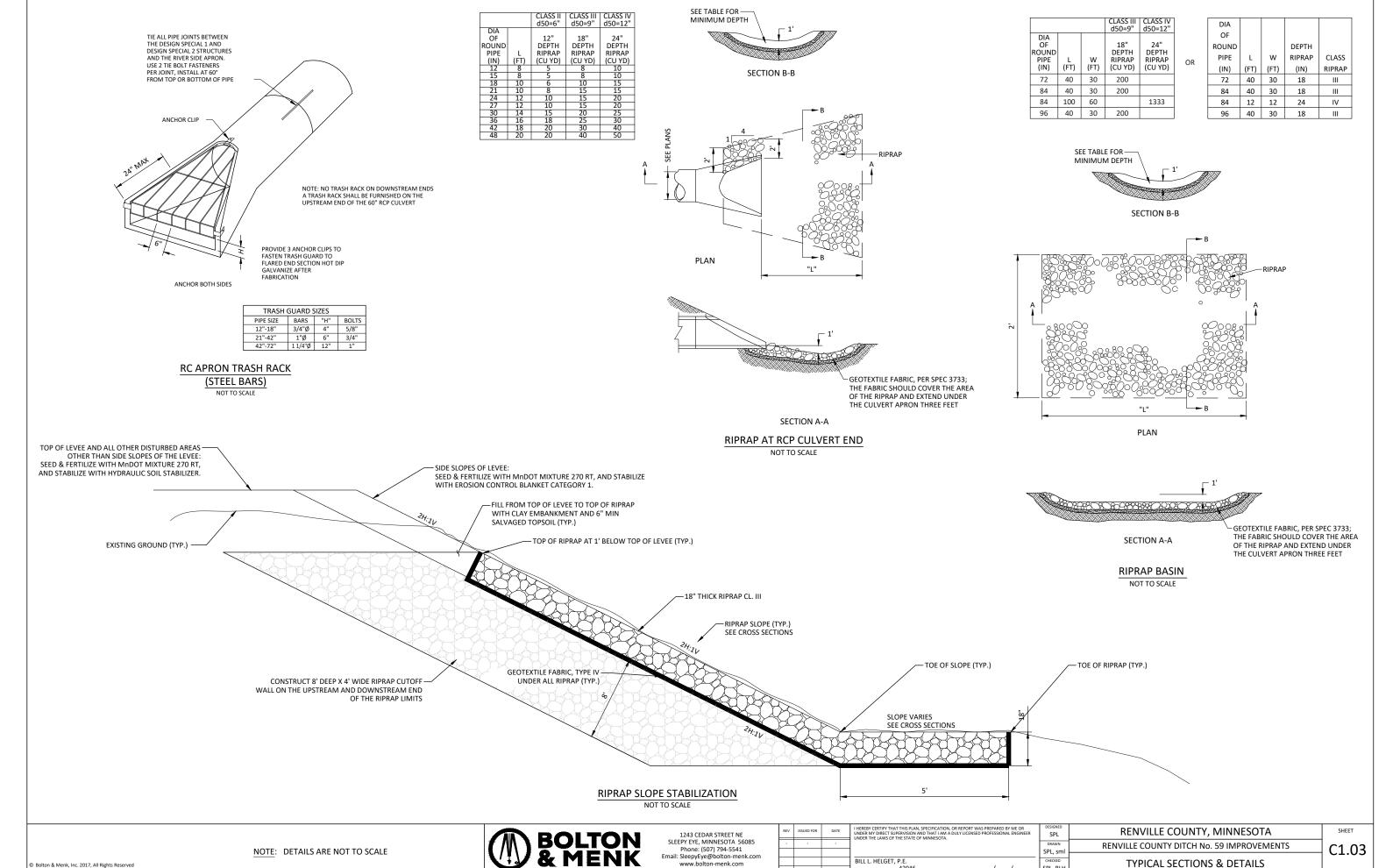


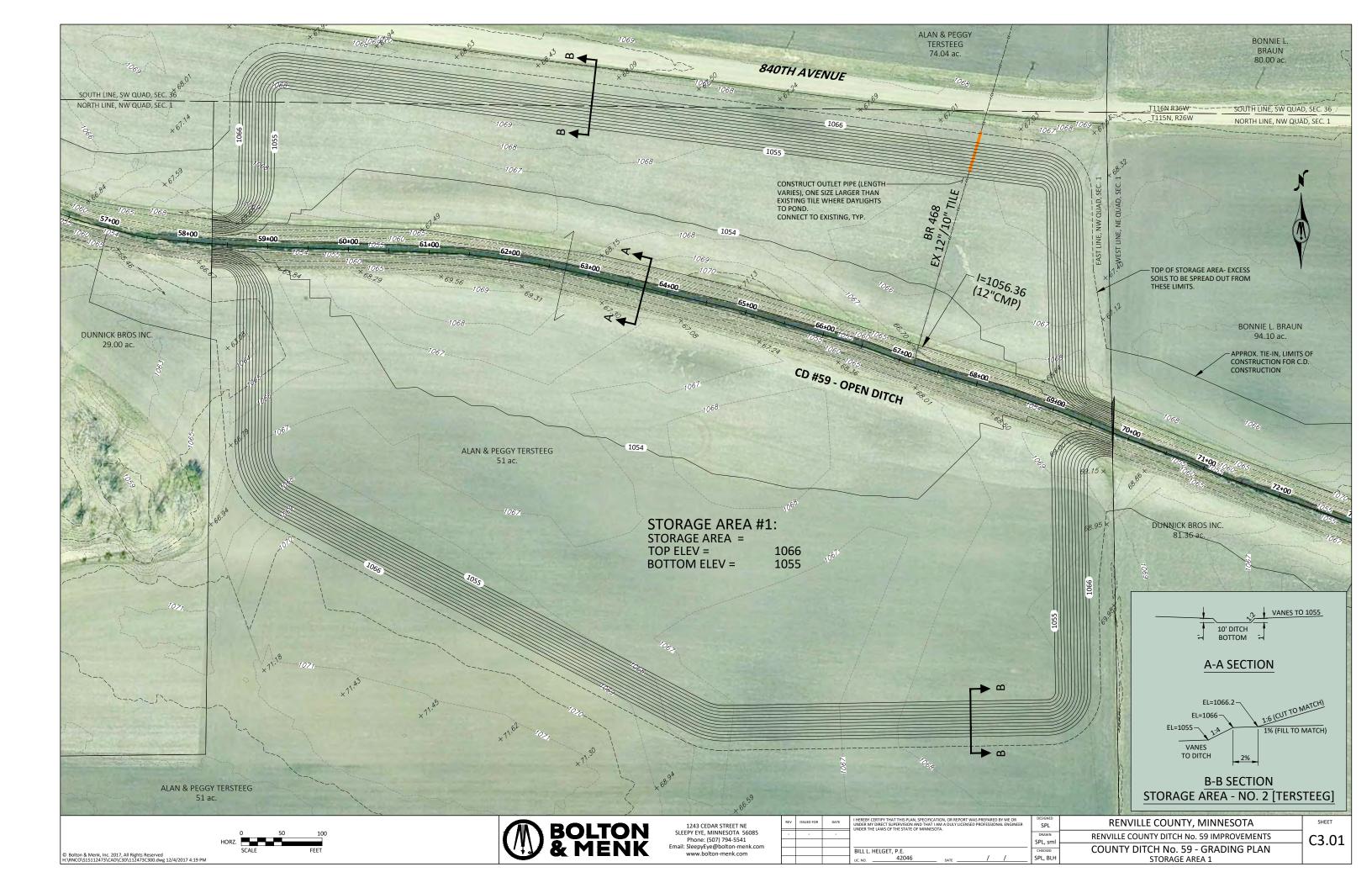
1243 CEDAR STREET NE SLEEPY EYE, MINNESOTA 56085 Phone: (507) 794-5541 www.bolton-menk.com

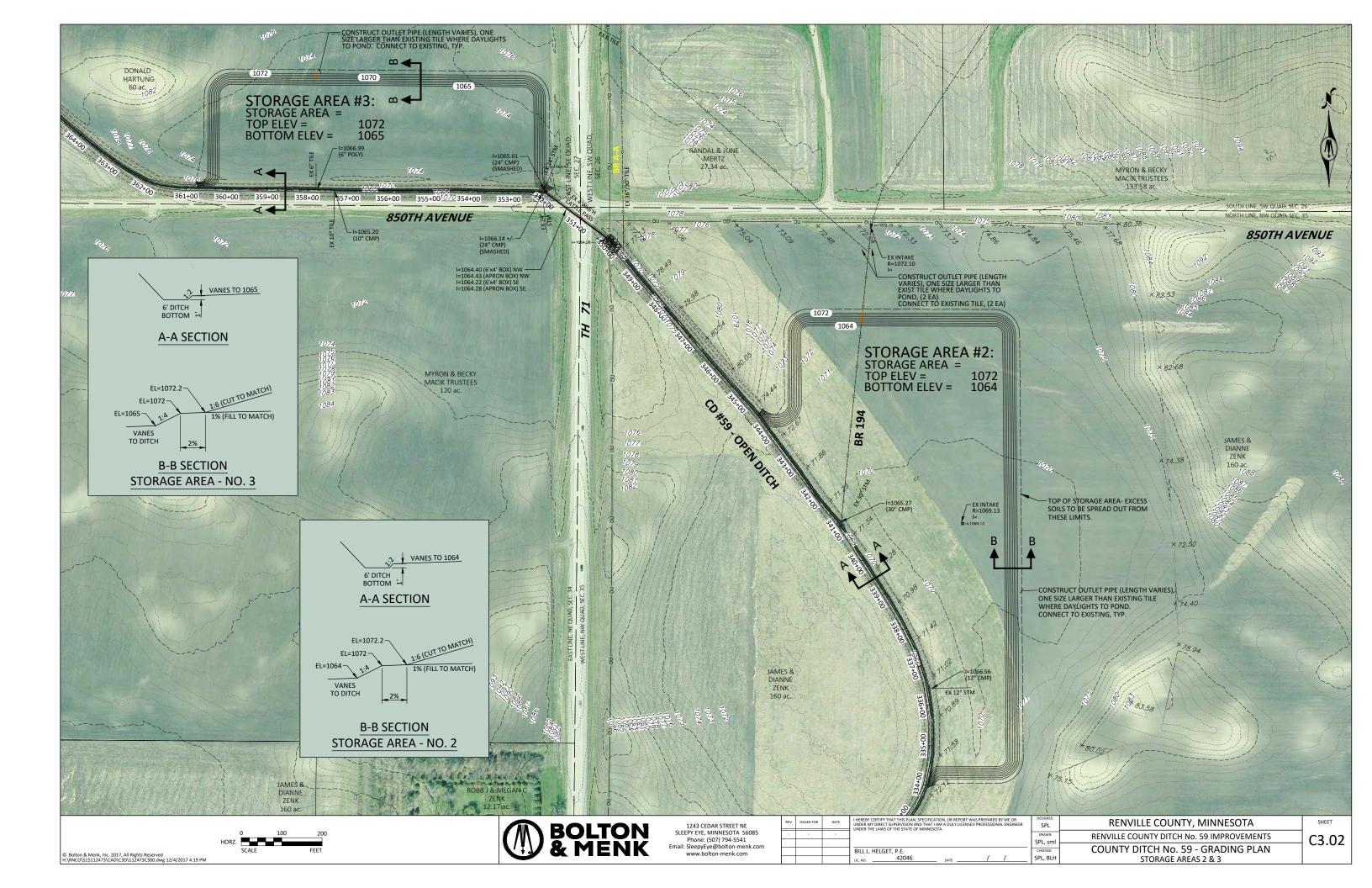
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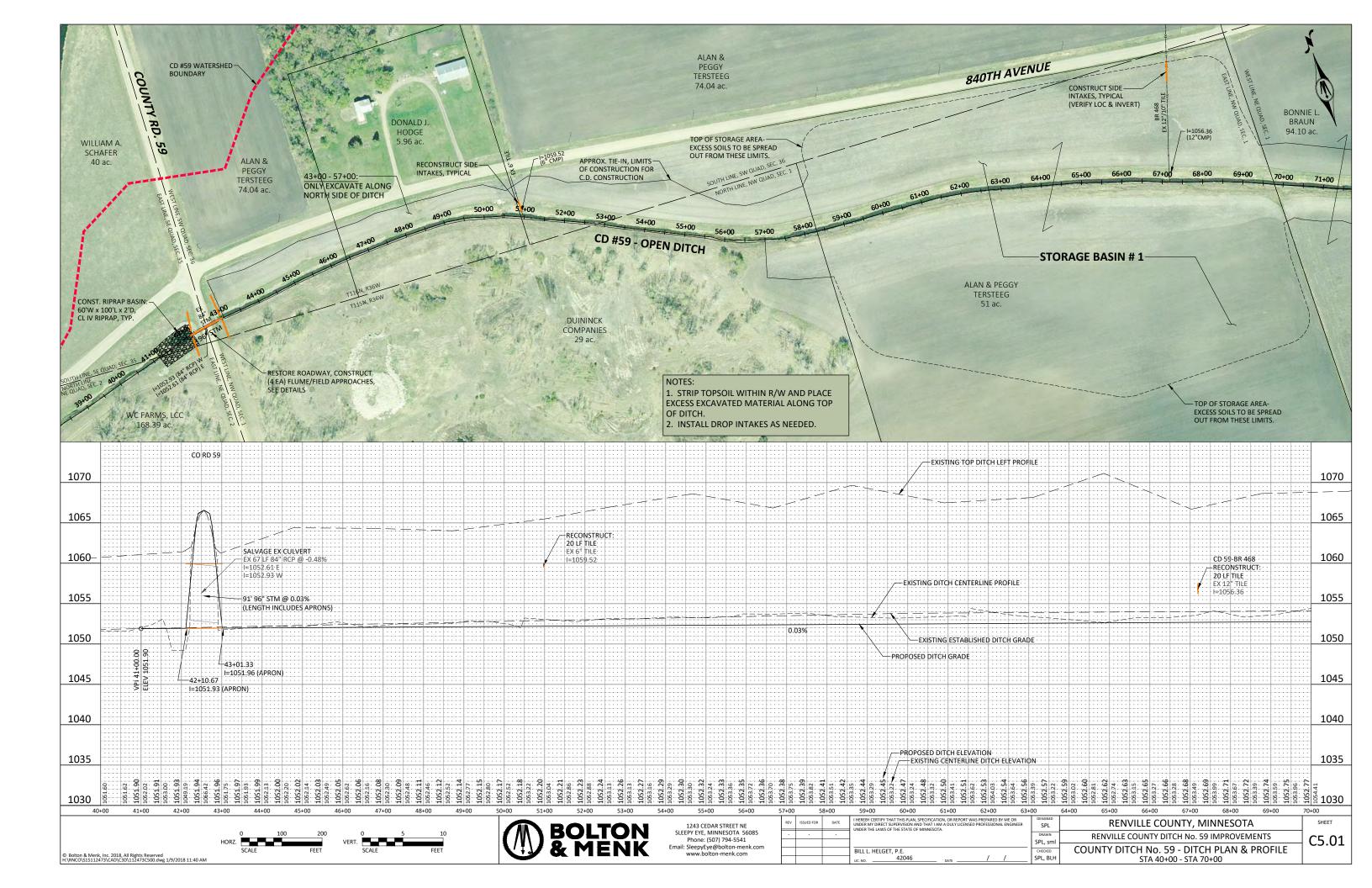
RENVILLE COUNTY, MINNESOTA RENVILLE COUNTY DITCH No. 59 IMPROVEMENTS **DETAILS**

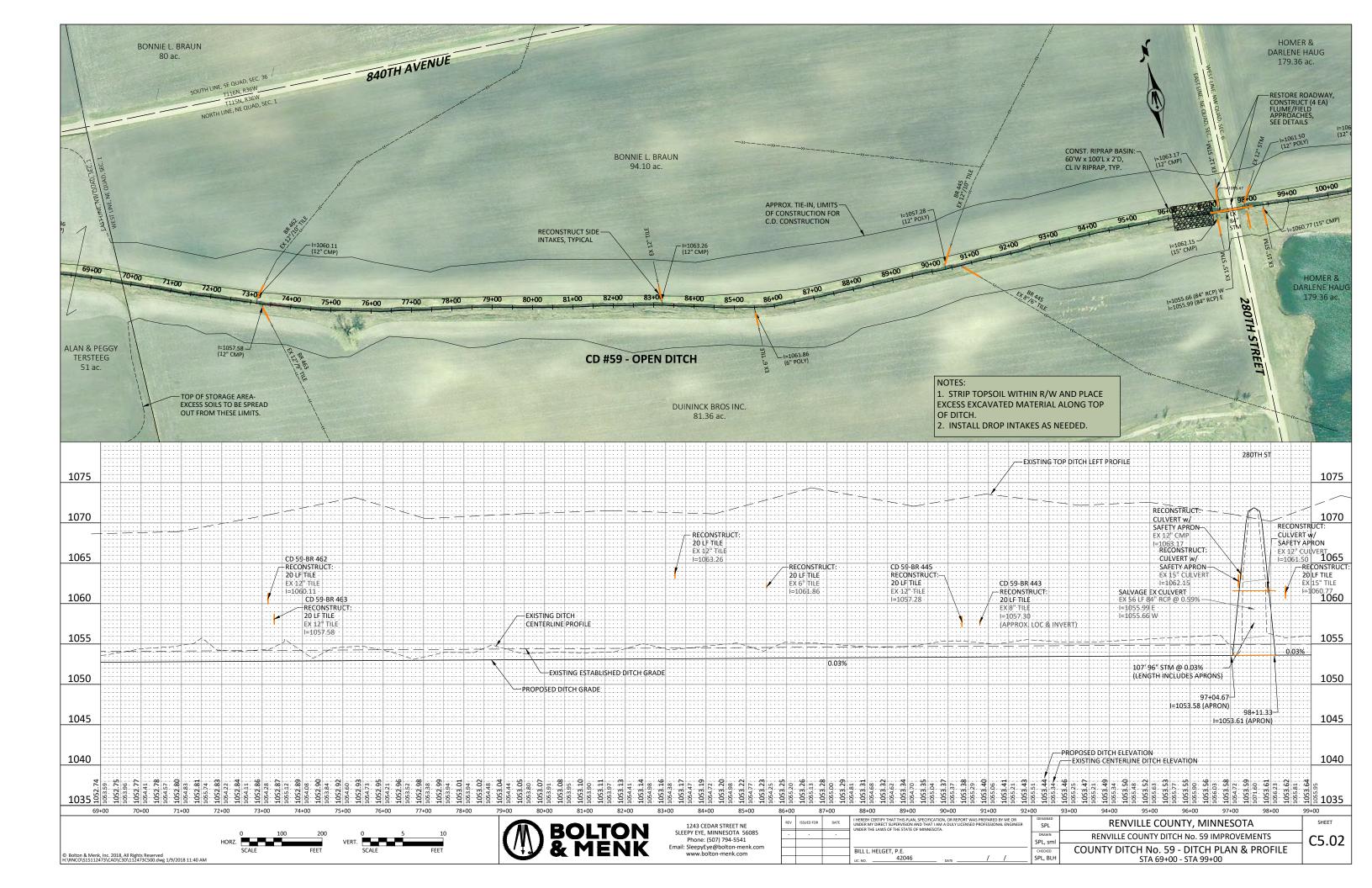
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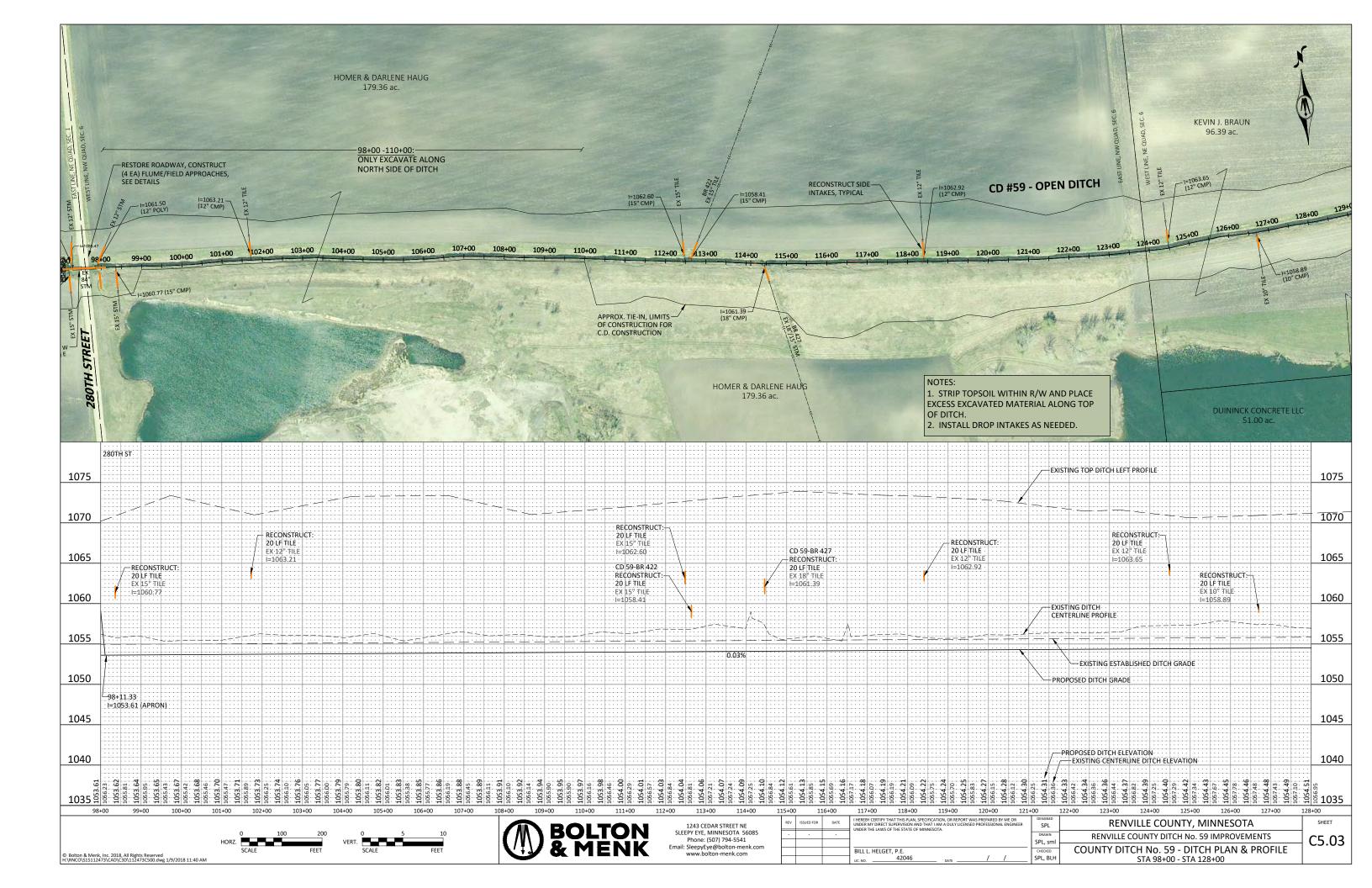


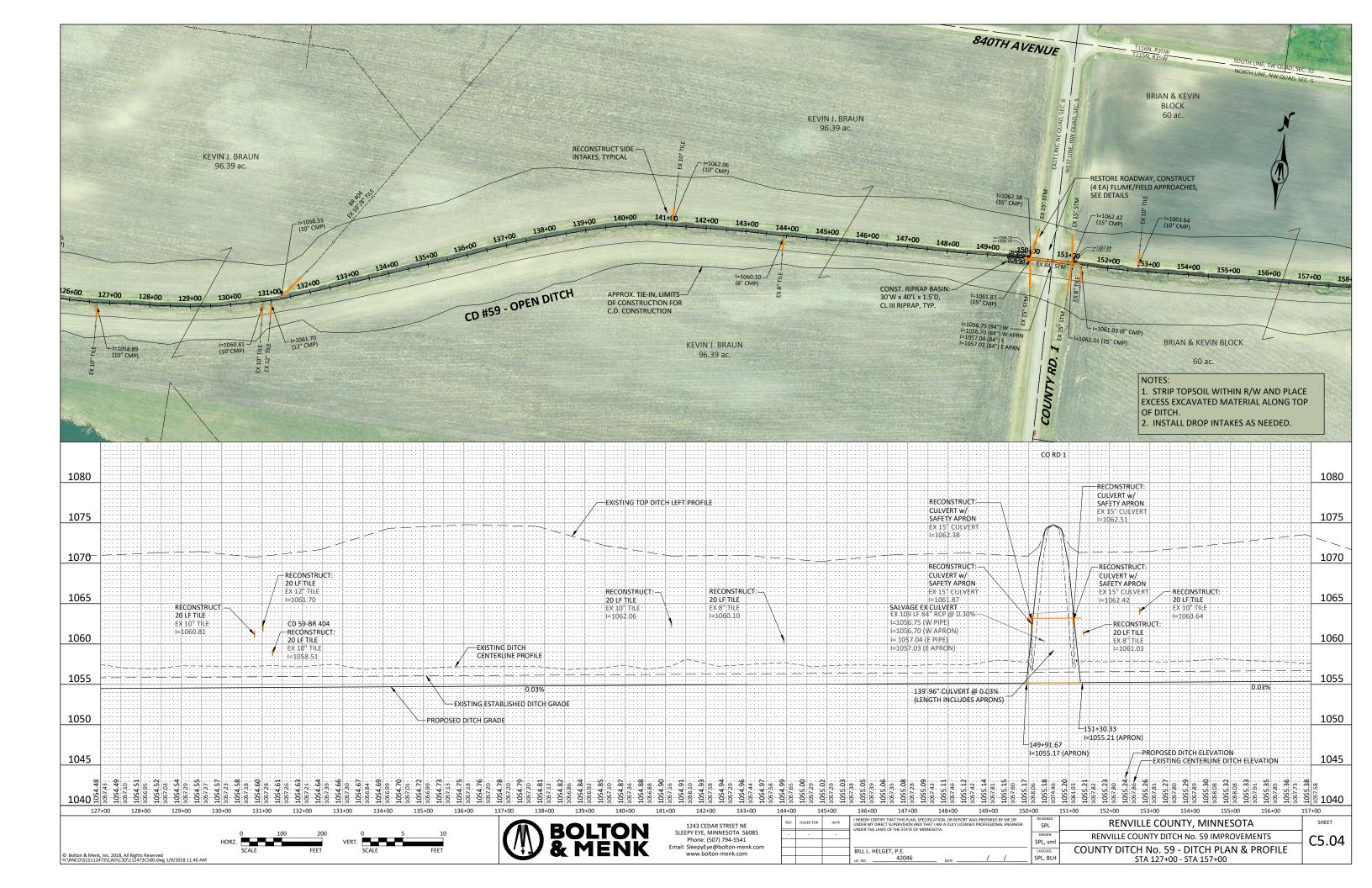


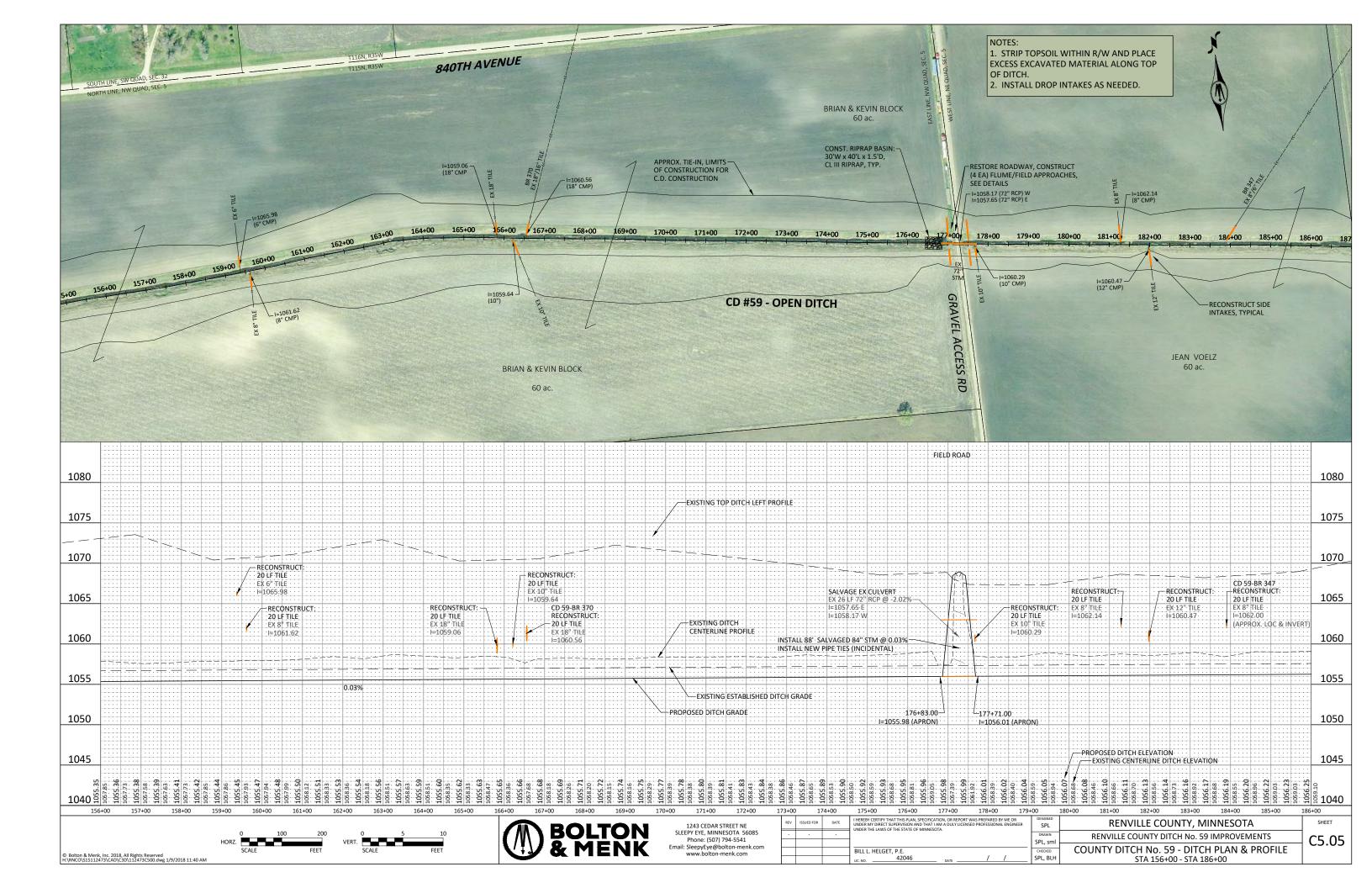


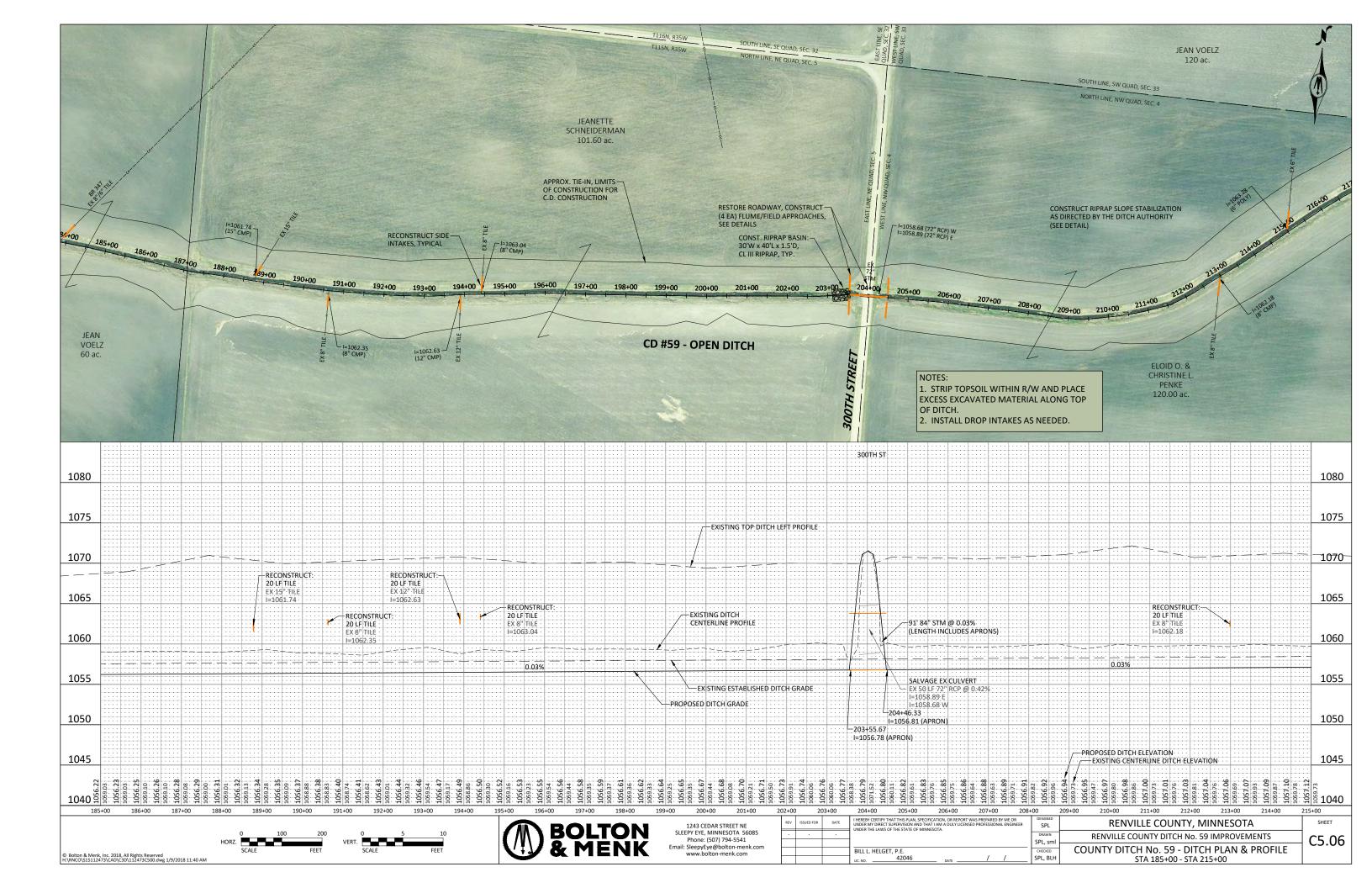


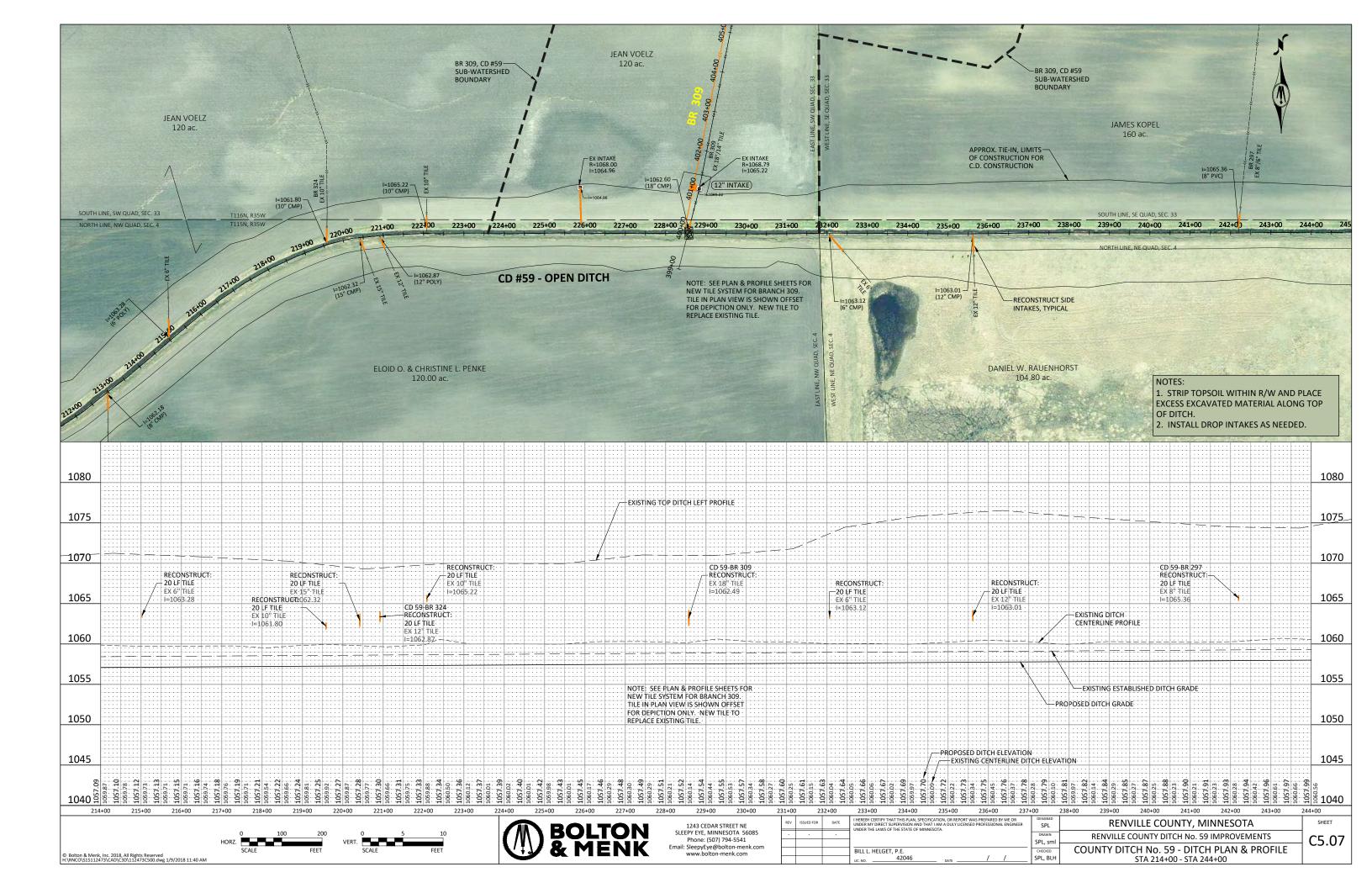


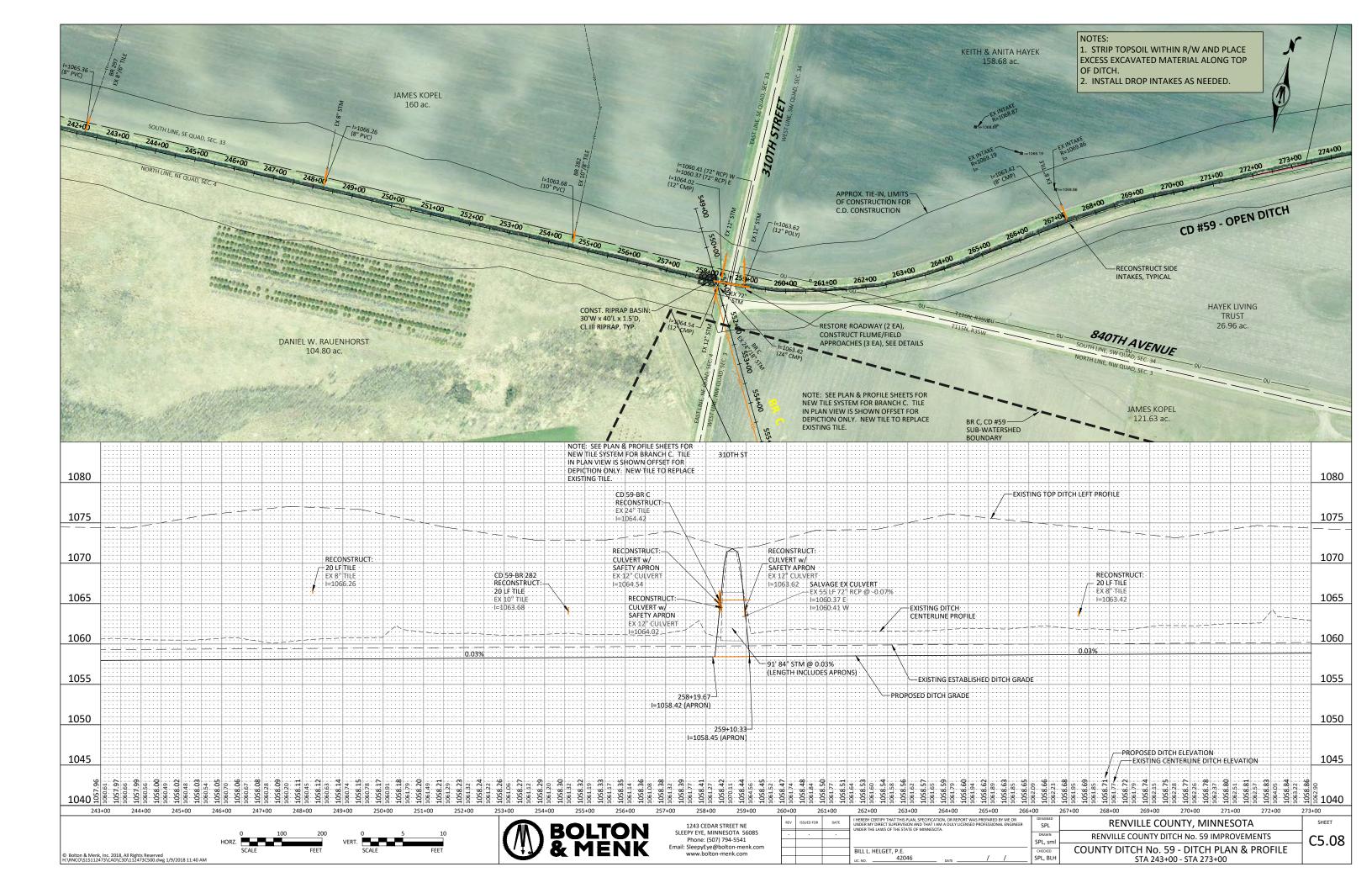


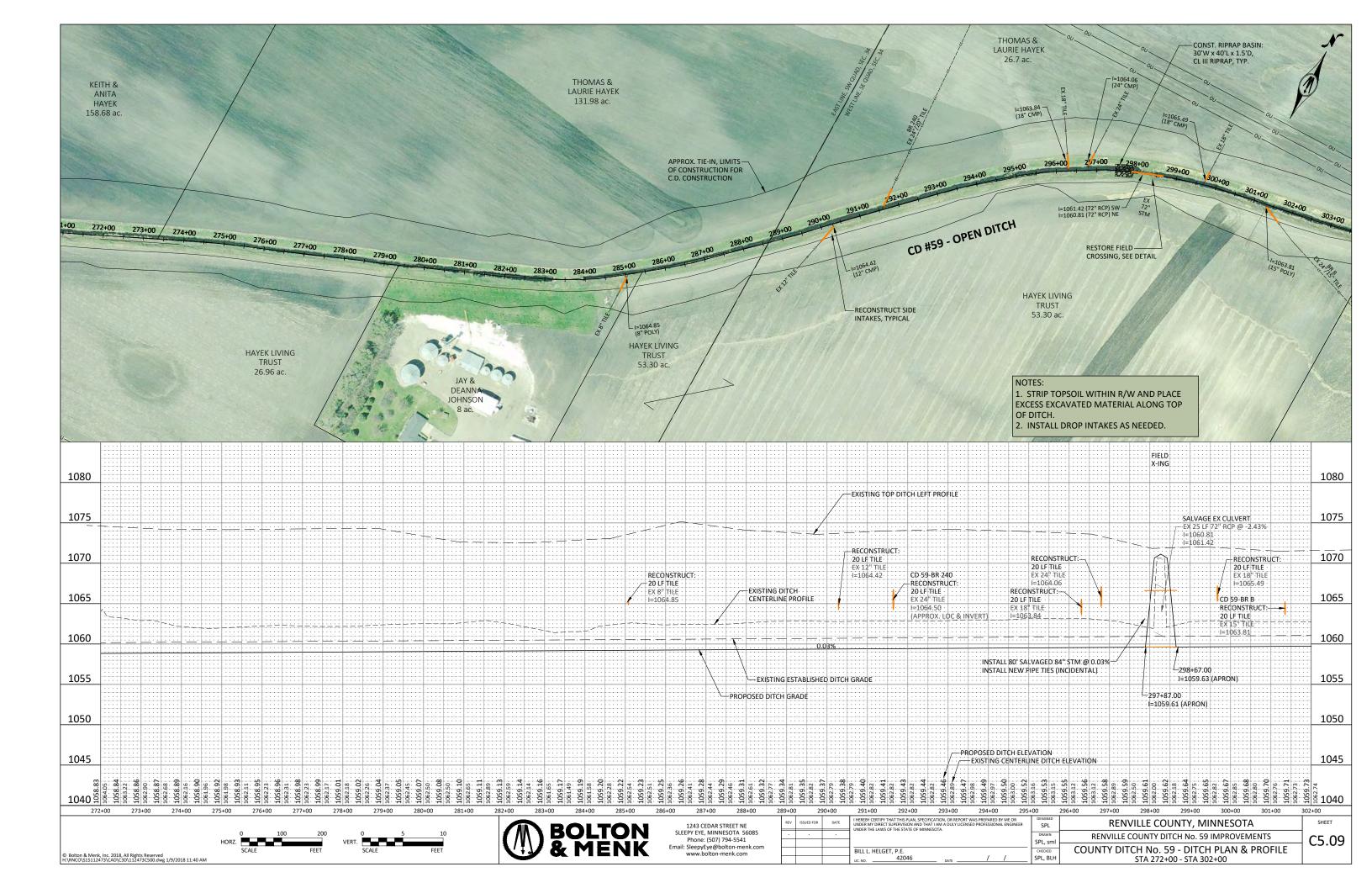




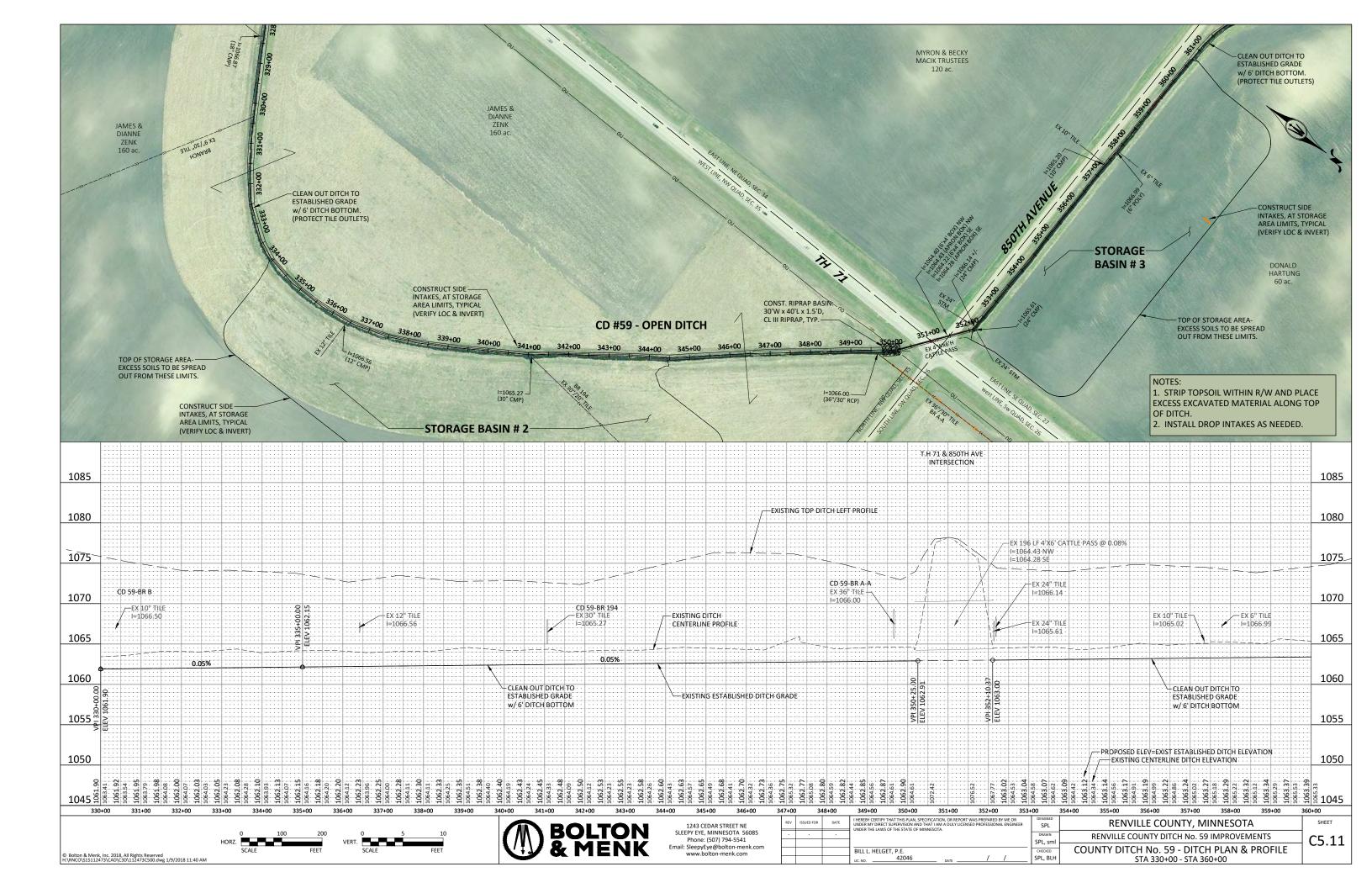


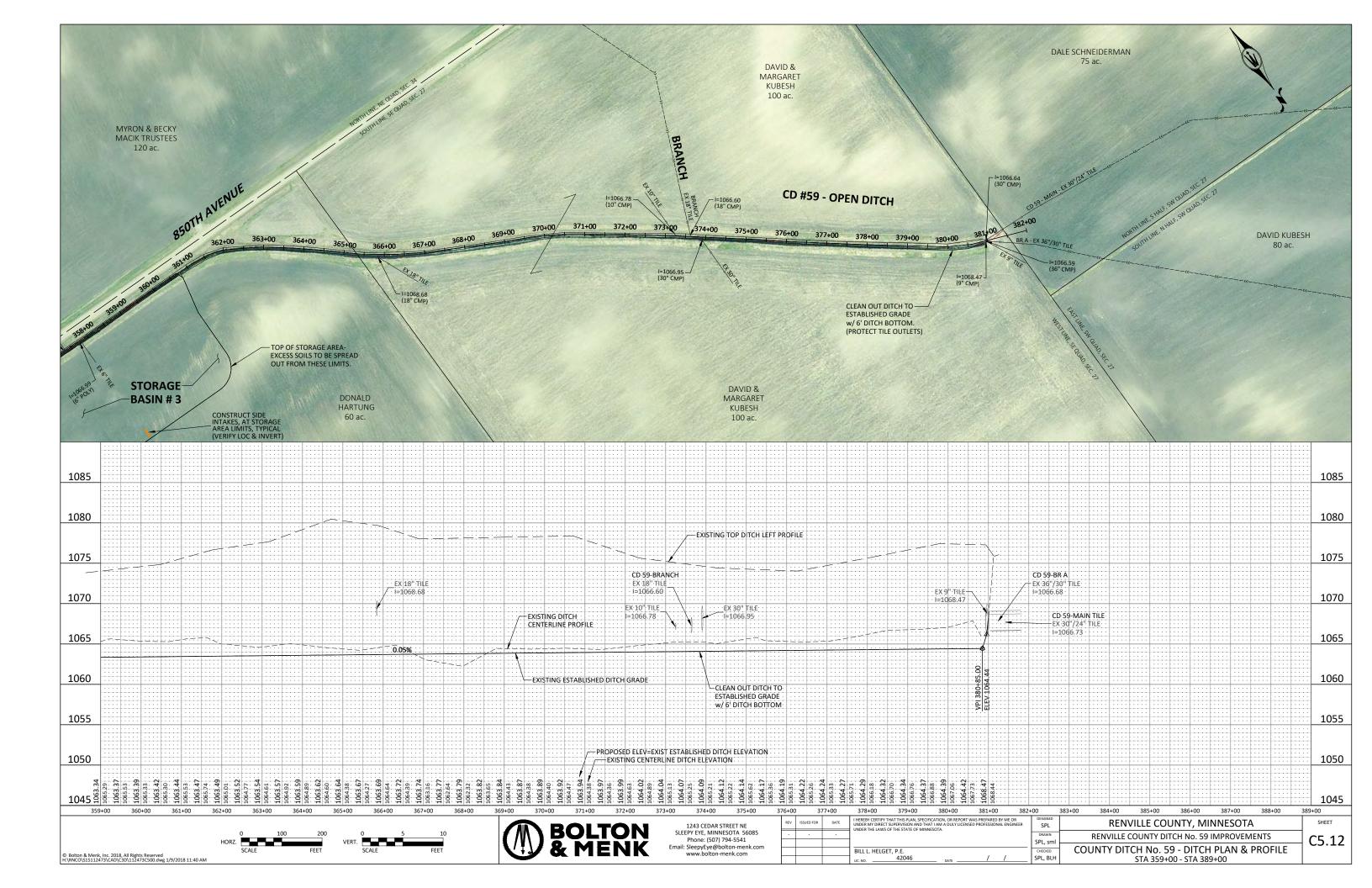


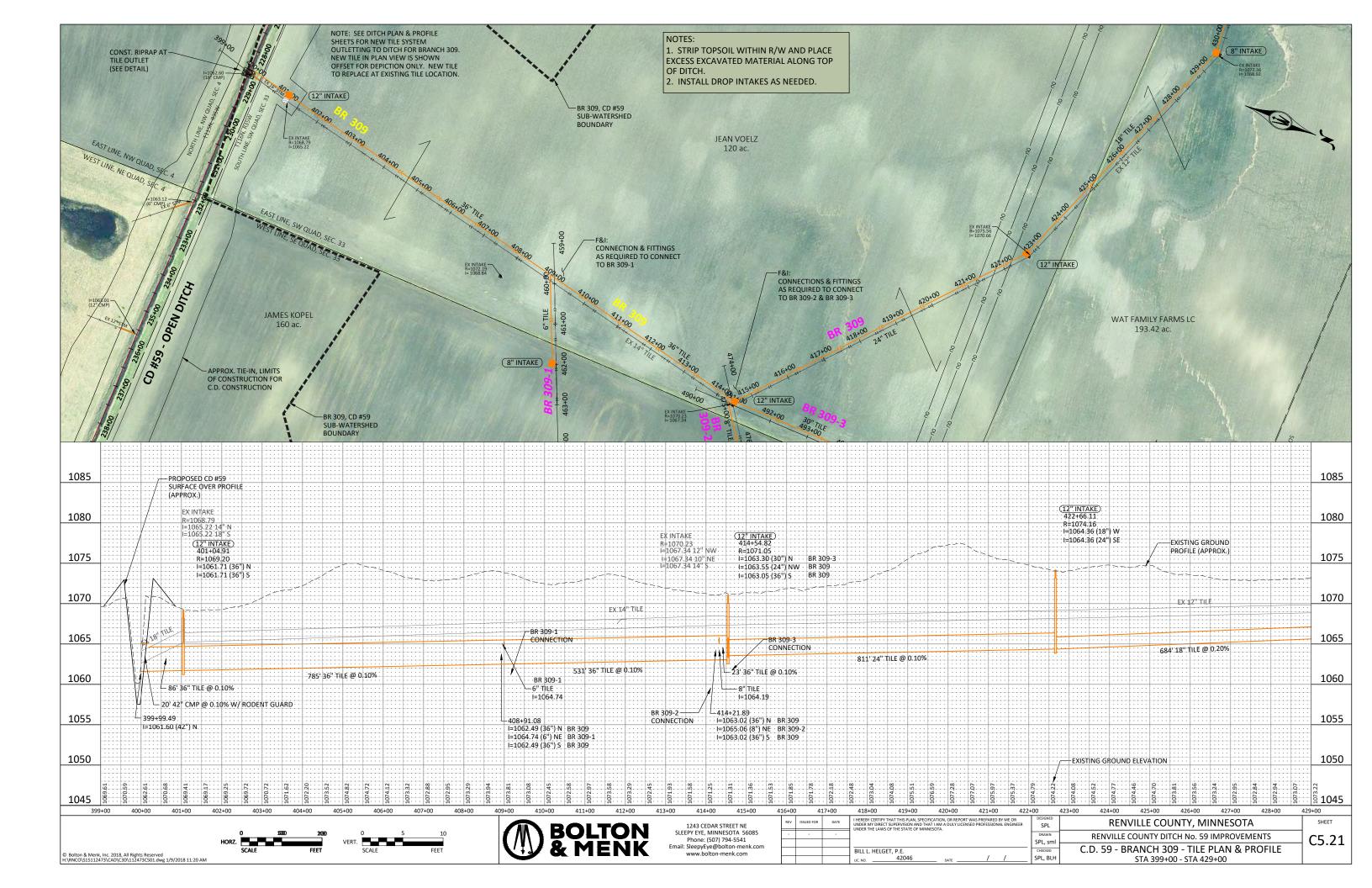


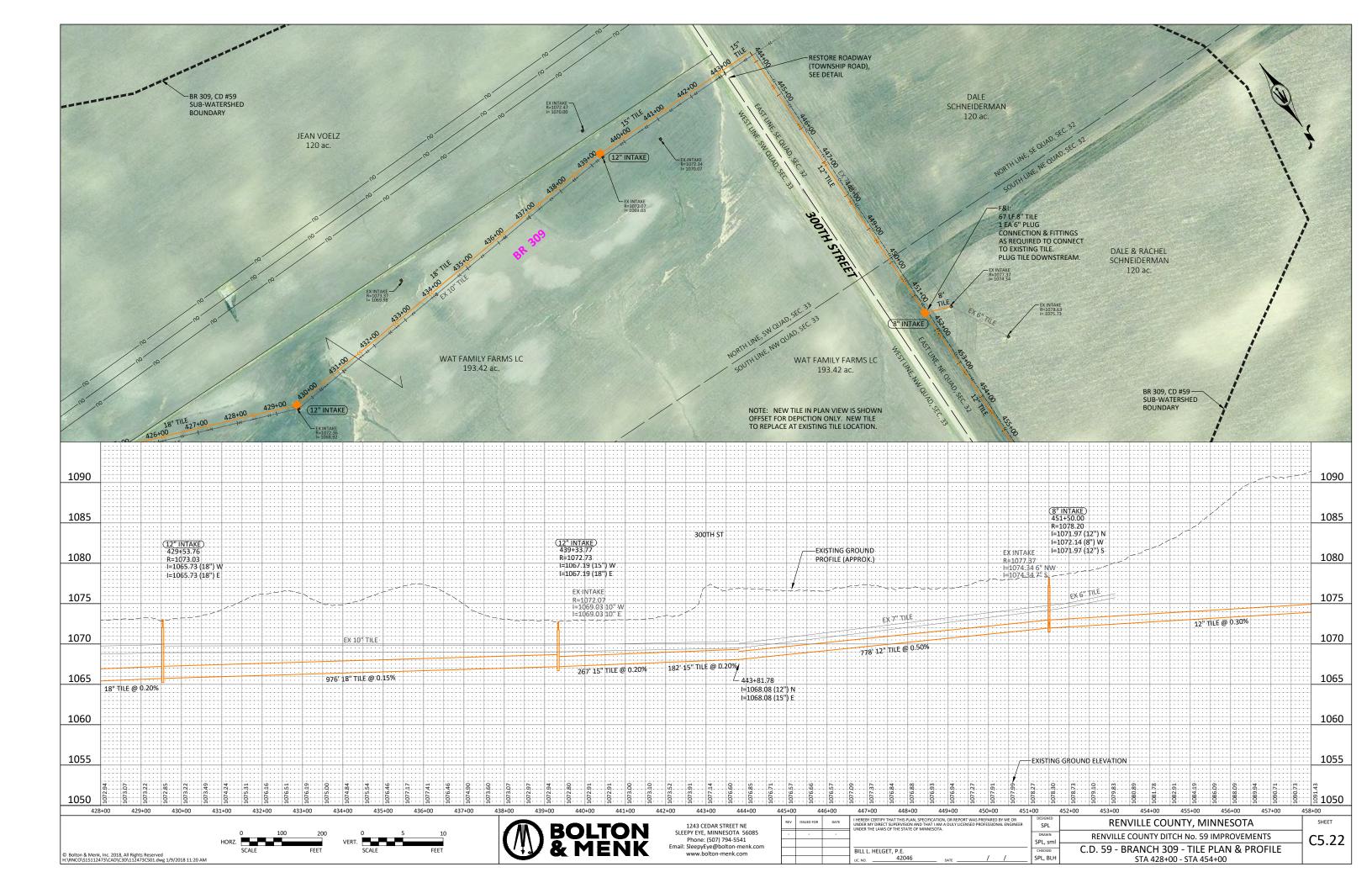


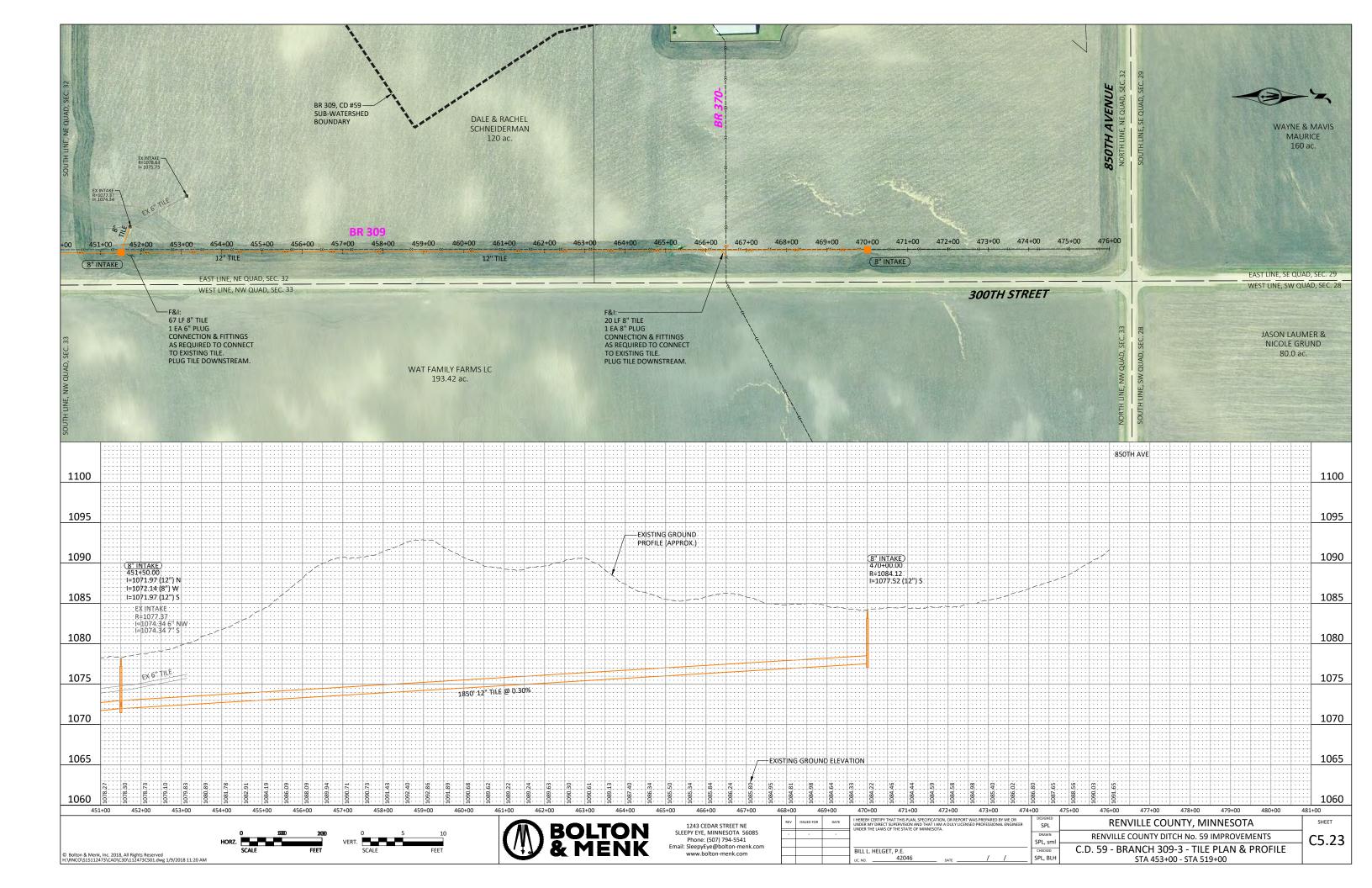


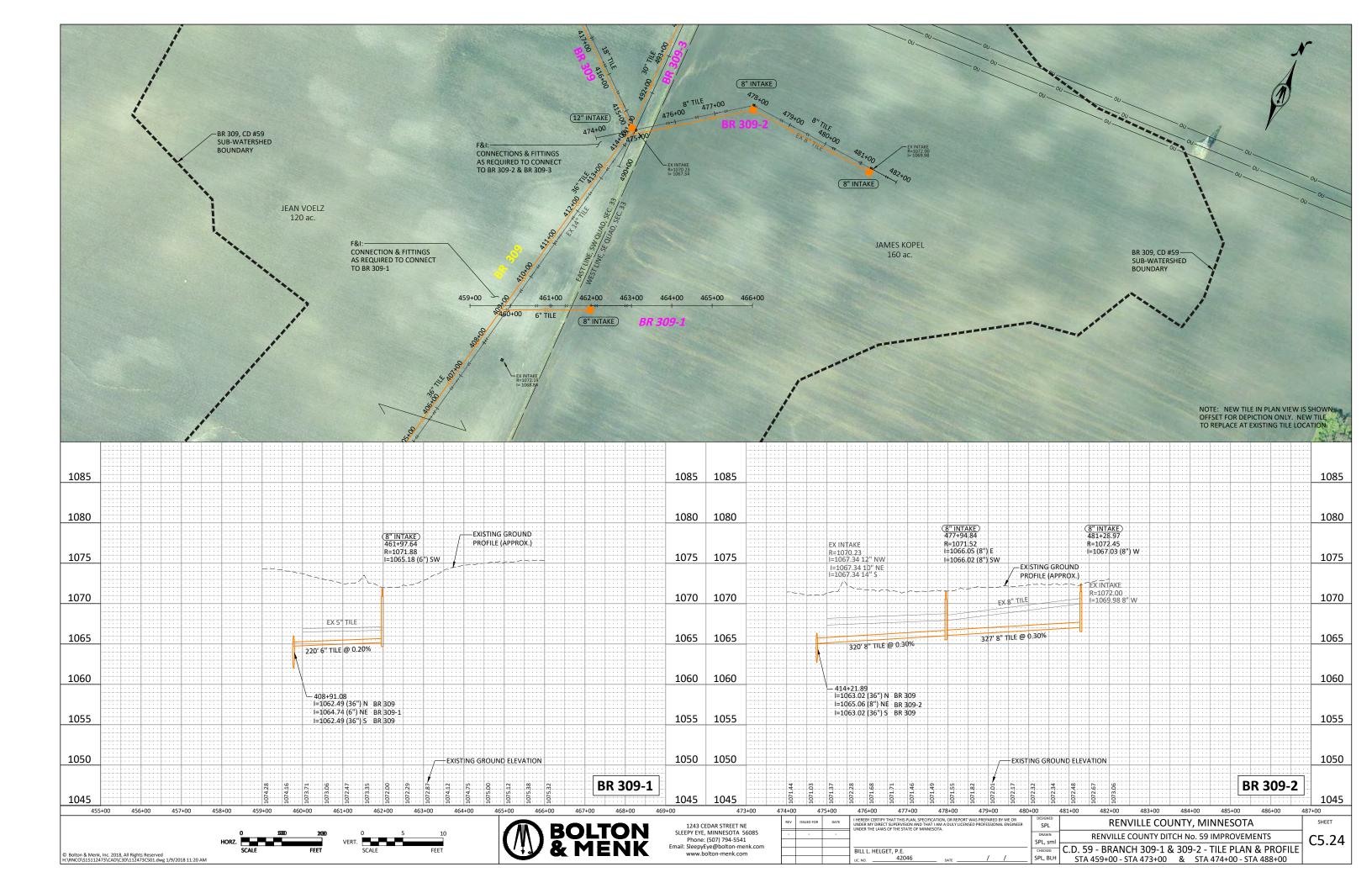


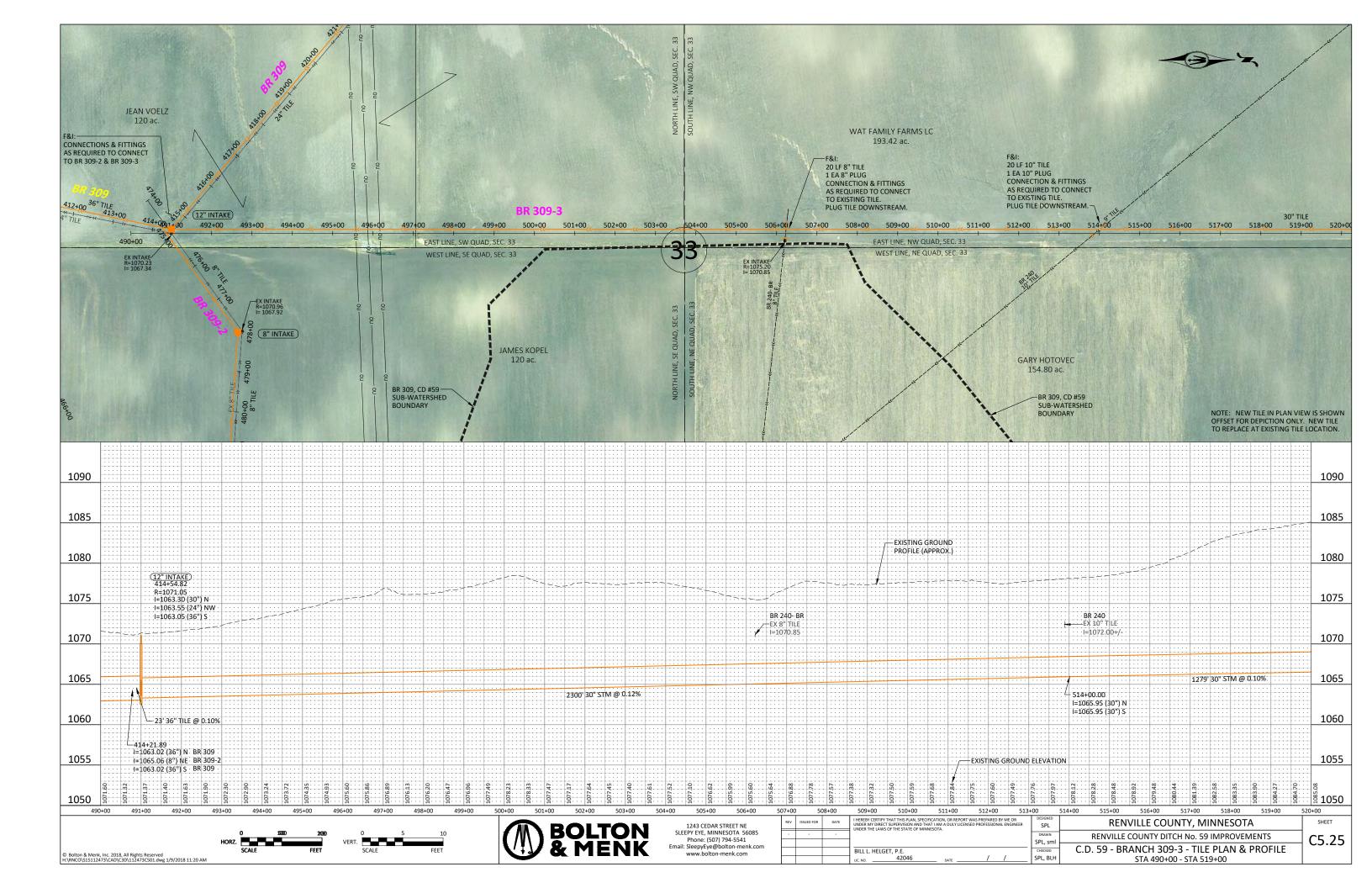


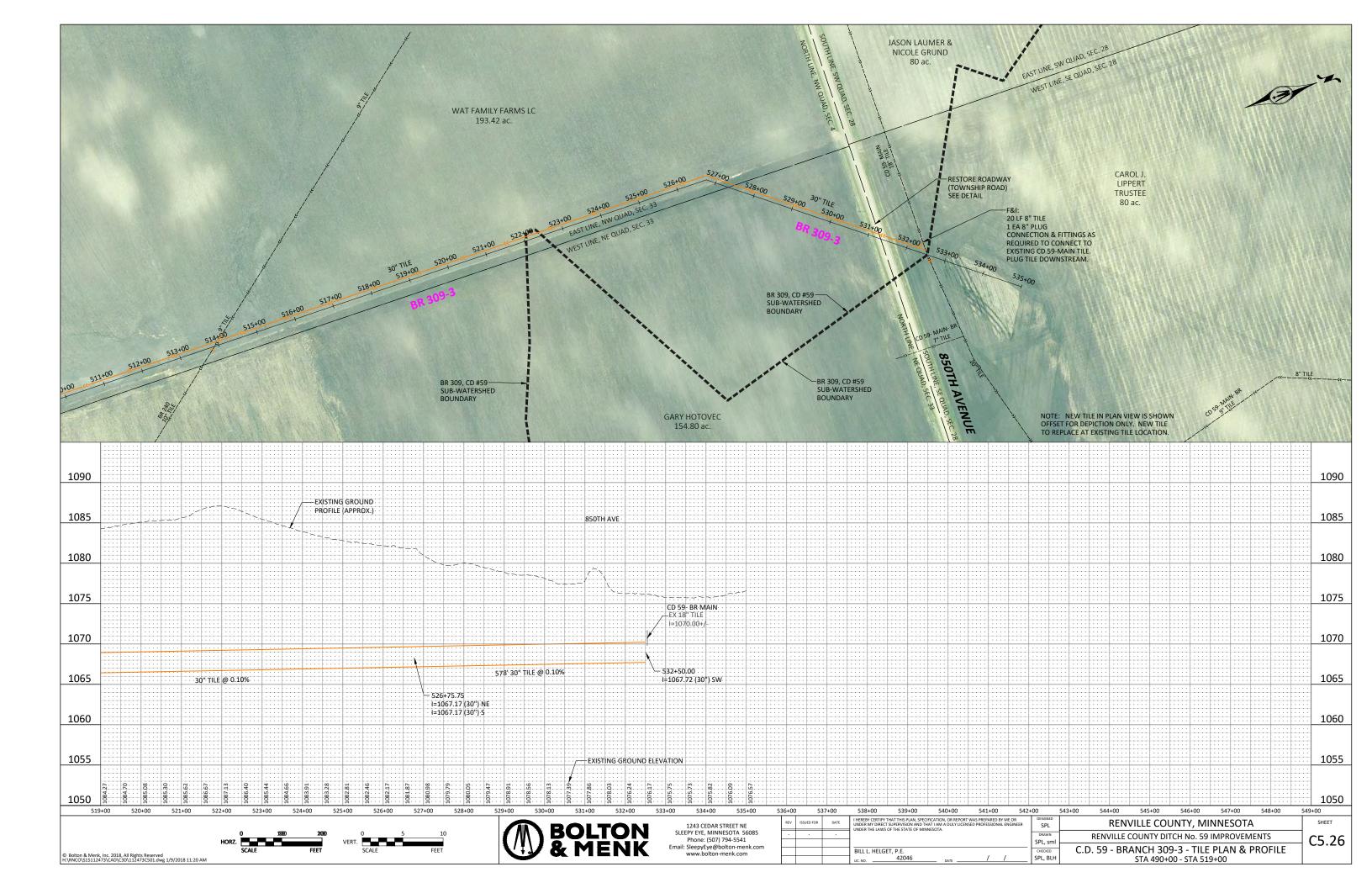


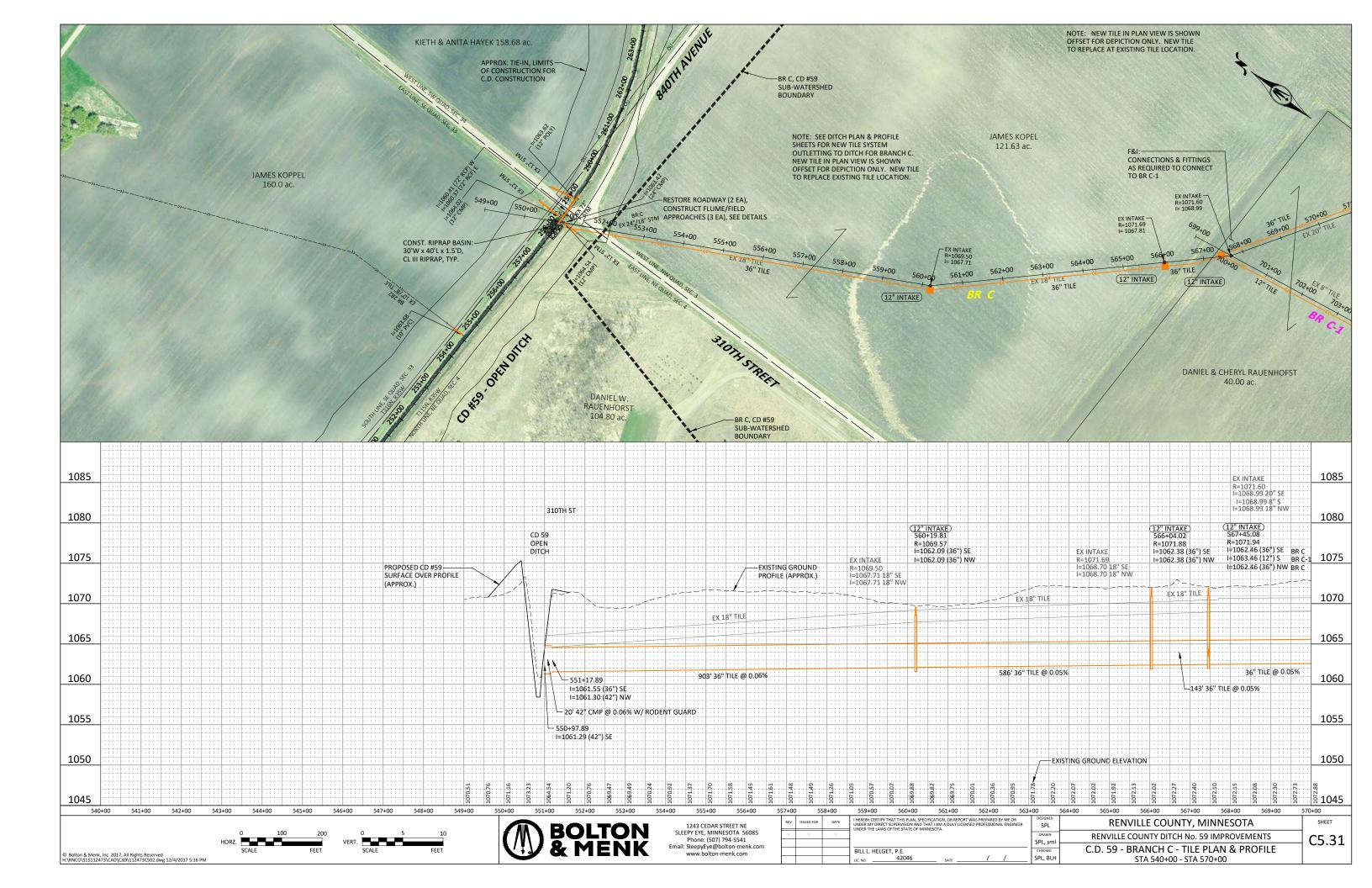


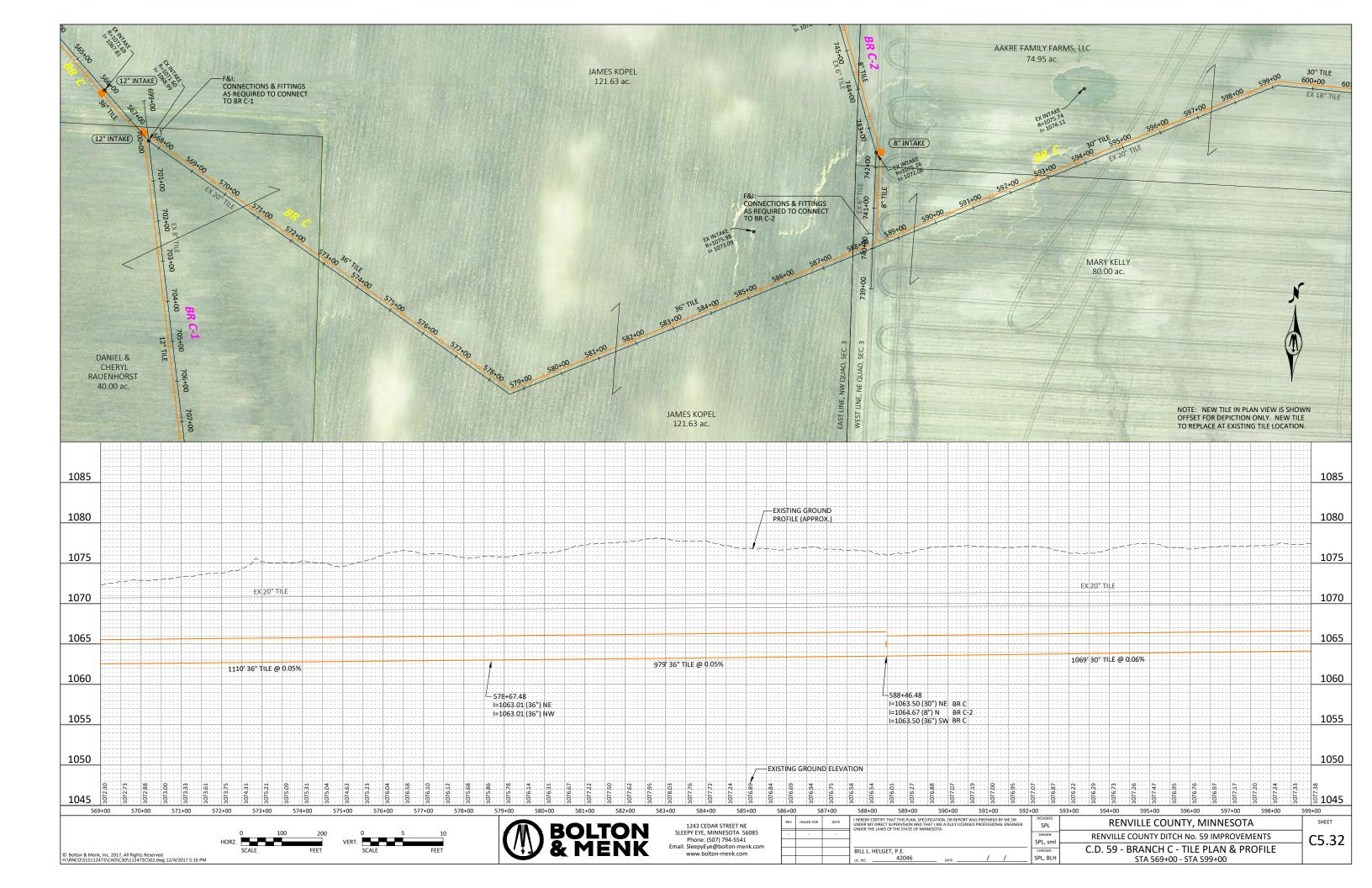


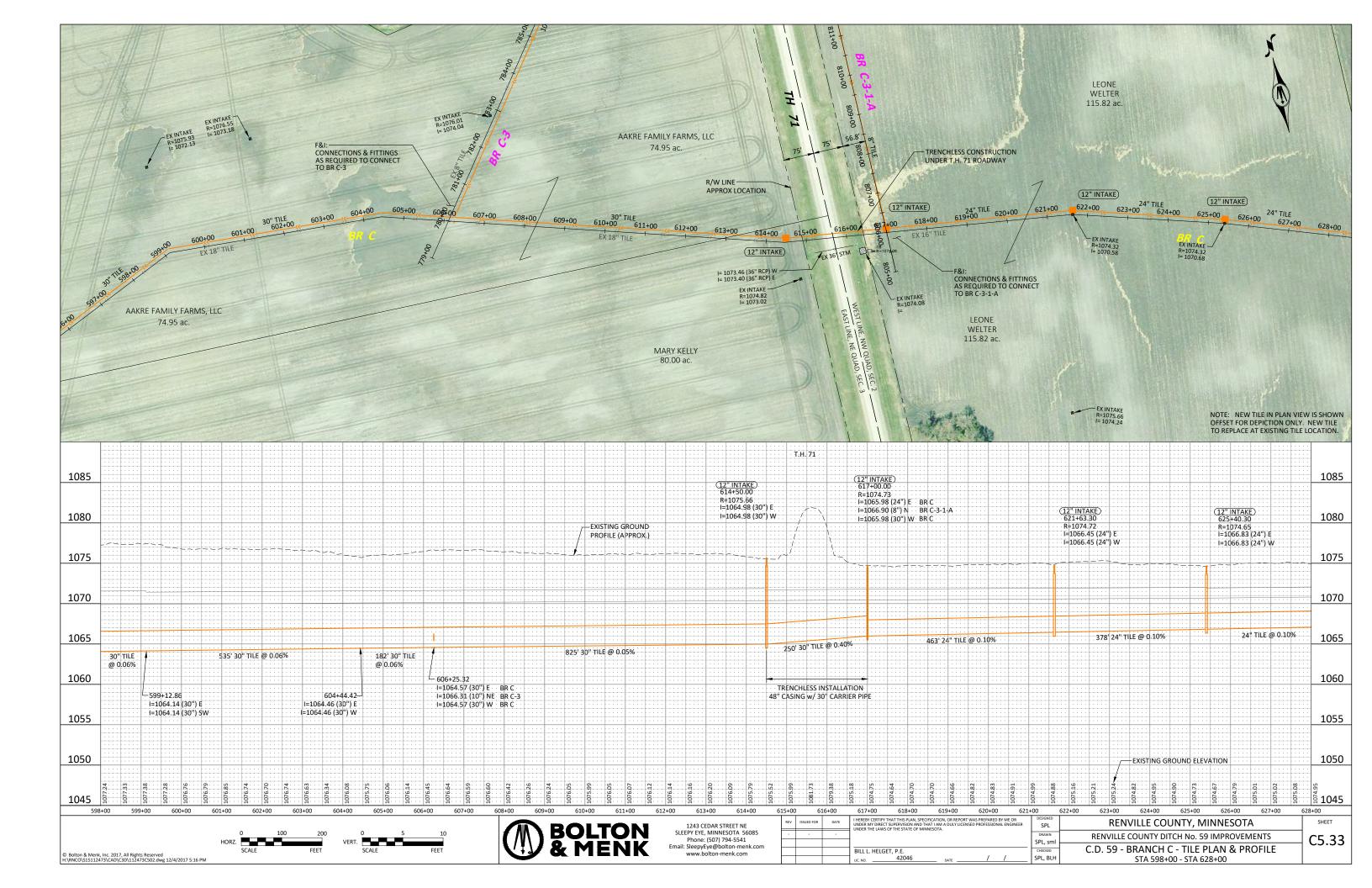


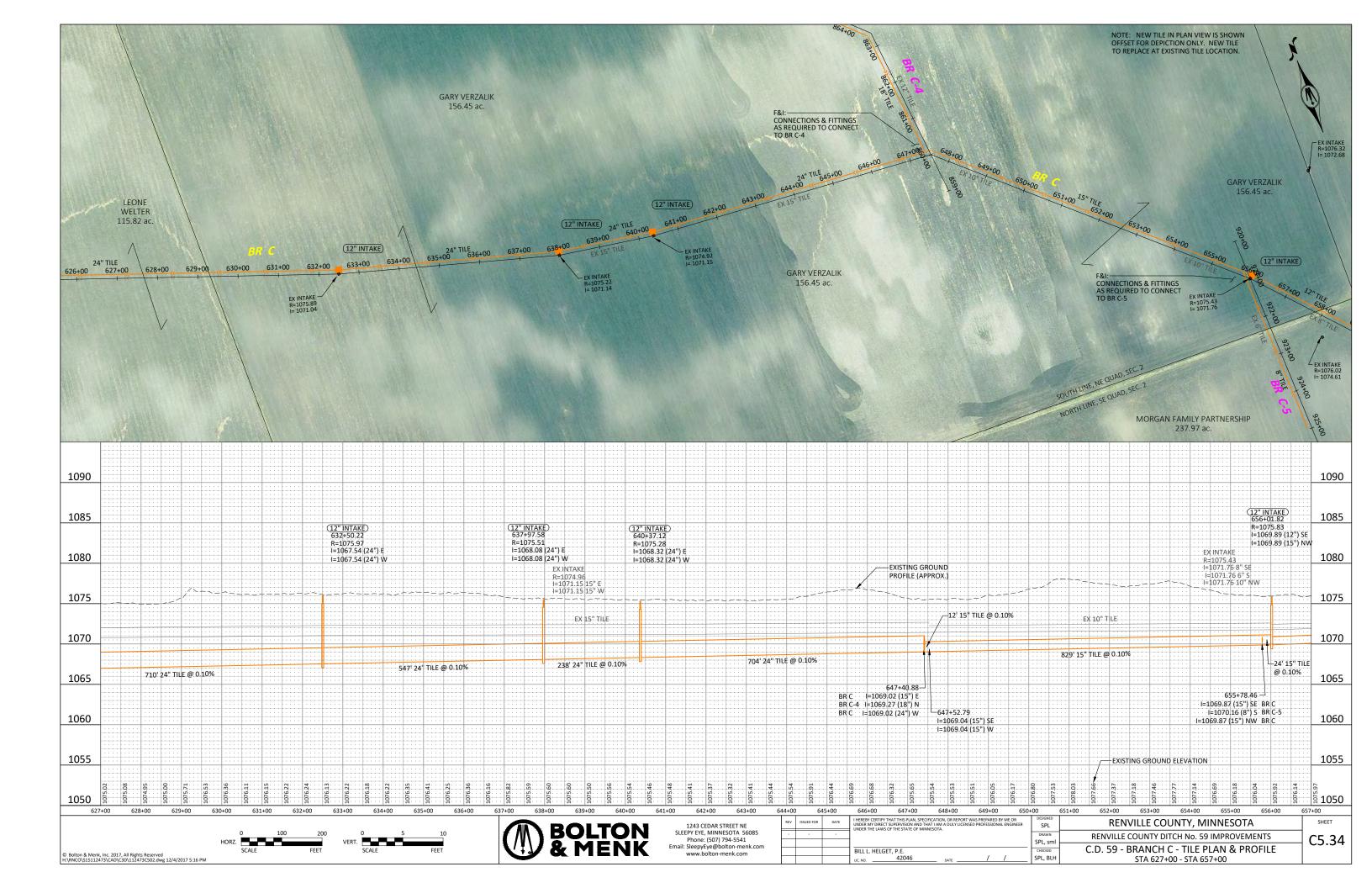


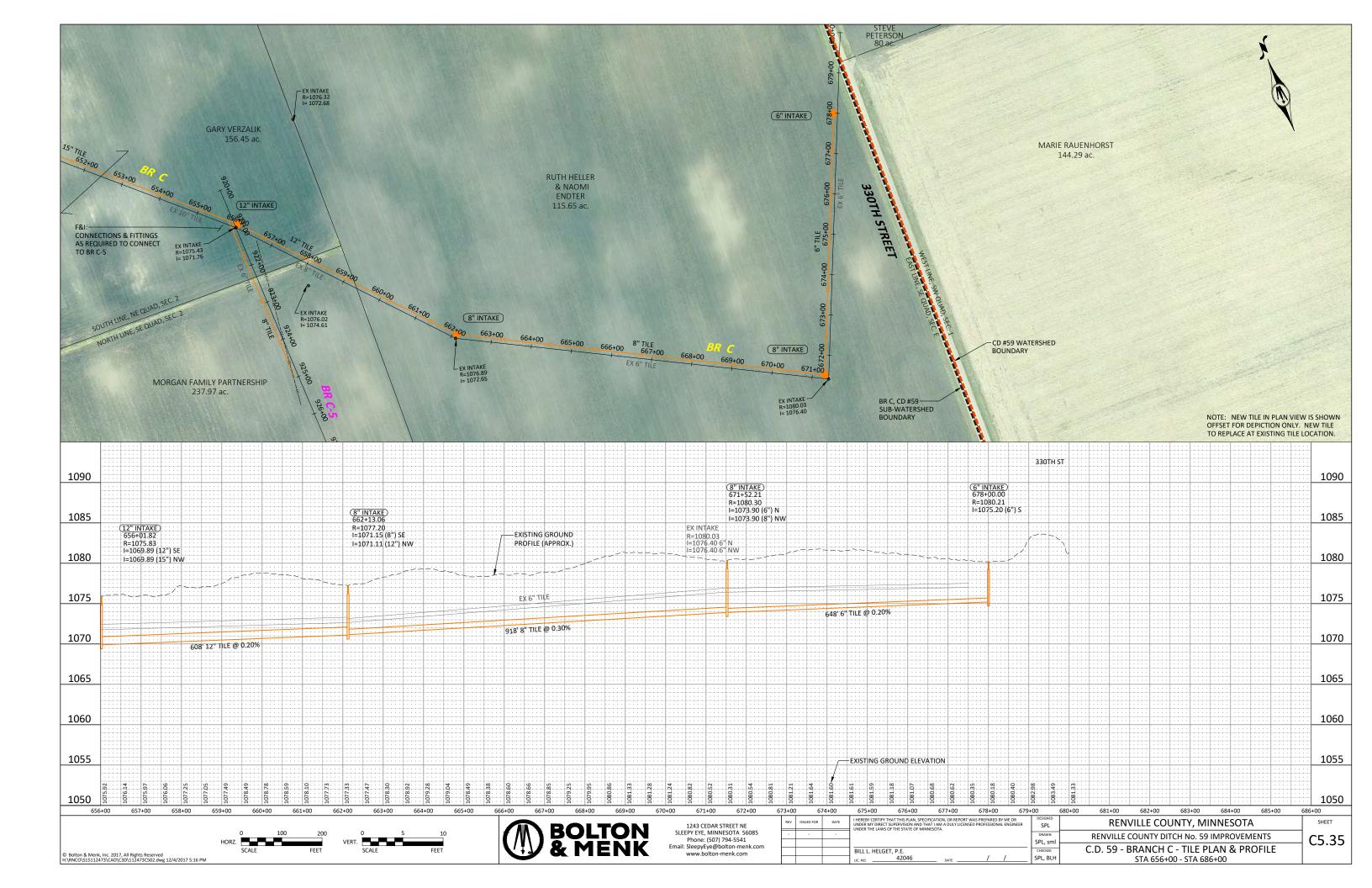


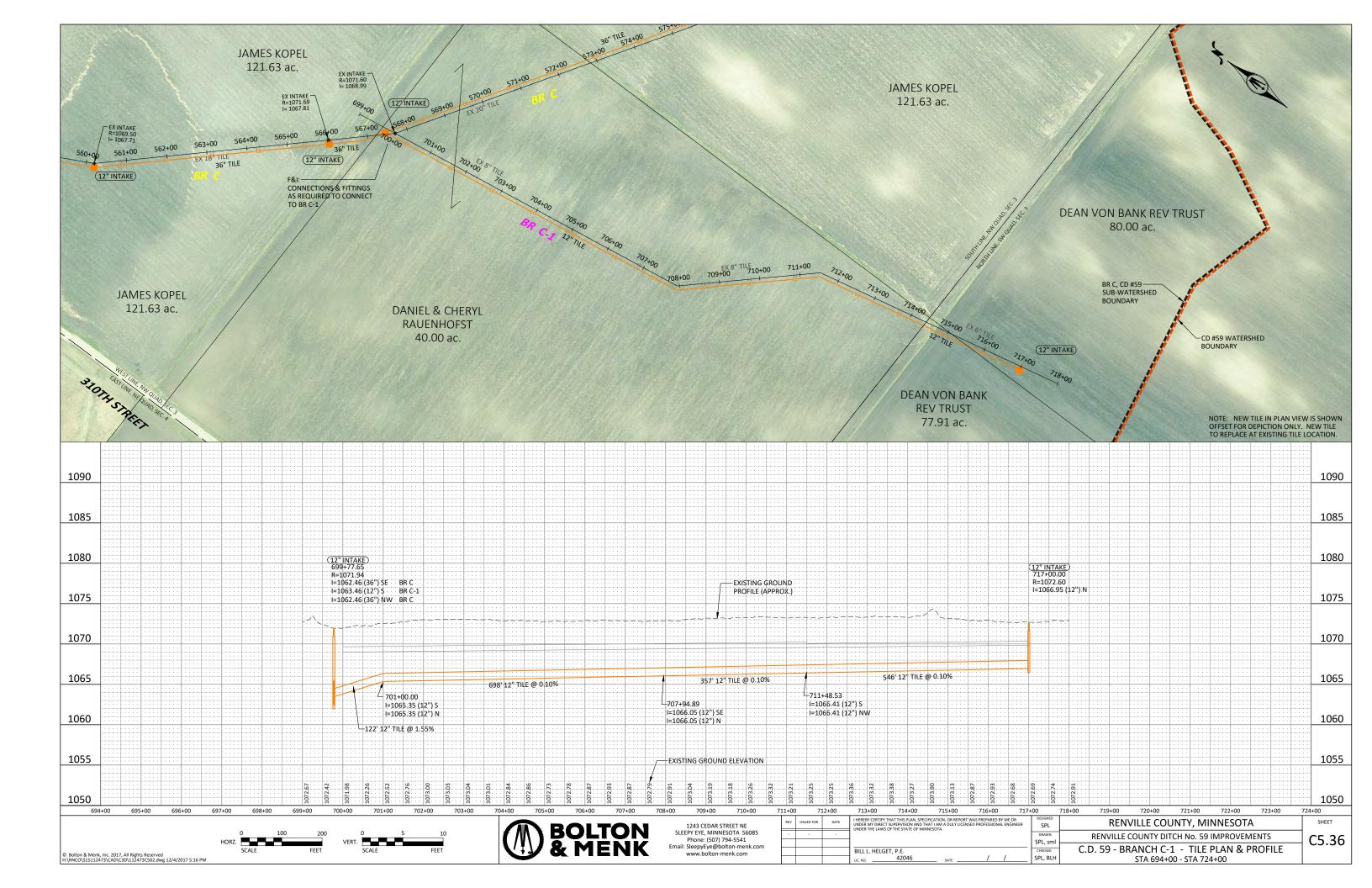


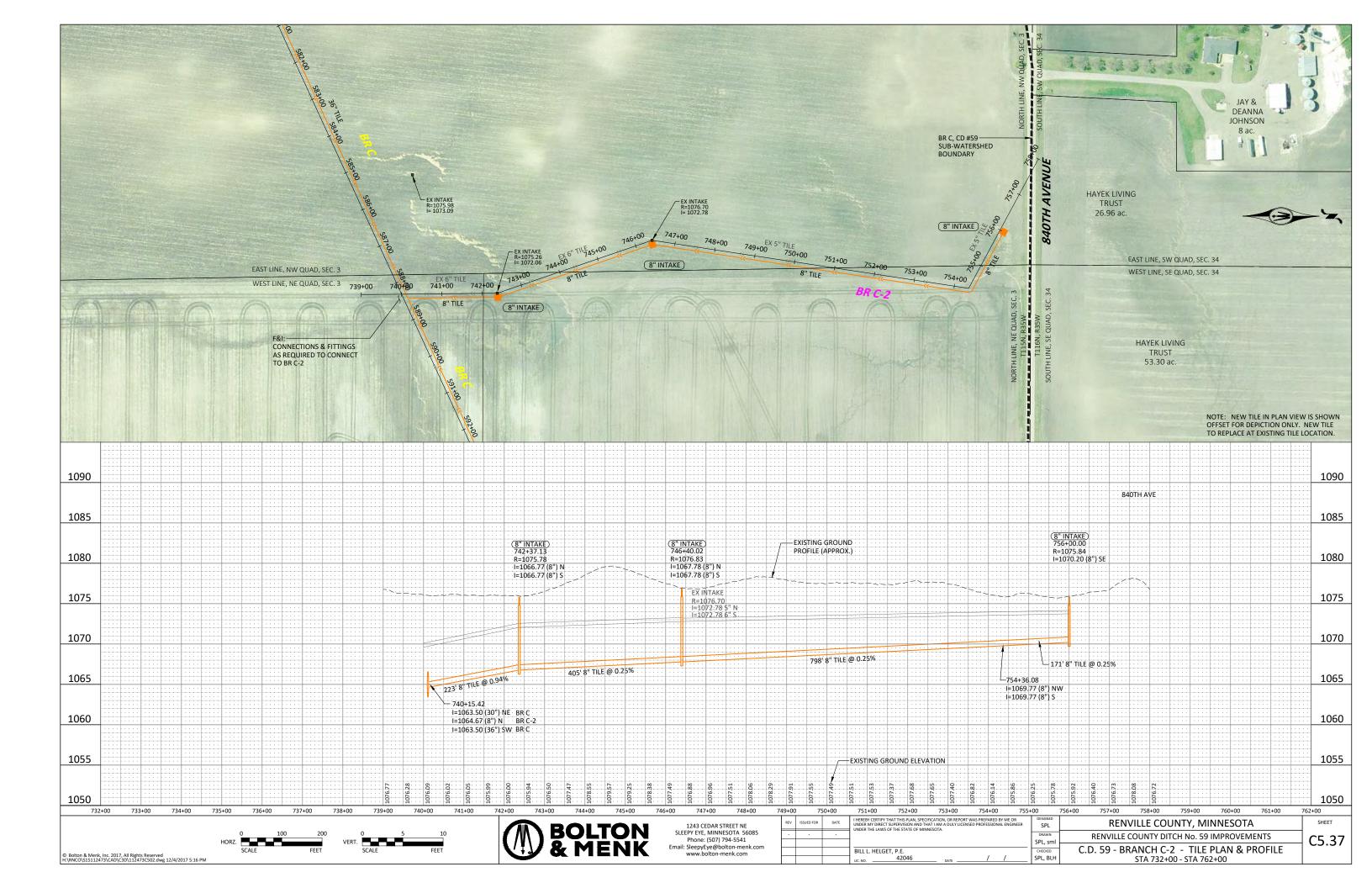


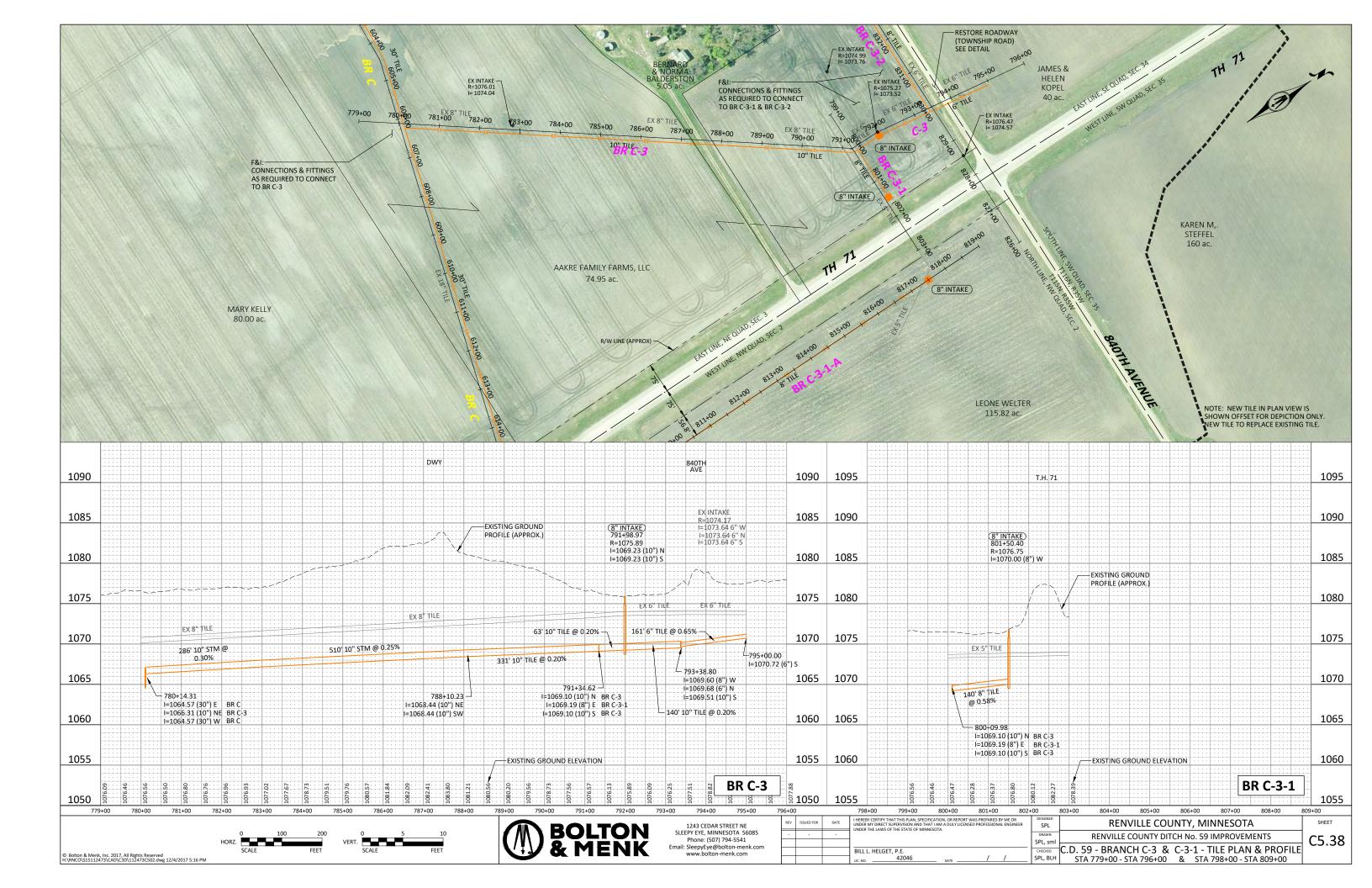


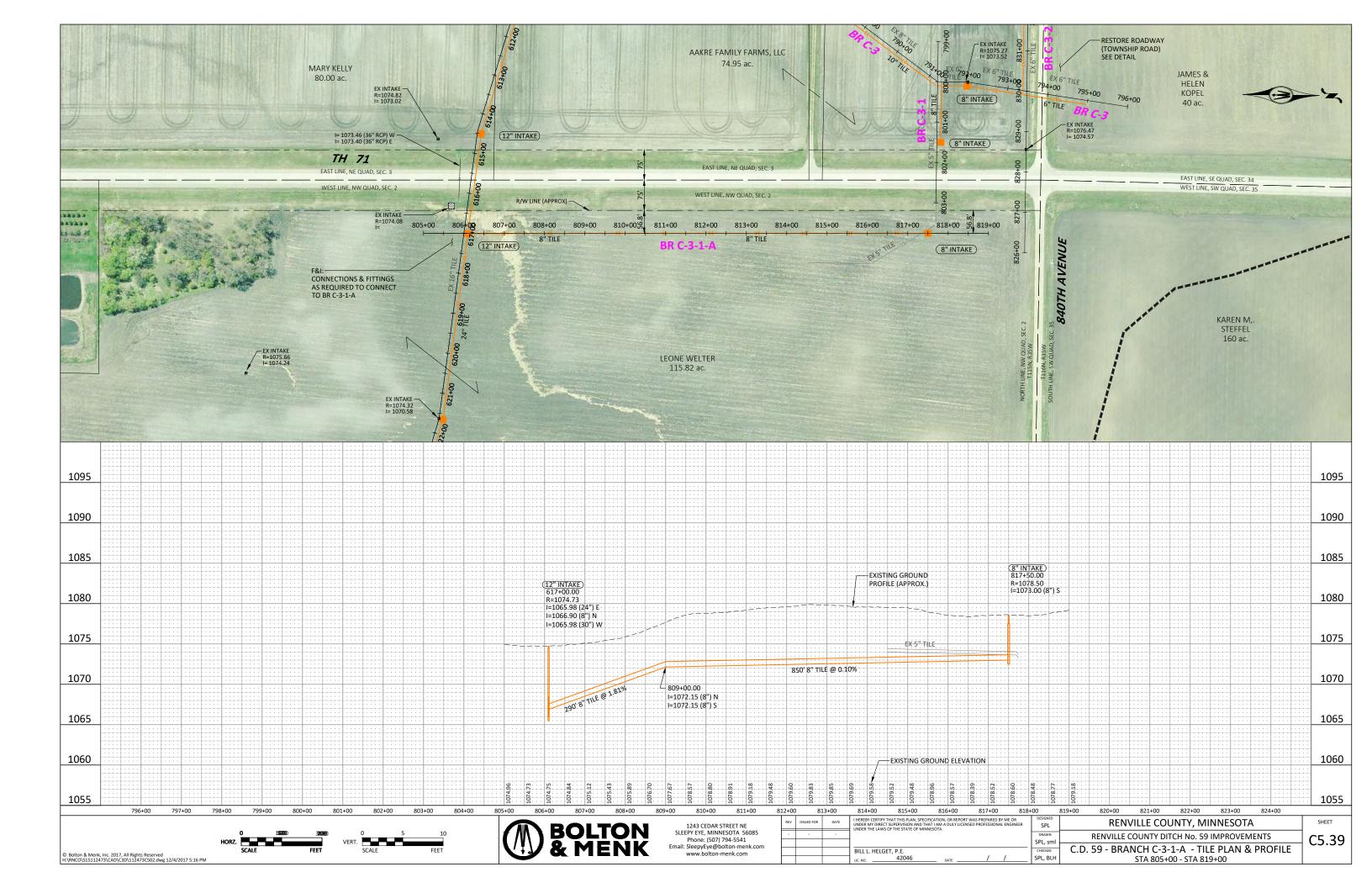


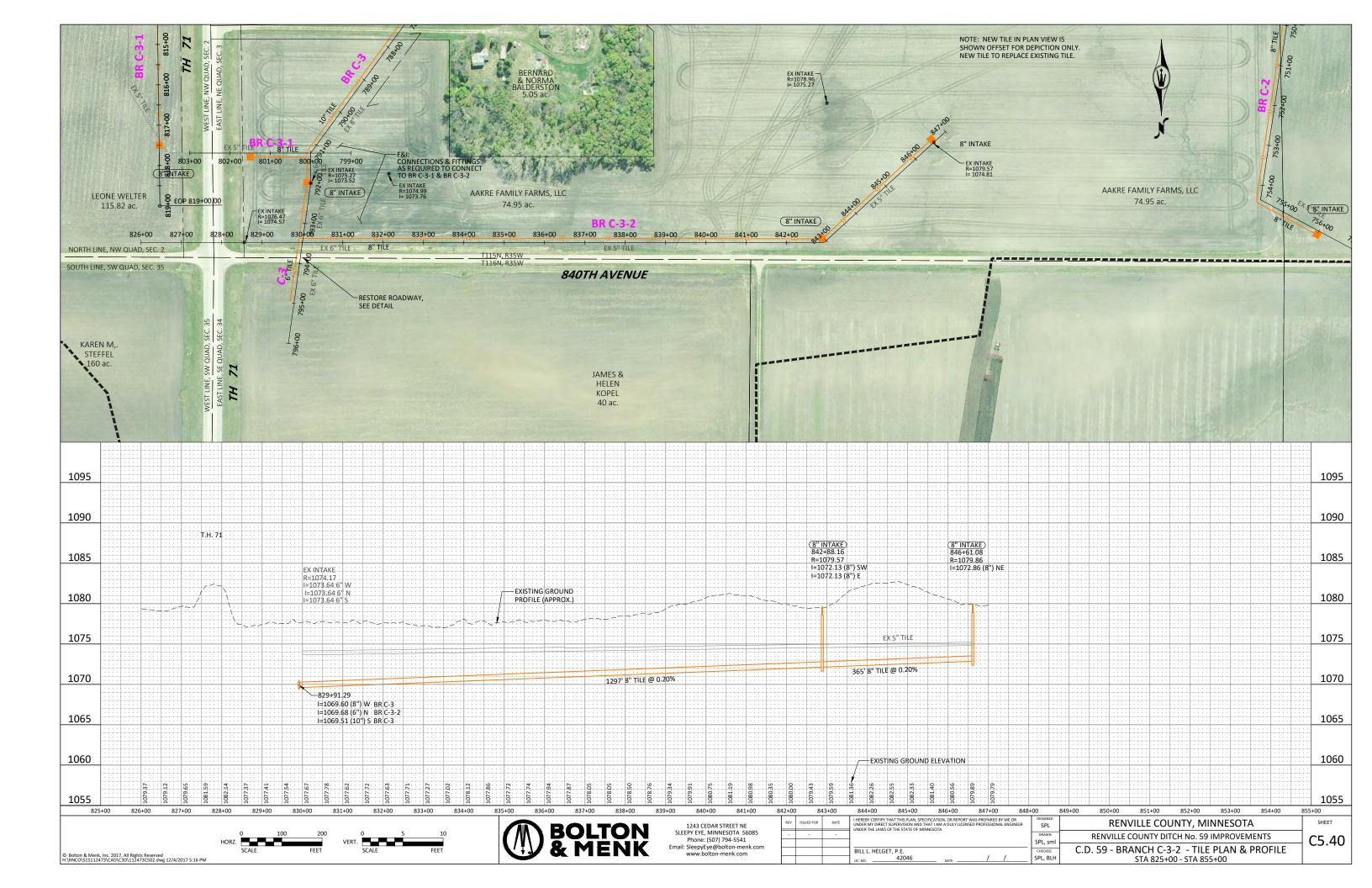


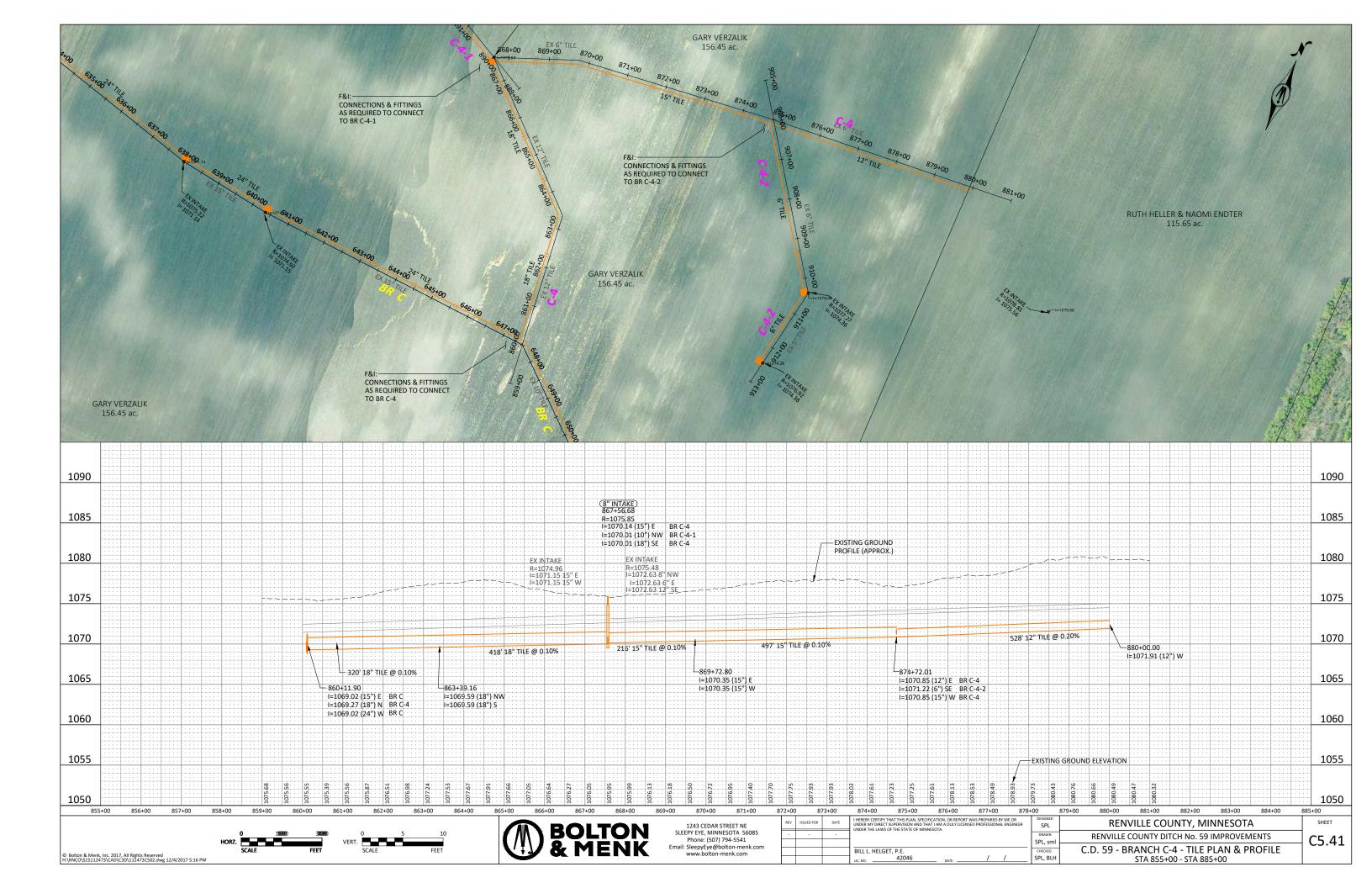


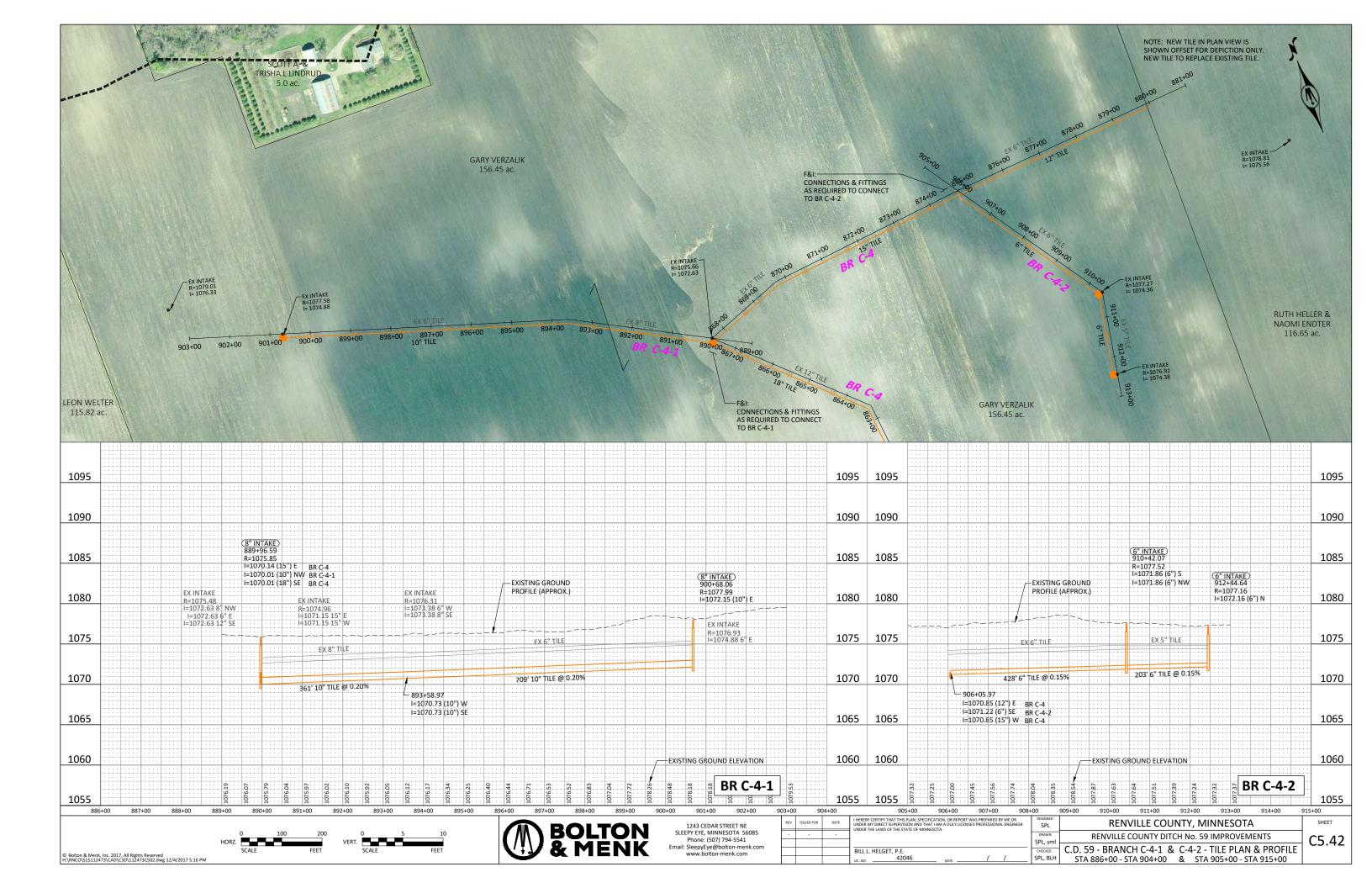


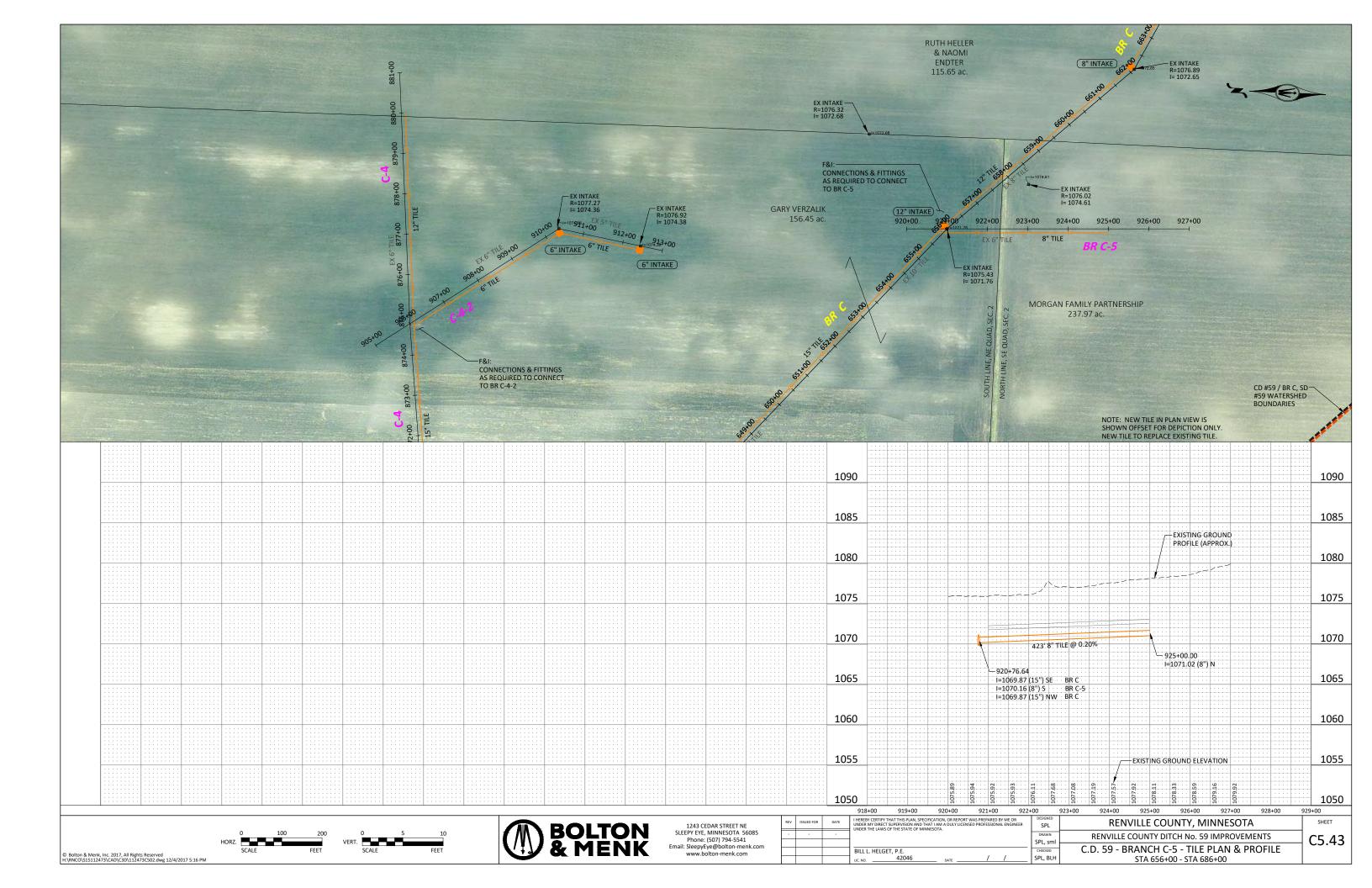


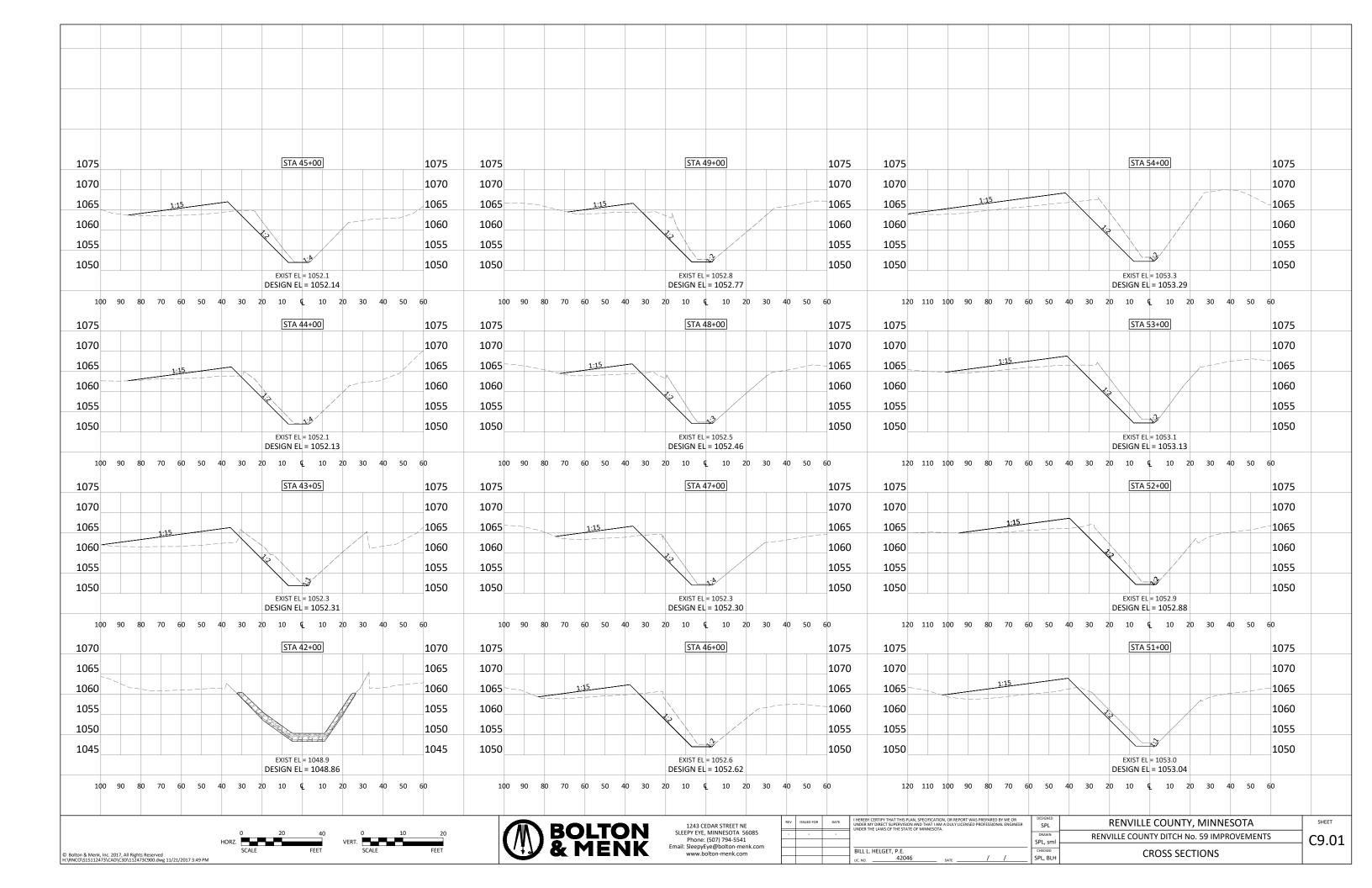


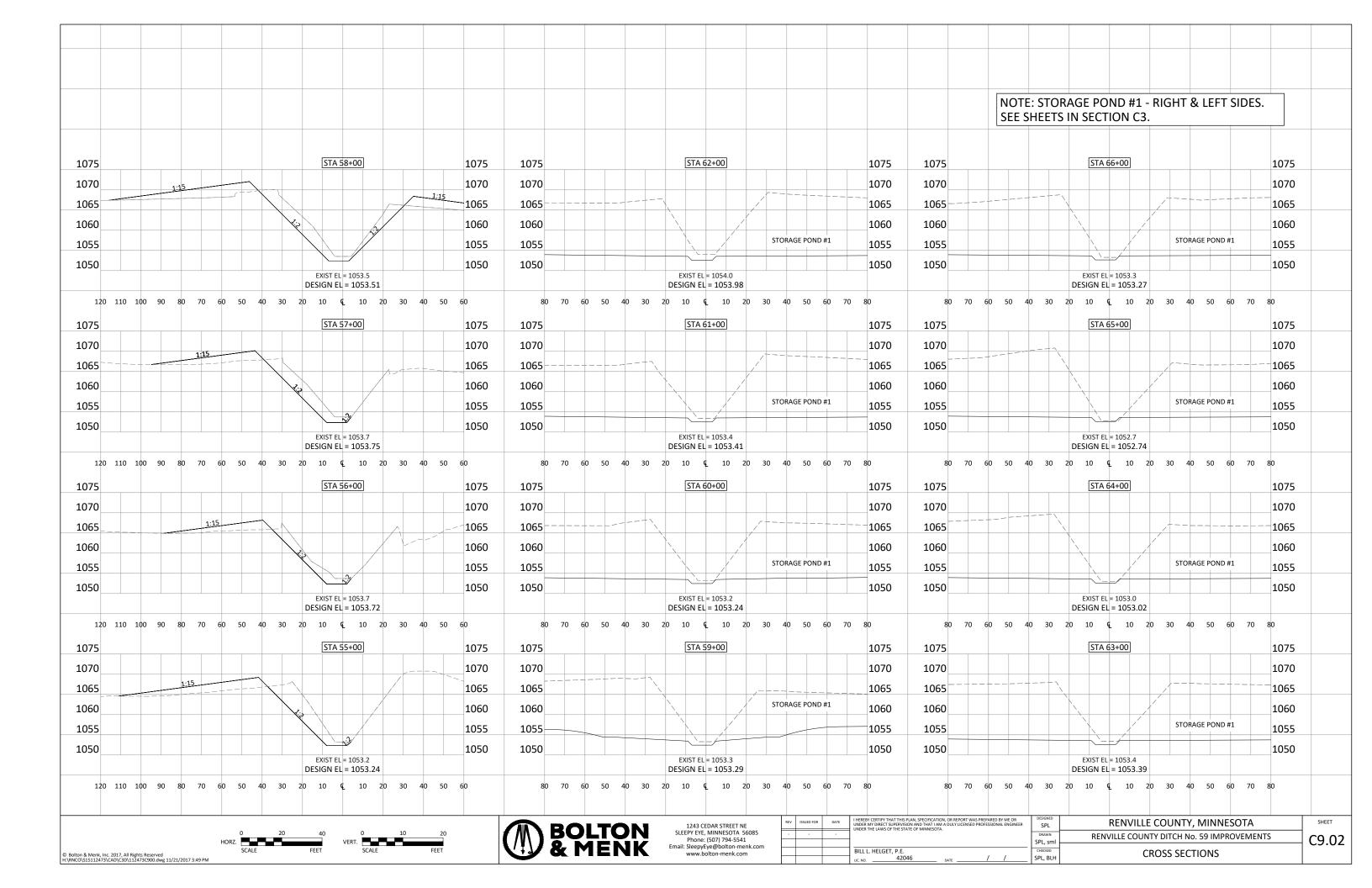


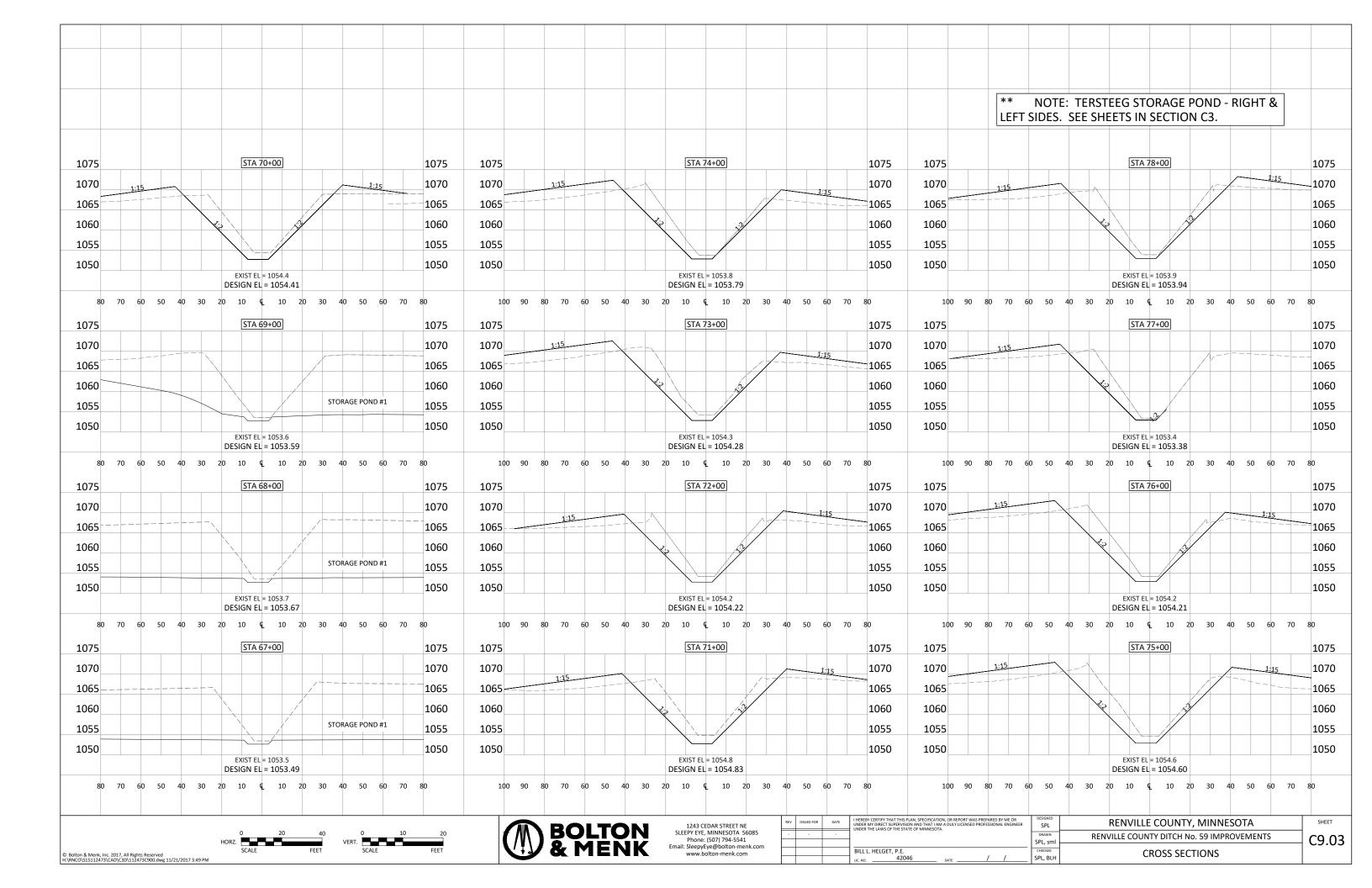


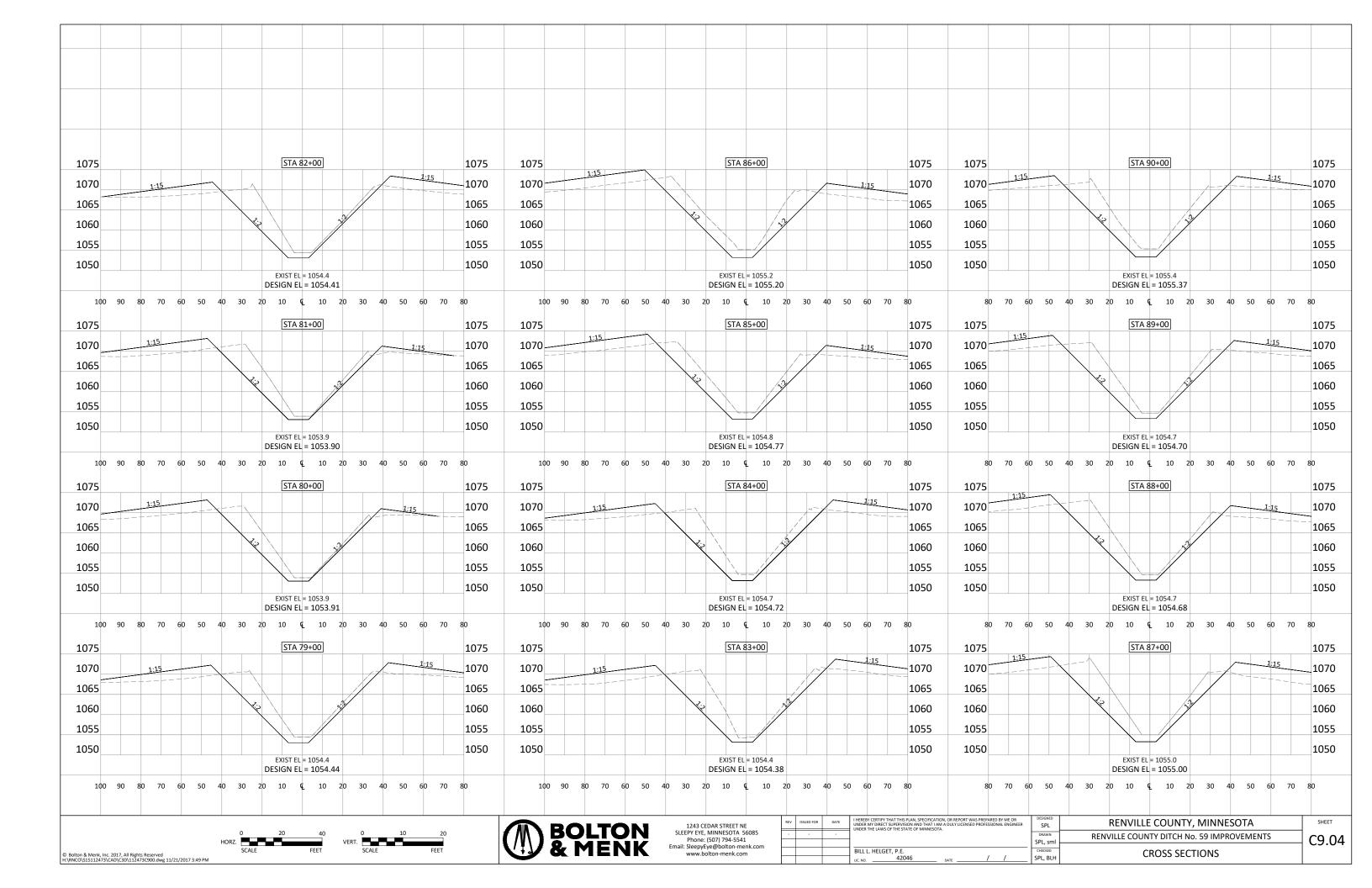


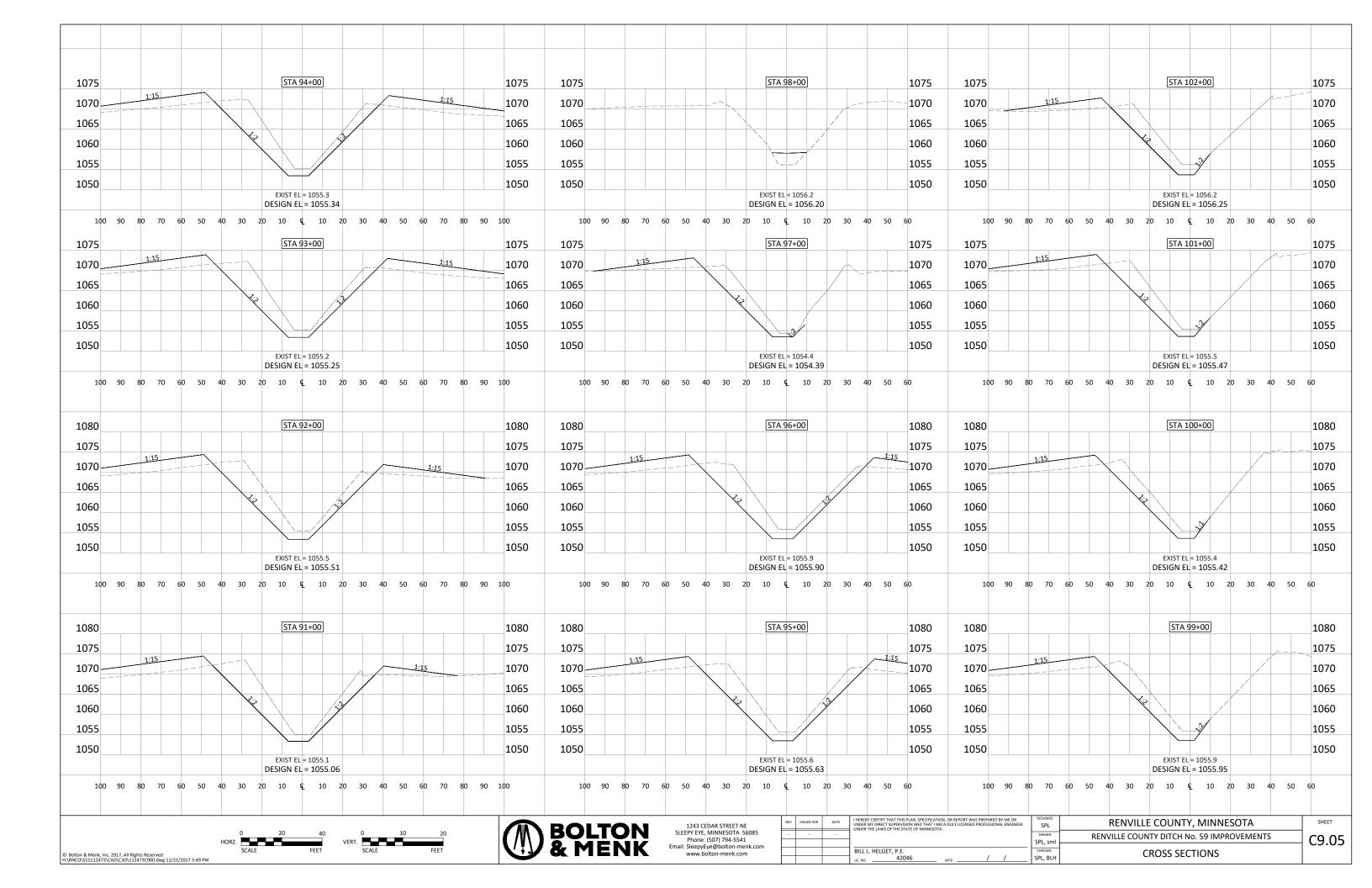


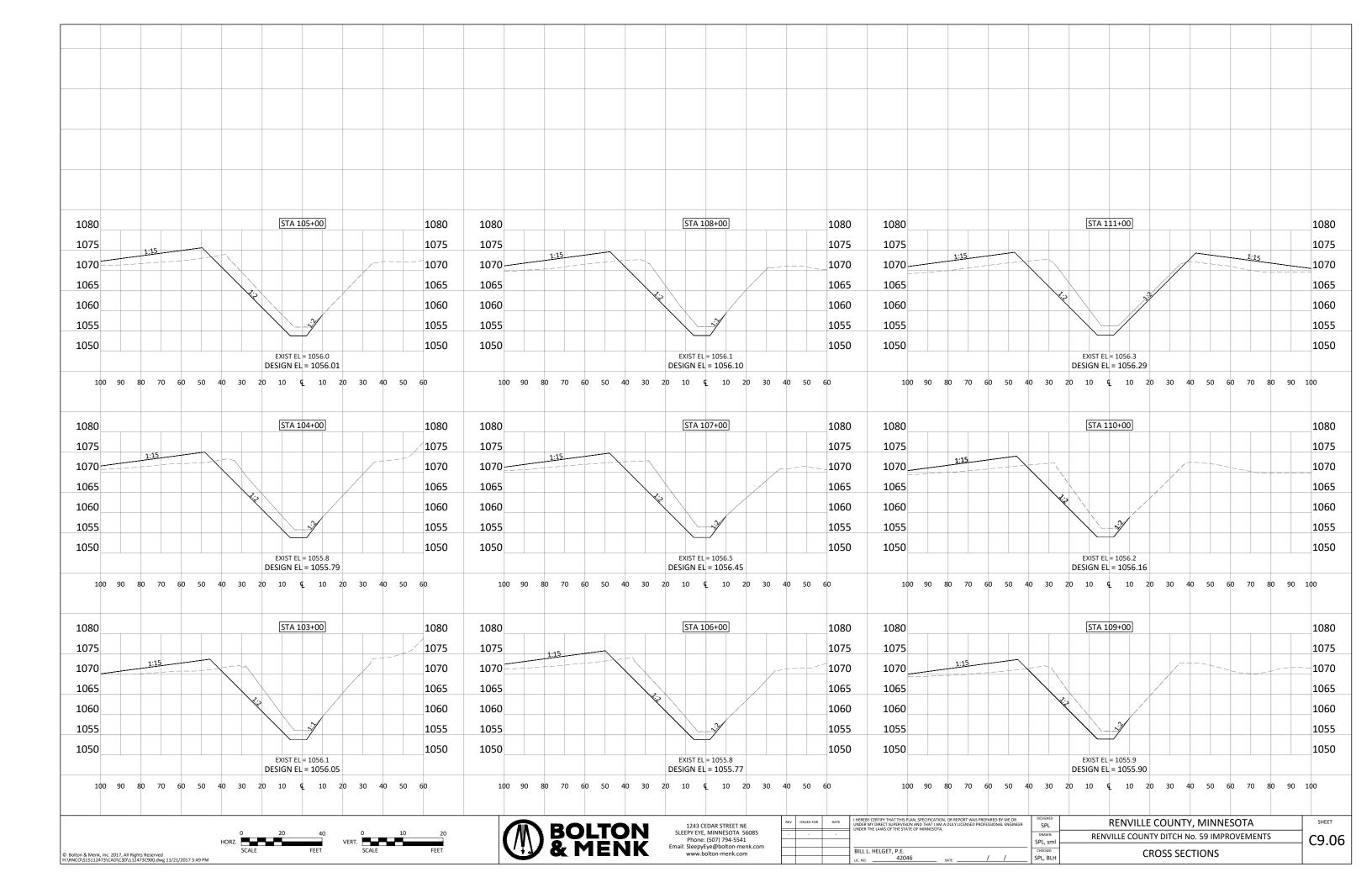


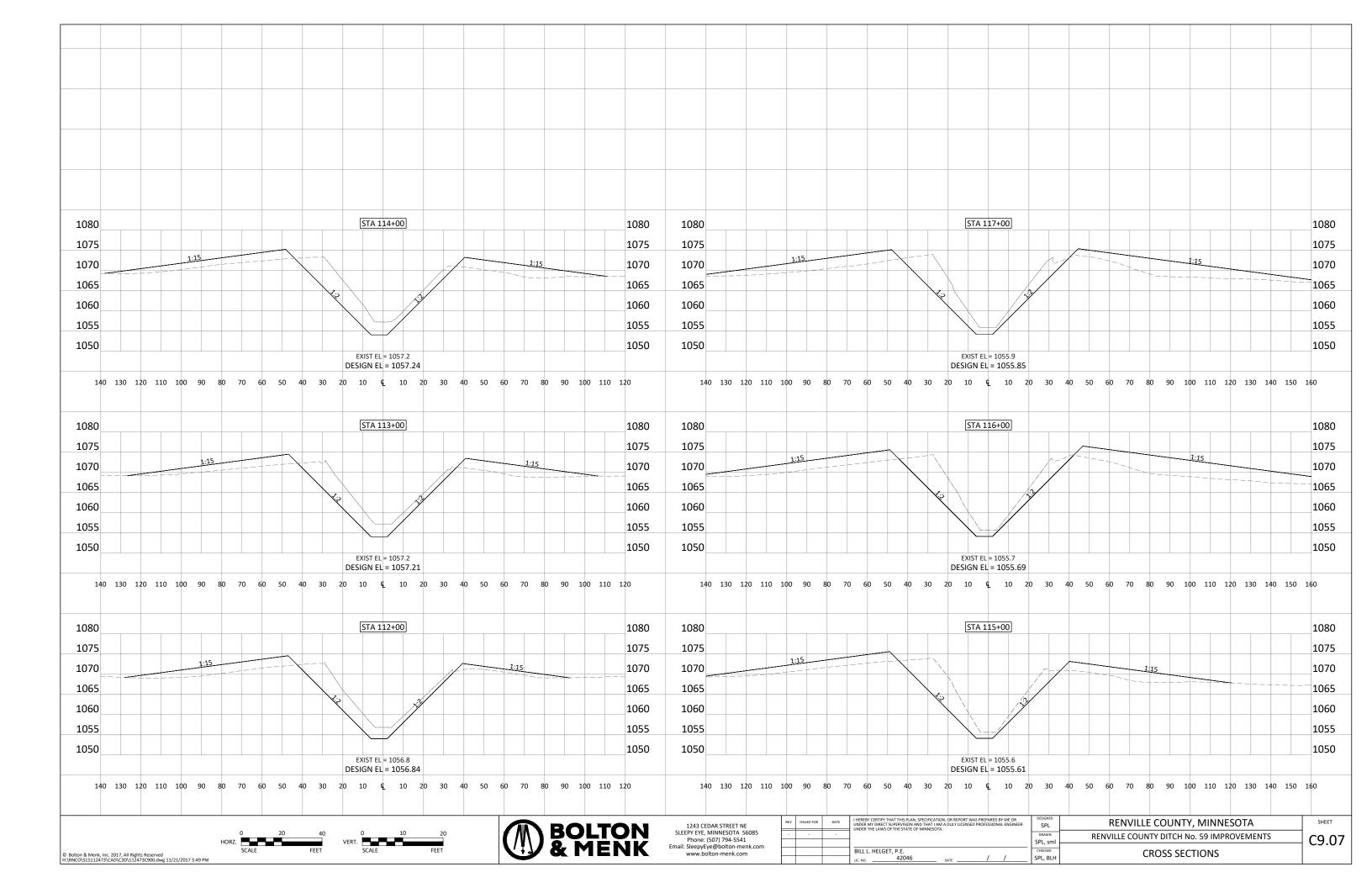


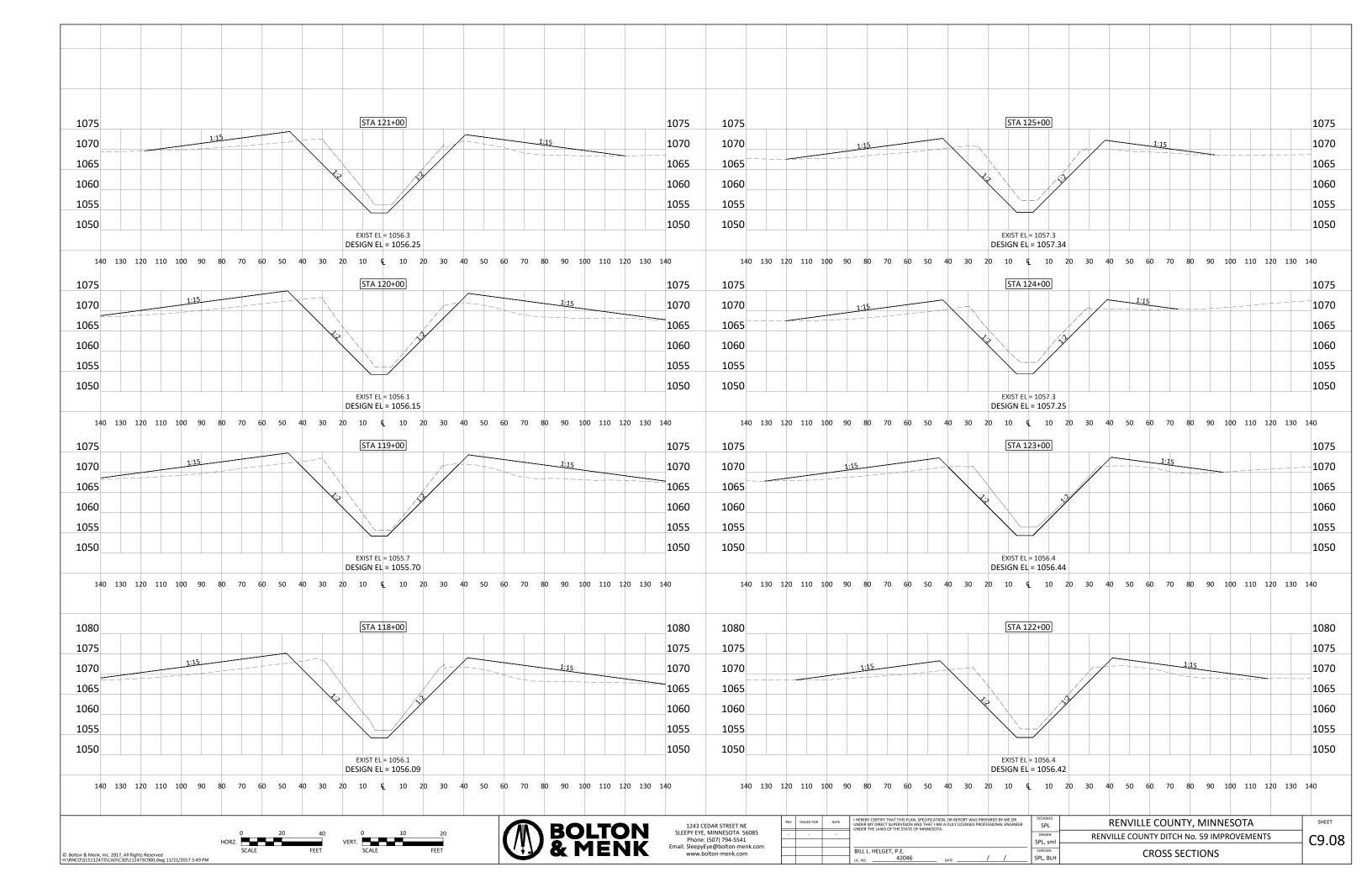


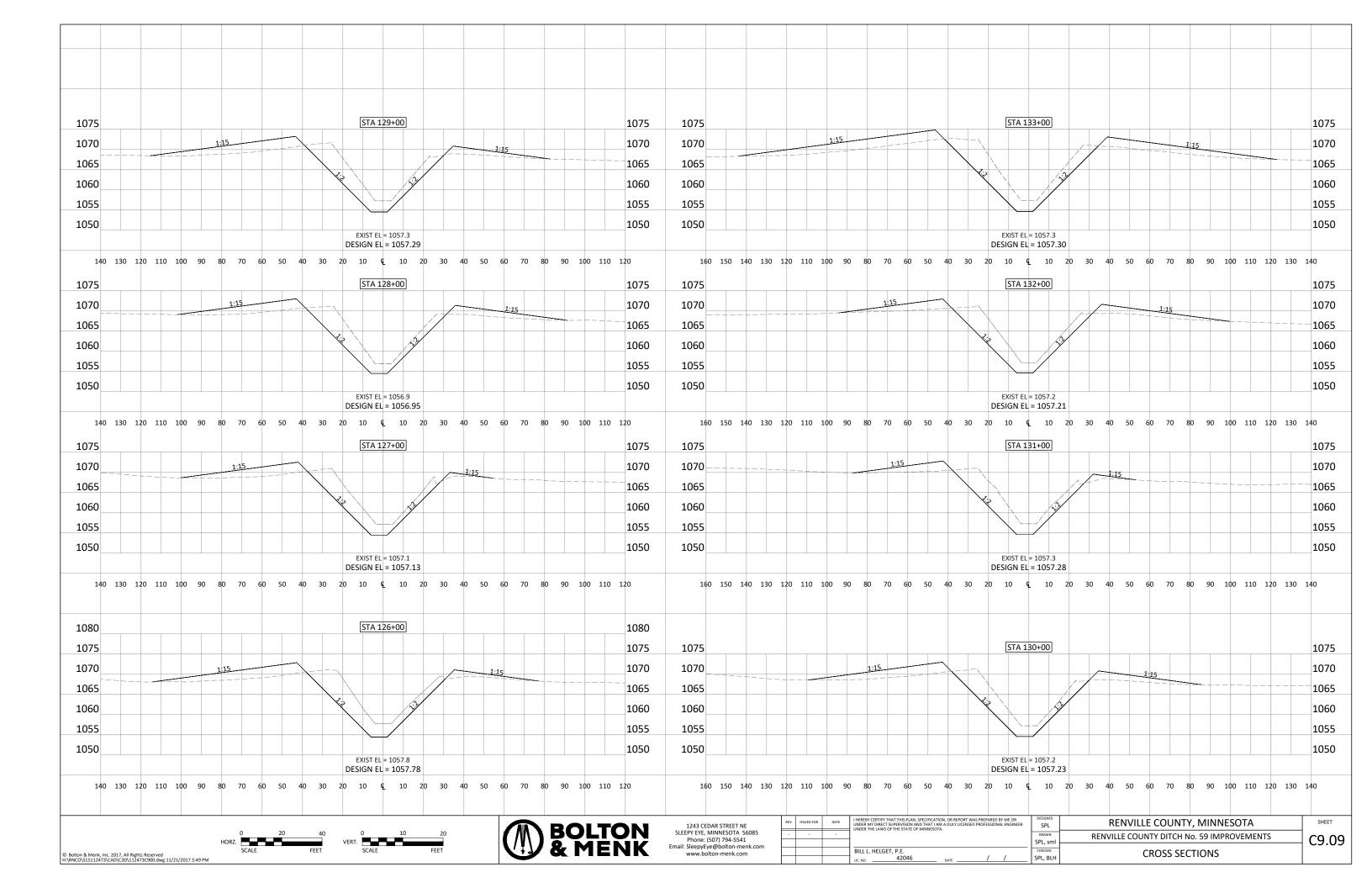


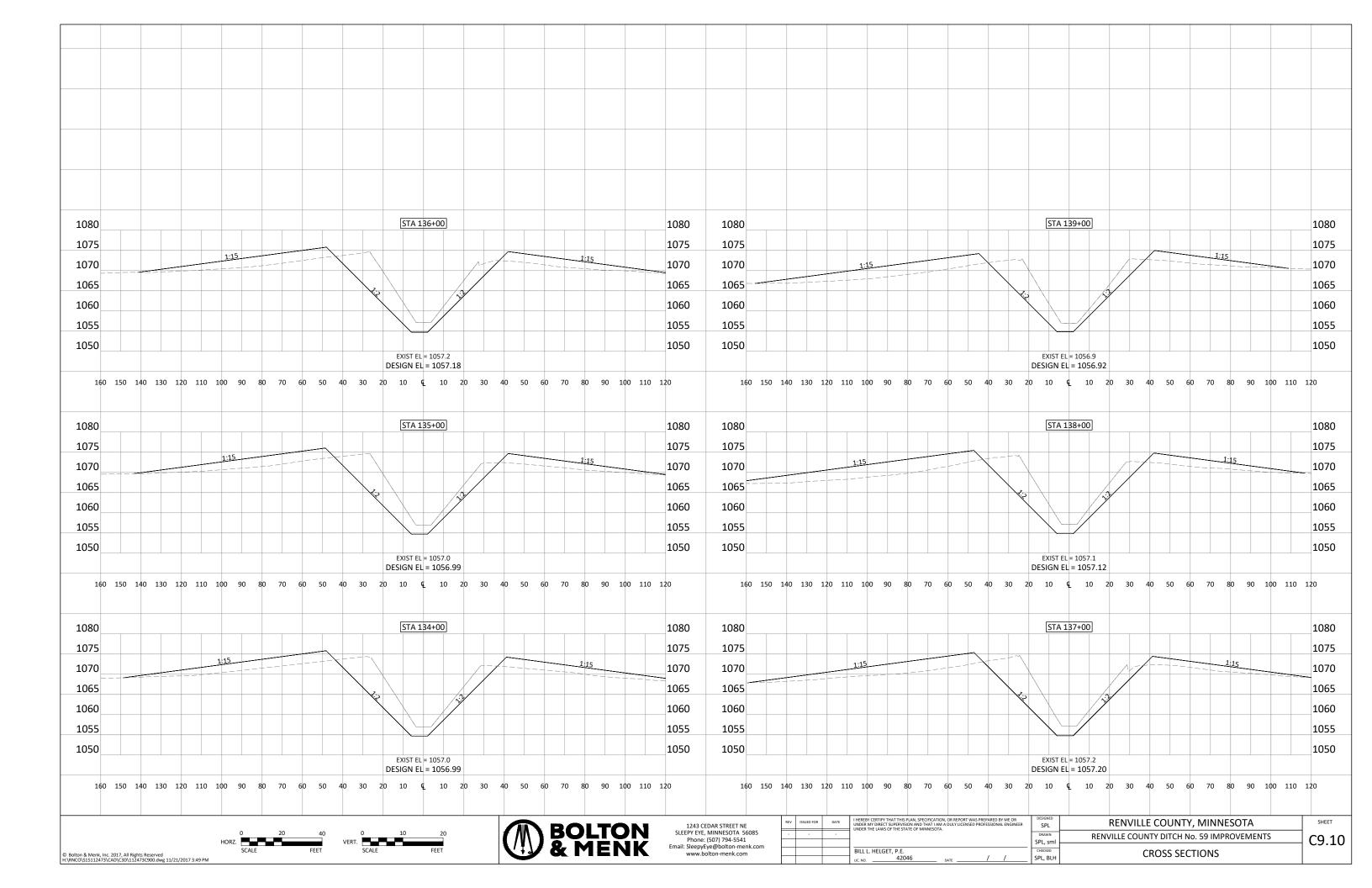


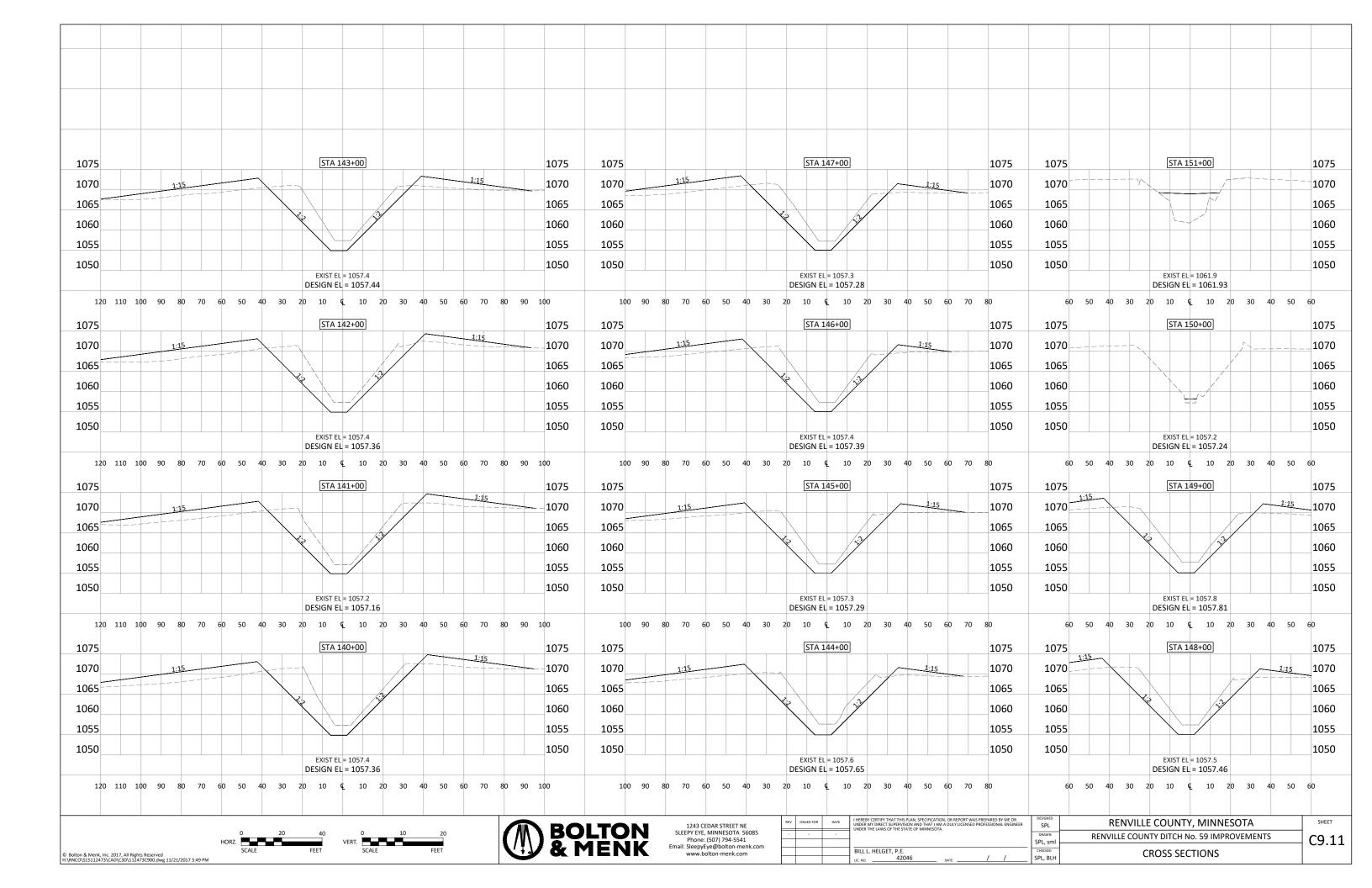


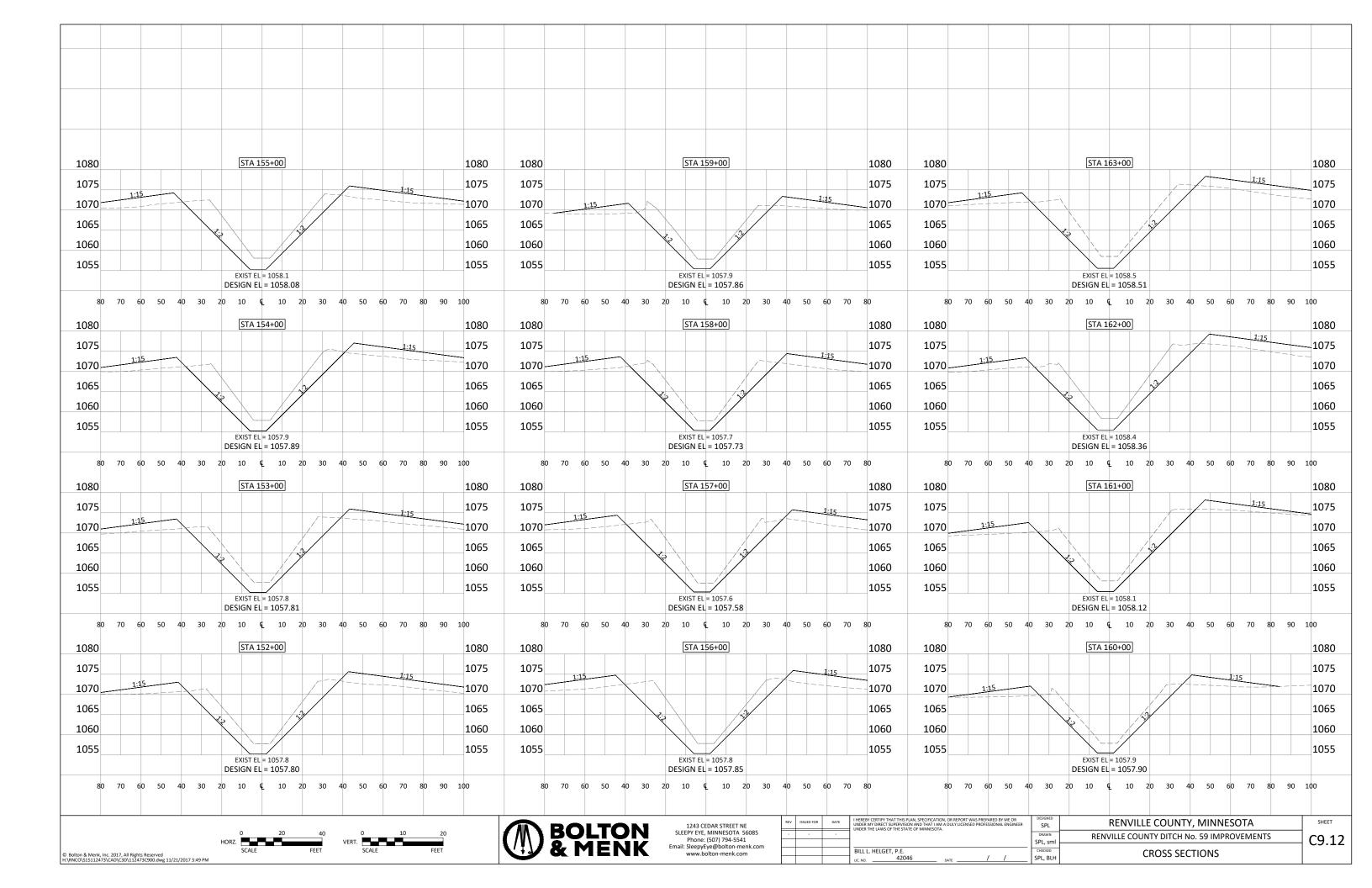


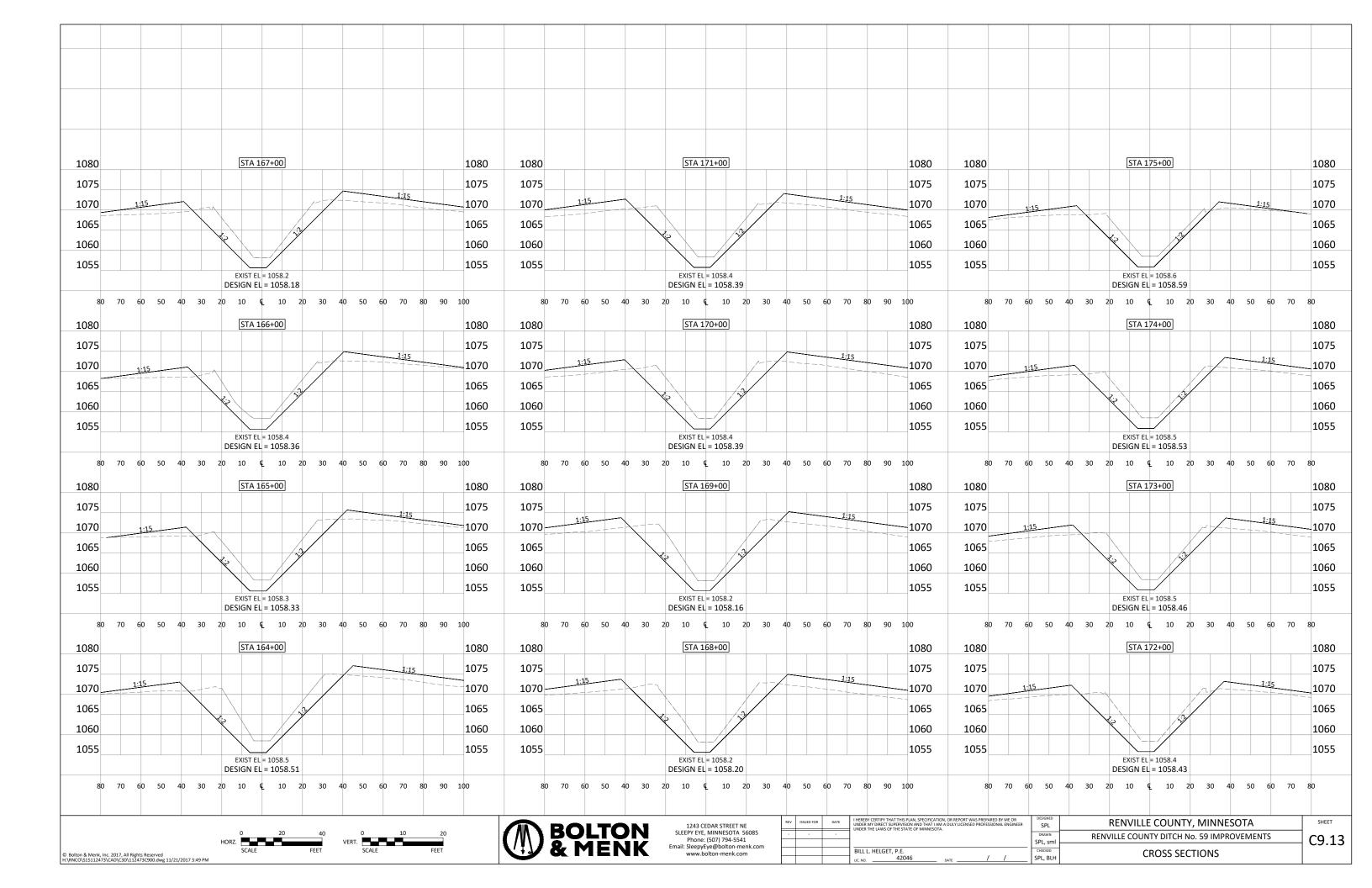


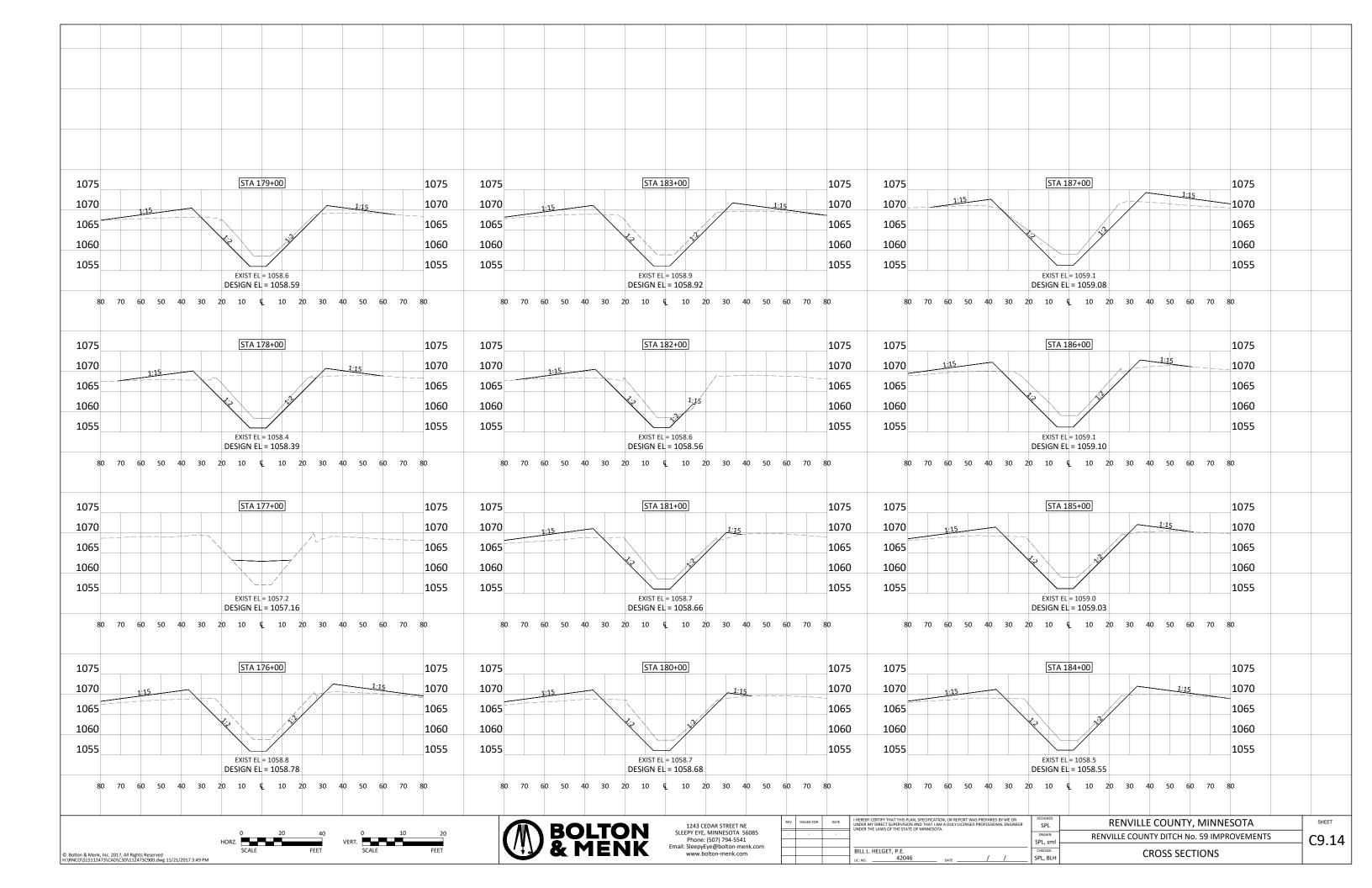


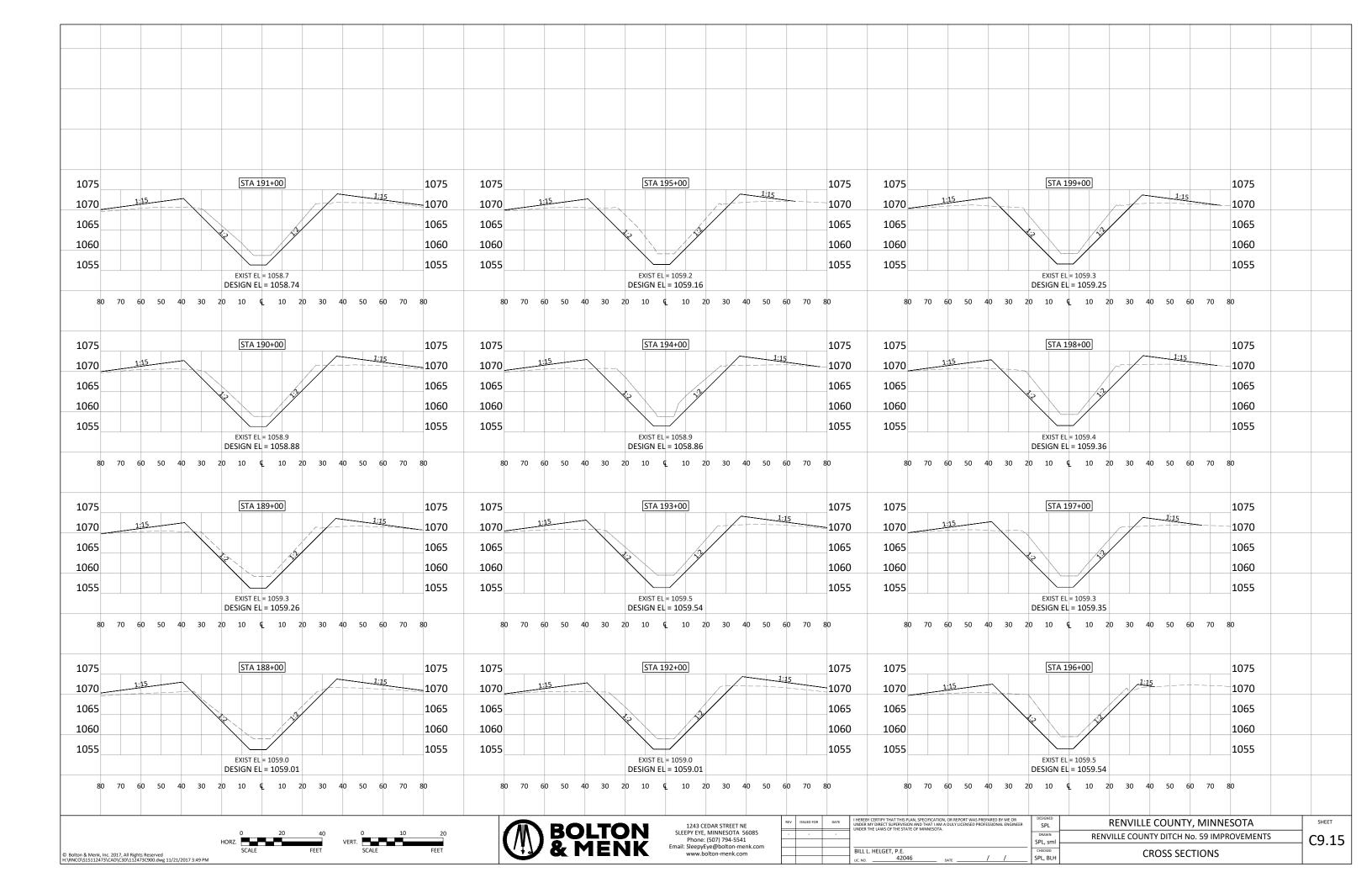


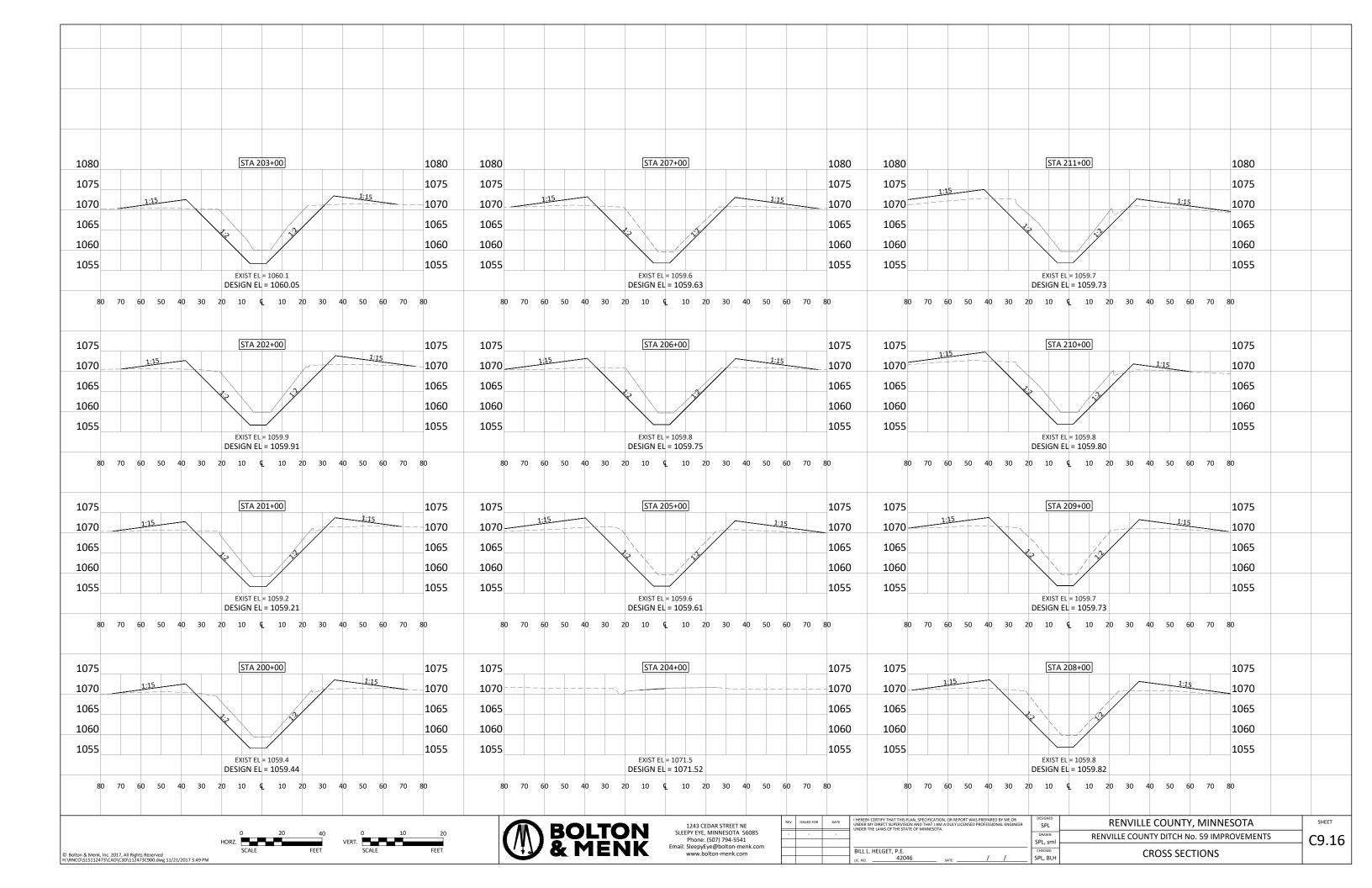


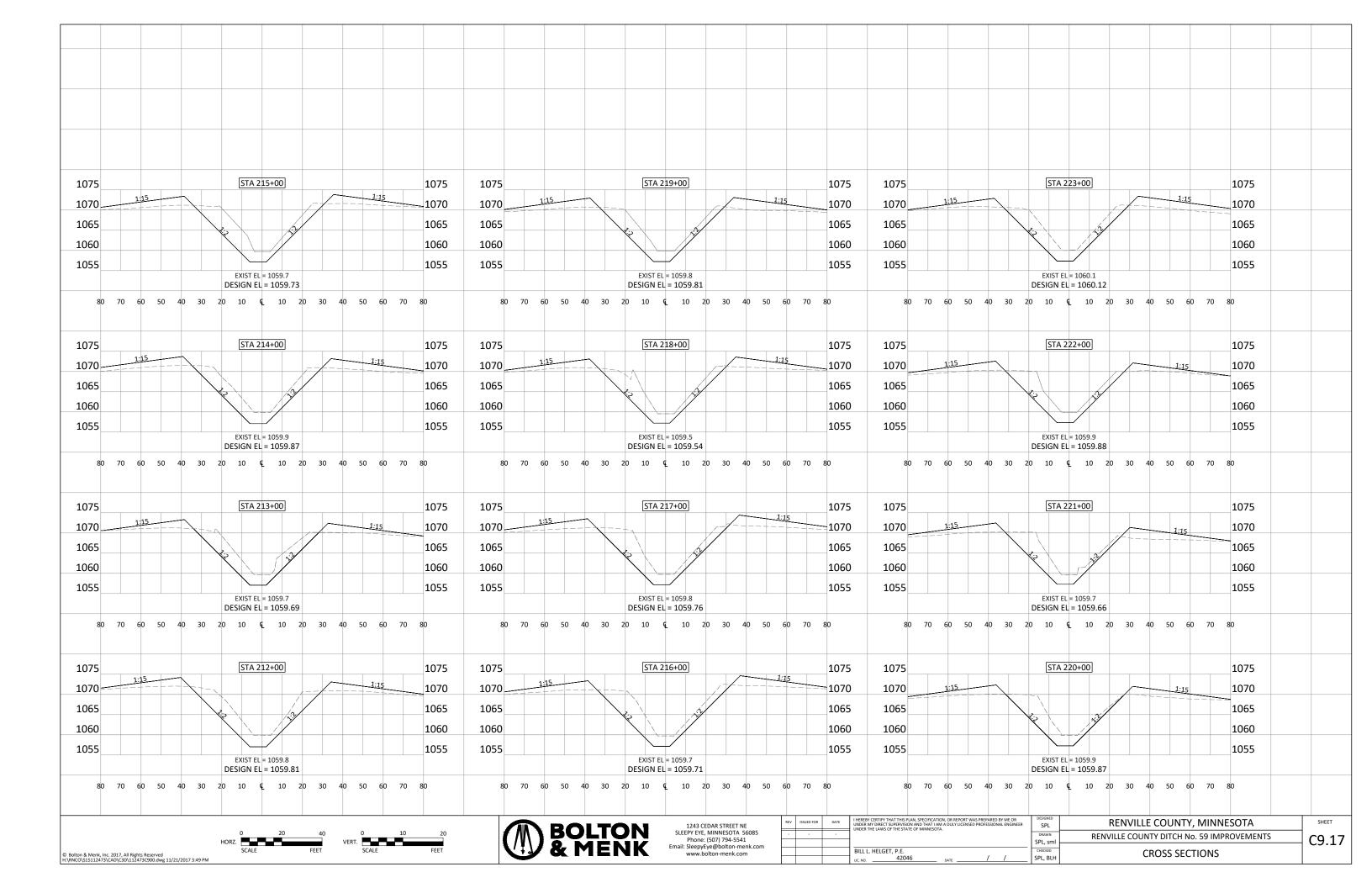


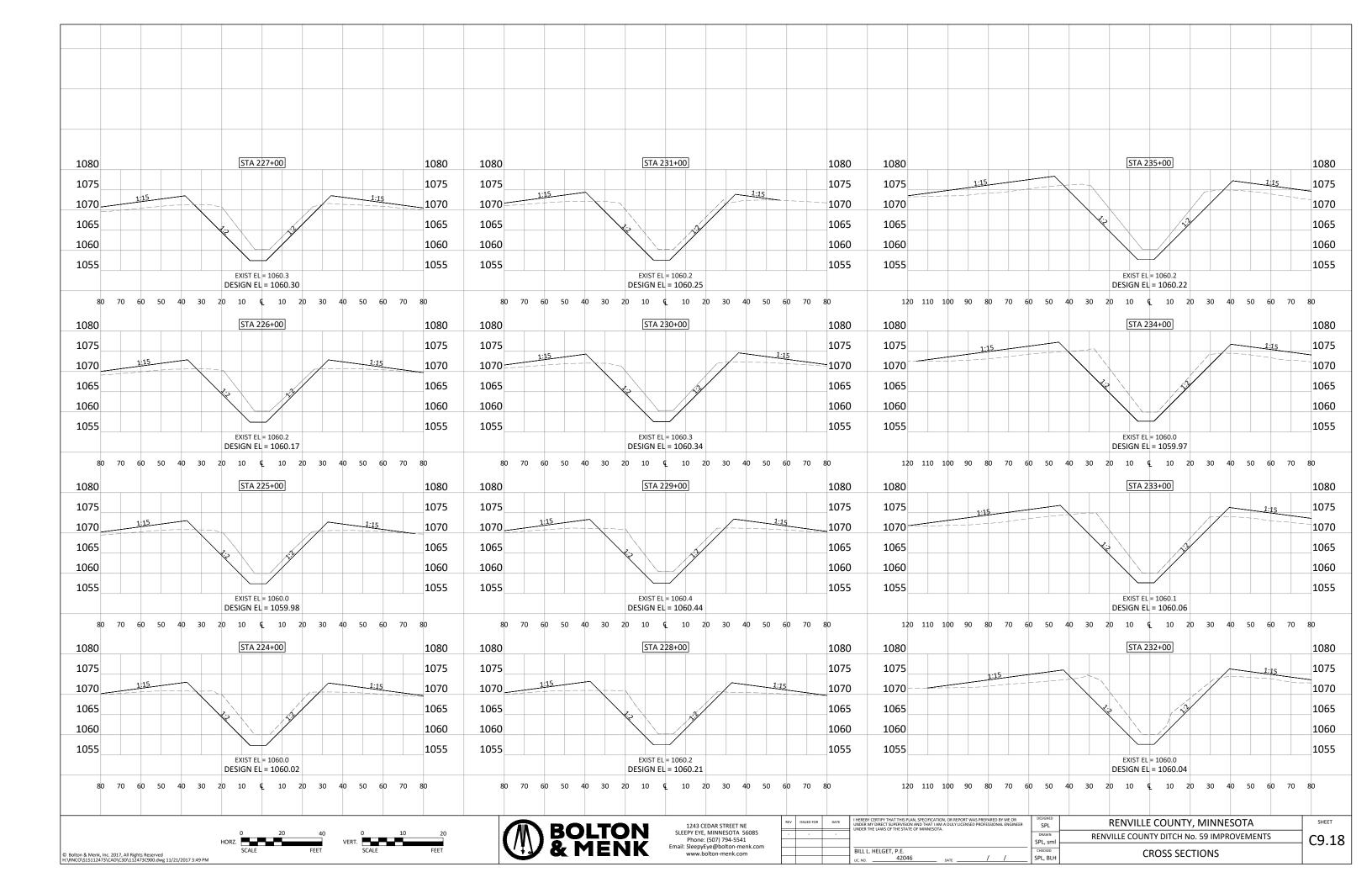


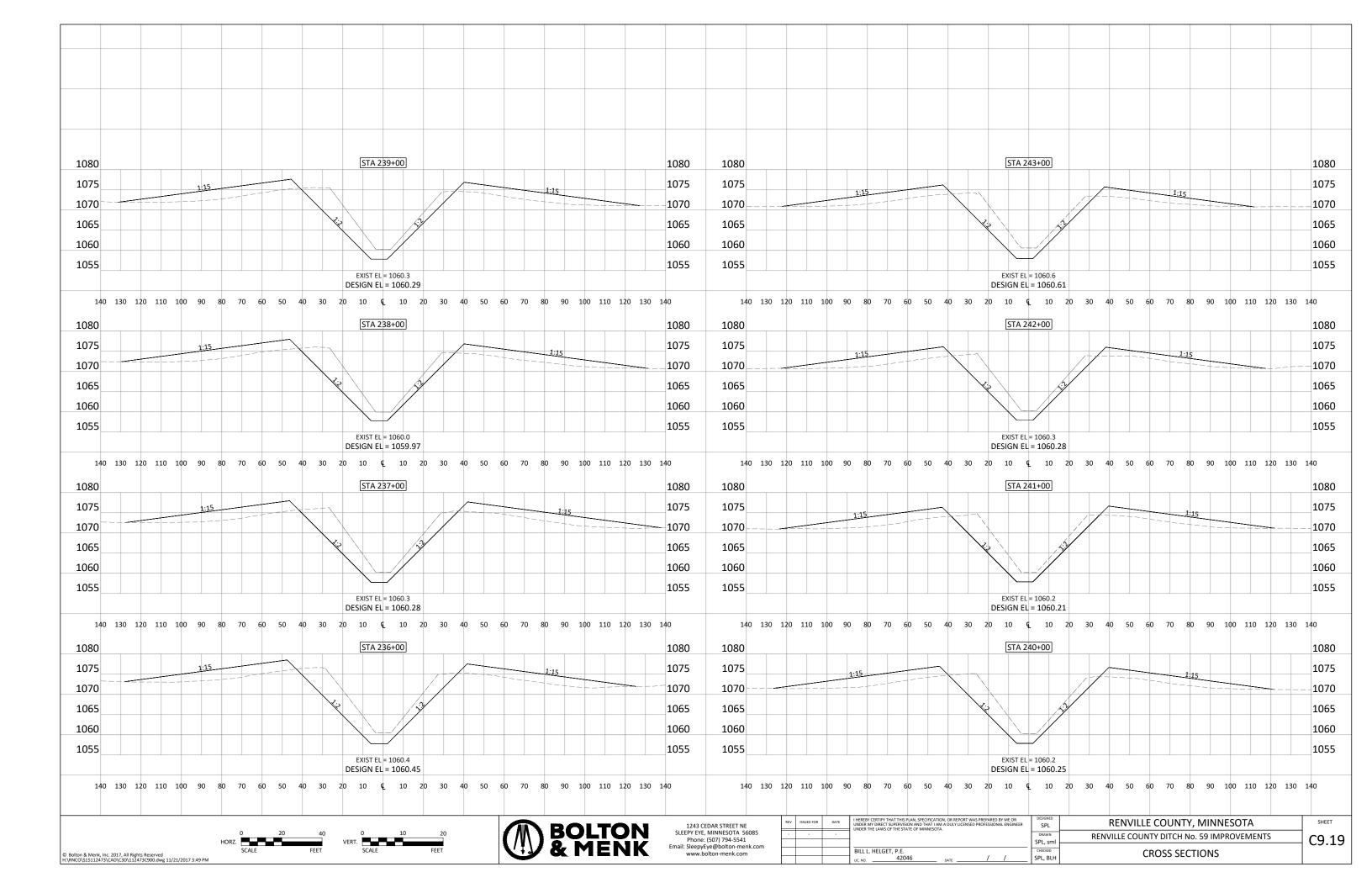


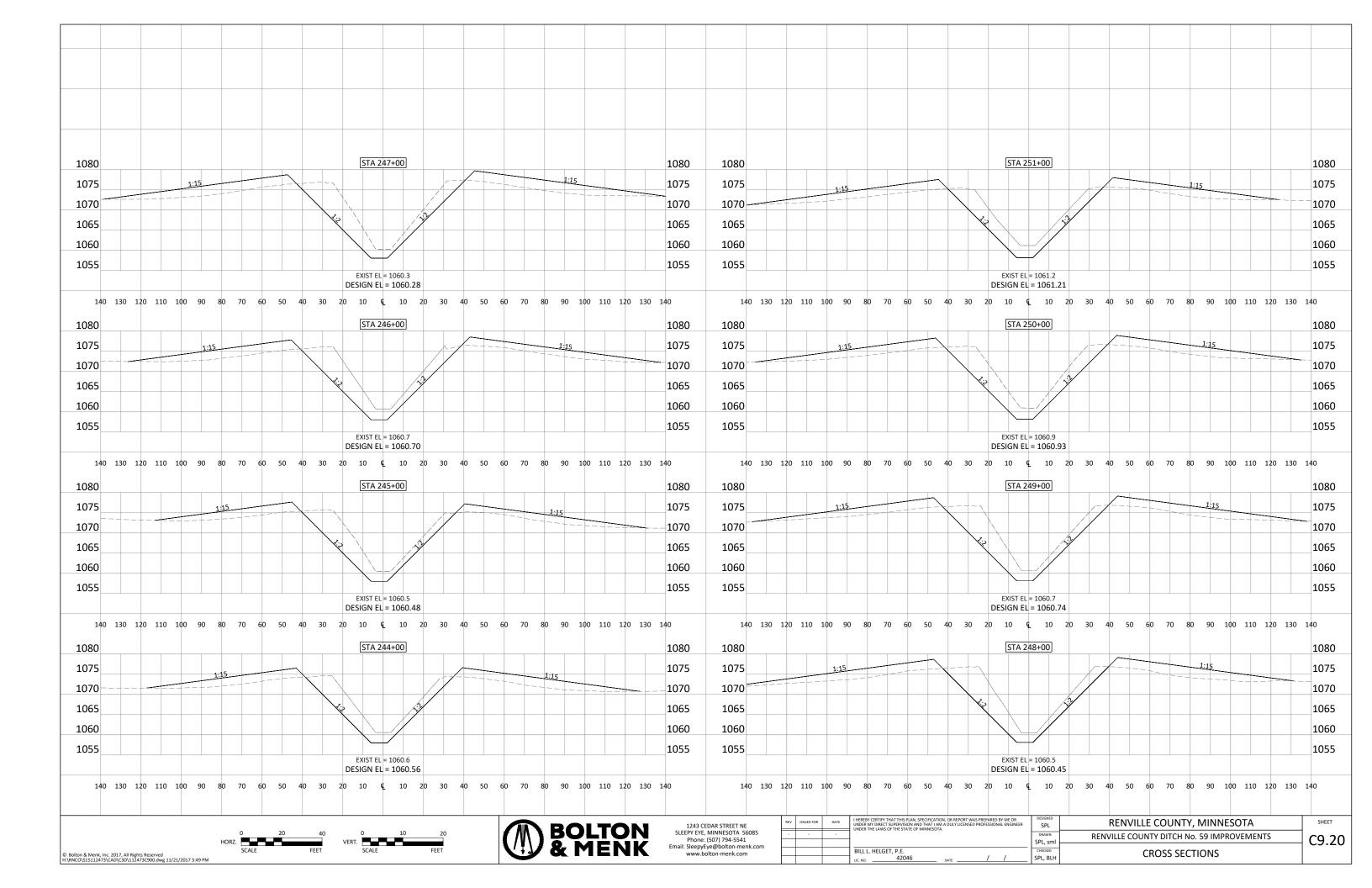


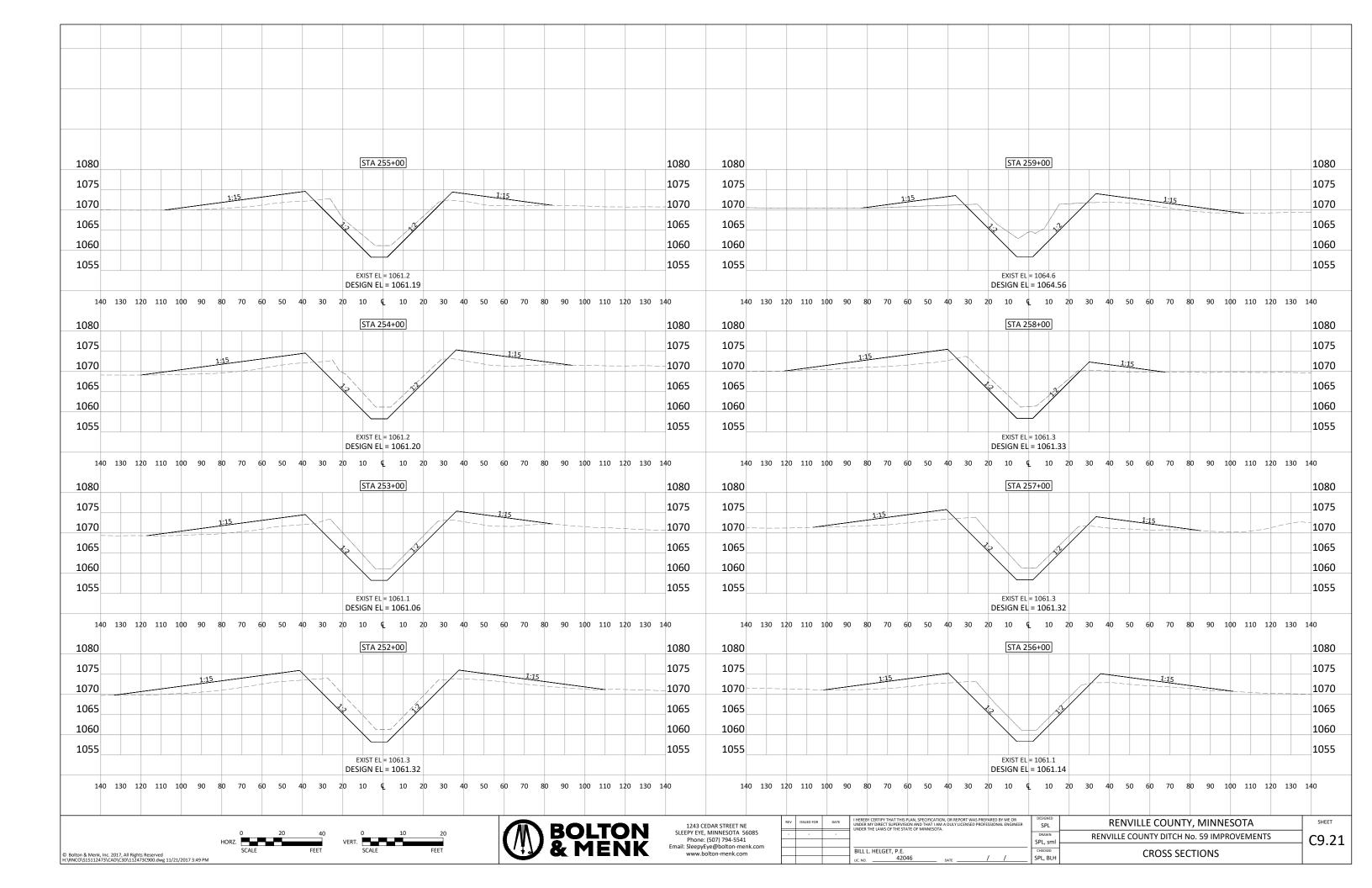


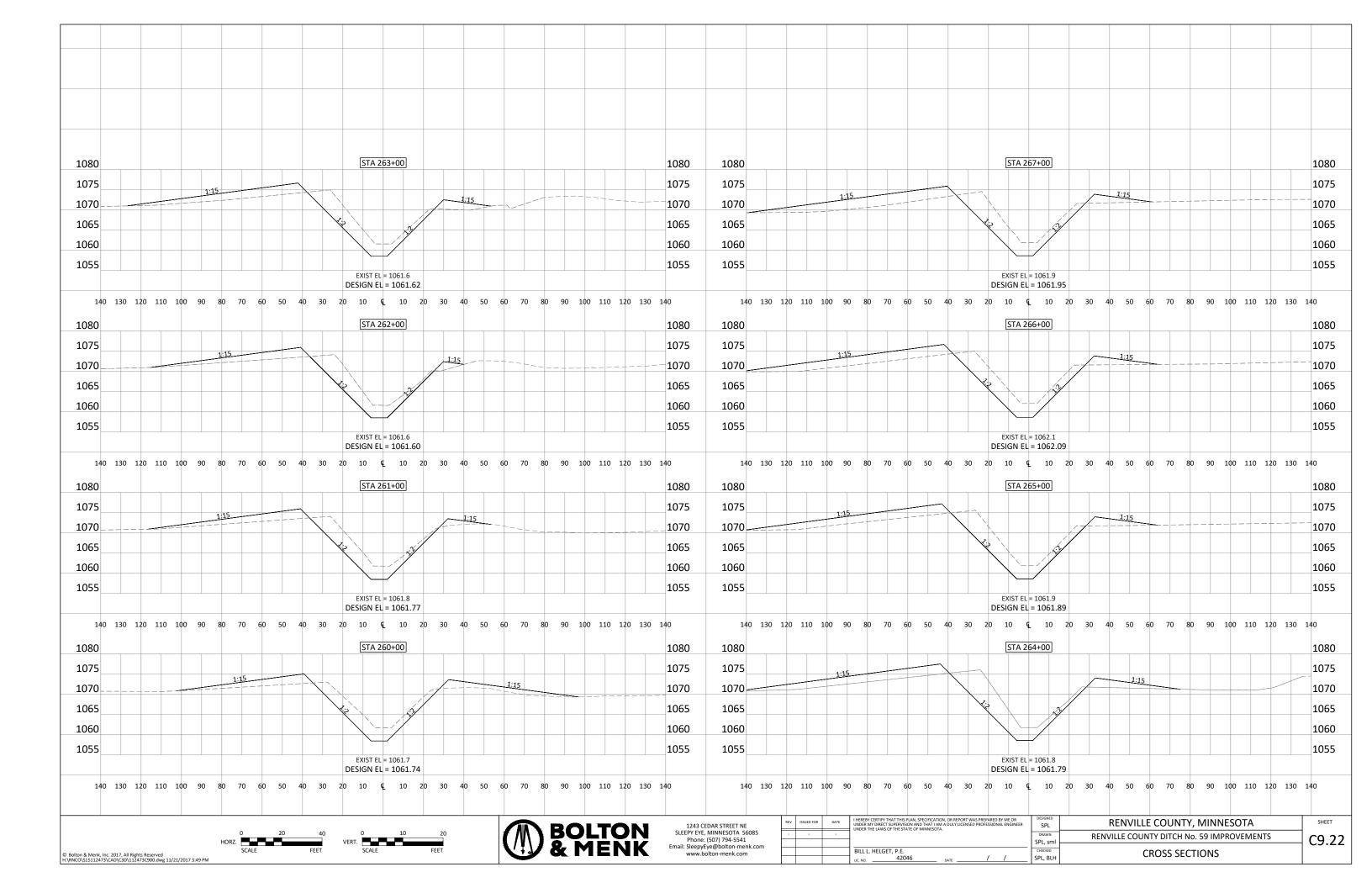


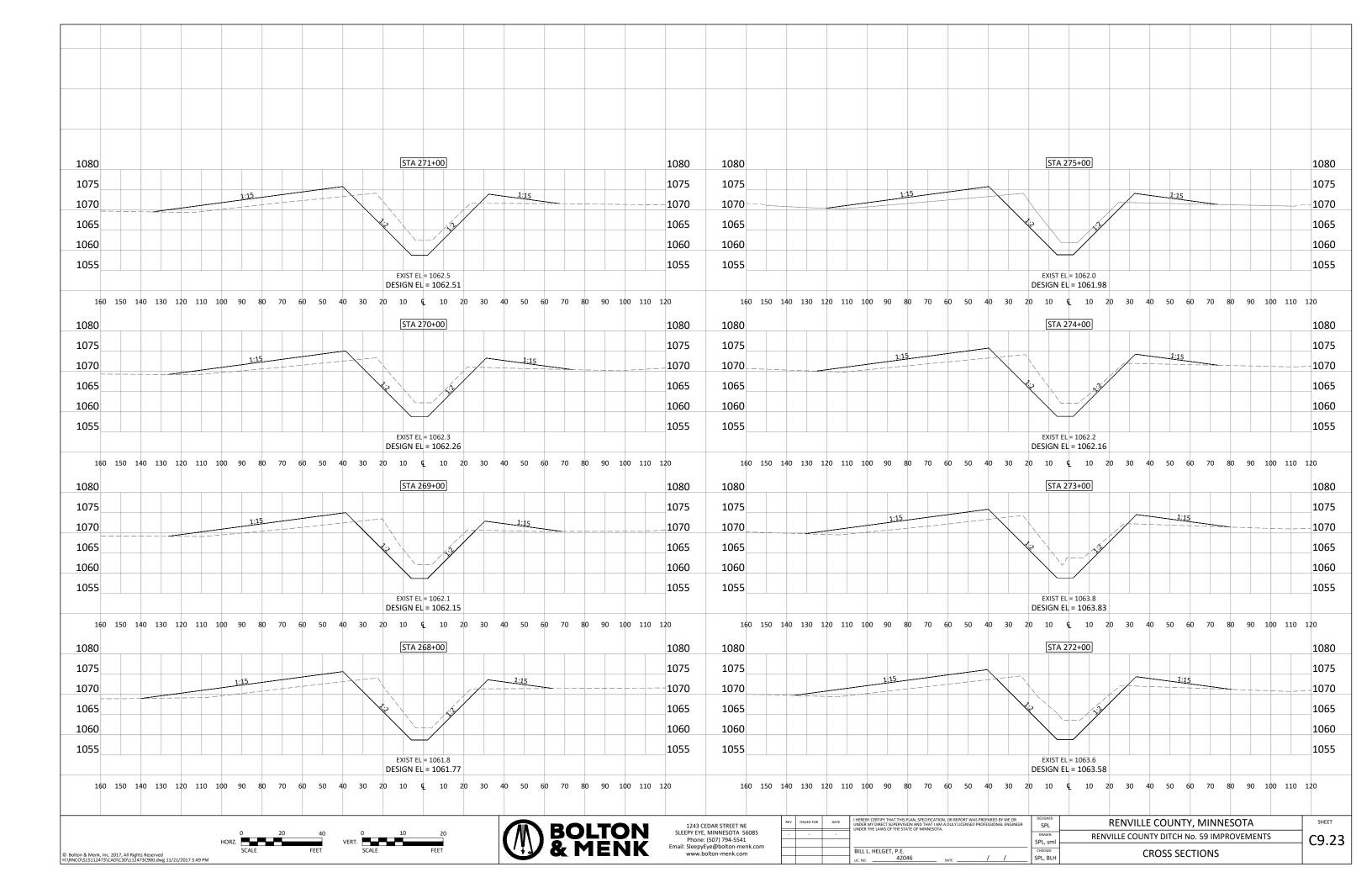


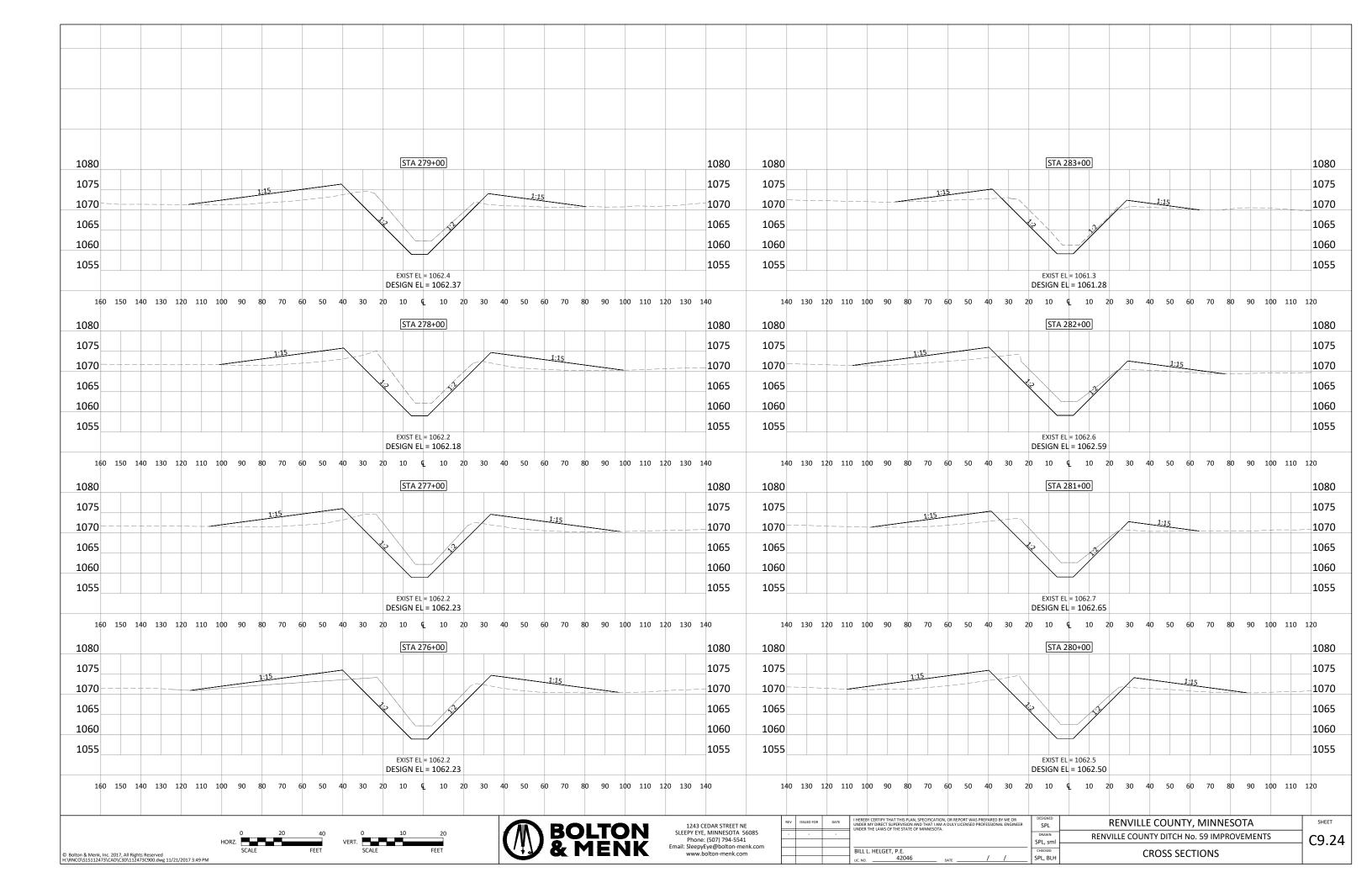


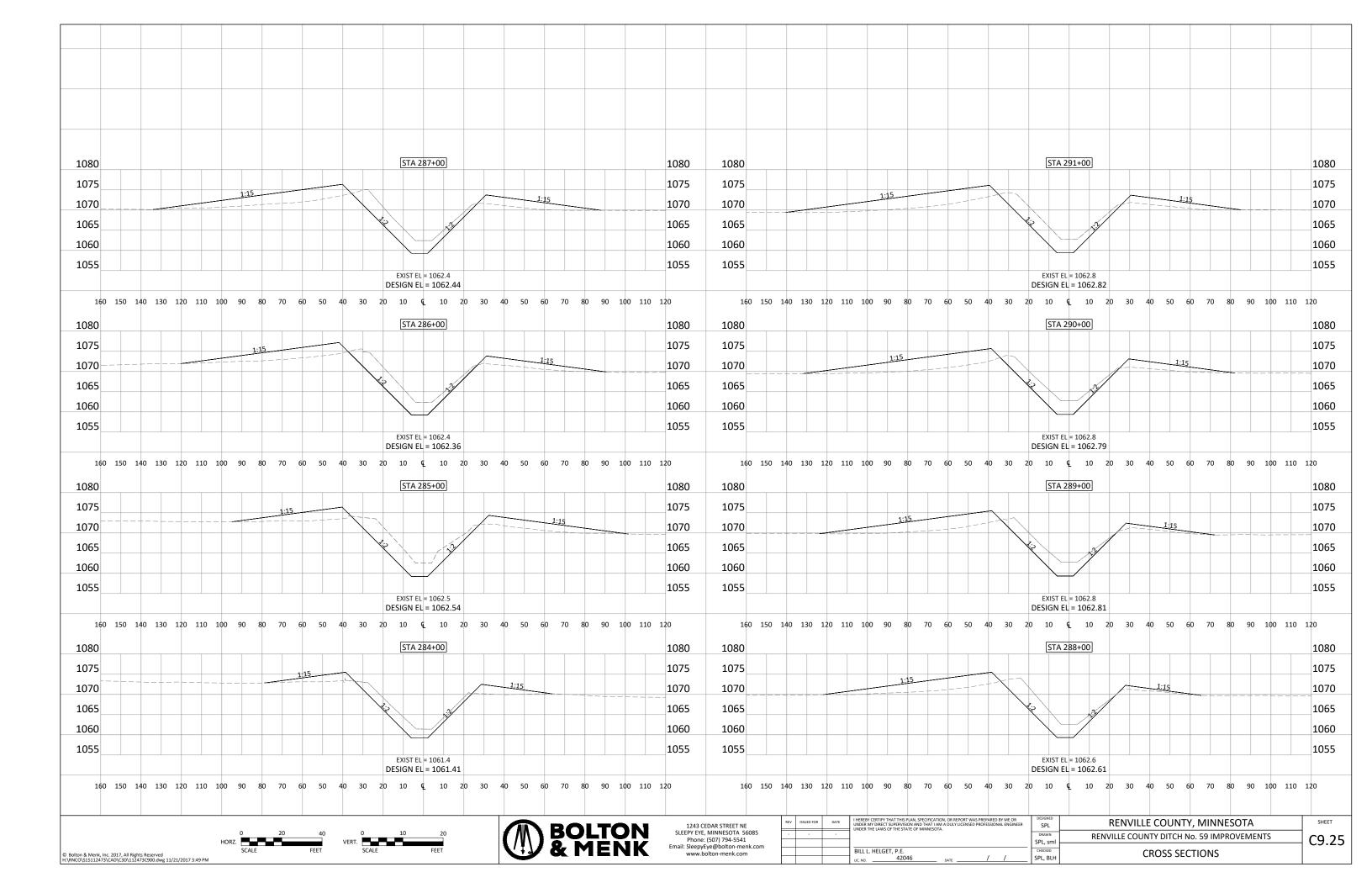


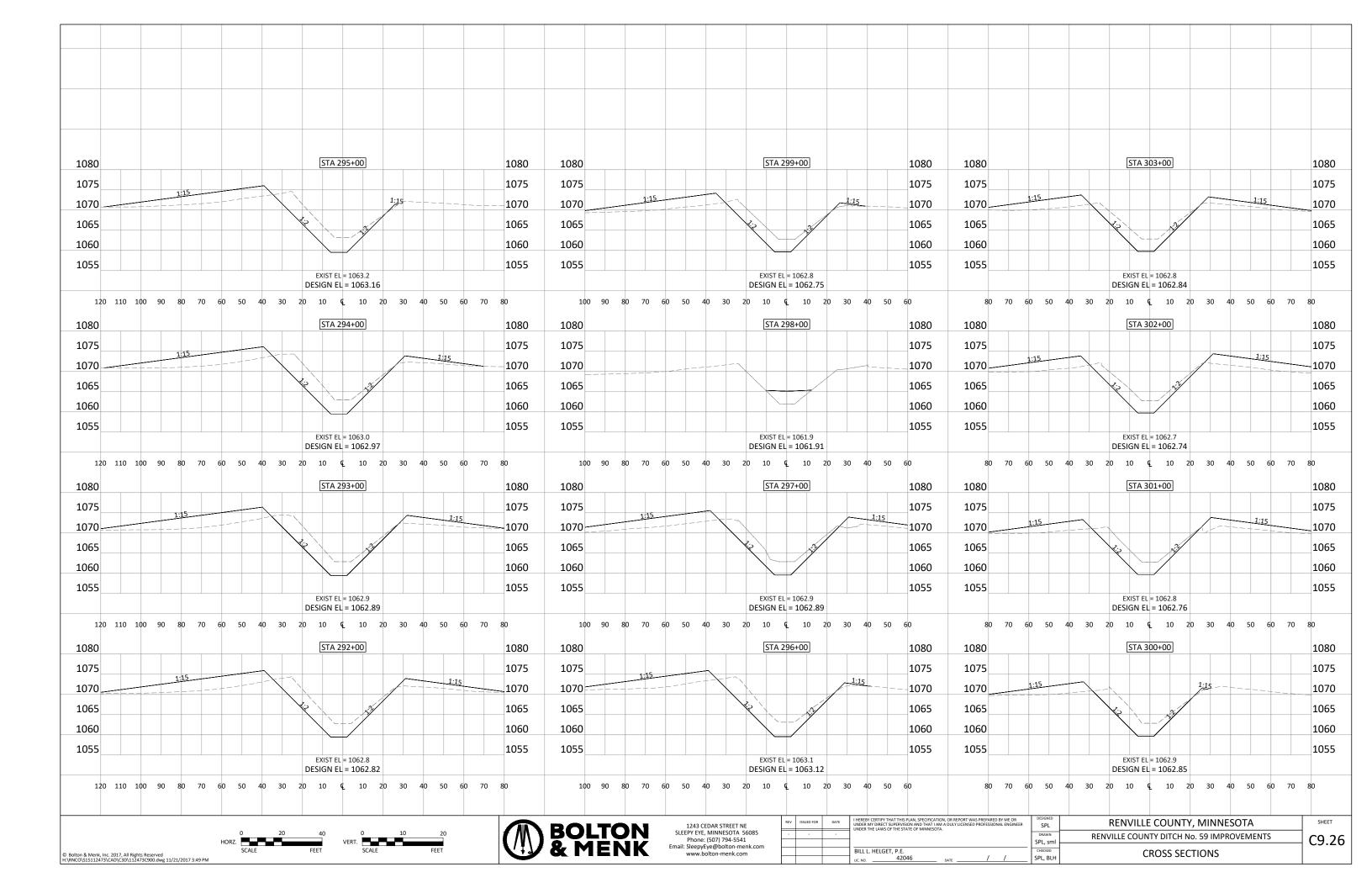


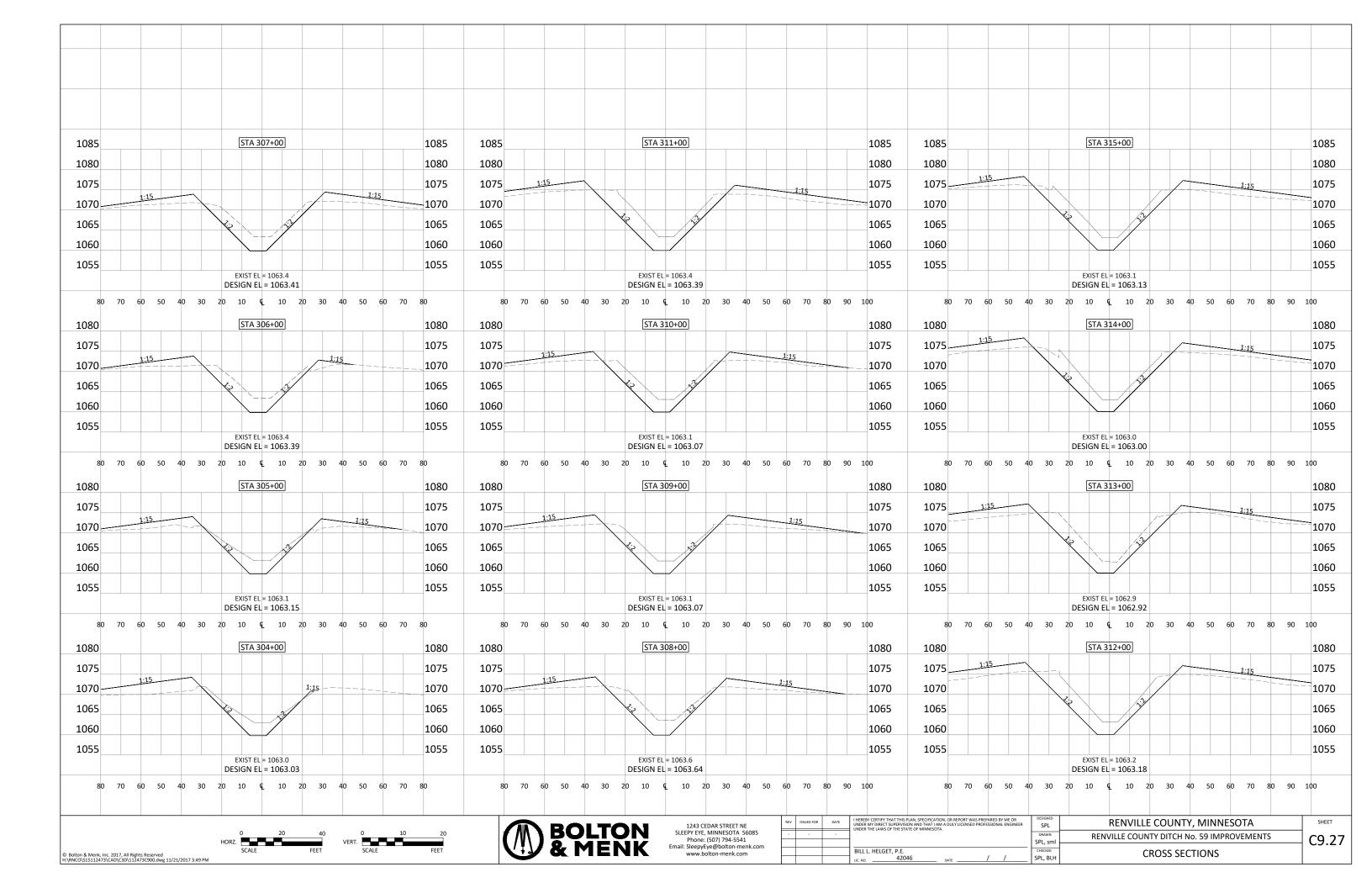


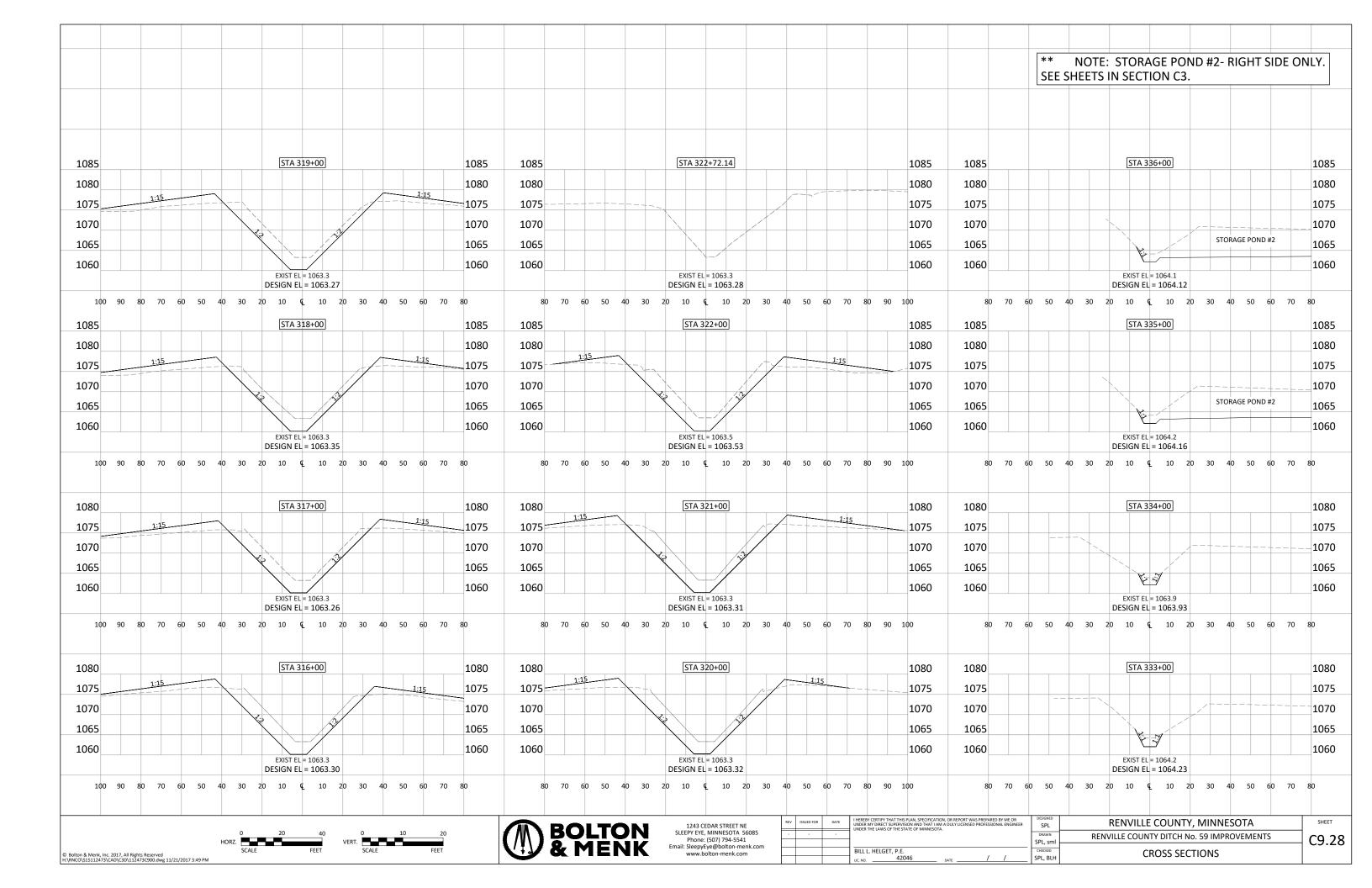


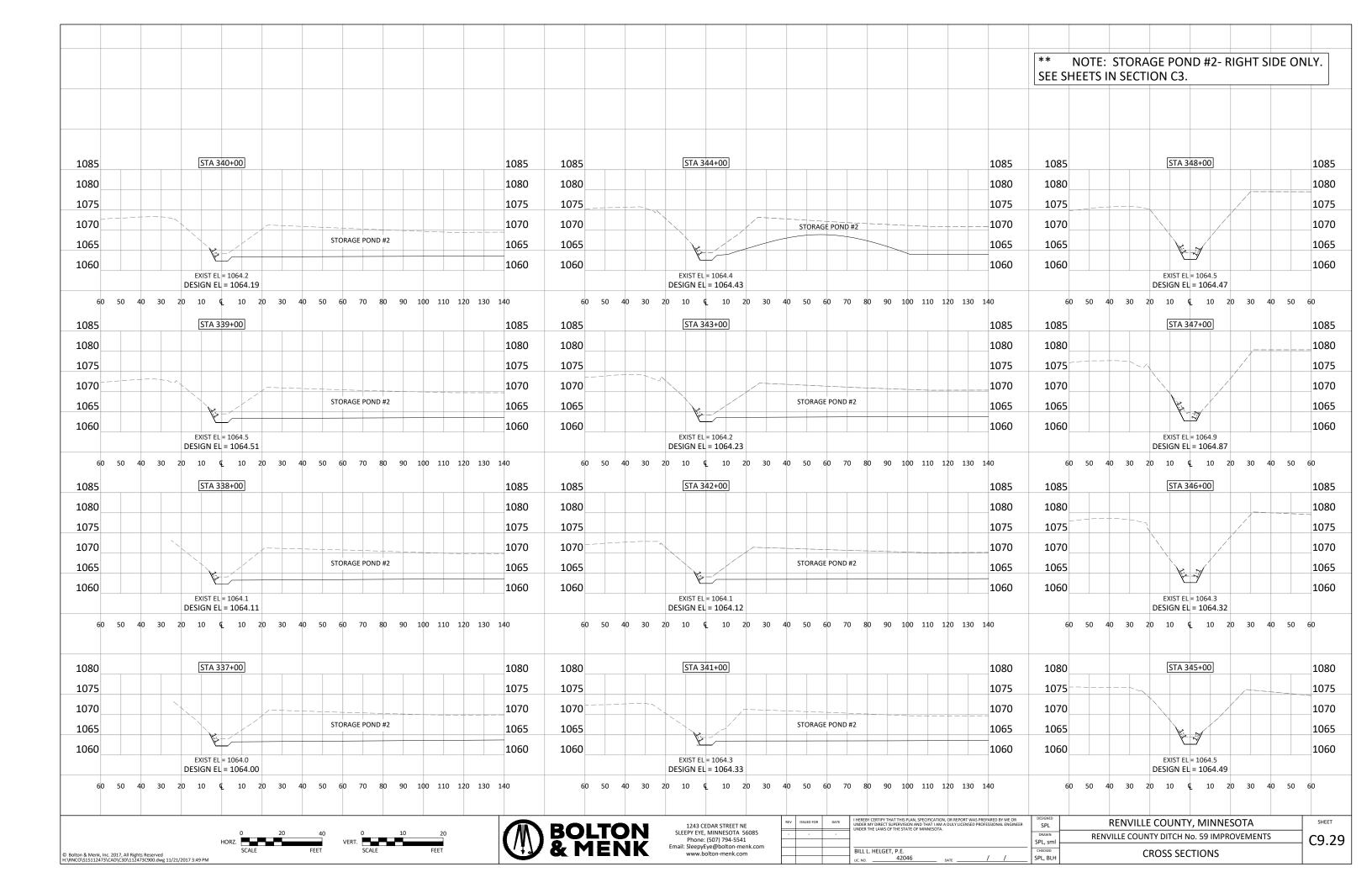


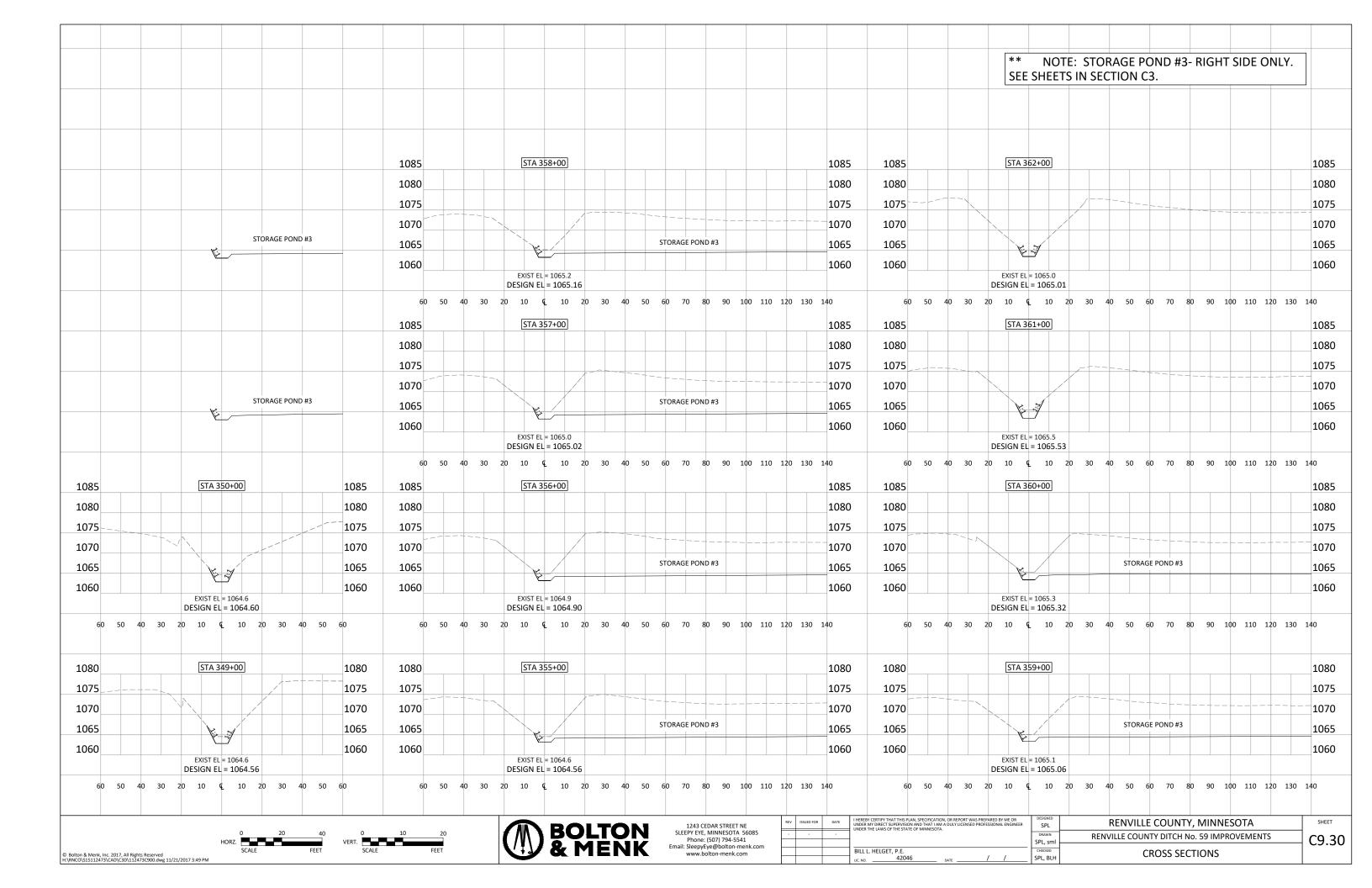


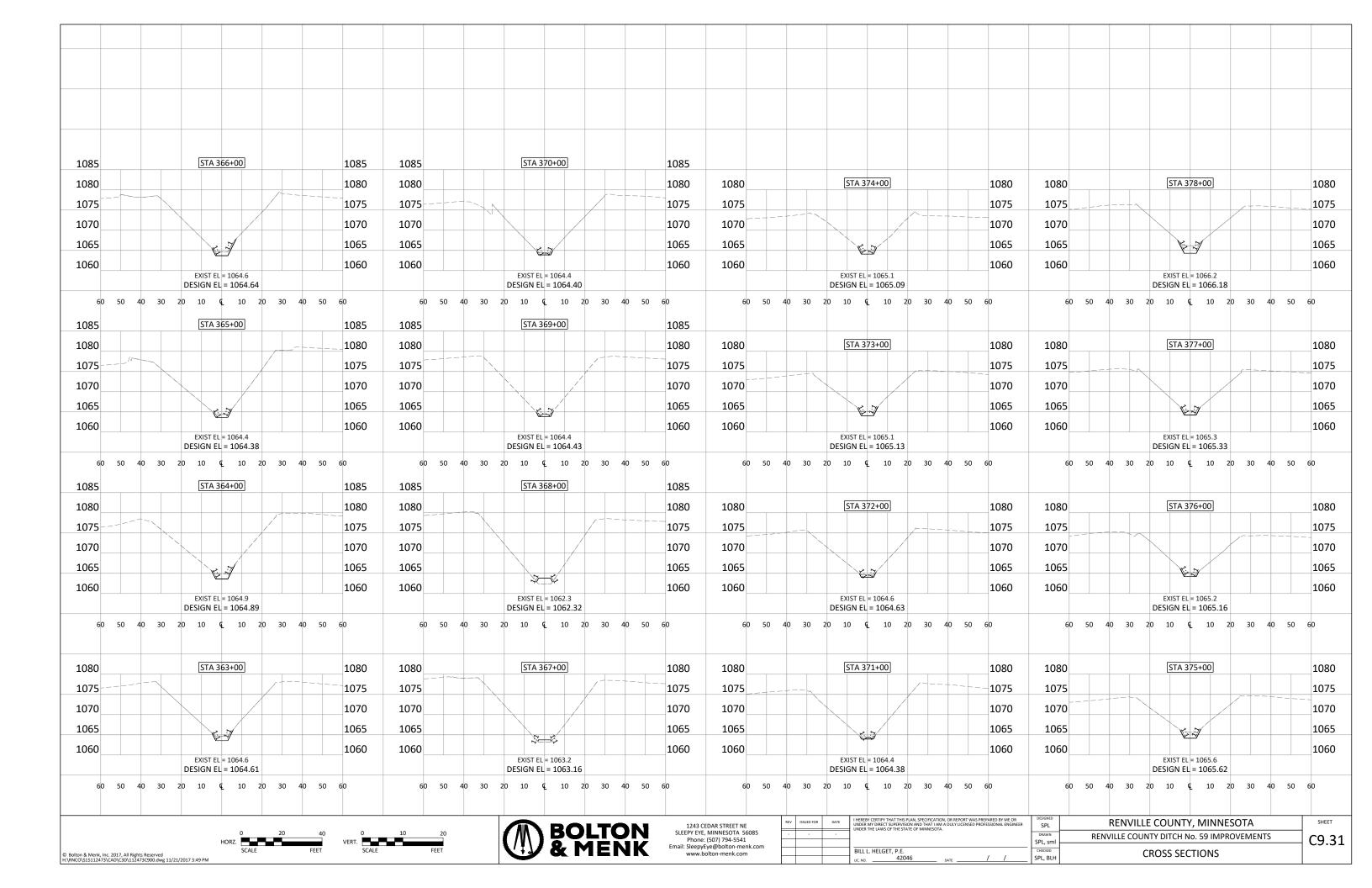


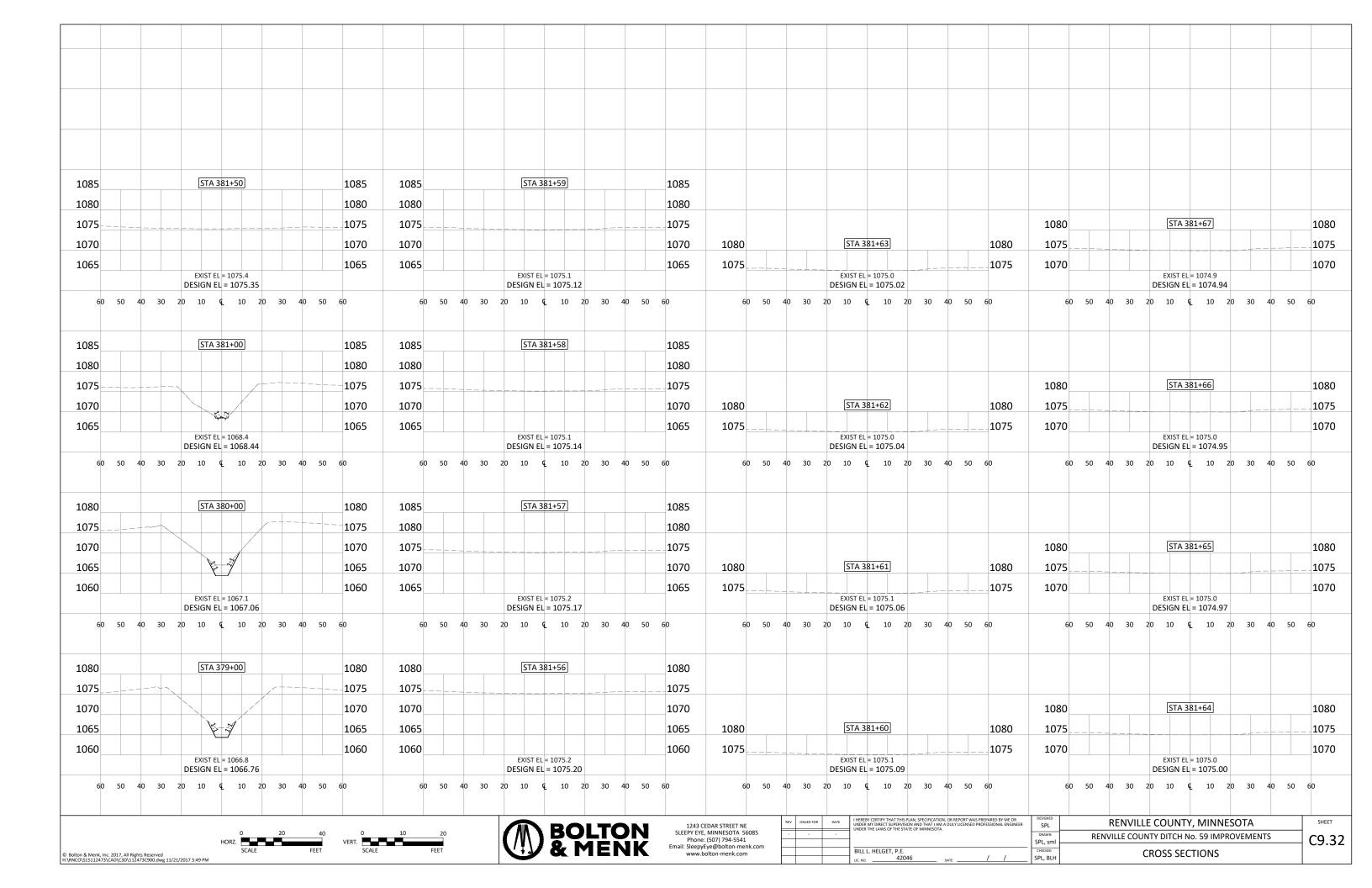














STATE OF MINNESOTA COUNTY OF RENVILLE

In Re:

Renville County Ditch No. 59, Renville County, Minnesota.

PETITION FOR IMPROVEMENT OF DRAINAGE SYSTEM

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

Petitioners respectfully represent, state and request the following:

1. Jurisdiction.

The undersigned Petitioners constitute: (1) at least 26% of the owners of the property affected by the proposed improvement; (2) at least 26% of the owners of property that the proposed improvement passes over; (3) the owners of at least 26% of the property area affected by the proposed improvement; or (4) the owners of at least 26% of the property area that the proposed improvement passes over.

2. Designation of Drainage System.

This Petition requests the improvement of the drainage system known by and designated as County Ditch No. 59 located in Renville County, Minnesota.

3. Need for Improvement.

The drainage system has insufficient capacity or needs enlarging or extending to furnish sufficient capacity or a better outlet.

4. Description of Proposed Improvement.

Attached as **Exhibit A** is a map which shows the general location of the proposed improvement. Exhibit A also depicts the approximate watershed limits in the area of the proposed improvement, the parcels over which the proposed improvement will pass, and the approximate location of the properties affected by the proposed improvement. The proposed improvement would include improvement of the Main Ditch, Branch C and various sub-branches thereof as identified below, and Branch 309 and various sublaterals thereof as designated below. The general location of the Main Ditch, Branch C and its sublaterals and Branch 309 and its sublaterials are, to the best of Petitioners' information, depicted on the attached Exhibit A.

The proposed improvement would be constructed in Sections 1 and 2 of Township 115 North, Range 36 West (Emmet Township), Sections 2, 3, 4, 5, and 6 of Township 115 North, Range 35 West (Troy Township), Sections 35 and 36 of Township 116 North, Range 36 West (Crooks Township), and Sections 27, 28, 32, 33, 34, and 35 of Township 116 North, Range 35 West (Winfield Township), all in Renville County, Minnesota.

The starting point and general course of the proposed improvement are as follows:

Main Ditch

Beginning at the outlet of the Main open ditch in the Southeast Quarter of Section 2, Township 115 North, Range 36 West, said point of beginning being approximately 2,240 feet north and 1,400 feet west of the Southeast Corner of said Section 2; thence northerly and northeasterly along the Main ditch across the Southeast and Northeast Quarters of said Section 2 and the Southeast Quarter of Section 35, Township 116 North, Range 36 West to the east line of said Section 35, said point being approximately 60 feet north of the Southeast Corner of said Section 35; thence easterly across the Southwest Quarter of Section 36-116-36, the North Half of Section 1-115-36, the North Half of Sections 6, 5, and 4 of Township 115 North, Range 35 West to the Northeast Corner of said Section 4; thence northeasterly across the Southwest, Southeast and Northeast Quarter of Section 34-116-35 and the Northwest Quarter of Section 35-116-35 to the Northwest Corner of said Section 35; thence northwesterly across the Southeast Quarter of Section 27-116-35 to the north-south ½ line, said point being approximately 1,150 feet north of the South Quarter Corner and there terminating.

Branch C

Beginning at the outlet of the Branch C tile into the Main open ditch in the Northeast Quarter of the Northeast Quarter of Section 4, Township 115 North, Range 35 West, said point of beginning being approximately 130 feet west and 130 feet south of the Northeast Corner of said Section 4, thence southeasterly and easterly generally following the current alignment of Branch C of County Ditch 59, across the Northeast Quarter of the Northeast Quarter of Section 4, across the West Half and the Southeast Quarter of the Northwest Quarter of Section 3, across the North Half of the Northeast Quarter of Section 2, across the Southwest Quarter of the Northeast Quarter of Section 2; and into the Northeast Quarter of the Southeast Quarter of Section 2 and there terminating, said point of termination being about 110 feet west and 30 feet south of the east Quarter Corner of said Section 2.

Branch C-1

Beginning at the outlet of the Branch C-1 tile into the Branch C tile in the Southwest Quarter of the Northwest Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 1,150 feet east and 1,740 feet south of the Northwest Corner of said Section 3, thence southerly and southeasterly generally following the current alignment of Branch C-1 of County Ditch 59, across the South Half of the Northwest Quarter of Section 3, and into the Northeast Quarter of the Southwest Quarter of Section 3 and there terminating, said point of termination being

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approximately 1,400 feet east and 270 feet south of the west Quarter Corner of said Section 3.

Branch C-2

Beginning at the outlet of the Branch C-2 tile into the Branch C tile in the Northwest Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 2,520 feet west and 1,280 feet south of the Northeast Corner of said Section 3, thence northerly generally following the current alignment of Branch C-2 of County Ditch 59 across the Northwest Quarter of the Northwest Quarter of Section 3; and into the Northeast Quarter of the Northwest Quarter of Section 3 and there terminating, said point of termination being approximately 2,580 feet east and 90 feet south of the Northwest Corner of said Section 3.

Branch C-3

Beginning at the outlet of the Branch C-3 tile into the Branch C tile in the Northeast Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 600 feet west and 1,070 feet south of the Northeast Corner of said Section 3, thence northeasterly generally following the current alignment of Branch C-3 of County Ditch 59 across the Northeast Quarter of the Northeast Quarter of Section 3; and into the Southeast Quarter of the Southeast Quarter of Section 34, Township 116 North, Range 35 West, said point of termination being approximately 200 feet west and 110 feet north of the Southeast Corner of said Section 34.

Branch C-3-1

Beginning at the outlet of the Branch C-3-1 tile into the Branch C-3 tile in the Northeast Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 280 feet west and 400 feet south of the Northeast Corner of said Section 3, thence easterly and southeasterly generally following the current alignment of Branch C-3-1 of County Ditch 59 across the Northeast Quarter of the Northeast Quarter of Section 3; and into the Northwest Quarter of the Northwest Quarter of Section 2 and there terminating, said point of termination being approximately 540 feet east and 670 feet south of the Northwest Corner of said Section 2.

Branch C-3-2

Beginning at the outlet of the Branch C-3-2 tile into the Branch C-3 tile in the Northeast Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 240 feet west and 30 feet south of the Northeast Corner of said Section 3, thence westerly generally following the current alignment of Branch C-3-2 of County Ditch 59 across the North Half of the Northeast Quarter of Section 3 and there terminating, said point of termination being approximately 1,960 feet west and 220 feet south of the Northeast Corner of said Section 3.

Branch C-4

Beginning at the outlet of the Branch C-4 tile into the Branch C tile in the Southwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 2,210 feet west and 1,680 feet south of the Northeast Corner of said Section 2, thence northerly and easterly generally following the current alignment of Branch C-4 of County Ditch 59 across the West Half of the Northeast Quarter of Section 2; and into the Northeast Quarter of the Northeast Quarter of Section 2 and there terminating, said point of termination being 1,120 feet west and 910 feet south of the Northeast Corner of said Section 2.

Branch C-4-1

Beginning at the outlet of the Branch C-4-1 tile into the Branch C-4 tile in the Northwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 2,210 feet west and 1,030 feet south of the Northeast Corner of said Section 2, thence northwesterly generally following the current alignment of Branch C-4-1 of County Ditch 59 across the Northwest Quarter of the Northeast Quarter of Section 2; and into the Northeast Quarter of the Northwest Quarter of Section 2 and there terminating, said point of termination being approximately 1,990 feet east and 770 feet south of the Northwest Corner of said Section 2

Branch C-4-2

Beginning at the outlet of the Branch C-4-2 tile into the Branch C-4 tile in the Northwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 1,530 feet west and 870 feet south of the Northeast Corner of said Section 2, thence southeasterly generally following the current alignment of Branch C-4-2 of County Ditch 59 across the Northwest Quarter of the Northeast Quarter of Section 2 and there terminating, said point of termination being approximately 1,400 feet west and 1,360 feet south of the Northeast Corner of said Section 2.

Branch C-5

Beginning at the outlet of the Branch C-5 tile into the Branch C tile in the Southwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 1,480 feet west and 2,540 feet south of the Northeast Corner of said Section 2, thence southerly generally following the current alignment of Branch C-5 of County Ditch 59 across the Southwest Quarter of the Northeast Quarter of Section 2; and into the Northwest Quarter of the Southeast Quarter of Section 2 and there terminating, said point of termination being approximately 1,550 feet west and 2,440 feet north of the Southeast Corner of said Section 2.

Branch 309

Beginning at the outlet of the Branch 309 tile into the Main open ditch in the Northeast Quarter of the Northwest Quarter of Section 4, Township 115 North, Range 35 West, said point of beginning being approximately 2,200 feet east and 60 feet south of the Northwest Corner of said Section 4, thence northerly and westerly generally following the current alignment of Branch 309 of County Ditch 59 across

the Northeast Quarter of the Northwest Quarter of Section 4, across the East Half and the Northwest Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, across the Northeast Quarter of the Southeast Quarter of Section 32, and into the Southeast Quarter of the Northeast Quarter of Section 32 and there terminating, said point of termination being approximately 100 feet west and 1,960 feet south of the Northeast Corner of said Section 32.

Branch 309-1

Beginning at the outlet of the Branch 309-1 tile into the Branch 309 tile in the Southeast Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, said point of beginning being approximately 2,340 feet east and 560 feet north of the Southwest Corner of said Section 33, thence northeasterly generally following the current alignment of Branch 309-1 of County Ditch 59 across the Southeast Quarter of the Southwest Quarter of Section 4, and into the Southwest Quarter of the Southeast Quarter of Section 33 and there terminating, said point of termination being approximately 2,550 feet west and 770 feet north of the Southeast Corner of said Section 33.

Branch 309-2

Beginning at the outlet of the Branch 309-2 tile into the Branch 309 tile in the Northeast Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, said point of beginning being approximately 2,550 feet east and 1,440 feet north of the Southwest Corner of said Section 33, thence northeasterly generally following the current alignment of Branch 309-2 of County Ditch 59 across the Northeast Quarter of the Southwest Quarter of Section 33, and into the Northwest Quarter of the Southeast Quarter of Section 33 and there terminating, said point of termination being approximately 1,790 feet west and 1,810 feet north of the Southeast Corner of said Section 33.

Branch 309-3

Beginning at the outlet of the Branch 309-3 tile into the Branch 309 tile in the Northeast Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, said point of beginning being approximately 2,550 feet east and 1,440 feet north of the Southwest Corner of said Section 33, thence northerly across the Northeast Quarter of the Southwest Quarter of Section 33, across the East Half of the Northwest Quarter of Section 33, across the Northeast Quarter of the Northeast Quarter of the Northeast Quarter of Section 33, and into the Southwest Quarter of the Southeast Quarter of Section 28 and there terminating, said point of termination being approximately 2,350 feet west and 110 feet north of the Southeast Corner of said Section 28.

Set forth on **Exhibit B** is a list of the 40-acre tracts or government lots that the proposed improvement would pass over, together with the names and addresses of the owners of those tracts.

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5. Public Utility and Health.

The proposed improvement will be of public utility and will promote the public health.

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 improvement proceedings are dismissed.

7. Cost Bond.

One or more petitioners shall cause a bond to be filed in the amount of at least \$10,000.00 payable to the drainage authority. The bond will be conditioned to pay the costs incurred if the proceedings are dismissed or if a contract is not awarded to construct the proposed improvement described in the petition.

WHEREFORE, the Petitioners respectfully request the following:

- a. That the drainage authority accept this Petition, review it and determine that it is legally adequate; and
- b. That the drainage authority appoint an engineer for purposes of the proposed improvement and direct the engineer to prepare an engineer's preliminary report for the proposed improvement, including allowing the engineer to analyze other potential routes for the proposed improvement.

Dated this 14th day of December, 2016.

Jeff C. Braegelmann #174701

jbraegelmann@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]

Name of Pet	itioner(s) (please print or type):				
Gary	Verzalik				
Ownership (X	(check one): Individual Co-Owners (# of co-owners: Partner (name of partnership: Corporation or limited lial Trust (complete name of trust Other (explanation:	company			
Statement of	f Authority:	-			
capa	undersigned states and represent city, he or she has the authority oration, limited liability company	to execute on	behalf of the	_	
	above-named Petitioner(s) ow at will pass over or which is affect				proposed
	Tract Description	Section	Township	Range	
SE1/4	NW1/4	2	115	35	
SW¹⁄	4 NE ¹ / ₄	2	115	35	
NW!	/4 NE ¹ /4	- 2	115	35	
Part	of the NE¼ NW¼	2	115	35	
D. 1	11 11 2016		М	1/	16

Name of Petitioner(s) (please print or type)):											
Carol J. Lippert												
Ownership (check one):												
Partner (name of partnersh	ip:)										
)	-									
X Trust (complete name of tr	rust:)								
Other (explanation:	-)								
capacity, he or she has the authori corporation, limited liability compa	Carol J. Lippert nership (check one): Individual Co-Owners (# of co-owners:) Partner (name of partnership:) Corporation or limited liability company (name of corporation or LLC: X Trust (complete name of trust:) Other (explanation:) ement 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 rovement will pass over or which is affected by the proposed improvement. Tract Description Section Township Range SW¼ SE¼ 28 116 35											
				proposed								
Tract Description	<u>Section</u>	<u>Township</u>	Range									
SW1/4 SE1/4	28	116	35									
Dated:	Carol J. Lin	L. Lygist,	Trustee	- S								

Name of Petitioner(s) (please print or type): Aakre Family Farms, LLC Ownership (check one): ____ Individual __ Co-Owners (# of co-owners: __) Partner (name of partnership: X Corporation or limited liability company (name of corporation or LLC: Aakre Family Farms, 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 Township Section Range NW1/4 NE1/4 35 3 115 Part of the NE¹/₄ NE¹/₄ 3 35 115 Dated: /1-9-/6

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

Dated: 11/9/16

Wat Family Farms LC										
Trust (complete name of trust:	Wat Family lity compa	ny (name of co	rporation or							
Statement of Authority:										
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							
Part of NE¼ SW¼	33	116	35							
Part of NW1/4 SW1/4	33	116	35							
SE1/4 NW1/4	33	116	35							
Part of NE ¹ /4 NW ¹ /4	33	116	35							
	WAT	FAMILY FA	RMS LL	٥						

1415 E. MAIN CTREET RICHMOND, UA 23219

EAWARD D. MITCHELL, MANAGER OF DEVON LC, MANAGER

Name of Petitioner(s) (please print or type):				
James Zenk				
Ownership (check one): X Individual Co-Owners (# of co-owners: Partner (name of partnership: Corporation or limited liabi Trust (complete name of trust: Other (explanation:	llity company	_)		
Statement of Authority:				
The undersigned states and represents capacity, he or she has the authority to corporation, limited liability company,	execute on be trust or other su	ehalf of the ach entity.	respective pa	rtnership,
The above-named Petitioner(s) own improvement will pass over or which is affected				proposed
Tract Description	Section	Township	Range	
SW1/4 NW1/4	35	116	35	
NW ¹ / ₄ NW ¹ / ₄	35	116	35	
Dated: <u>Duc, </u>	James Zenk	u B	ink	

Individual X Co-Owners (# of co-owners: 2) Partner (name of partnership: Corporation or limited liability company (name of corporation or LLC: Trust (complete name of trust: Other (explanation: 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 SW¼ NW¾ 3 115 35										
Ownership (check one):										
	2)									
	Partner (name of partnership:)									
Corporation or limited liab										
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,										
Tract Description	Section	Township	Range							
SW1/4 NW1/4	3	115	35							
Dated: $\frac{12-3-16}{2}$	Daniel W. R	W Foun	In I							
Dated: 12-3-16	Cheryl Raue	ALCU Inhorst	uenhorst							

company (name of corporation or LLC											
	1										
)										
Daniel W. Rauenhorst Parthip (check one): X											
	d										
ection Township Range											
4 115 35											
4 115 35											
ani D w Fouenherst	_										
	if he or she is executing in a representative ecute on behalf of the respective partnership or other such entity. e following tract(s) which the proposed the proposed improvement. ection Township Range 4 115 35										

Name of Petitio	ner(s) (please print or type):
Robb J.	Zenk
Megan (
Ownership (che	ck one):
	Individual
X	Co-Owners (# of co-owners: <u>2</u>)
	Partner (name of partnership:)
	Corporation or limited liability company (name of corporation or LLC:
	Trust (complete name of trust:
	Other (explanation:)
Statement of Au	thority:
capacity	ersigned states and represents that if he or she is executing in a representative, he or she has the authority to execute on behalf of the respective partnership, ion, limited liability company, trust or other such entity.
	ove-named Petitioner(s) owns the following tract(s) which the proposed ill pass over or which is affected by the proposed improvement.
	<u>Tract Description</u> <u>Section</u> <u>Township</u> <u>Range</u>
Part of S	E¼ NE¼ 34 116 35
Dated: 12-2	8-16 Robb J. Zenk
Dated: 12 8	Megan C. Zenk

Name of Petitioner(s) (please print or type):			
Ruth Heller				
Naomi Endter				
Ownership (check one):				
Individual				
X Co-Owners (# of co-owners	rs: <u>2</u>)			
Partner (name of partnersh)
Corporation or limited)		
Trust (complete name of to	rust:			
Other (explanation:)
The undersigned states and repres capacity, he or she has the author corporation, limited liability compatible. The above-named Petitioner(s) improvement will pass over or which is affirm	ity to execute on any, trust or other owns the follow	behalf of the r such entity. wing tract(s)	espective par	tnership,
Tract Description	Section	Township	Range	
NE1/4 SE1/4	2	115	35	
SE1/4 NE1/4	2	115	35	
Part of NE1/4 NE1/4	2	115	35	
Dated: 11/15/2016	Ruth Heller	Waomi Endi	ter	8

By: Roger Heller, Power of Attorney

EXHIBIT A

[Map – attached]

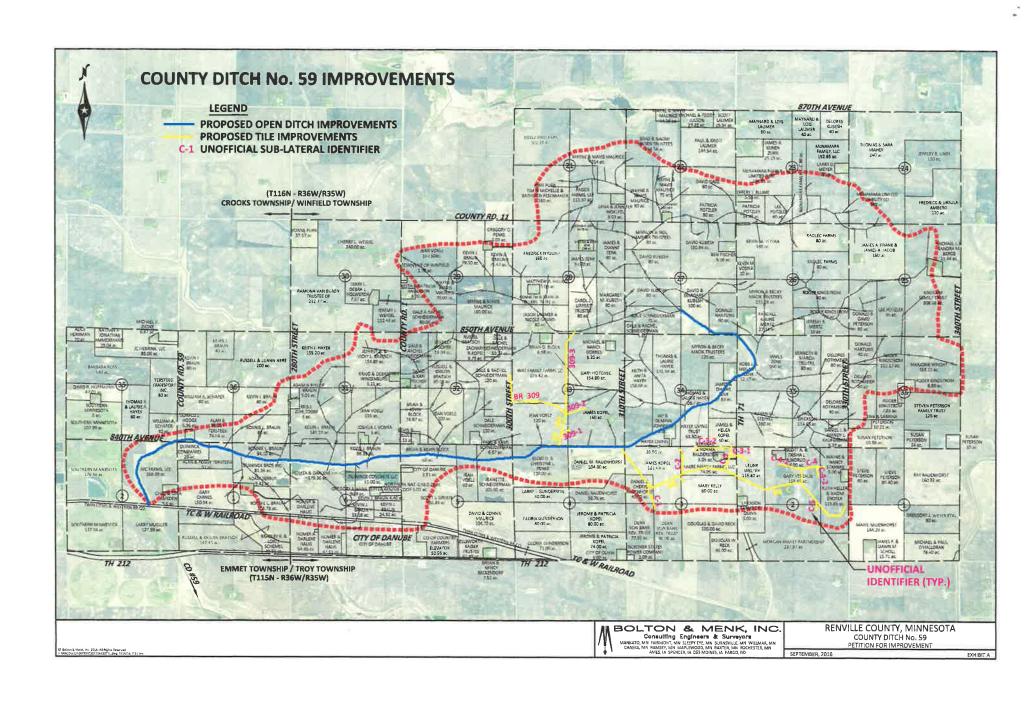
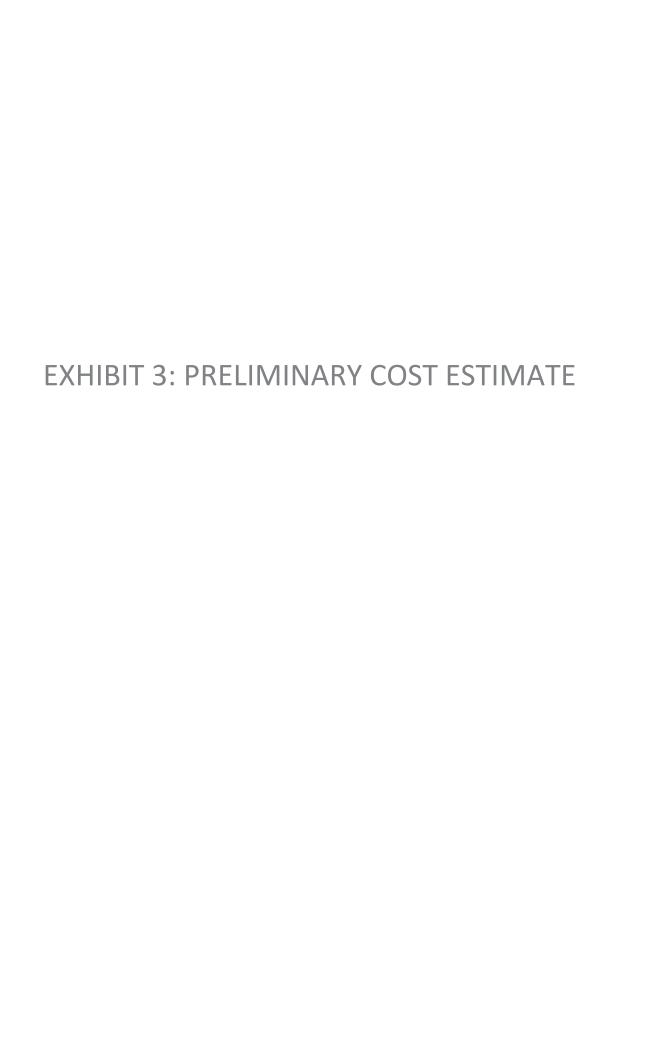


EXHIBIT B

[Tract Descriptions - attached]

	Location	Owner	Address	PID No.	Description	Section	Township	Range
1	Main Ditch	Larry Mueller	26826 US Hwy 212, Danube, MN 56230	10-00070-00	NW 1/4 SE 1/4	2	115	36
2	Main Ditch	WC Farms, LLC	18105 31st Ave. N, Plymouth, MN 55447	10-00060-00	SW 1/4 NE 1/4	2	115	36
3	Main Ditch	WC Farms, LLC	18105 31st Ave. N, Plymouth, MN 55447	10-00060-00	NW 1/4 NE 1/4	2	115	36
4	Main Ditch	WC Farms, LLC	18105 31st Ave. N, Plymouth, MN 55447	10-00060-00	NE 1/4 NE 1/4	2	115	36
5	Main Ditch	William A. Schafer	84213 270th St., Renville, MN 56284	enville, MN 56284 09-00480-00 SE 1/4 St , MN 56277 09-00500-00 Pt SW 1/4 St , SE., Renville, MN 56284 09-00570-00 Pt SW 1/4 St , MN 56281 10-00050-00 Pt NW 1/4 St , MN 56277 10-00040-00 Pt NE 1/4 N , MN 56277 10-00050-00 Pt NE 1/4 N , MN 56230 10-00020-00 Pt NW 1/4 N , MN 56230 10-00020-00 Pt NW 1/4 N , MN 56281 10-00021-00 Pt NW 1/4 N , MN 56281 10-00021-00 Pt NW 1/4 N , MN 56230 24-00170-00 NW 1/4 N , MN 56230 24-00170-00 NE 1/4 N		35	116	36
6	Main Ditch	Alan & Peggy Tersteeg	PO Box 163, Olivia, MN 56277	09-00500-00	Pt SW 1/4 SW 1/4	36	116	36
7	Main Ditch	Donald J Hodge	110 Chestnut Ave SE., Renville, MN 56284	09-00570-00	Pt SW 1/4 SW 1/4	36	116	36
8	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00050-00	Pt NW 1/4 NW 1/4	1	115	36
9	Main Ditch	Alan & Peggy Tersteeg	PO Box 163, Olivia, MN 56277	10-00040-00	Pt NE 1/4 NW 1/4	1	115	36
10	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00050-00	Pt NE 1/4 NE 1/4	1	115	36
11	Main Ditch	Bonnie L. Braun	80197 Co Rd 1, Danube, MN 56230	10-00020-00	Pt NW 1/4 NE 1/4	1	115	36
12	Main Ditch	Bonnie L. Braun	80197 Co Rd 1, Danube, MN 56230	10-00020-00	Pt NE 1/4 NE 1/4	1	115	36
13	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00021-00	Pt NW 1/4 NE 1/4	1	115	36
14	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00021-00	Pt NE 1/4 NE 1/4	1	115	36
15	Main Ditch	Homer & Darlene Haug	PO Box 356, Danube, MN 56230	24-00170-00	NW 1/4 NW 1/4	6	115	35
16	Main Ditch	Homer & Darlene Haug	PO Box 356, Danube, MN 56230	24-00170-00	NE 1/4 NW 1/4	6	115	35
17	Main Ditch	Kevin J. Braun	80197 Co. Rd 1, Danube, MN 56230	24-00160-00	NW 1/4 NE 1/4	6	115	35
18	Main Ditch	Kevin J. Braun	80197 Co. Rd 1, Danube, MN 56230	24-00160-00	NE 1/4 NE 1/4	6	115	35
19	Main Ditch	Brian Block & Kevin Block	30325 850th Ave., Danube, MN 56230	24-00130-00	NW 1/4 NW 1/4	5	115	35
20	Main Ditch	Brian Block & Kevin Block	30325 850th Ave., Danube, MN 56230	24-00130-00	NE 1/4 NW 1/4	5	115	35
21	Main Ditch	Jean Voelz	29438 840th Ave., Danube MN 56230	24-00110-00	Pt NW 1/4 NE 1/4	5	115	35
22	Main Ditch	Jeanette Schneiderman	29688 840th Ave., Danube, MN 56230	24-00120-00	Pt NW 1/4 NE 1/4	5	115	35
23	Main Ditch	Jeanette Schneiderman	29688 840th Ave., Danube, MN 56230	24-00120-00	NE 1/4 NE 1/4	5	115	35
24	Main Ditch	Eloid O & Christine Penke	29677 800th Avenue, Danube, MN 56230	24-00100-00	NW 1/4 NW 1/4	4	115	35
25	Main Ditch; Branch 309	Eloid O & Christine Penke	29677 800th Avenue, Danube, MN 56230	24-00100-00	NE 1/4 NW 1/4	4	115	35
26	Main Ditch; Branch 309; Branch 309-1	Jean Voelz	29438 840th Ave., Danube, MN 56230	27-01040-00	SE 1/4 SW 1/4	33	116	35
27	Main Ditch; Branch 309-1	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, MN 56277	27-01060-00	SW 1/4 SE 1/4	33	116	35
28	Main Ditch	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, MN 56277	27-01060-01	SE 1/4 SE 1/4	33	116	35
29	Main Ditch	Daniel W. Rauenhorst	81961 320th St., Olivia, MN 56277	24-00041-00	NW 1/4 NE 1/4	4	115	35
30	Main Ditch; Branch C	Daniel W. Rauenhorst	81961 320th St., Olivia, MN 56277	24-00041-00	NE 1/4 NE 1/4	4	115	35
31	Main Ditch; Branch C	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, MN 56277	24-00010-00	NW 1/4 NW 1/4	3	115	35
32	Main Ditch	Keith J. & Anita M. Hayek	1422 University Ave. NE, Minneapolis, MN 55413	27-01070-00				35
33	Main Ditch	Hayek Living Trust c/o Mark & Ruth Hayek	3300 149th Ave., Ham Lake, MN 55304	27-01750-00	Pt SW 1/4 SW 1/4	/4 SE 1/4 33 116 L/4 NE 1/4 4 115 /4 NE 1/4 4 115 /4 NW 1/4 3 115 1/4 SW 1/4 34 116 1/4 SW 1/4 34 116		35
34	Main Ditch	Hayek Living Trust c/o Mark & Ruth Hayek	3300 149th Ave., Ham Lake, MN 55304	27-01750-00	Pt SE 1/4 SW 1/4	34	116	35
35	Main Ditch	Jay L. & Deannea L. Johnson	31406 840th Ave., Olivia, MN 56277	27-01101-00	Pt SE 1/4 SW 1/4	34	116	35
36	Main Ditch	Thomas R. and Laurie A. Hayek	26158 Co. Rd. 4, Renville, MN 56284	27-01100-00	Pt SE 1/4 SW 1/4	34	116	35
37	Main Ditch	Hayek Living Trust c/o Mark & Ruth Hayek	3300 149th Ave., Ham Lake, MN 55304	27-01751-00	SW 1/4 SE 1/4	34	116	35
38	Main Ditch	Hayek Living Trust c/o Mark & Ruth Hayek	3300 149th Ave., Ham Lake, MN 55304	27-01751-00	Pt NW 1/4 SE 1/4	34	116	35
39	Main Ditch	Thomas R. and Laurie A. Hayek	26158 Co. Rd. 4, Renville, MN 56284	27-01102-00	Pt NW 1/4 SE 1/4	34	116	35
40	Main Ditch	James & Dianne Zenk	84691 US Hwy 71, Danube, MN 56230	27-01770-00	NE 1/4 SE 1/4	34	116	35
41	Main Ditch	James & Dianne Zenk	84691 US Hwy 71, Danube, MN 56230	27-01770-00	Pt. SE 1/4 NE 1/4	34	116	35
42	Main Ditch	Robb J. & Megan C. Zenk	84691 US Hwy 71, Danube, MN 56230	27-01771-00	Pt. SE 1/4 NE 1/4	34	116	35
43	Main Ditch	James Zenk	3300 149th Ave., Ham Lake, MN 55304 27-01751-00 SW 1/4 SE 1/4 Hayek t 3300 149th Ave., Ham Lake, MN 55304 27-01751-00 Pt NW 1/4 SE 1/4 Hayek urie A. Hayek 26158 Co. Rd. 4, Renville, MN 56284 27-01102-00 Pt NW 1/4 SE 1/4 lenk 84691 US Hwy 71, Danube, MN 56230 27-01770-00 NE 1/4 SE 1/4 lenk 84691 US Hwy 71, Danube, MN 56230 27-01770-00 Pt. SE 1/4 NE 1/4		35	116	35	
44	Main Ditch	James Zenk	84691 US Hwy 71, Danube, MN 56230	27-01800-00	NW 1/4 NW 1/4	35	116	35

	Location	Owner	Address	PID No.	Description	Section	Township	Range
45	Main Ditch	Donald L. Hartung	14941 St. Hwy 4, Cosmos, MN 56228	27-01730-00	SE 1/4 SE 1/4	27	116	35
46	Main Ditch	David & Margaret Kubesh	85554 310th St., Danube, MN 56230	27-01720-00	SW 1/4 SE 1/4	27	116	35
47	Branch C; Branch C-1	Daniel & Cheryl Rauenhorst	81961 320th St., Olivia, MN 56277	24-00030-00	SW 1/4 NW 1/4	3	115	35
48	Branch C	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, MN 56277	24-00010-00	SE 1/4 NW 1/4	3	115	35
49	Branch C; Branch C-2; Branch C-3-2	Aakre Family Farms, LLC C/O Sally Jo Aakre	80664 350th St., Olivia, MN 56277	24-01130-00	NW 1/4 NE 1/4	3	115	35
50	Branch C; Branch C-3; Branch C-3-1; Branch C-3-2	Aakre Family Farms, LLC C/O Sally Jo Aakre	80664 350th St., Olivia, MN 56277	24-01130-00	Pt. NE 1/4 NE 1/4	3	115	35
51	Branch C; Branch C-3-1;	Leone Welter C/O Virginia Hartmann	331 2nd Ave. SW, Forest Lake, MN 55025	24-01110-00	NW 1/4 NW 1/4	2	115	35
52	Branch C	Leone Welter C/O Virginia Hartmann	331 2nd Ave. SW, Forest Lake, MN 55025	24-01110-00	Pt SW 1/4 NW 1/4	2	115	35
53	Branch C	Gary Verzalik	15937 Cascade Path, Rosemount, MN 55068	24-01090-00	SE 1/4 NW 1/4	WW 1/4 2		35
54	Branch C; Branch C-4; Branch C-5	Gary Verzalik	15937 Cascade Path, Rosemount, MN 55068	24-01090-00	SW 1/4 NE 1/4	2	115 115	35
55	Branch C	Ruth Heller & Naomi Endter, TR C/O Roger Heller	PO Box 26, Olivia, MN 56277	24-01100-00	NE 1/4 SE 1/4	2	115	35
56	Branch C-1	Dean Von Bank & Susan Von Bank Revocable Trust	725 Forrest Road, Glenview, IL 60025	24-00020-00	NE 1/4 SW 1/4	3	115	35
57	Branch C-3	Bernard & Norma Balderston	509 10th St. S, Olivia, MN 56277	24-01131-00	Pt. NE 1/4 NE 1/4	3	115	35
58	Branch C-3	James & Helen Kopel	1107 Park Ave W, Olivia, MN 56277	27-01780-00	SE 1/4 SE 1/4	34	116	35
59	Branch C-4; Branch C-4-1; Branch C-4-2	Gary Verzalik	15937 Cascade Path, Rosemount, MN 55068	24-01090-00	NW 1/4 NE 1/4	2	115	35
60	Branch C-4; Branch C-4-1; Gary Verzalik Branch C-4-2		PO Box 26, Olivia, MN 56277	24-01100-00	Pt NE 1/4 NE 1/4	2	115	35
61	Branch C-4-1	Gary Verzalik	15937 Cascade Path, Rosemount, MN 55068	24-01090-00	Pt NE 1/4 NW 1/4	2	115	35
62	Branch C-5	Morgan Family Partnership C/O Patrick & Rita Morgan	PO Box 107, Elmore, MN 56027	24-01120-00	NW 1/4 SE 1/4	2	115	35
63	Branch 309; Branch 309-2; Branch 309-3	Jean Voelz	29438 840th Ave., Danube, MN 56230	27-01040-00	Pt. NE 1/4 SW 1/4	33	116	35
64	Branch 309; Branch 309-3	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	Pt. NE 1/4 SW 1/4	33	116	35
65	Branch 309	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	Pt. NW 1/4 SW 1/4	33	116	35
66	Branch 309	Dale & Rachel Schneiderman	31034 850th Ave., Danube, MN 56230	27-00981-00	NE 1/4 SE 1/4	32	116	35
67	Branch 309	Dale & Rachel Schneiderman	31034 850th Ave., Danube, MN 56230	27-00981-00	SE 1/4 NE 1/4	32	116	35
68	Branch 309-2	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W., Olivia, MN 56277	27-01060-00	NW 1/4 SE 1/4	33	116	35
69	Branch 309-3	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	SE 1/4 NW 1/4	33	116	35
70	Branch 309-3	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	Pt. NE 1/4 NW 1/4	33	116	35
71	Branch 309-3	Gary Hotovec ETAL	87308 US Hwy 71, Danube, MN 56230	27-01050-00	NW 1/4 NE 1/4	33	116	35
72	Branch 309-3	Carol J. Lippert, Trustee	89118 Co. Rd 1, Danube, MN 56230	27-00801-00	SW 1/4 SE 1/4	28	116	35



PRELIMINARY CONSTRUCTION COST ESTIMATE

County Ditch No. 59 Improvement

Renville County, MN
FILENAME: H:\RNCO\S15112473\2_Preliminary\A_Calculations\[112473 Preliminary Cost Estimate.xlsx]Engineers Estimate

DATE: January 9, 2018

						CD 59 I	MPROVEMENT	CD 59 II	MPROVEMENT	CD 59 IN	IPROVEMENT	CD 59 IN	PROVEMENT	CD 59 II	MPROVEMENT	CD 59 II	MPROVEMENT
ITEM			UNIT		TOTAL		OPEN DITCH		E STORAGE #1		STORAGE #2		STORAGE #3		ANCH 309		RANCH C
NO.	ITEM	UNIT	PRICE	EST. QUANT.	AMOUNT	EST. QUANT.	AMOUNT	EST. QUANT.	AMOUNT	EST. QUANT.	AMOUNT	EST. QUANT.	AMOUNT	EST.	AMOUNT	EST.	AMOUNT
1	Mobilization & Traffic Control	Lump Sum	\$110,000.00	1.00	\$110,000.00	0.35	\$38,500.00	0.23	\$25,300.00	0.08	\$8,800.00	0.06	\$6,600.00	0.10	\$11,000.00	0.18	\$19,800.0
2	Exploratory Excavation	Hour	\$200.00	65	\$13,000.00	10	\$2,000.00	5	\$1,000.00	5	\$1,000.00	5	\$1,000.00	20	\$4,000.00	20	\$4,000.0
	Common Excavation (P)	Cubic Yard	\$2.50	715,000	\$1,787,500.00	210,000	\$525,000.00	325,000	\$812,500.00	105,000	\$262,500.00	75,000	\$187,500.00				
	Ditch Cleanout	Station	\$200.00	55	\$11,000.00	55	\$11,000.00										
	Salvage Pipe Culvert	Linear Foot	\$15.00	388	\$5,820.00	388	\$5,820.00										
	Wearing Course Mixture (SPWEA230B)	Ton	\$110.00 \$110.00	110 110	\$12,100.00 \$12,100.00	110 110	\$12,100.00 \$12,100.00										
	Non-wearing Course Mixture (SPNWB230B) Aggregate Surfacing, Class 1	Ton Ton	\$110.00	110	\$12,100.00	110	\$12,100.00										
	Aggregate Base, Class 5	Ton	\$20.00	875	\$17,500.00	800	\$16,000.00							25	\$500.00	50	\$1,000.0
	Pipe Bedding Material	Ton	\$25.00	3,000	\$75,000.00	1,500	\$37,500.00								700000	1,500	
	6" Tile Inlet	Each	\$250.00	10	\$2,500.00	5	\$1,250.00									5	\$1,250.0
	8" Tile Inlet	Each	\$260.00	35	\$9,100.00	15	\$3,900.00							5	\$1,300.00	15	\$3,900.0
	10" Tile Inlet	Each	\$300.00	10	\$3,000.00	10	\$3,000.00										
	12" Tile Inlet	Each	\$350.00	30	\$10,500.00	10								5	\$1,750.00	15	\$5,250.0
	15" Tile Inlet	Each	\$400.00	5	\$2,000.00	5	\$2,000.00									-	
	18" Tile Inlet 6" Drain Tile	Each Linear Foot	\$500.00 \$8.00	1,870	\$2,500.00 \$14,960.00	200	\$2,500.00 \$1,600.00	 	 					220	\$1,760.00	1,450	\$11,600.0
	8" Drain Tile	Linear Foot	\$10.00	6,860	\$68,600.00	200	\$2,000.00							760	\$7,600.00	5,900	\$59,000.0
	10" Drain Tile	Linear Foot	\$12.00	2,620	\$31,440.00	200	\$2,400.00		1					20	\$240.00	2,400	\$28,800.0
	12" Drain Tile	Linear Foot	\$16.00	5,590	\$89,440.00	100	\$1,600.00							2,630	\$42,080.00	2,860	\$45,760.0
21	15" Drain Tile	Linear Foot	\$20.00	2,130	\$42,600.00	100	\$2,000.00							450	\$9,000.00	1,580	\$31,600.0
	18" Drain Tile	Linear Foot	\$25.00	2,520	\$63,000.00	100	\$2,500.00							1,680	\$42,000.00	740	\$18,500.0
	24" Drain Tile	Linear Foot	\$30.00	3,895	\$116,850.00	40	\$1,200.00							815	\$24,450.00	3,040	\$91,200.0
	30" Drain Tile	Linear Foot	\$40.00	7,070	\$282,800.00	40	\$1,600.00							4,160	\$166,400.00	2,870	\$114,800.0
	36" Drain Tile	Linear Foot	\$50.00	5,150	\$257,500.00	200	42 200 00							1,425	\$71,250.00	3,725	\$186,250.0
	6" CS Drain Tile Outlet Pipe w Rodent Guard 8" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$16.00 \$18.00	200 300	\$3,200.00 \$5,400.00	200 300	\$3,200.00 \$5,400.00								-		-
	10" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot Linear Foot	\$18.00	300	\$6,600.00	300	\$6,600.00										
	12" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$24.00	300	\$7,200.00	300	\$7,200.00										
	15" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$30.00	200	\$6,000.00	200	\$6,000.00								1		
	18" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$32.00	200	\$6,400.00	200	\$6,400.00										
	24" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$42.00	60	\$2,520.00	60	\$2,520.00										
	30" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$50.00	20	\$1,000.00	20	\$1,000.00										
	42" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$80.00	40	\$3,200.00									20	\$1,600.00	20	\$1,600.0
	15" CS Pipe Culvert	Linear Foot	\$40.00	920	\$36,800.00	920	\$36,800.00										
	15" CS Safety Apron Install Pine Culvert	Each Linear Foot	\$300.00 \$50.00	23 168	\$6,900.00	23 168	\$6,900.00 \$8,400.00										
	84" RC Pipe Culvert	Linear Foot	\$500.00	144	\$72,000.00	144	\$72,000.00										
	96" RC Pipe Culvert	Linear Foot	\$600.00	280	\$168,000.00	280	\$168,000.00										
	84" RC Pipe Apron	Each	\$4,000.00	4	\$16,000.00	4	\$16,000.00										
41	96" RC Pipe Apron	Each	\$5,000.00	6	\$30,000.00	6	\$30,000.00										
	Random Riprap, Class II	Ton	\$45.00	800	\$36,000.00	800	\$36,000.00										
43	Random Riprap, Class III	Ton	\$50.00	780	\$39,000.00	700	\$35,000.00							40	\$2,000.00	40	\$2,000.0
	Random Riprap, Class IV	Ton	\$60.00	1,500	\$90,000.00	1,500	\$90,000.00										
	Filter Berm, Type 5 Storm Drain Inlet Protection	Linear Foot Each	\$50.00 \$100.00	150 170	\$7,500.00 \$17,000.00	150 100	\$7,500.00 \$10,000.00	 	 					20	\$2,000.00	50	\$5,000.0
	Sediment Control Log, Type Straw	Linear Foot	\$100.00 \$3.00	6.000	\$17,000.00	5.000	\$10,000.00	500	\$1,500.00	250	\$750.00	250	\$750.00	20	\$2,000.00	50	0.000,65
- ''	Immediate Ditch Slope Seeding	Station	\$100.00	336	\$33,600.00	336	\$33,600.00	300	71,300.00	230	\$7,50.00	230	\$7.50.00		1		1
	Seeding (Buffer Strip, Storage Disposal Area)	Acre	\$500.00	278.6	\$139,300.00	68.0	\$34,000.00	92.0	\$46,000.00	32.0	\$16,000.00	19.0	\$9,500.00	22.4	\$11,200.00	45.2	\$22,600.0
	Rapid Stabilization, Method 4	Square Yard	\$2.00	18,300	\$36,600.00	8,000	\$16,000.00	5,000	\$10,000.00	2,500	\$5,000.00	2,500	\$5,000.00	100	\$200.00	200	\$400.0
			_		-		-										
	SUBTOTAL ESTIMATED CONSTRUCTION BID ITEMS				\$3,839,630.00		\$1,346,790.00		\$896,300.00		\$294,050.00		\$210,350.00		\$400,330.00	ļ	\$691,810.0
	NAMES OF A SECURITION OF A SEC		40 :		4440		A		ļ						1		1
	IMPROVEMENT RIGHT-OF-WAY (DITCH WIDENING)	ACRE	\$8,000.00	18.5	\$148,000.00	18.5	\$148,000.00	 	 						 	 	1
	IMPROVEMENT RIGHT-OF-WAY (16.5' BUFFER STRIP EACH SIDE) IMPROVEMENT RIGHT-OF-WAY (STORAGE)	ACRE ACRE	\$8,000.00	26.0 41.0	\$208,000.00 \$328,000.00	26.0	\$208,000.00	22.0	\$176,000.00	12.0	\$96,000.00	7.0	\$56,000.00	-	 	1	
	TEMPORARY RIGHT-OF-WAY (80' EACH SIDE OF THE DITCH)	ACRE	\$600.00	124.0	\$74,400.00	124.0	\$74,400.00	22.0	3170,000.00	12.0	350,000.00	7.0	\$30,000.00		-	1	-
	TEMPORARY RIGHT-OF-WAY (STORAGE EXCAVATION DISPOSAL)	ACRE	\$600.00	102.0	\$61,200.00	124.0	\$74,400.00	70.0	\$42,000.00	20.0	\$12,000.00	12.0	\$7,200.00		1		1
	TEMPORARY RIGHT-OF-WAY (80' TILE CONSTRUCTION)	ACRE	\$600.00	67.6	\$40,560.00			1 2.0	, -,		, ,,,,,,,,,,		, ,	22.4	\$13,440.00	45.2	\$27,120.0
	TOTAL ESTIMATED CONSTRUCTION COST				\$4,699,790.00		\$1,777,190.00		\$1,114,300.00		\$402,050.00		\$273,550.00		\$413,770.00		\$718,930.0
	10% CONSTRUCTION CONTINGENCY				\$470,300.00		\$177,800.00		\$111,500.00		\$40,300.00		\$27,400.00		\$41,400.00	ļ	\$71,900.0
	TOTAL ESTIMATED CONSTRUCTION COST				\$5,170,090.00		\$1,954,990.00	ļ	\$1,225,800.00		\$442,350.00		\$300,950.00		\$455,170.00	1	\$790,830.0
	ENGINEERING, VIEWING, LEGAL, PERMITS, ADMIN (20%)				\$1,034,200.00		\$391,000.00		\$245,200.00		\$88,500.00		\$60,200.00		\$91,100.00	 	\$158,200.0
	TOTAL ESTIMATED PROJECT COST				\$6,204,290.00		\$2,345,990.00	 	\$1,471,000.00		\$530,850.00		\$361,150.00		\$546,270.00	1	\$949,030.0
	TOTAL ACRES IN UPSTREAM WATERSHED			 		-	9702	 	9702		9702		9702	-	1032	1	83
	ESTIMATED PROJECT COST/ACRE			\vdash			9702 \$242	 	9702 \$152		9702 \$55		9702 \$37		1032 \$529	1	\$1.13



Real People. Real Solutions.

Preliminary Engineer's Report for

Improvement of Main Open Ditch, Branch 309 & Branch C of Renville County Ditch No. 59

S15.112473

January 2018

Submitted by:

Bolton & Menk, Inc. 1243 Cedar Street NE Sleepy Eye, MN 56085 P: 507-794-5541

F: 507-794-5542

Certification

Preliminary Engineer's Report

For

Improvement

Of

Main Open Ditch, Branch 309, & Branch C

Of

Renville County Ditch No. 59

January 2018

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:

Bill L. Helget, P.E. License No. 42046

ate: 1/10/2018

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Exhibits

EXHIBIT 1: PRELIMINARY PLANS AND PROFILES

EXHIBIT 2: PETITION FOR CD 1B IMPROVEMENT

EXHIBIT 3: PRELIMINARY COST ESTIMATE

STATE OF MINNESOTA

RENVILLE COUNTY, MINNESOTA

IN THE MATTER OF THE PETITION FOR AN IMPROVEMENT OF RENVILLE COUNTY DITCH NO 59 IN RENVILLE COUNTY, MINNESOTA:

In January 2017, the Renville County Board, acting as the Ditch Authority for County Ditch No. 59 (CD 59) in Renville County, in accordance with Minnesota Statute 103E.215, accepted a petition for the improvement of portions of CD 59. 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.

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

I. LOCATION AND SCOPE OF IMPROVEMENT

County Ditch No. 59 lies within and provides drainage to a large watershed in the north-central portion of Renville County. The open ditch system is about seven miles long and drains generally from east to west. The system provides drainage to:

- portions of two Sections in Crooks Township.
- portions of fifteen Sections in Winfield Township.
- portions of two Sections in Emmet Township.
- portions of five Sections in Troy Township.

County Ditch No. 59 serves as an outlet for County Ditch No. 17A at their confluence about two miles northwest of Danube, approximately 850 feet southwest of the CD 59 crossing of County Road 59. CD 17A drains portions of Crooks and Winfield Township. The total estimated watershed for CD 17A from USGS Streamstats data is 42.2 square miles.

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 the Main open ditch, Branch 309, and Branch C, of CD 59. The main open ditch initially drains from west to east and then forms a loop to drain to the west. The loop crosses US Highway 71 (TH 71) twice.

Branch 309 drains portions of Sections 32 and 33 in Winfield Township. The branch drains in general from north to south and discharges into the Main open ditch of CD 59. The existing watershed for Branch 309 is approximately 229 acres. Included in the scope of the petitioned improvements to Branch 309, is to extend the Branch tile to the north approximately 3,800 feet, and intercept the Main tile of CD 59. The goal of this portion of the improvement is to reroute the water drained by the upper portion of the system in a more direct route to the Main open ditch, and relieve the stress on the existing open ditch crossings of TH 71. The drainage area proposed to be re-routed is 628 acres.

Branch C drains portions of Sections 2, 3, and 4 in Troy Township and Section 34 in Winfield Township and drains in general from east to west. The existing watershed for Branch C is approximately 786 acres.

Bolton & Menk, Inc. collected field survey information in November of 2011 for a repair of the main open ditch conducted in 2014. This field survey information included the elevation of the

bottom of the ditch, and the top of one side of the ditch. The survey also included establishing the elevation and size of the culvert crossings, as well as centerline information of the roadway, railroad, or field crossing at the culvert crossings. Additional field survey information was collected by our firm in July of 2017, which included the top of the second side of the ditch, tile intakes near the Branch 309 and Branch C improvements, as well as ground elevations in potential storage areas.

The design of the improvements has also utilized 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 plans obtained from Renville County files. However, the County plans do not show existing tile grades. Thus, it was necessary to use information gathered through intakes to make some interpretations regarding the existing tile grades. The existing plans, and other available information, do not identify the nomenclature of sub-branches of the CD 59 system. As a result, we have given the sub-branches unique identifiers, but only for the purposes of this improvement.

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.

An extensive repair of the existing system, known as Repair F occurred in 1967.

III. CAPACITY OF THE EXISTING DRAINAGE SYSTEM

The portion of the proposed system improvements consists of an open ditch and 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 existing drainage system analysis used standard engineering methods. The estimated capacity of the existing open ditch used the Manning equation. The capacity calculations for the culvert crossings used HY-8, a culvert modeling software developed by the Federal Highway Administration. The amount of drainage needed for modern crop production has been compared to standards recommended by the Natural Resources Conservation Service (NRCS). The NRCS Engineering Field Handbook Minnesota Supplement 650.0703 for Grassed Waterways Curve 2 was used to determine the design discharge for the ditch watershed at each of the culvert crossings within the study area. The watershed contributing flow to the open ditch at each of the culverts was delineated using the USGS Streamstats program and confirmed using LIDAR data.

The exiting capacity of the culverts within the study area was calculated by determining the headwater (upstream) elevation for each of the culverts at the design flow. NRCS Code 608 guidance states that one-foot of freeboard should be provided between the design water surface profile in the open ditch, and the ground elevation of the low areas being served by the open ditch. The headwater elevation was then compared to the maximum elevation for one-foot of freeboard for each of the culverts.

A summary of the existing headwater elevations for the culverts within and downstream of the area of the Improvement is in Table 1.

	Table 1 – Existing Ditch Capacity Computations											
Culvert Location	Culvert Size and Material	Upstream Watershed (Acres)	NRCS Ditch Flow (cfs)	NRCS Ditch Flow (In./ Day)	Ditch Bottom Width (ft)	Est. Max Depth (ft)	Ditch Grade (%)	Ditch Capacity (cfs) (n= 0.035)	Culvert Capacity (cfs) at Max Depth	Limiting Capacity (cfs)	Ditch Efficiency Ratio	
TH 71 Crossing North	6' x 4' Cattle Pass	2,309	74	0.76	6	5.6	0.05	128	99	99	1.34	
TH 71 Crossing South	6' x 4' Cattle Pass	4,016	125	0.74	6	5.0	0.05	102	85	85	0.68	
Field Crossing Section 34	72" RCP	5060	157	0.74	8	6.6	0.03	167	139	139	0.89	
310th Street	72" RCP	5,890	182	0.74	8	7.1	0.03	193	154	154	0.85	
300th Street	72" RCP	7,154	220	0.73	8	8.1	0.03	250	194	194	0.88	
Field Road Section 5	72" RCP	7,335	225	0.73	8	7.8	0.03	232	253	232	1.03	
CSAH 1	84" RCP	8,202	251	0.73	8	8.5	0.03	276	233	233	0.93	
280th Street	84" RCP	9,090	278	0.73	8	9.5	0.03	346	278	278	1.00	
County Road 59	84" RCP	9,702	296	0.73	8	8.1	0.10	457	319	319	1.08	
CD 59 at TC&W Crossing w/o CD 17A or CD 37	Dual 16'x10' Box Culverts	9,858	301	0.73	20	7.3	0.10	772	735	735	1.78	
CD 59 with CD 17A	Dual 16'x10' Box Culverts	36,858	1111	0.72	20	7.3	0.10	772	735	735	0.48	
CD 59 with CD 37	Dual 16'x10' Box Culverts	41,008	1235	0.72	20	7.3	0.10	772	735	735	0.43	

As can be seen in Table 1, the culverts are generally the limiting factor that determines the capacity of the ditch. The south Highway 71 crossing has the lowest efficiency upstream of County Road 59, and the addition of the CD 17A and CD 37 watersheds have a dramatic impact on the efficiency of the TC&W crossing. The limiting factor at the TC&W crossing is the relatively low ground adjacent to the open ditch on the upstream side of the TC&W crossing. The crossing consists of dual sixteen foot wide by ten-foot tall box culverts, but the maximum depth that can be attained in the ditch while maintaining one-foot of freeboard is 7.3 feet.

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 inch of runoff per day. Watershed areas have been estimated using LIDAR data. The capacity of the existing tiles in Branch 309 is shown in Table 2 and the capacity

of the existing tiles in Branch C is shown in Table 3.

	Table 2 – Branch 309 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)			
309	Br. 309 west of 300th St.	44	0.92	10	0.10*	0.69	0.75	0.38			
	Br. 309 east of 300th St.	88	1.85	10	0.10*	0.69	0.38	0.19			
	Low area in E1/2 of W/12 Section 33	149	3.13	12	0.10	1.13	0.36	0.18			
	Br. 309 prior to Br. 309-2	167	3.51	12	0.10	1.13	0.32	0.16			
	Br. 309 meets Br. 309-2	193	4.05	14	0.16	2.16	0.53	0.27			
	Br. 309 meets Br. 309-1	219	4.60	14	0.16	2.16	0.47	0.23			
	Br. 309 meets CD 59 Open Ditch	229	4.81	14	2.48	8.49	1.76	0.88			
309-2	Br. 309-2	26	0.55	10	0.19	0.96	1.75	0.88			
309-1	Br. 309-1	11	0.23	5	0.10*	0.11	0.47	0.24			
*Denotes	Assumed Tile Grade										

As shown in Table 2, the majority of Branch 309 is capable of draining the watershed at a rate of about 3/16" to ¼" per day. When compared to the NRCS recommended standard of ½" per day, the tile system is delivering about 32% to 50% of the recommended flow. Thus, there is inadequate capacity in the existing drainage system to provide for the efficient production of row crops.

As shown in Table 3, the majority of Branch C is Capable of draining the watershed at a rate of about 3/32" to 3/16" per day. When compared to the NRCS recommended standard of ½" per day, the tile system is delivering about 18% to 35% of the recommended flow. Thus, there is inadequate capacity in the existing drainage system to provide for the efficient production of row crops.

Many of the existing tiles have been televised by Renville County. The existing tile systems were found to be in poor condition, showing offset joints and collapsed pipes in some areas. Since there is evidence that the pipe system is in poor repair, the system is likely delivering even less flow than has been calculated. A few of the tiles have been reconstructed at the original size and grade.

Another limitation of the existing Branch 309 and Branch C tile system is the very shallow depths at which the exiting tiles are installed. The shallow tile is prone to damage from modern farming equipment.

	Table	3 – Branch (Existing Ti	le Capa	acity Co	mputations		
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)
С	Br C East 1/2 of E 1/2 of Section 2	21	0.44	6	0.40	0.36	0.81	0.40
	Br. C prior to Br. C5	78	1.64	8	0.15	0.47	0.29	0.14
	Br. C meets Br. C5	102	2.14	10	0.04	0.44	0.21	0.10
	Br. C meets Br. C-4	228	4.79	15	0.04	1.30	0.27	0.14
	Br. C meets Br. C-3	476	10.00	18	0.03	1.82	0.18	0.09
	Br. C meets Br. C-2	585	12.29	20	0.03	2.42	0.20	0.10
	Br. C meets Br. C-1	685	14.39	18	0.17	4.34	0.30	0.15
	Br. C meets Open Ditch 59	786	16.51	18	0.34	6.14	0.37	0.19
	•							
C-5	Br. C-5	24	0.50	6	0.20*	0.25	0.50	0.25
C-4	Br. C-4 beginning	34	0.71	6	0.15*	0.22	0.31	0.15
	Br. C-4 meets Br. C-4-2	40	0.84	6	0.15*	0.22	0.26	0.13
	Br. C-4 meets Br. C-4-1	102	2.14	12	0.16*	1.43	0.67	0.33
	Br. C-4 meets Br. C	109	2.29	12	0.16*	1.43	0.62	0.31
C-4-2	Br. C-4-2 meets Br. C-4	6	0.13	6	0.15*	0.22	1.73	0.86
C-4-1	Br. C-4-1 meets Br. C-4	41	0.86	8	0.20	0.54	0.63	0.31
C-3	Br. C-3 north of 840th Avenue	23	0.48	6	0.07*	0.15	0.31	0.15
	Br. C-3 meets Br. C-3-2	48	1.01	6	0.08*	0.16	0.16	0.08
	Br. C-3 meets Br. C-3-1	66	1.39	8	0.28	0.64	0.46	0.23
	Br. C-3 north of driveway	71	1.49	8	0.28	0.64	0.43	0.21
	Br. C-3 meets Br. C	79	1.66	8	0.28	0.64	0.39	0.19
C-3-2	Br. C-3-2 meets Br. C-3	25	0.53	6	0.07*	0.15	0.28	0.14
C-3-1	Br. C-3-1 East of TH 71	17	0.36	5	0.10*	0.11	0.31	0.15
C-2	Br. C-2 meets Br. C	29	0.61	6	0.18	0.24	0.39	0.20
C-1	Br. C-1	53	1.11	8	0.05*	0.27	0.24	0.12
*Denote	es Assumed Tile Grade							

IV. DISCUSSION OF IMPROVEMENT

The petitioners for the Improvement of the Main Open Ditch, Branch 309, and Branch C 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 of the proposed improved ditch and culverts, and the preliminary grades, sizes, and depths of the tile systems, and to analyze the outlet. 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. **Main Open Ditch** – The improvement will consist of widening and lowering the Main Open Ditch from the downstream side of County Road 59 to the downstream side of the southerly TH 71 crossing. The remaining open ditch upstream of the Southerly TH 71 crossing will be cleaned.

The existing culvert crossings at County Road 59, 280th Street, and CSAH 1 are to be replaced with 96-inch diameter reinforced concrete pipe culverts with aprons. The existing culvert crossings at the Field Road east of CSAH 1, and the field crossing between 310th Street and the southerly TH 71 crossing are to be replaced with salvaged 84-inch diameter reinforced concrete pipe culverts without aprons. The existing culverts at 300th Street and 310th Street are to be replaced with new 84" reinforced concrete pipe culverts with aprons. The crossings of the roadways would preferably be made by open cut methods.

The existing open ditch is proposed to be reconstructed from the upstream end of County Road 59 to 280th Street at a 0.03% slope with a ten foot wide bottom and 1V:2H side slopes and from 280th Street to the southerly TH 71 crossing at a 0.03% slope with an eight foot wide bottom and 1V:2H side slopes. The improvement includes cleaning out the existing open ditch from the southerly TH 71 to the upstream end of the open ditch at the previously established ditch grade.

- 2. **Branch 309** The improvement will consist of new tile to replace the existing system. The proposed tiles are offset from the existing tiles in Exhibit 1 for clarity only. The improvement will also include a new tile to the north to intercept the existing CD 59 Main Tile, and bring the runoff from a majority of the Main Tile watershed directly to the lower portion of the Main Open Ditch. The improvement also consists of an extension of Branch 309 into the Northeast Quarter of the Northeast Quarter of Section 32 of Winfield Township.
- 3.**Branch** C The improvement will consist of new tiles to replace the existing system. The proposed tiles are offset from the existing tiles in Exhibit 1 for clarity only. The TH 71 crossing will be made by boring and jacking methods, and the route of Branch C-3-1 may be adjusted in the final design to avoid a second crossing of TH 71.
- 4. Other components of the proposed Improvement include:
 - a) Reconstructing the outlets of existing tiles coming into the open ditch, and any intakes adjacent to the spoil berm impacted by the work.
 - b) Construct riprap as erosion protection on the outlet side of the culverts, and at the inlet side of the culverts if warranted.
 - c) Construct riprap slope stabilization along the ditch slopes where side slope stability has been an issue.
 - d) Reseed the ditch slopes, a minimum of a one-rod buffer (16.5 feet), and any portions of the spoil bank that exceed a one rod width.
 - e) Reconstructing the surface above the culvert crossings.
 - f) Generally the new tiles will be constructed lower in elevation than the existing pipe so that all existing tiles will have an outlet.
 - g) Existing tiles cut by the new tile line will be connected to the new tile.

B. DESIGN DATA

As shown on Exhibit 1, the proposed improvements to the Main Open Ditch CD 59 consists

of improving the open ditch and replacing or reinstalling the culvert crossings. The type of pipe that should be used for the improvement is as follows:

1. Precast Reinforced Concrete Pipe (RCP) meeting the requirements of the Minnesota Department of Transportation (MnDOT).

The criteria for the design of the open ditch system are based on Natural Resources Conservation Service (NRCS) methodology. The NRCS Engineering Field Handbook Minnesota Supplement 650.0703 for Grassed Waterways Curve 2 was used to determine the design discharge for the ditch watershed at each of the culvert crossings within the study area and then sizing the culverts to provide 1-foot of freeboard as stated in NRCS Code 608 guidance.

The proposed improvements' efficiency of the Main open ditch is shown in Table 4

	Table 4 – Proposed Ditch Capacity Computations											
Culvert Location	Culvert Size and Material	Upstream Watershed (Acres)	NRCS Ditch Flow (cfs)	NRCS Ditch Flow (In./ Day)	Ditch Bottom Width (ft)	Est. Max Depth (ft)	Ditch Grade (%)	Ditch Capacity (cfs) (n= 0.035)	Culvert Capacity (cfs) at Max Depth	Limiting Capacity (cfs)	Ditch Efficiency Ratio	
TH 71 Crossing North	6' x 4' Cattle Pass	1,683	55	0.78	6	5.6	0.05	128	99	99	1.80	
TH 71 Crossing South	6' x 4' Cattle Pass	3,390	107	0.75	6	5.0	0.05	102	102	102	0.95	
Field Crossing Section 34	84" RCP	4,434	138	0.74	8	8.4	0.03	422	282	282	2.04	
310th Street	84" RCP	5,264	163	0.74	8	9.0	0.03	493	314	314	1.93	
300th Street	84" RCP	7,154	220	0.73	8	10.2	0.03	656	370	370	1.68	
Field Road Section 5	84" RCP	7,335	225	0.73	8	10.0	0.03	627	356	356	1.58	
CSAH 1	96" RCP	8,202	251	0.73	8	10.3	0.03	671	424	424	1.69	
280th Street	96" RCP	9,090	278	0.73	8	11.9	0.03	937	519	519	1.87	
County Road 59	96" RCP	9,702	296	0.73	10	9.0	0.03	543	417	417	1.41	
CD 59 at TC&W Crossing w/o CD 17A or CD 37	Dual 16' x 10' Box Culverts	9,858	301	0.73	20	7.3	0.10	772	735	735	1.78	
CD 59 with CD 17A	Dual 16' x 10' Box Culverts	36,858	1111	0.72	20	7.3	0.10	772	735	735	0.48	
CD 59 with CD 37	Dual 16' x 10' Box Culverts	41,008	1235	0.72	20	7.3	0.10	772	735	735	0.43	

The proposed grades for the Branch 309 and Branch C tile improvements are shown on Exhibit 1. The type of pipe to be used for the construction will be specified as one of the following:

- Dual Wall Polyethylene Drain Tile meeting the requirements of the American Association of State Highway Transportation Officials (AASHTO) Specification No. M294. Pipe will be bedded in granular material as shown on Exhibit 1 and will be both non-perforated and perforated with a geotextile sock.
- 2. Reinforced concrete pipe meeting the specifications of MnDOT Specification 3352. The joints of the pipe will be covered with geotextile fabric in order to allow some infiltration.
- 3. Polyvinyl Chloride Sewer Pipe for the deep cut areas, meeting the Specifications of ASTM D 3034.
- 4. Concrete drain tile meeting the specifications of ASTM C412.

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 309 and Branch C are shown in Table 5 and Table 6. The tables also show the resulting runoff coefficient provided for the watershed served.

	Table 5 – Branch 309 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)			
309	SW & SE 850th Ave. & 300th St.	91	1.91	12	0.30	2.12	1.11	0.55			
	Br. 309 Upper End	114	2.39	12	0.50	2.74	1.14	0.57			
	Br. 309 West of 300th Street	136	2.86	15	0.20	3.14	1.10	0.55			
	Br. 309 East of 300th Street	180	3.78	18	0.15	4.42	1.17	0.58			
	Low Area in E1/2 of W1/2 Section 33	241	5.06	18	0.20	5.10	1.01	0.50			
	Br. 309 Prior to Br. 309-2	259	5.44	24	0.10	7.77	1.43	0.71			
	Br. 309 meets Br. 309-2 & 309-3	996	20.92	36	0.10	22.91	1.10	0.55			
	Br. 309 meets Br. 309-1	1022	21.47	36	0.10	22.91	1.07	0.53			
	Br. 309 meets Open Ditch 59	1032	21.68	36	0.10	22.91	1.06	0.53			
New 309-3	Connection to Main Tile	628	13.19	30	0.10	14.09	1.07	0.53			
	Connection to Branch 240 Tile	711	14.94	30	0.12	15.43	1.03	0.52			
309-2	Br. 309-2	26	0.55	8	0.30	0.72	1.32	0.66			
309-1	Br. 309-1	11	0.23	6	0.20	0.27	1.18	0.59			

	Table 6 -	- Branch C P	roposed Ti	le Capa	city Con	nputations		
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)
С	Br. C Upper End	9	0.19	6	0.20	0.27	1.44	0.72
	Br. C East 1/2 of E 1/2 of Section 2	21	0.44	8	0.30	0.72	1.63	0.81
	Br. C Prior to Br. C5 Br. C meets Br. C5	78 102	1.64 2.14	12 15	0.20	1.73 2.22	1.06 1.04	0.53 0.52
	Br. C meets Br. C-4	277	5.82	24	0.10	7.77	1.04	0.52
	Br. C meets Br. C-3-1-A	422	8.86	30	0.10	9.96	1.12	0.56
	Br. C meets Br. C-3	525	11.03	30	0.05	10.91	0.99	0.49
	Br. C meets Br. C-2	634	13.32	36	0.05	16.20	1.22	0.61
	Br. C meets Br. C-1	734	15.42	36	0.05	16.20	1.05	0.53
	Br. C meets Open Ditch 59	835	17.54	36	0.06	17.75	1.01	0.51
						2,,,,,		0.00
C-5	Br. C-5	24	0.50	8	0.20	0.59	1.16	0.58
C-4	Br. C-4 Beginning	83	1.74	12	0.20	1.73	0.99	0.50
	Br. C-4 meets Br. C-4-2	89	1.87	15	0.10	2.22	1.19	0.59
	Br. C-4 meets Br. C-4-1	151	3.17	18	0.10	3.61	1.14	0.57
	Br. C-4 meets Br. C	158	3.32	18	0.10	3.61	1.09	0.54
C-4-2	Br. C-4-2 meets Br. C-4	6	0.13	6	0.15	0.24	1.87	0.94
C-4-1	Br. C-4-1 meets Br. C-4	41	0.86	10	0.20	1.06	1.24	0.62
C-3	Br. C-3 North of 840th Avenue	23	0.48	6	0.65	0.49	1.02	0.51
	Br. C-3 Meets Br. C-3-2	48	1.01	10	0.20	1.06	1.06	0.53
	Br. C-3 Meets Br. C-3-1	49	1.03	10	0.20	1.06	1.03	0.52
	Br. C-3 North of Driveway	54	1.13	10	0.25	1.19	1.05	0.52
	Br. C-3 Meets Br. C	62	1.30	10	0.30	1.30	1.00	0.50
C-3-2	Br. C-3-2 Meets Br. C-3	25	0.53	8	0.20	0.59	1.12	0.56
C-3-1-A	Br. C-3-1-A East of TH 71	17	0.36	8	0.10	0.42	1.16	0.58
C-2	Br. C-2 Meets Br. C	29	0.61	8	0.25	0.66	1.08	0.54
C-1	Br. C-1	53	1.11	12	0.10	1.22	1.10	0.55

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 RESTORATION

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.

In order 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 380 acre feet of water cannot be discharged from the CD 59 watershed upstream of County Road 59 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 foot depth, approximately 380 acres of wetland restoration would be needed to provide sufficient storage capacity for the excess runoff.

In order to convert the 380 acres to wetlands, at least twice this many acres would need to be acquired for irregular wetland shapes and marginal damp soils. Thus, about 760 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 restoration would likely be about \$10,000 per acre, resulting in a total cost of about \$7.60 million. Wetland restoration is about 2.0 times the estimated cost for the Improvement of the Main Ditch without additional storage, or about 1.2 times the estimated cost for the Improvement of the Main Ditch with the additional storage.

Wetland restoration 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 restoration 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. ONLINE STORAGE

A third alternative would be to construct the proposed improvements and create online storage within the ditch system. This alternative would provide the storage by excavating out the low areas adjacent to the ditch to the same elevation as the bottom of the ditch. The excavated material would then be placed in the remaining surrounding low areas. This alternative would have the benefit of maintaining similar peak flows for the smaller, more frequent, rainfall events. This alternative would also allow the remaining low area near the storage to be raised up, and offer additional protection from the larger rainfall events.

Three areas, as shown on Exhibit 1, were identified as sites for potential storage basins.

Storage basin number 3 is along the open ditch north of 850th Avenue and west of TH 71, just upstream of the northerly TH 71 crossing. The storage area is approximately 7 acres in size, and is approximately 8 to 10 feet lower than the existing ground. Preliminary calculations estimate 75,000 cubic yards of excavation from this site. The excavation material would be used to raise surrounding low areas to the west, and north, higher than elevation 1073.

Storage basin number 2 is along the east side of the open ditch in between the TH 71

crossings. The storage area is approximately 13 acres in size, and is approximately 6 to 8 feet lower than the existing ground. Preliminary calculations estimate 105,000 cubic yards of excavation from this site. The excavation material would be used to raise surrounding low areas higher than elevation 1072.

Construction of these two storage basins will allow the existing TH 71 crossings to be of sufficient size for the design flow event, and freeboard limitations of the surrounding fields.

Storage basin number 1 is along the north and south side of the open ditch east of County Road 59. The storage area is approximately 20 acres in size, and is approximately 12 to 14 feet lower than the existing ground. Preliminary calculations estimate 325,000 cubic yards of excavation from this site. The excavation material would be disposed of in the surrounding areas. Construction of this third storage area will allow the peak flow rate at County Road 59 for the 2-Year and 5-Year events to be similar to the existing conditions.

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 place 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 the crossing of CR 59 and CSAH 1 from the Renville County Highway Department. This permit will be applied for after the Preliminary Hearing

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 Preliminary 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.

The estimated cost of the proposed Improvement is included in this report. The public and private benefits and damages will be available at the final hearing.

D. AGRICULTRUAL 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

Little change in measureable water quality is anticipated because of this Improvement. However, there are components of the Improvement that will mitigate erosion and help improve water quality on a micro watershed scale. Some of the existing culvert crossings are hydraulically undersized, which leads to higher velocities through the undersized culvert, which can cause scour and erosion on the outlet end of the culvert. Increasing the size of the culvert crossings will lead to lower outlet velocities. 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. The one-rod (16.5 feet) buffer strip will be acquired if not already done so, or reestablished along the Improvement limits.

As a requirement of the MPCA Erosion Control Permit, the establishment of an erosion control plan is anticipated. 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. The improvements made to the culvert crossings will reduce the water velocities through the culverts, which will allow for easier passage of fish.

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. Embankment areas will be stripped of topsoil prior to the placement of non-topsoil material in order to preserve topsoil.
- 3. 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.
- 4. 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. The re-establishment of the grass buffer along the open ditch, decreasing the outlet velocity at the culvert crossings, and the use of Hickenbottom 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. ADEQUACY OF THE OUTLET

A. GENERAL INFORMATION

As mentioned earlier, CD 59 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.

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. 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. The intent of the 0.72" runoff event in Table 7 and Table 9 is to show the change in peak flow and elevation for a rain event with a runoff amount equal to the NRCS design ditch flow. A summary of the existing and proposed peak flows and upstream water surface elevations for various frequency flow events at County Road 59 are presented in Table 7.

Table 7 – Hy	Table 7 – HydroCAD Existing vs. Proposed Model (Without Storage) Summary at County Road 59										
Flow Event	Existing Peak Flow (cfs)	Existing Peak Elevation	Proposed Peak Flow (cfs)	Proposed Peak Elevation	Change in Peak Flow (ProEx.) (cfs)	Change in Peak Elevation (ProEx.)					
0.72" Runoff	350	1061.3	366	1060.0	16	-1.3					
2-Year	418	1062.6	475	1061.7	57	-0.9					
5-Year	455	1063.4	515	1062.7	60	-0.7					
10-Year	473	1064.1	542	1063.6	69	-0.5					
25-Year	498	1065.2	576	1064.7	78	-0.5					
50-Year	516	1065.9	601	1065.5	85	-0.4					
100-Year	574	1066.5	615	1066.3	41	-0.2					

As can be seen in Table 7, the HydroCAD model shows an increase in the peak flow and a decrease in the peak headwater elevation at County Road 59.

Between the TC&W Railroad, and County Road 59, CD 17A joins with CD 59, and then CD 59 joins with CD 37. The peak flows from Streamstats was obtained at the TC&W Railroad, at CD 17A and CD 37 prior to their confluences with CD 59, and CD 59 at County Road 59.

A summary of the flows are presented in Table 8.

Т	Table 8 – Streamstats Peak Flows										
Point Of Interest	TC&W Railroad	CD 17A Prior to CD 59	CD 59 at CR 59	CD 37 Prior to CD 59							
Area (Sq Mi)	64.07	42.15	15.88	5.6							
2-Year Peak Flood (cfs)	297	214	113	33.5							
5-Year Peak Flood (cfs)	675	483	254	74							
10-Year Peak Flood (cfs)	1030	733	383	111							
25-Year Peak Flood (cfs)	1580	1130	587	171							
50-Year Peak Flood (cfs)	2070	1480	769	224							
100-Year Peak Flood (cfs)	2650	1890	980	287							
2-Year Peak / Area (cfs/Sq Mi.)	4.64	5.08	7.12	5.98							

An analysis of Table 8 shows that the peak flow at the TC&W Railroad is not simply the sum of the peak flows of the incoming streams. Peak flow is directly proportional to the watershed area, and inversely proportional to the time of concentration. Therefore, dividing the peak flows from a single event by the watershed area will yield a relationship to the time of concentration. A higher peak flow per area value means that the time of concentration for that watershed is a smaller value (shorter duration). The last row in Table 8 shows the 2-Year peak flow divided by the watershed area for each of the points of interest.

The fact that CD 59 at CR 59 has the highest peak flow / area ratio means that the time of concentration for the upstream area is the shortest, and that the peak flow of CD 59 at CR 59 happens prior to the peak flow of CD 17A.

By increasing the peak flow from CD 59 at CR 59, and moving a larger volume of water downstream quicker from a small portion of the system, the peak flow of the entire system at the TC&W Railroad crossing, which happens later, will decrease. Therefore, it is our opinion, that the outlet for the improvements, without online storage is adequate.

A summary of the existing conditions and the proposed conditions with online storage is in Table 9.

Table 9 –	HydroCAD Exi	sting vs. Prop	osed + Storag	e Model Sumr	nary at Count	y Road 59
Flow Event	Existing Peak Flow (cfs)	Existing Peak Elevation	Proposed+ Storage Peak Flow (cfs)	Proposed+ Storage Peak Elevation	Change in Peak Flow (Pro.+Stor. -Ex.) (cfs)	Change in Peak Elevation (Pro.+StorEx.)
0.72" Runoff	350	1061.3	306	1059.2	-44	-2.1
2-Year	418	1062.6	425	1060.9	7	-1.7
5-Year	455	1063.4	471	1061.7	16	-1.7
10-Year	473	1064.1	500	1062.3	27	-1.8
25-Year	498	1065.2	532	1063.3	34	-1.9
50-Year	516	1065.9	554	1064.0	38	-1.9
100-Year	574	1066.5	573	1064.6	-1	-1.9

As can be seen in Table 9, the HydroCAD model for the proposed conditions with online storage shows a decrease in the peak flow for the design 0.72" runoff event, and the 100-Year event. The model shows smaller increases in the peak flow for the 2-Year through 50-Year events than without storage, and decreases in the peak headwater elevations for all events at County Road 59.

Therefore, it is our opinion, that the outlet for the improvements with the online storage is adequate.

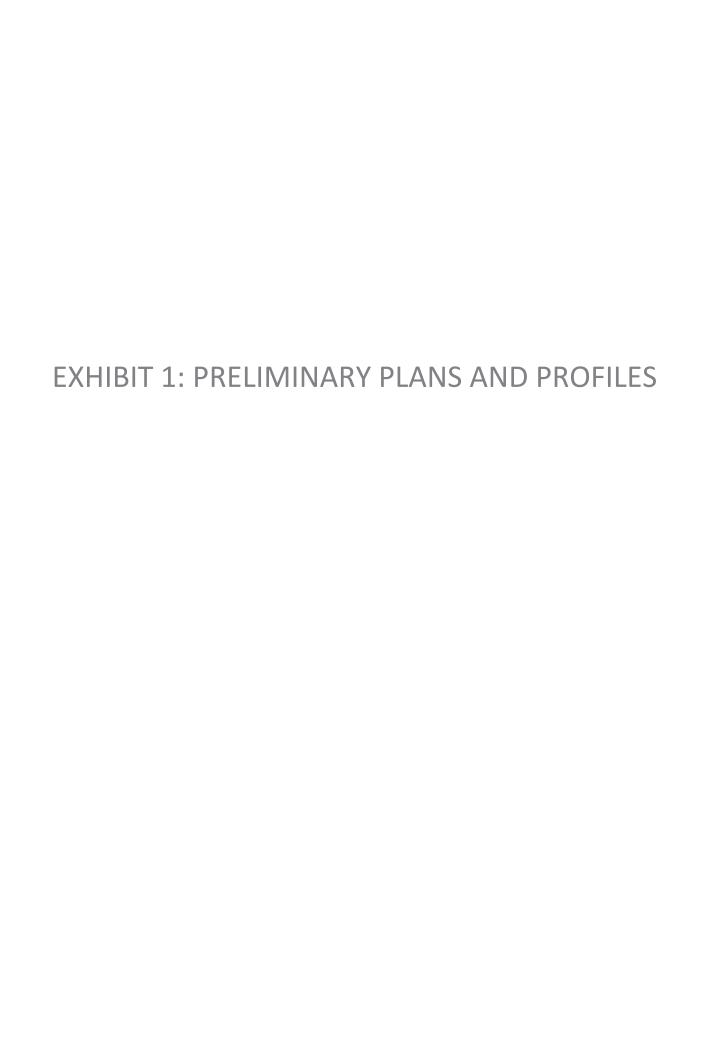
VIII. ESTIMATE OF COST

The preliminary cost estimate to construct the proposed Improvements, as described in this report is shown in Exhibit 3. The total estimated project cost without online storage is approximately \$3,841,290, and with the online storage is approximately \$6,204,290. Included in the project cost estimate are the acreages of land to be permanently taken out of production for: the widening of the ditch (18.5 acres), the establishment of a one-rod (16.5-foot) buffer strip (26 acres), and the excavation of the online storage (41 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 (191.6 acres), and disposal of the online storage excavation (102 acres). The individual landowners will be compensated for this loss through the damage process of the further ditch proceedings.

IX. RECOMMENDATIONS

The proposed Improvements to the Main Open Ditch, Branch 309, and Branch C of 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.

It is the recommendation of your engineer that the Preliminary Engineer's Report be approved, the Board determines if the online storage alternative is to be included in the scope of the improvement, that the Board appoint Viewers, and order the preparation of the Final Engineer's Report for the Improvement.

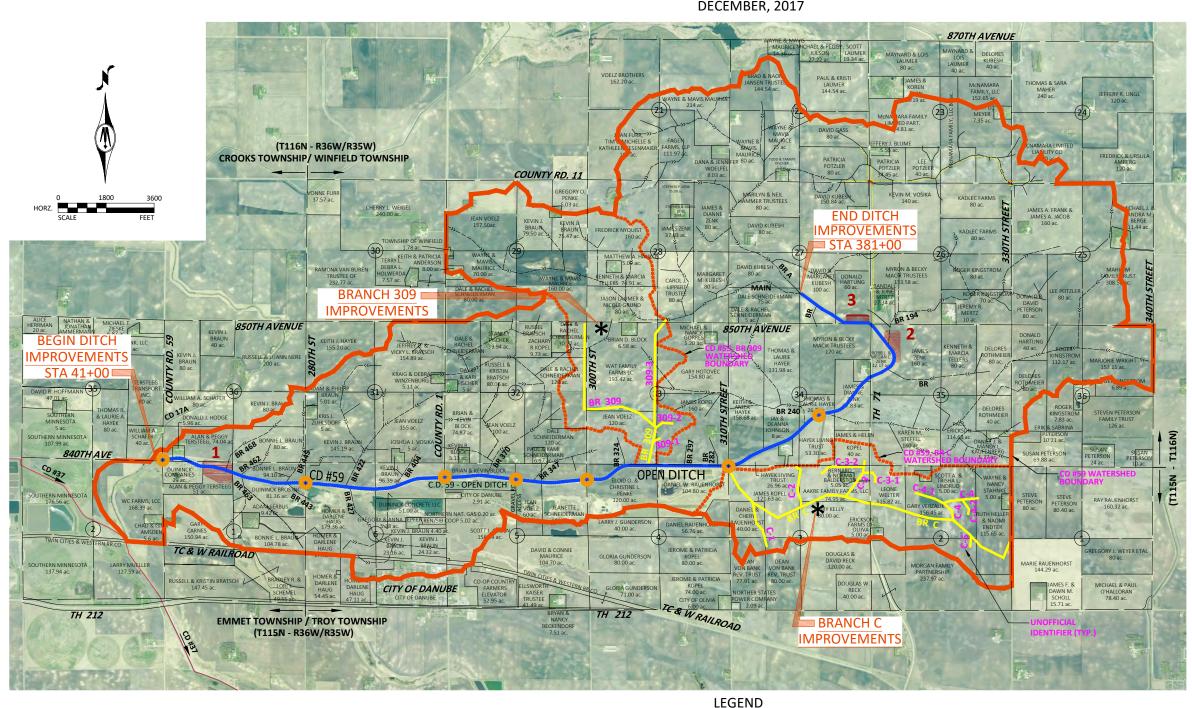


PLAN REVISIONS
REV ISSUED FOR DATE
- - - -

PRELIMINARY CONSTRUCTION PLANS FOR

COUNTY DITCH No. 59 IMPROVEMENTS RENVILLE COUNTY, MINNESOTA

DITCH IMPROVEMENTS, CULVERT REPLACEMENTS, TILE AND INTAKE IMPROVEMENTS
DECEMBER, 2017



SHEET INDEX

GENERAL SHEET NO. G0.01 - G0.02 TITLE, LEGEND & NOTES **EXISTING CONDITIONS & REMOVALS** C0.01 SECTION NOT USED TABLES, DETAILS & PHASING TYPICAL SECTIONS & DETAILS C1.01 DETAILS C1.02 **DETAILS** C1.03 **EROSION CONTROL** C2.01 SECTION NOT USED **GRADING** C3.01 GRADING PLAN - STORAGE AREA 1 C3.02 GRADING PLAN - STORAGE AREAS 2 & 3 **SANITARY AND WATER** C4.01 SECTION NOT USED STORM SEWER **COUNTY DITCH 59 - STORM PLAN & PROFILES** C5.01-C5.12 CD 59, BRANCH 309 - STORM PLAN & PROFILES C5.21-C5.26 C5.31-C5.43 CD 59, BRANCH C - STORM PLAN & PROFILES STREETS SECTION NOT USED C6.01 STANDARD DETAILS C7.01 SECTION NOT USED TRAFFIC CONTROL C8.01 SECTION NOT USED CROSS SECTIONS

THIS PLAN SET CONTAINS <u>70</u> SHEETS.

C9.01-C9.32

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.

COUNTY DITCH 59- CROSS SECTIONS

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

PROJECT DATUM: RENVILLE CO COORDINATES
HORIZONTAL: RENVILLE CO - NAD83 (2007ADJ)
VERTICAL: NAVD88

♦ BM=1058.62

BENCHMARK DISC

RAII ROAD BOX CUI VERT

C.D. #59 OVERALL WATERSHED BOUNDARY

PROPOSED OPEN DITCH IMPROVEMENTS

PROPOSED TILE IMPROVEMENTS

OFFICIAL LATERAL IDENTIFIER

UNOFFICIAL SUB-LATERAL IDENTIFIER

C.D. #59 BRANCH 309 & C WATERSHED BOUNDARIES

STORAGE AREAS

STORAGE AREAS IDENTIFIERPROPOSED CULVERT REPLACEMENT

BM=1079.90
REFERENCE MARK DISC, NE QUAD COUNTY RD 1
 & 840TH AVENUE

 BM=1077.05
BENCHMARK DISC, NE QUAD T.H. #71
 & 850TH AVENUE

 & 855TH AVENUE

 BM=1077.05
BENCHMARK DISC, NE QUAD T.H. #71
 & 855TH AVENUE

 **BM=1079.90

 **BM=1077.05
BENCHMARK DISC, NE QUAD T.H. #71
 & 840TH AVENUE

 **BM=1079.90

 **BM=1077.05
BENCHMARK DISC, NE QUAD T.H. #71
 **BENCHMARK DIS

1243 CEDAR STREET NE SLEEPY EYE, MINNESOTA 56085 Phone: (507) 794-5541 Email: SleepyEye@bolton-menk.com www.bolton-menk.com I HEBEBY 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.

BILL L. HELGET, P.E.

RENVILLE COUNTY, MINNESOTA

DRAWN
SPL, SMI
CHECKED
SPL, BLH

RENVILLE COUNTY DITCH No. 59 IMPROVEMENTS
TITLE SHEET

G0.01

EXISTING

0	IRON PIPE MONUMENT SET		ELECTRIC TRANSFORMER	0	SEMAPHORE TRAFFIC LIGHT
•	MONUMENT FOUND	□EV	EXHAUST VENT	•	SIGNAL BOX
•	CAST IRON MONUMENT FOL	JND ∞	FLAG POLE	0	SIGNAL POLE - RR
	STONE MONUMENT FOUND	0	FILL PIPE	•	SOIL BORING
\triangle	POST SET	©	GAS MANHOLE	L	SIREN
Φ	BENCH MARK	©	GAS REGULATOR	無	SPRINKLER HEAD
⊚ AS	AUTO SPRINKLER	⊗	GAS VALVE	D	STORM MANHOLE
⊗	ANTENNA	G	GAS METER	1	TELEPHONE MANHOLE
\otimes	AIR CONDITIONER		ACCESS GRATE		PUBLIC TELEPHONE
C	ANCHOR	Ė	HANDICAPPED PARKING		TILE INLET
⊚ AP	AIR PUMP	H	HAND HOLE		TILE RISER
\triangleright	APRON	-ф	HYDRANT	0-	TRAFFIC ARM BARRIER
þ	BASKETBALL HOOP	•	IRRIGATION CONTROL VALVE	Д	TRAFFIC SIGN
-B-	BIRD FEEDER	中	LIGHT DECORATIVE	E \$ 3	TRANSMISSION TOWER
<u> </u>	BENCH	*	LIGHT POLE	0	UTILITY POLE
•	BRACE POLE	MB	MAILBOX		VACUUM
	CATCH BASIN	M	METER	\bigcirc	VENT PIPE
0	CLOTHES LINE POLE	(P)	POST	\triangle	DECIDUOUS TREE
Δ	CONTROL POINT	(U)	MANHOLE	₹	CONIFEROUS TREE
©	CLEAN OUT	(L)	LIFT STATION MANHOLE	\$	STUMP
⊞СР	COMMUNICATION PEDESTAI	L ®	MONITORING WELL	0	BUSH
8	CURB STOP VALVE	A	ORDER MICROPHONE	Δ	WELL
\Diamond	DITCH TOP		PARK GRILL	(W)	WATER MANHOLE
E	DRINKING FOUNTAIN		GAS PUMP	W	WATER METER
D	DOWN SPOUT	⊗	POST INDICATOR VALVE	8	WATER SPIGOT
E	ELECTRIC MANHOLE		PARKING METER	×	WATER VALVE
E	ELECTRIC METER	(S)	SANITARY MANHOLE	عللد	WETLAND / MARSH
⊞E	ELECTRIC PEDESTAL	Ÿ	SATELLITE DISH	Δ	WETLAND - DELINEATED
	E0 OV	'ERHEAD ELECTRIC L	.INE		EASEMENT LINE
	EU UN	IDERGROUND ELECT	TRIC LINE — — — —		BUILDING SETBACK LINE
	G GA	AS LINE	——X———X—	xx	FENCE LINE
	FO FIB	BER OPTIC LINE		0 0	GUARD RAIL
	CU UN	IDERGROUND COMI	MUNICATIONS LINE		ACCESS CONTROL LINE
	OV	ERHEAD UTILITY LIN	NE —— —		CENTERLINE
	WA	ATER SYSTEM			PROPERTY / LOT LINE
>>	>>> ST0	ORM SEWER			ROAD RIGHT-OF-WAY LINE
>	>>	E LINE			RAILROAD RIGHT-OF-WAY LINE
	>> SA	NITARY SEWER			GRAVEL EDGE
	SA	NITARY FORCEMAIN	· — —		BITUMINOUS EDGE
	CU	ILVERT			CONCRETE EDGE
	IN7	TERMEDIATE CONTO	DURS ======		CURB & GUTTER
	INI	DEX CONTOURS			WATER EDGE
	CO	OUNTY LINE	·		WATER CENTERLINE
	CIT	TY LIMITS			HIGHWATER LINE
	SIX	CTEENTH LINE			WETLAND EDGE
		JARTER LINE			- SWALE CENTERLINE
	SEC	CTION LINE			RAILROAD TRACKS

PROPOSED

22+00	ALIGNMENT/CENTERLINE
	RIGHT-OF-WAY LINE
	TEMPORARY EASEMENT
	CONSTRUCTION LIMITS
	CURB & GUTTER
	CURB & GUTTER (OUT)
	BITUMINOUS EDGE
	CONCRETE EDGE
	GRAVEL EDGE
	SILT FENCE-PREASSEMBLED
	SILT FENCE-HEAVY DUTY
\mathcal{O}	EROSION PROTECTION AT INLET
•	MANHOLE
_	CATCH BASIN
_	STORM INLET
•	APRON
	STORM SEWER
	PERFORATED PIPE DRAIN
	STORM DRAIN TILE
>>>	CULVERT W/APRON
1	STORM MANHOLE NUMBER
	SANITARY SEWER
IIIII	SANITARY FORCEMAIN
	SANITARY SEWER SERVICE
0	SANITARY LIFT STATION
•	SANITARY MANHOLE
A	SANITARY MANHOLE NUMBER

-11	WATERMAIN
	WATERMAIN SERVICE
	WATER SYSTEM MANHO
\(\rightarrow	HYDRANT
-◇™	HYDRANT W/ VALVE
H	VALVE
8	CURBSTOP
✓ -I	BEND
H	REDUCER
±	CROSS
F	TEE
С	CAP
=	SLEEVE
	SIGN
*	LIGHT POLE
•	GUARD RAIL
∂ B-?	SOIL BORING
عللد	WETLAND
•	BUSH
*	CONIFEROUS TREE
\odot	DECIDUOUS TREE

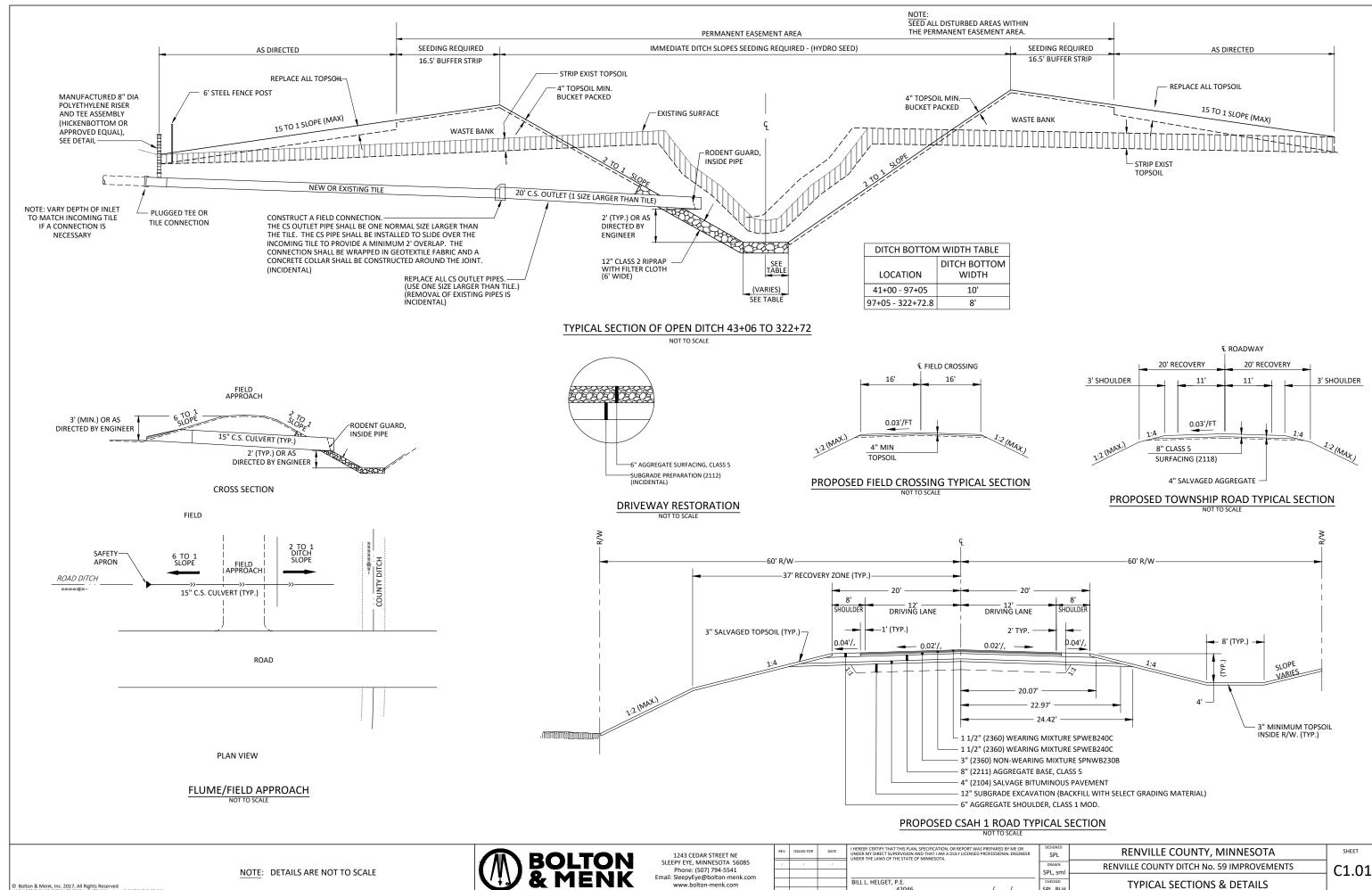


_ ~ TREE DRIP LINE

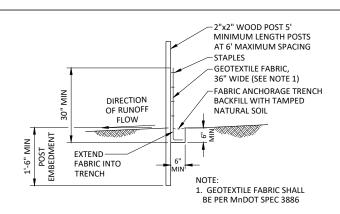
1243 CEDAR STREET NE	REV	ISSUED FOR	DATE	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATIO UNDER MY DIRECT SUPERVISION AND THAT I AM UNDER THE LAWS OF THE STATE OF MINNESOTA	I Á DUI
PY EYE, MINNESOTA 56085					
Phone: (507) 794-5541 SleepyEye@bolton-menk.com					
www.bolton-menk.com				BILL L. HELGET, P.E.	
				11C NO 42046	DATE

	DESIGNED	DENIVILLE COLINITY MAININECOTA
ER	SPL	RENVILLE COUNTY, MINNESOTA
	DRAWN	RENVILLE COUNTY DITCH No. 59 IMPROVEMENTS
	SPL. sml	RETAILED COOKER PROPERTY.
_	CHECKED	
		LEGEND
	SPL, BLH	

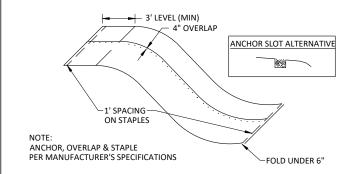
ADJACENT LINES



DATE	UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	SPL
	ONDER THE DAYS OF THE STATE OF WHITESOFA.	DRAWN
		SPL, sm
	BILL L. HELGET, P.E.	CHECKED
	42046 / /	SPI BIE



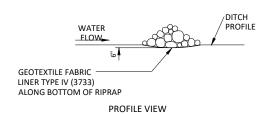
HAND PLACED SILT FENCE - PREASSEMBLED

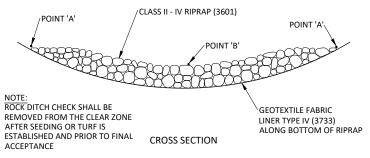


NOTE: CONSTRUCT EROSION CONTROL BLANKET AT DESIGNATED LOCATIONS AS SHOWN ON PLANS.

EROSION CONTROL BLANKET INSTALLATION

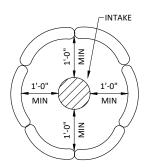
NOT TO SCALE





POINT 'A' MUST BE 1'-0" MINIMUM HIGHER THAN POINT 'B' TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

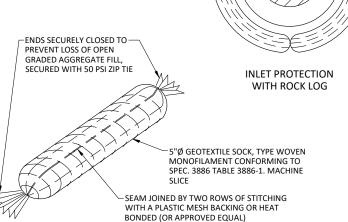
DITCH CHECK - RIPRAP NOT TO SCALE



FILL ROCK LOG WITH 45 LBS. OF OPEN GRADED AGGREGATE CONSISTING OF SOUND, DURABLE PARTICLES OF CRUSHED QUARRY ROCK OR GRAVEL CONFORMING TO THE FOLLOWING GRADATION.

GRADATION			
SIEVE SIZE	PERCENT PASSING		
1 1/2"	100		
1"	95-100		
3/4"	65-95		
3/8"	30-65		
NO 4	10-35		
NO 10	3-20		
NO 40	0-8		
NO 200	0-3		

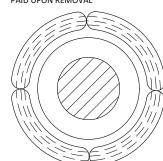
CRUSHED CONCRETE OR BITUMINOUS SHALL NOT BE USED FOR OPEN GRADED AGGREGATE.



INLET PROTECTION ROCK BAG

NOT TO SCALE

PAYMENT SHALL INCLUDE ALL MATERIALS, FILLING OF LOG, PLACEMENT, MAINTENANCE & REMOVAL: 80% OF BID PRICE SHALL BE PAID UPON PROPER PLACEMENT WITH THE FINAL 20% PAID UPON REMOVAL



4" 4.6" 3"-4" 6.8" 4"-6" 4"-6" 9.5" 10" 11.6" 5"-8" 12" 5"-8" 14.2" 15" 17.7" 5"-8" 18" 22.0" 6"-10" 24" 29.5" 8"-12" 30" 35.4" 8"-12" 36' 41.0" 8"-12"

1. BEDDING AND EMBEDMENT MATERIAL PER

2. CONSTRUCTION REQUIREMENTS PER SPEC

DEPTH, LOOSE MEASURE, TO 95% STANDARD

PROCTOR DENSITY FROM THE BEDDING TO A

3. COST FOR FURNISHING AND INSTALLING GRANULAR BEDDING AND ENCASEMENT

MATERIALS SHALL BE INCLUDED IN THE PRICE BID FOR POLYETHYLENE PIPE, PER LINEAL FOOT.

'F'

ENVELOPE

WIDTH

MINIMUM DEPTH OF AT LEAST 12" ABOVE THE

2451 MODIFIED SO THAT EMBEDMENT MATERIAL

IS COMPACTED IN UNIFORM LIFTS, 8" OR LESS IN

SPECIFICATIONS.

CROWN OF THE PIPE.

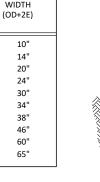
PIPE OD

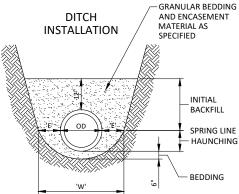
(Nominal)

PIPF

SIZE

TRENCH AND ENCASEMENT MATERIAL AS INSTALLATION

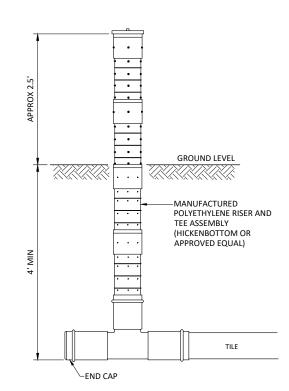




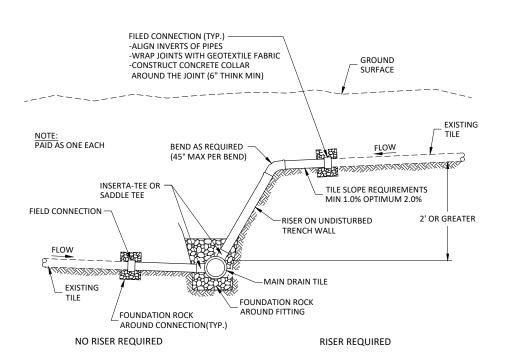
DUAL WALL POLYETHYLENE TRENCH

NOT TO SCALE

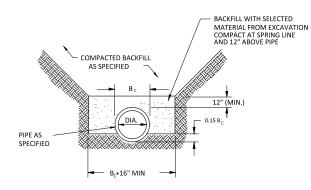
MINIMUM TRENCH



SURFACE WATER INTAKE RISER NOT TO SCALE



DRAIN TILE CONNECTION NOT TO SCALE



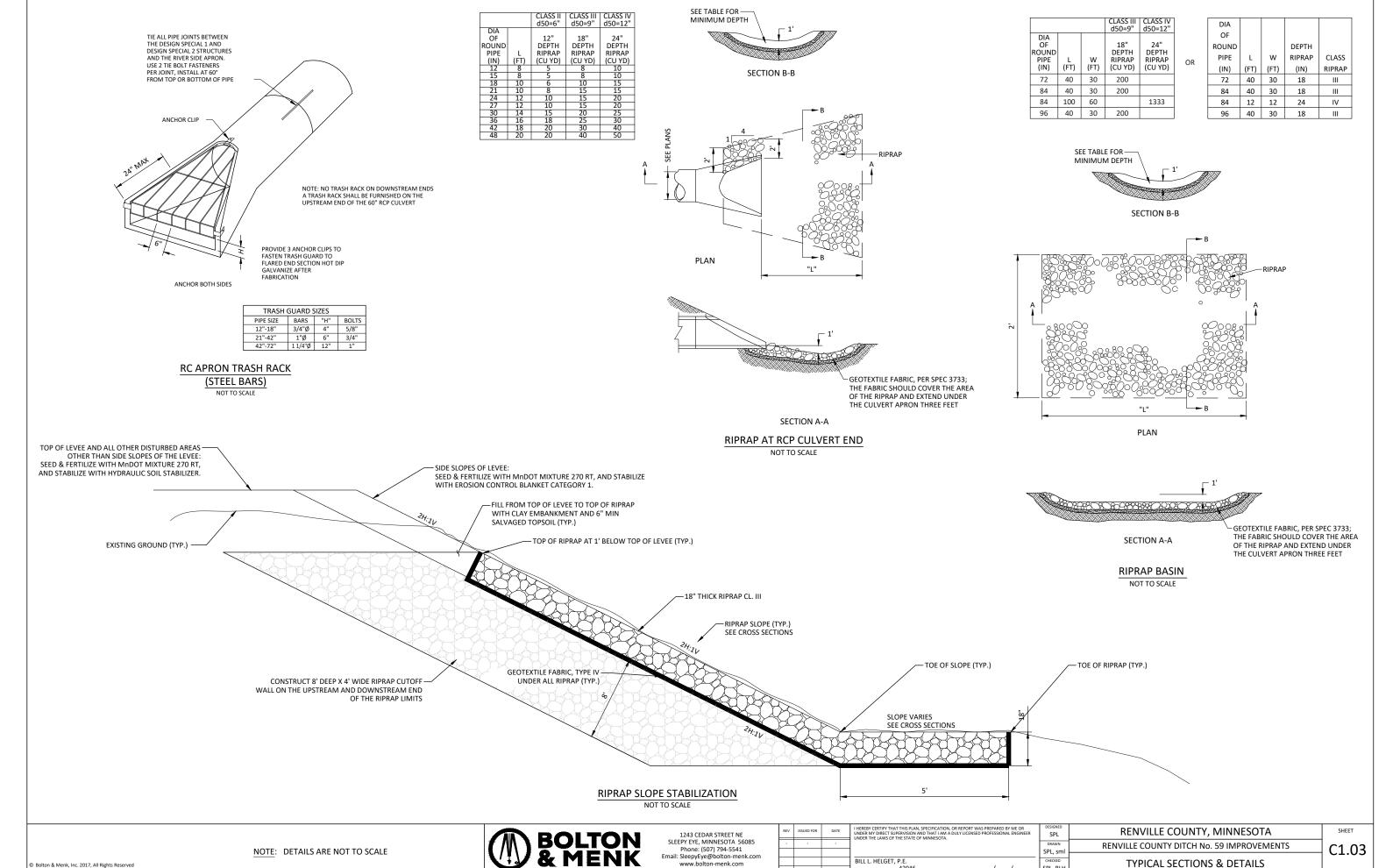
	PIPE DIA.	В
36	5" OR LESS	B _c + 24"
	42" TO 54"	1.5 x B _c
6	0" OR OVER	B _c + 36"

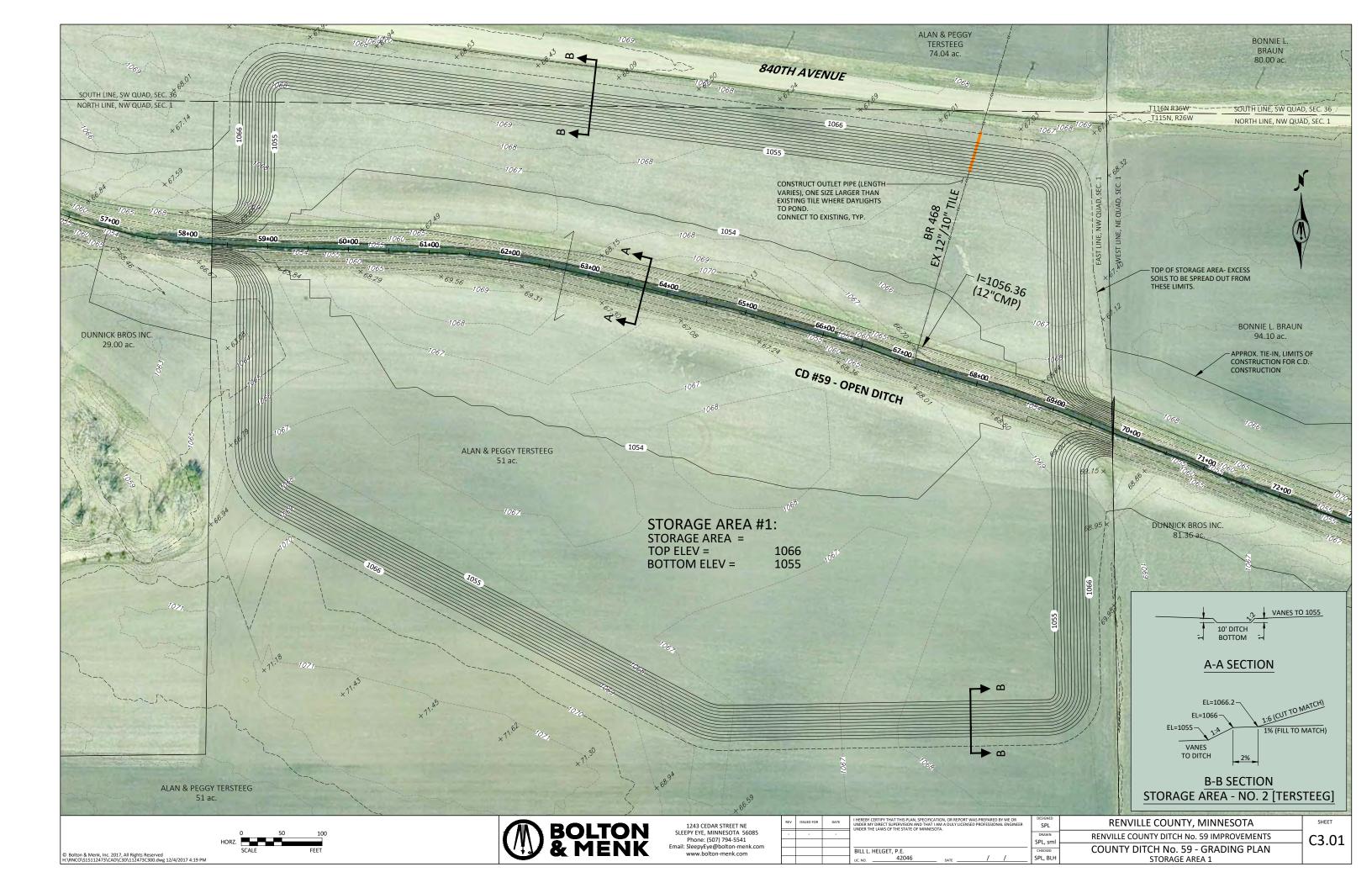
TRENCH DETAIL C.S. & REINFORCED CONCRETE PIPE CLASS "C" BEDDING CONDITION NOT TO SCALE

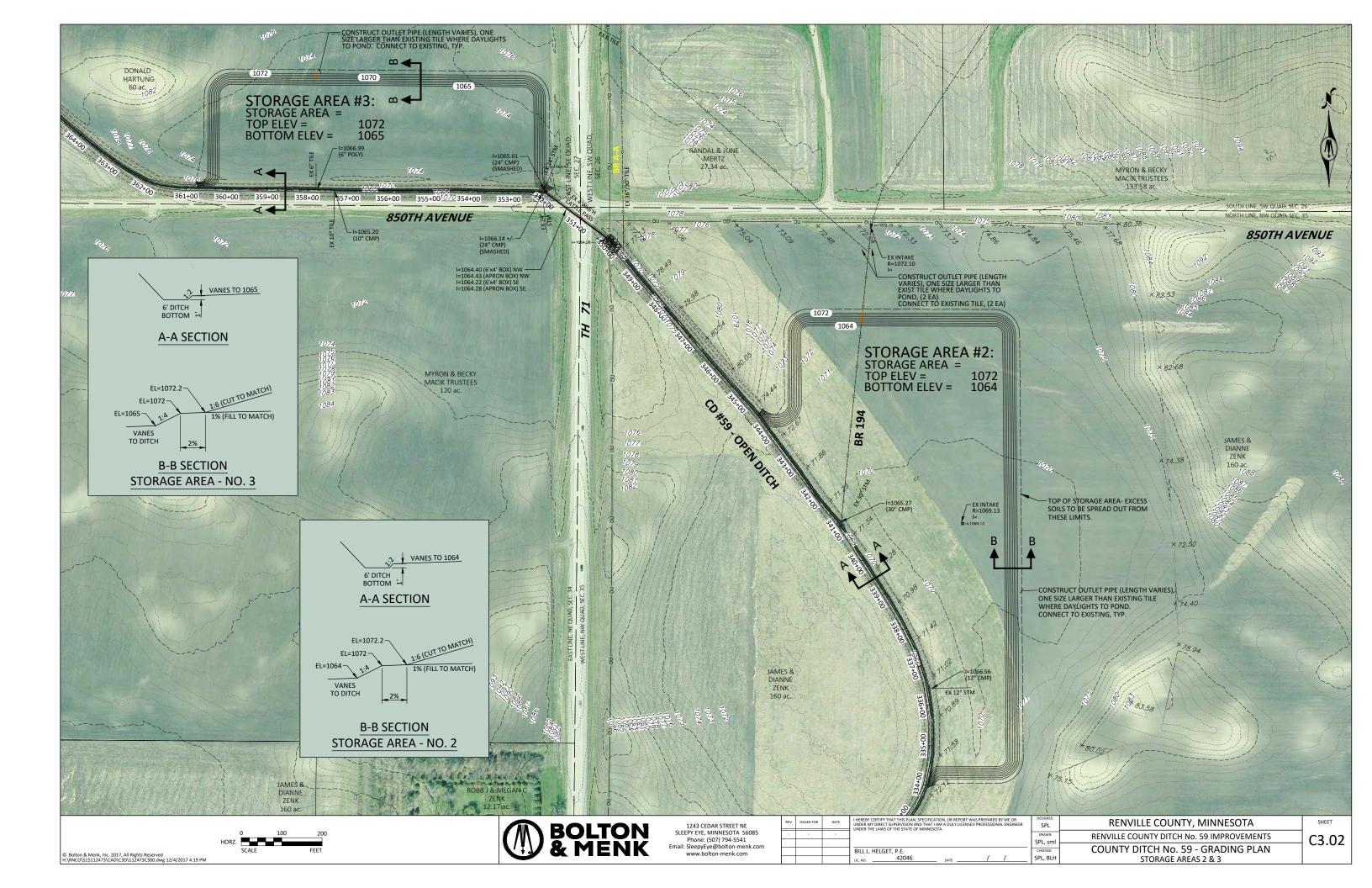
1243 CEDAR STREET NE SLEEPY EYE, MINNESOTA 56085 Phone: (507) 794-5541 www.bolton-menk.com

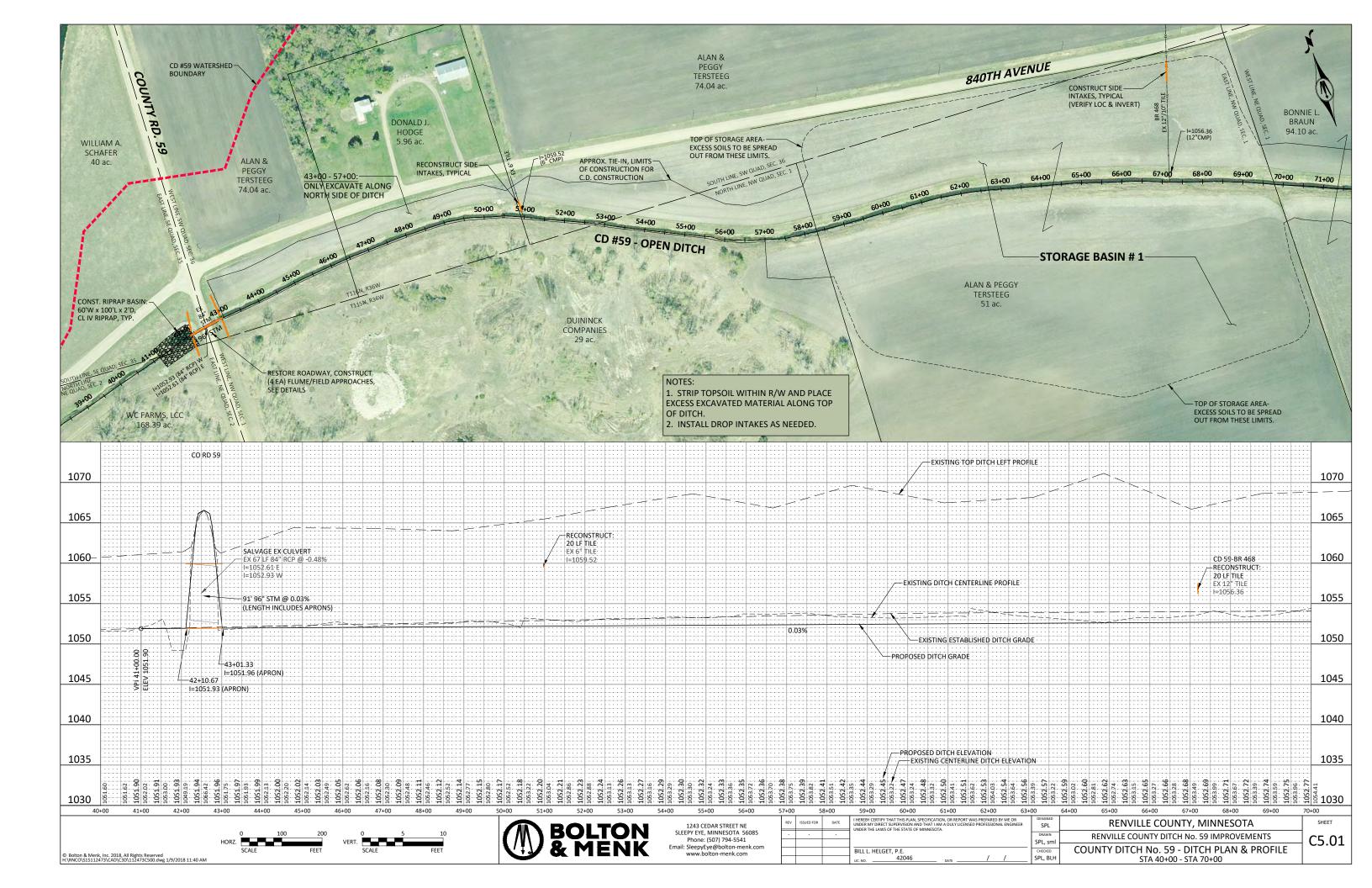
BILL L. HELGET, P.E.

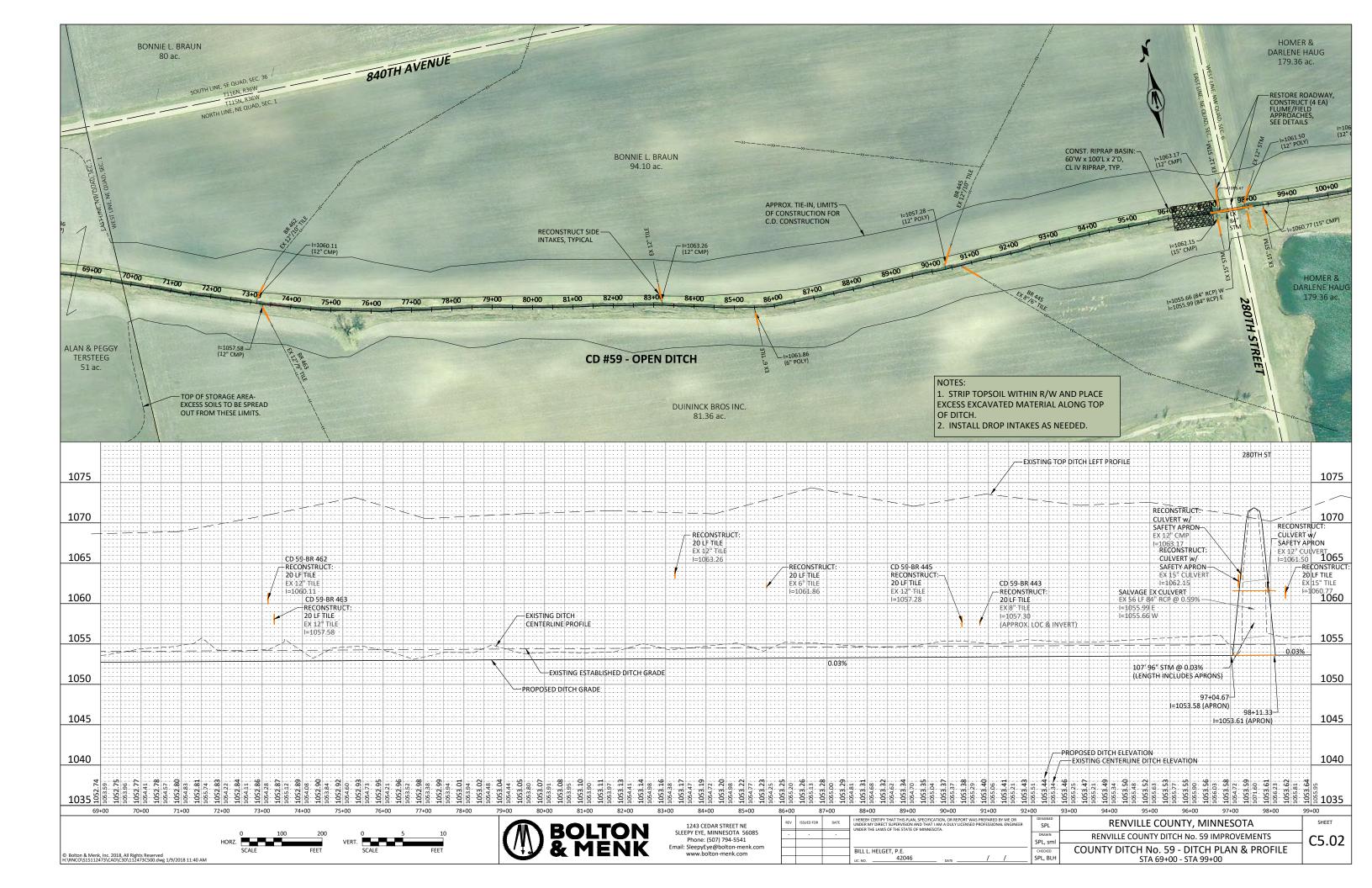
RENVILLE COUNTY, MINNESOTA RENVILLE COUNTY DITCH No. 59 IMPROVEMENTS SPL, sml **DETAILS**

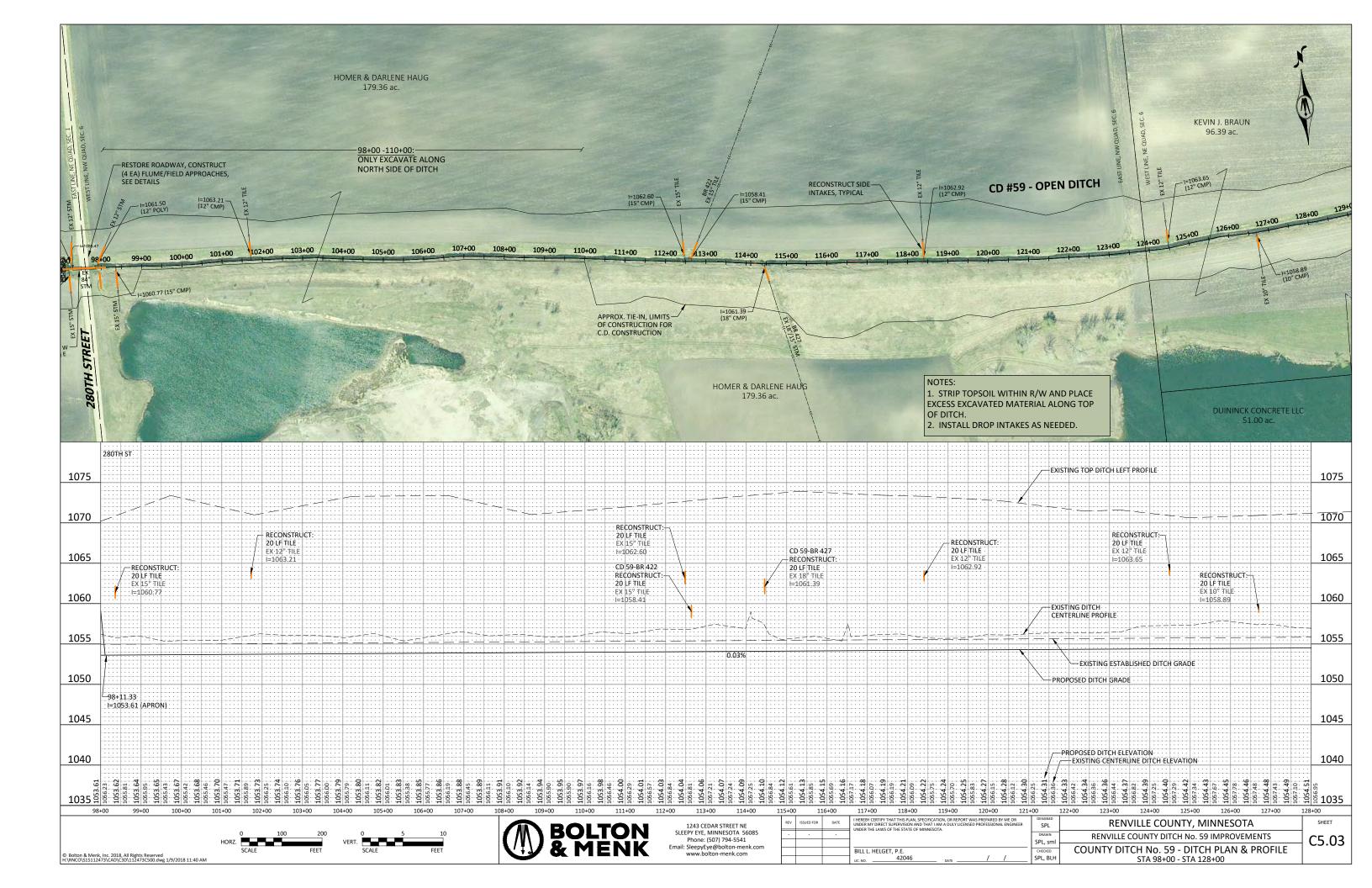


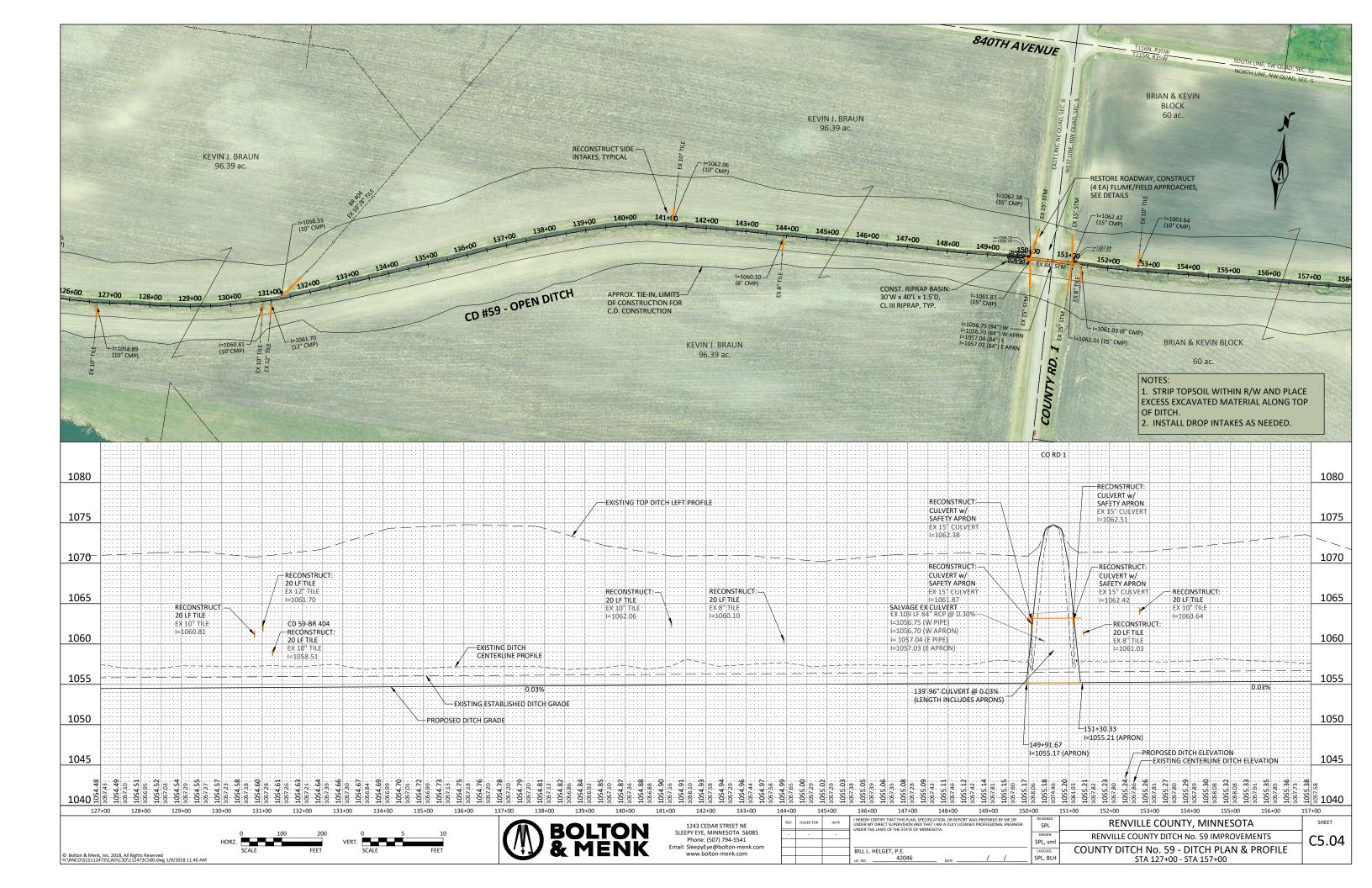


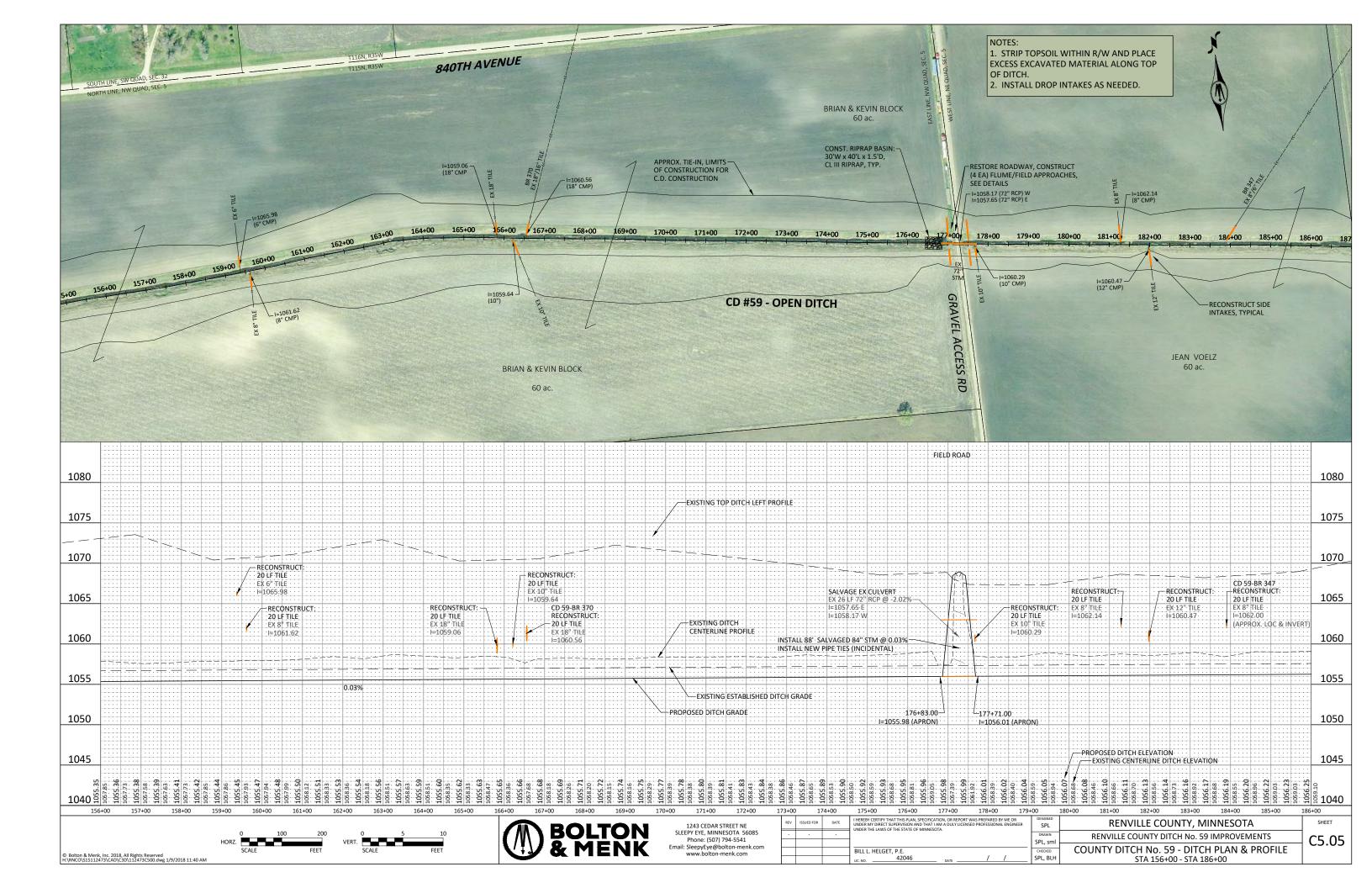


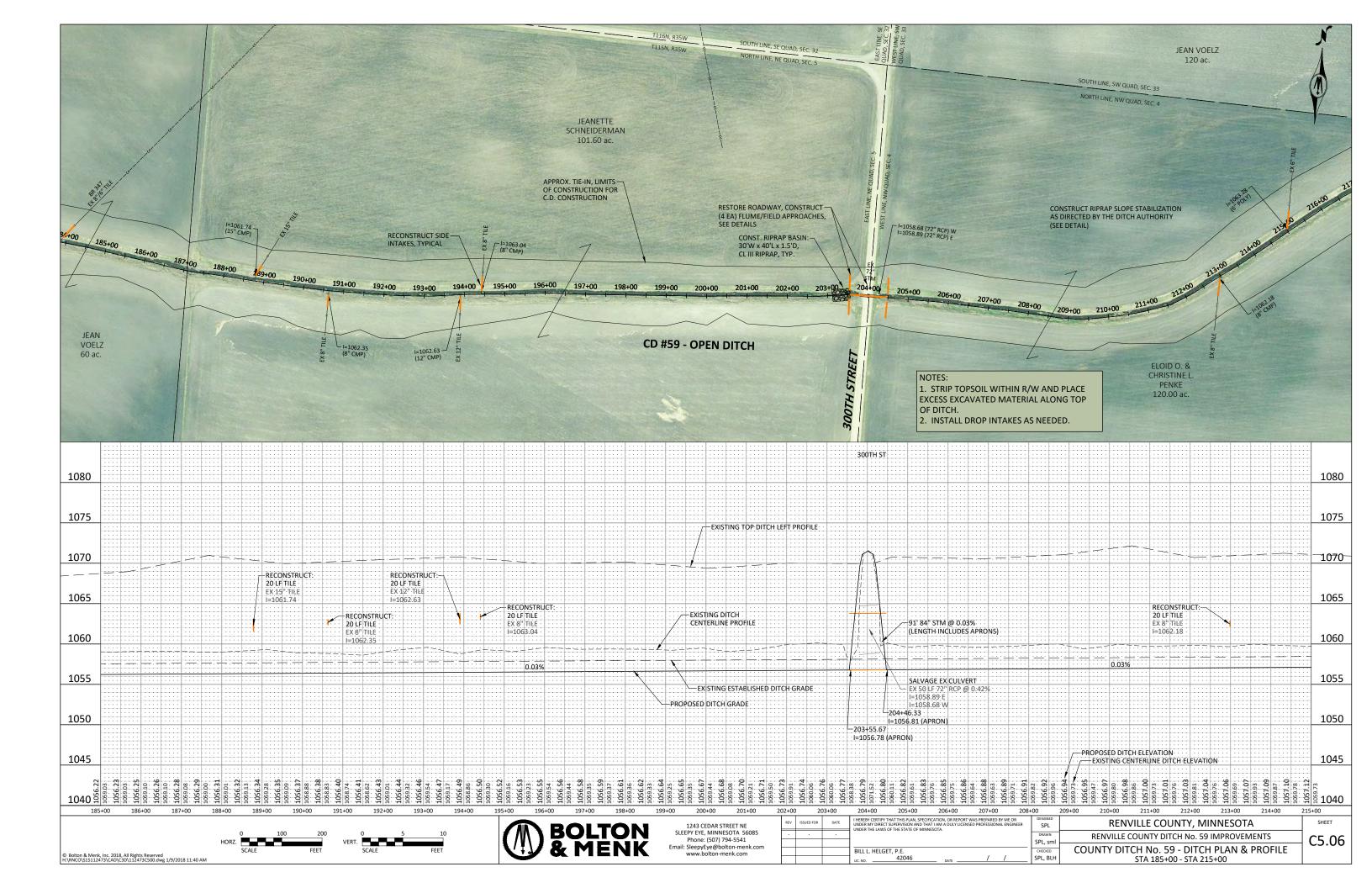


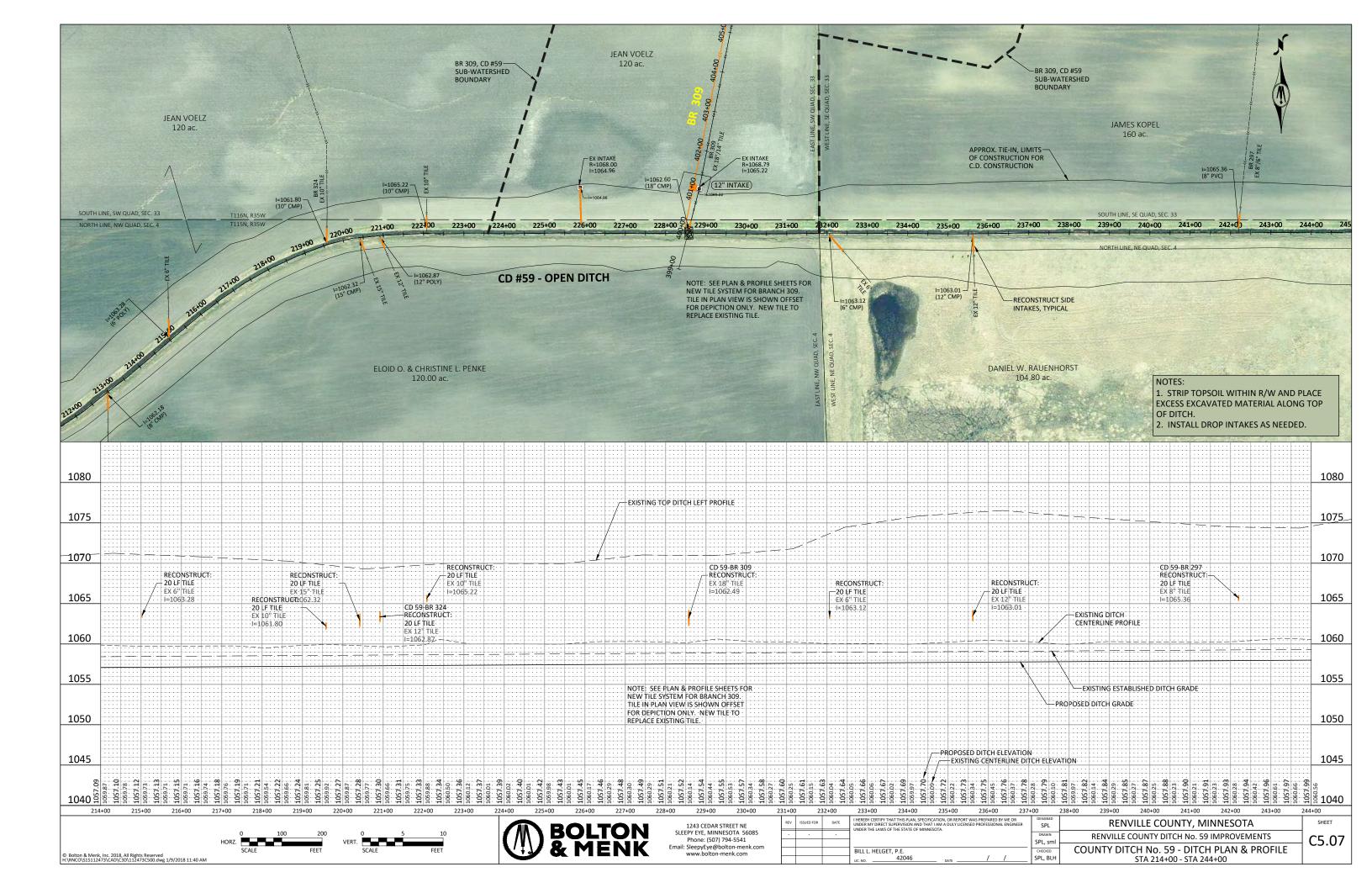


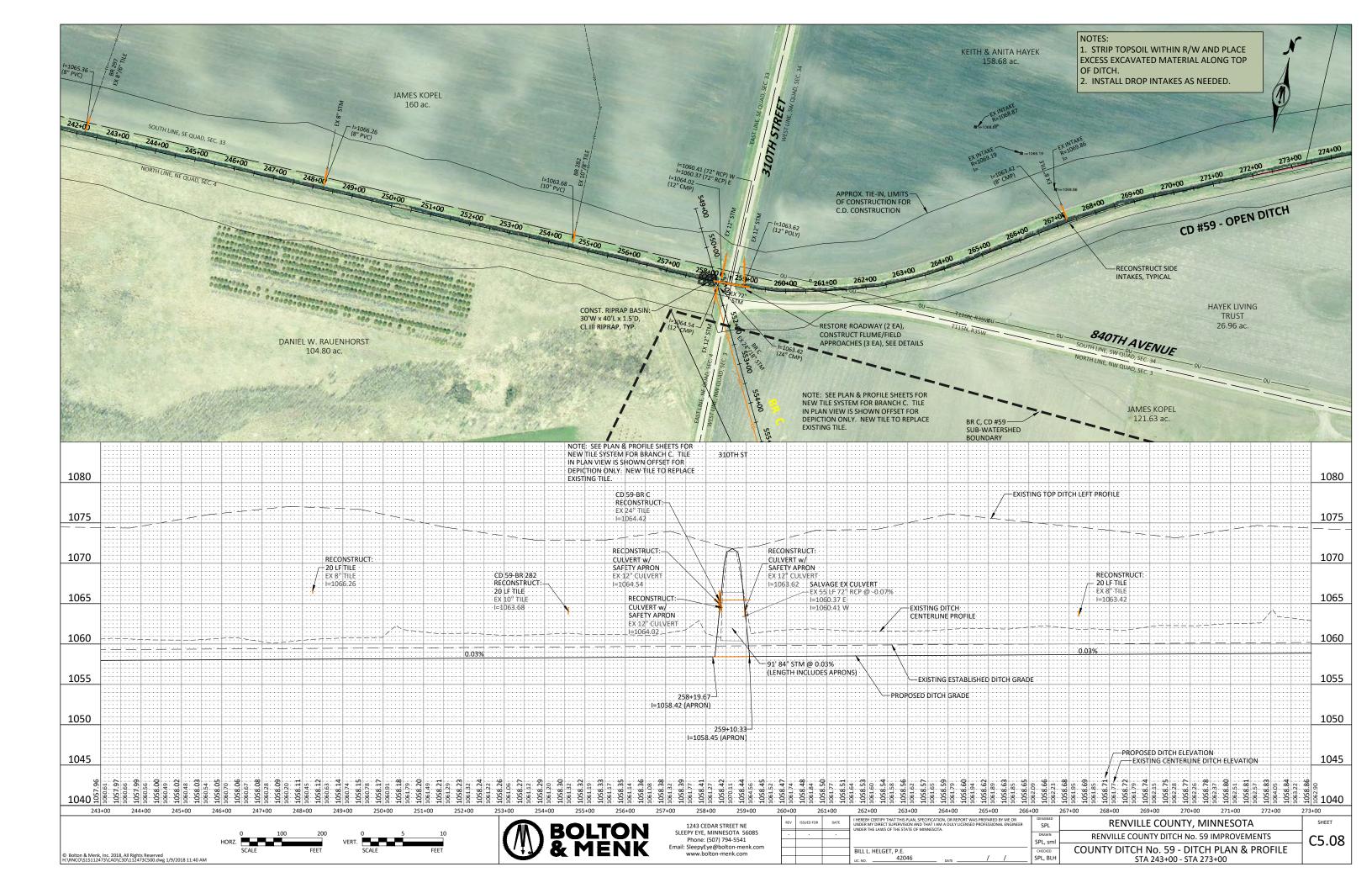


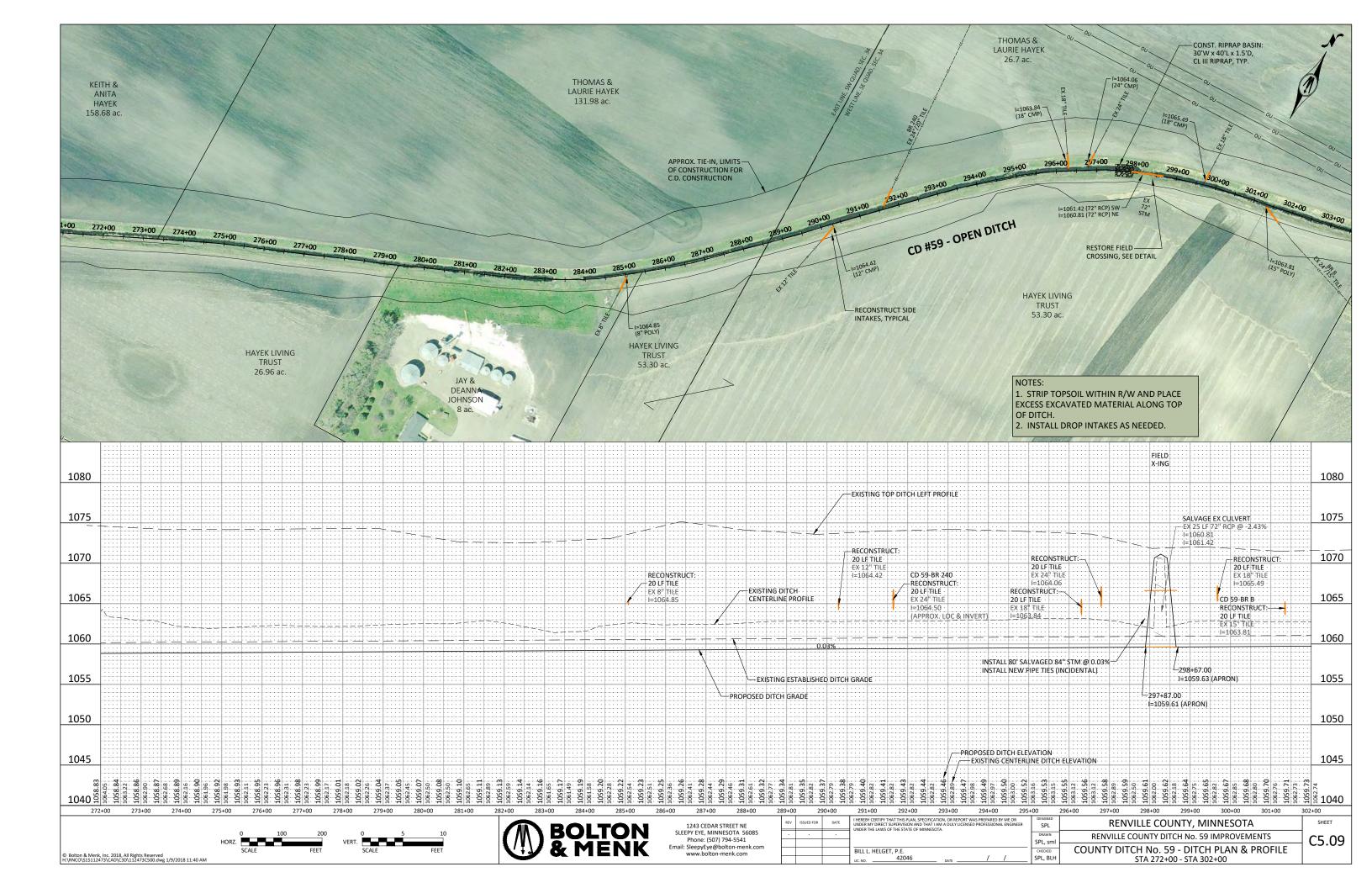




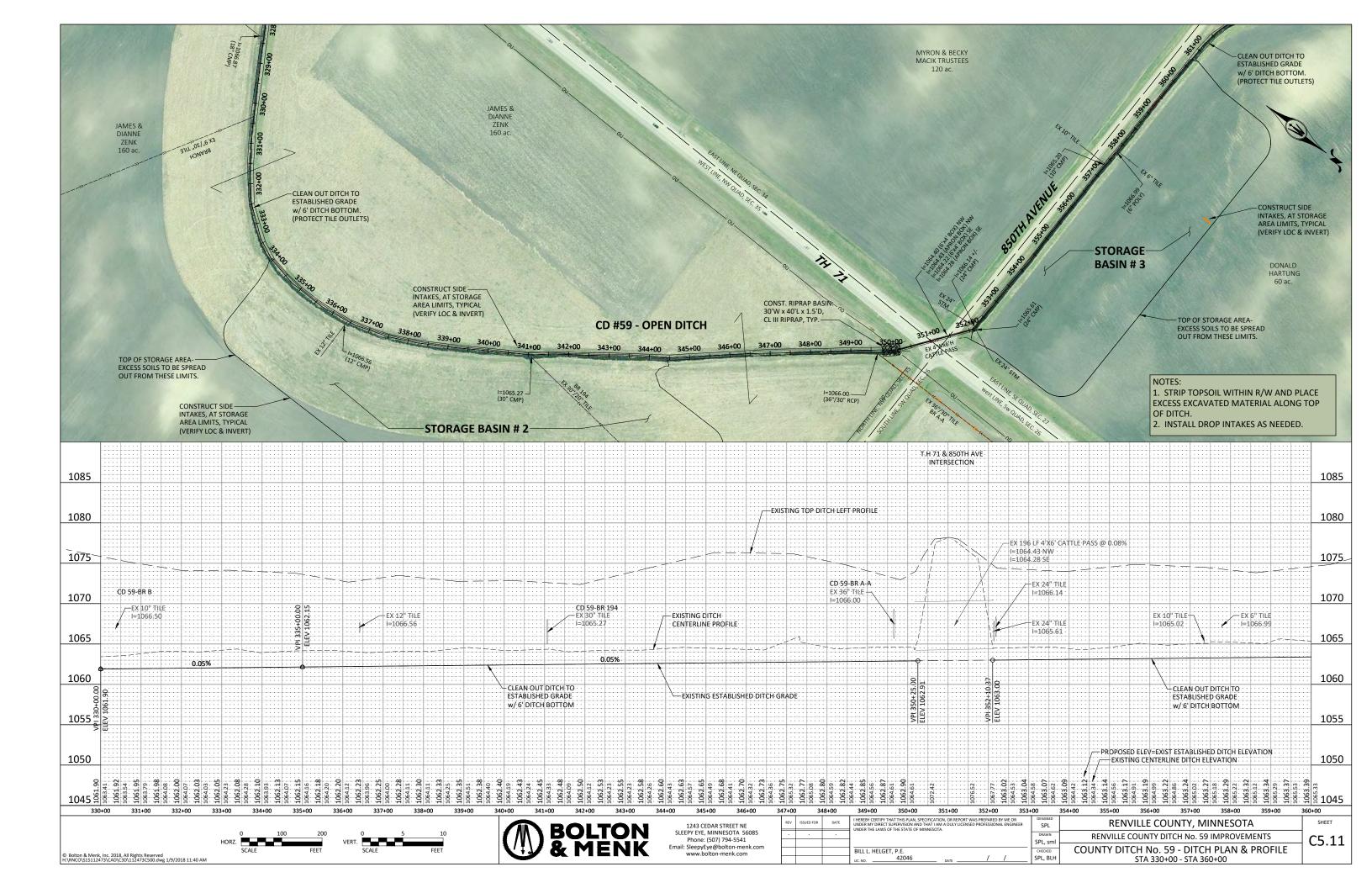


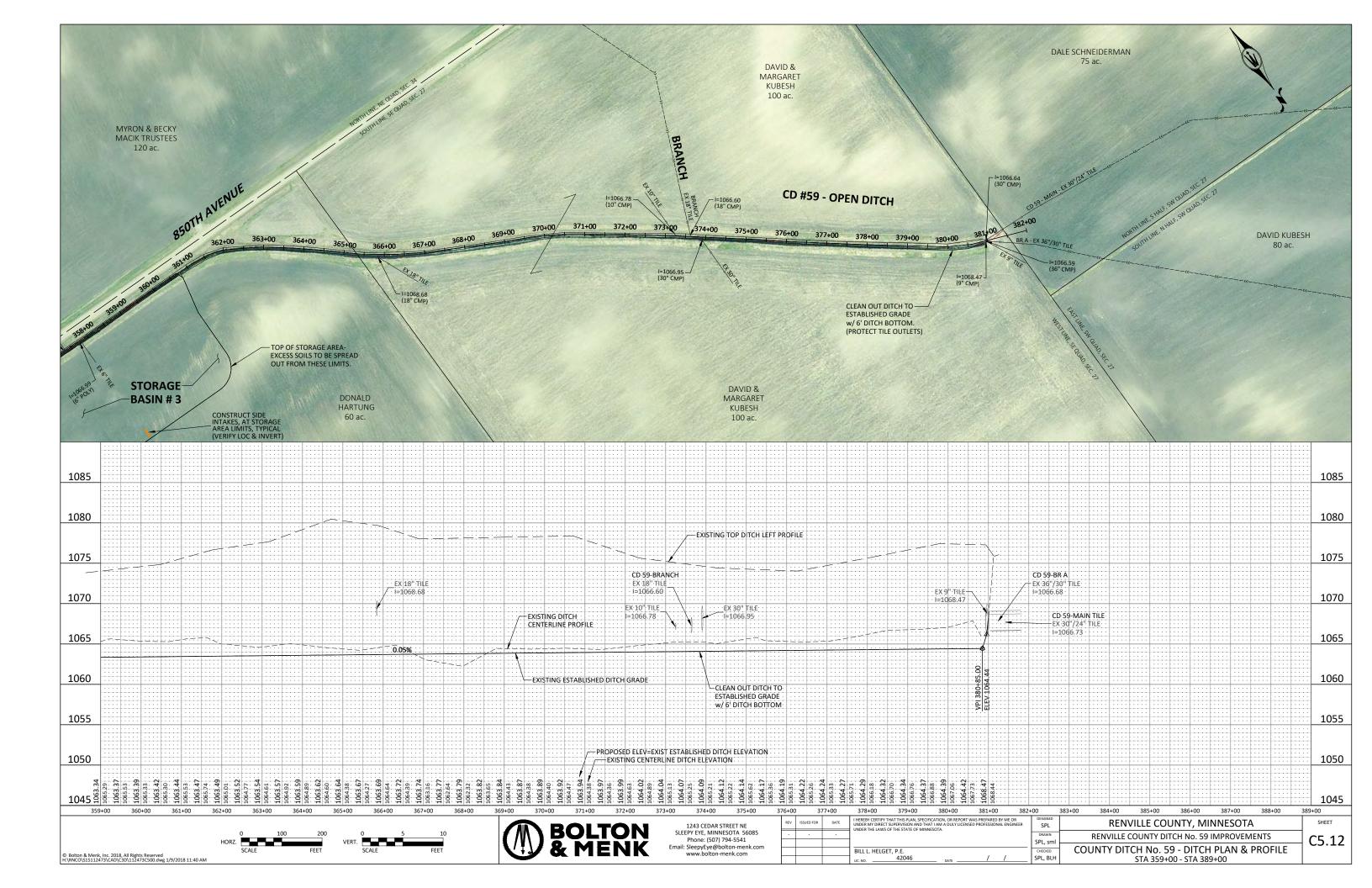


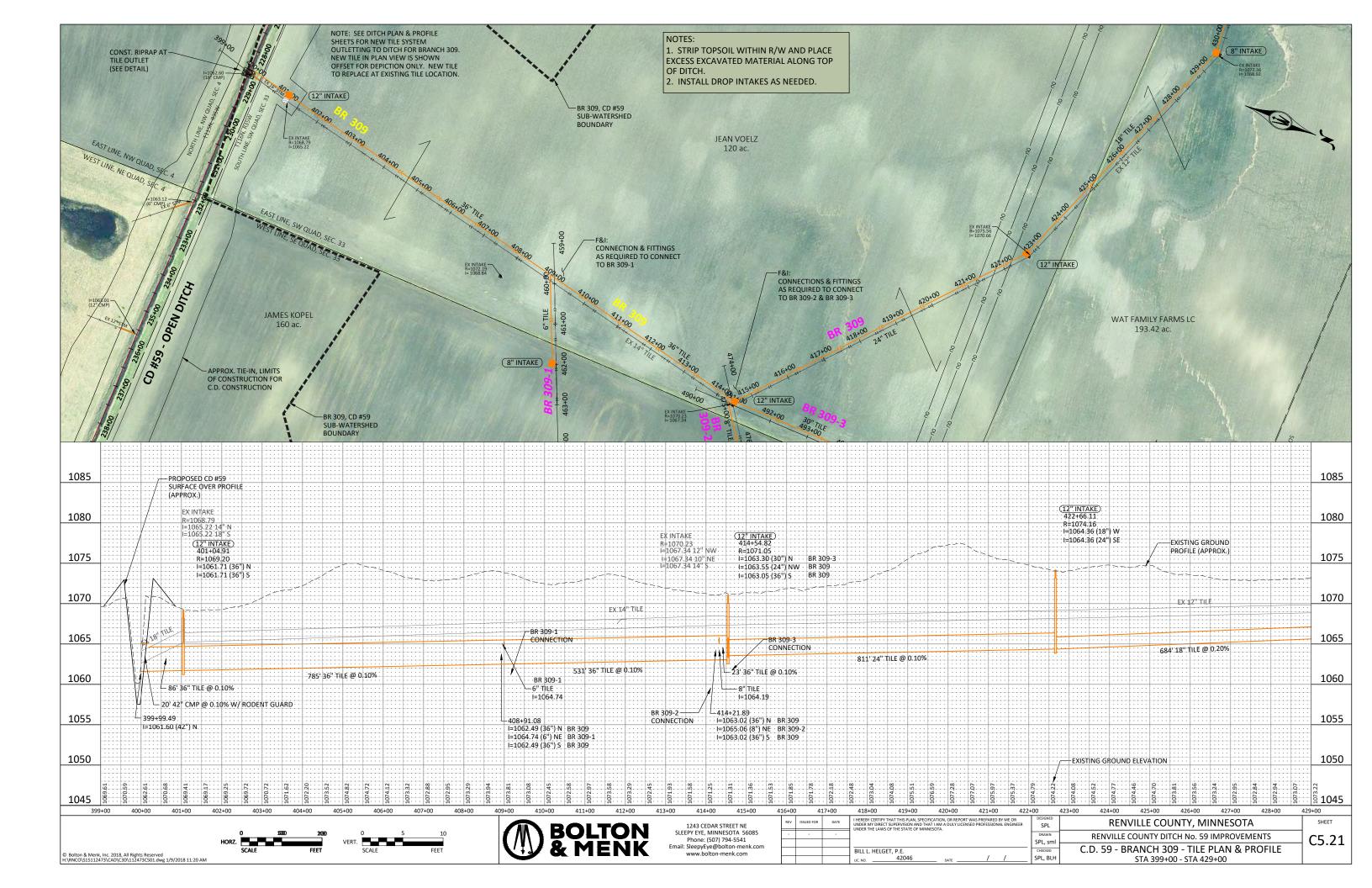


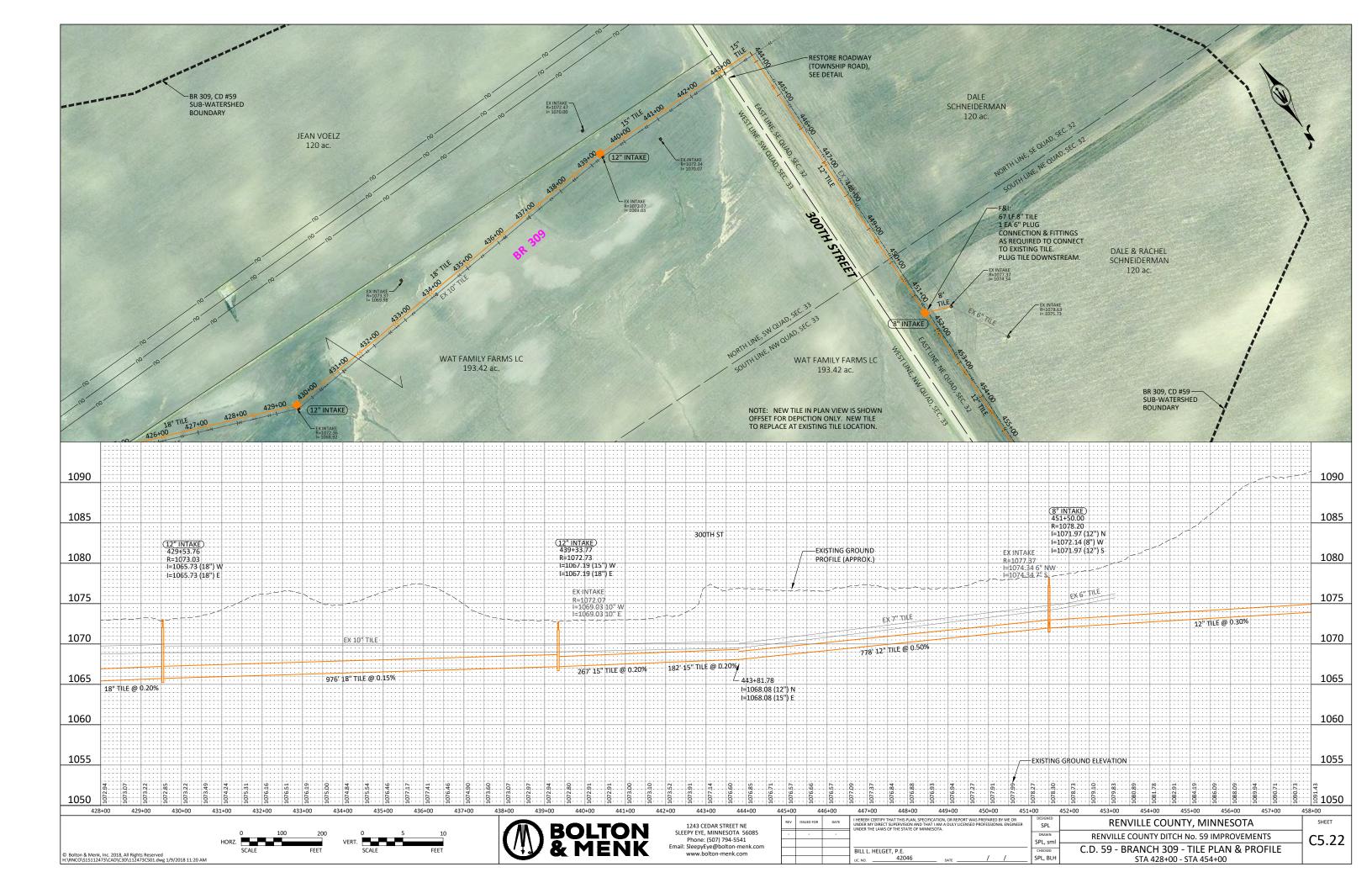


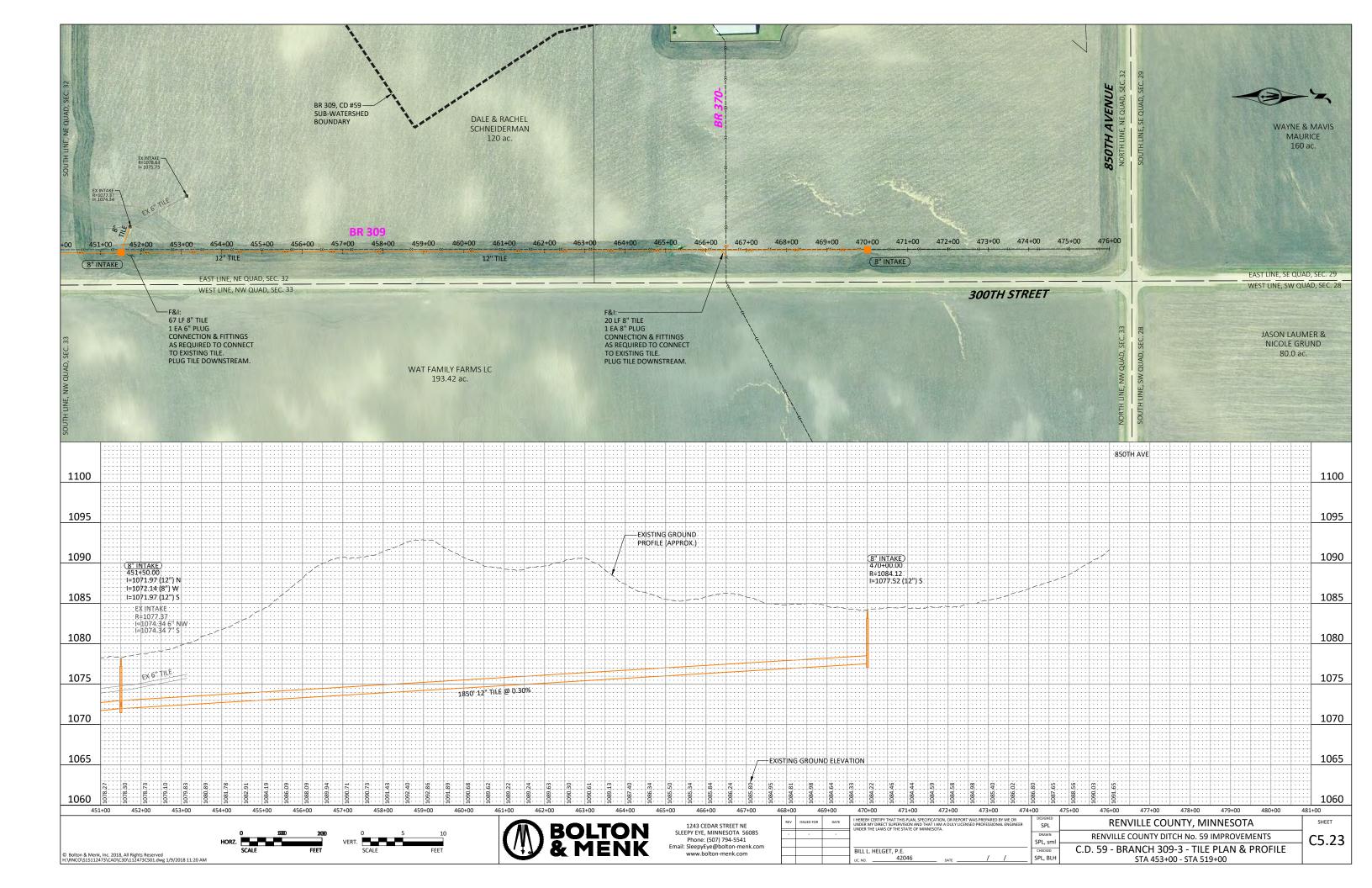


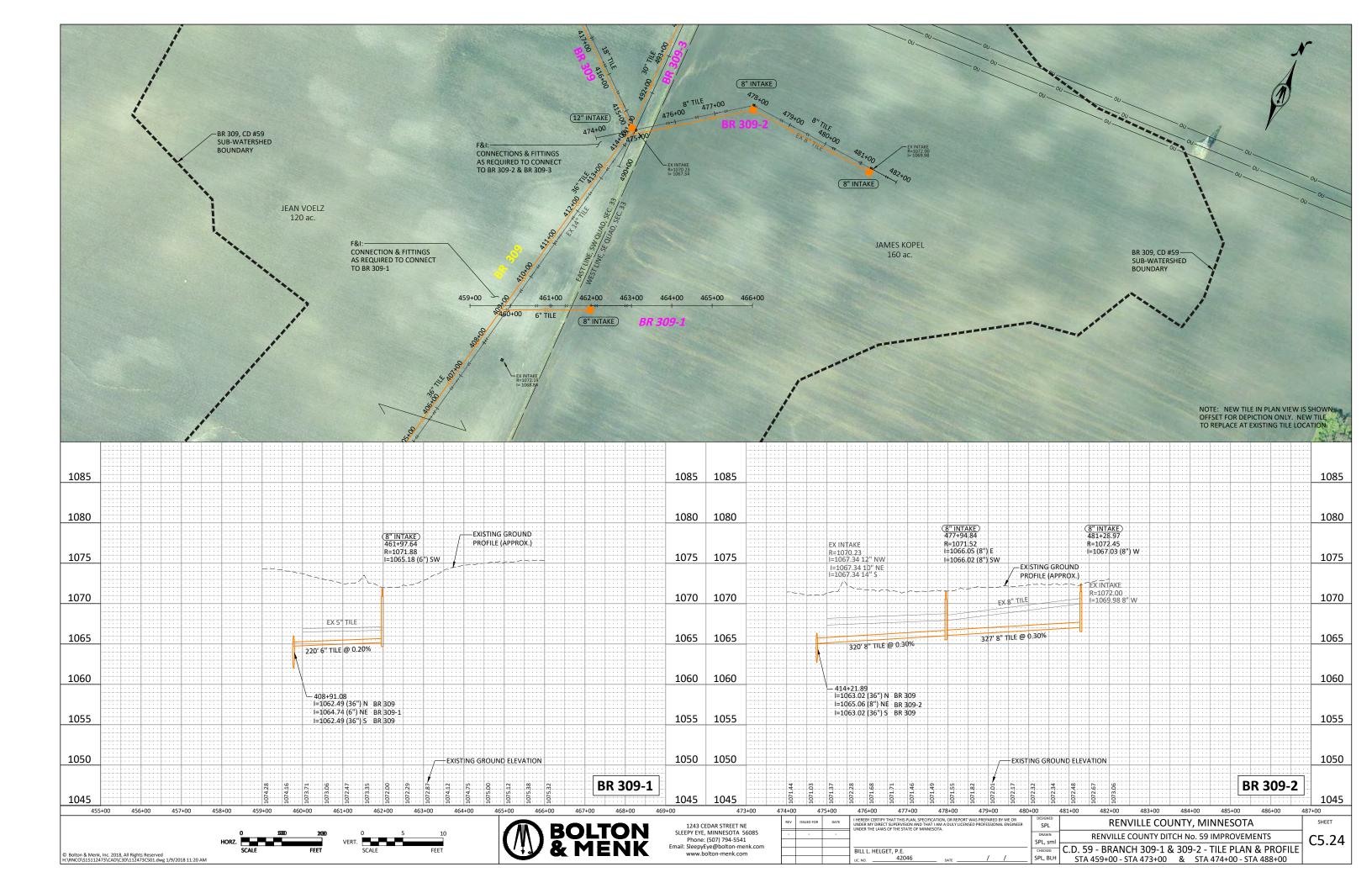


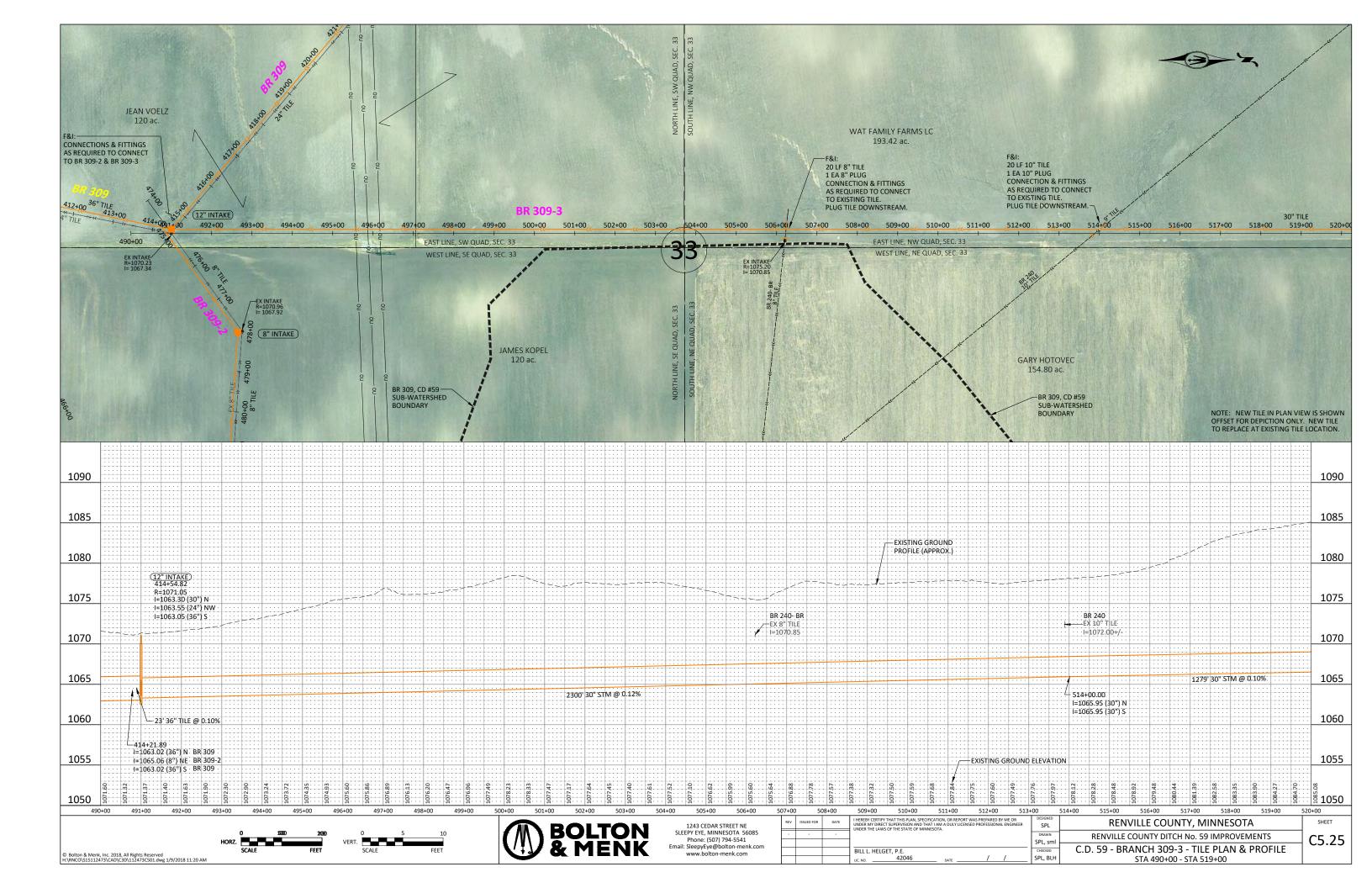


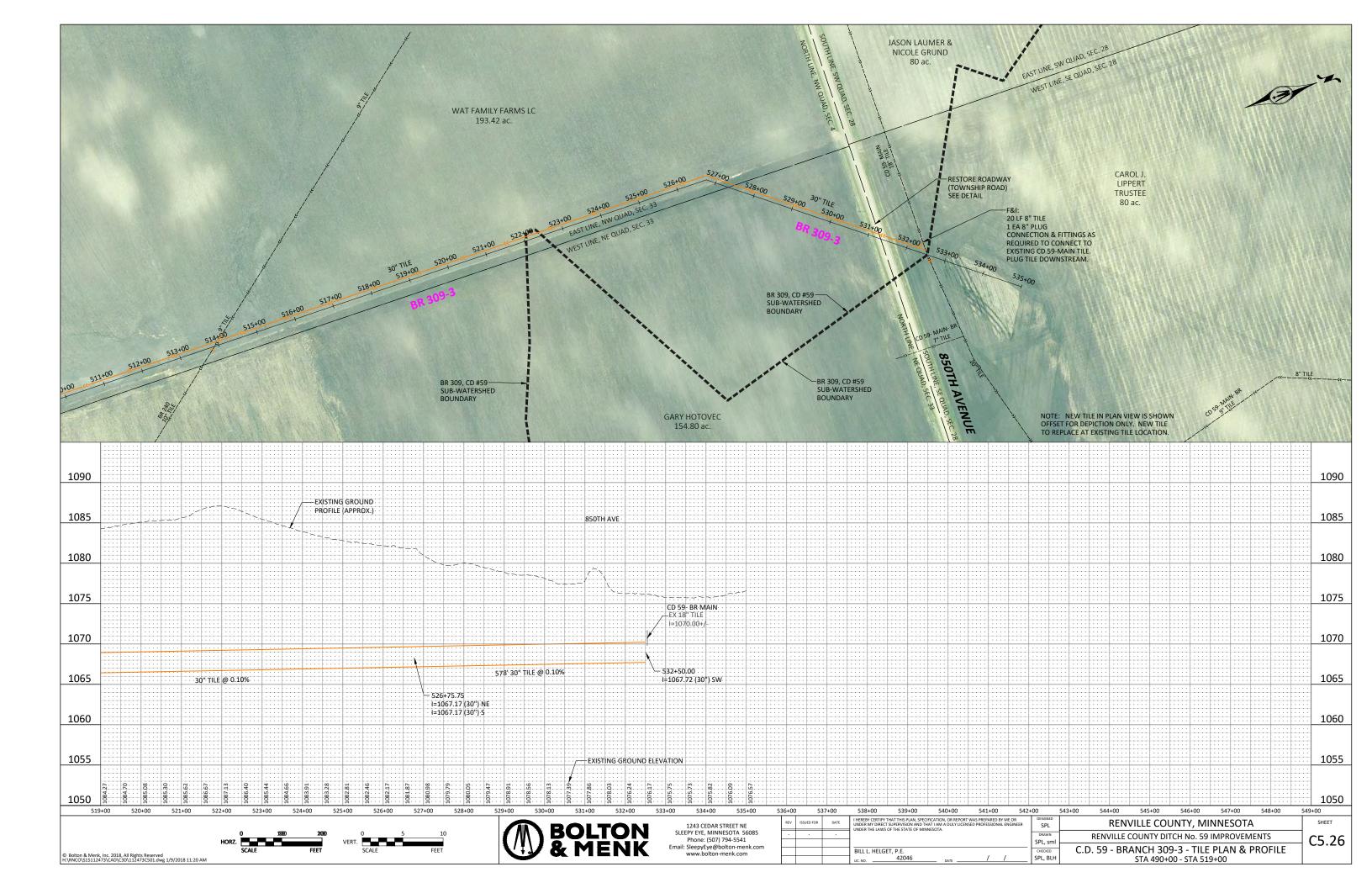


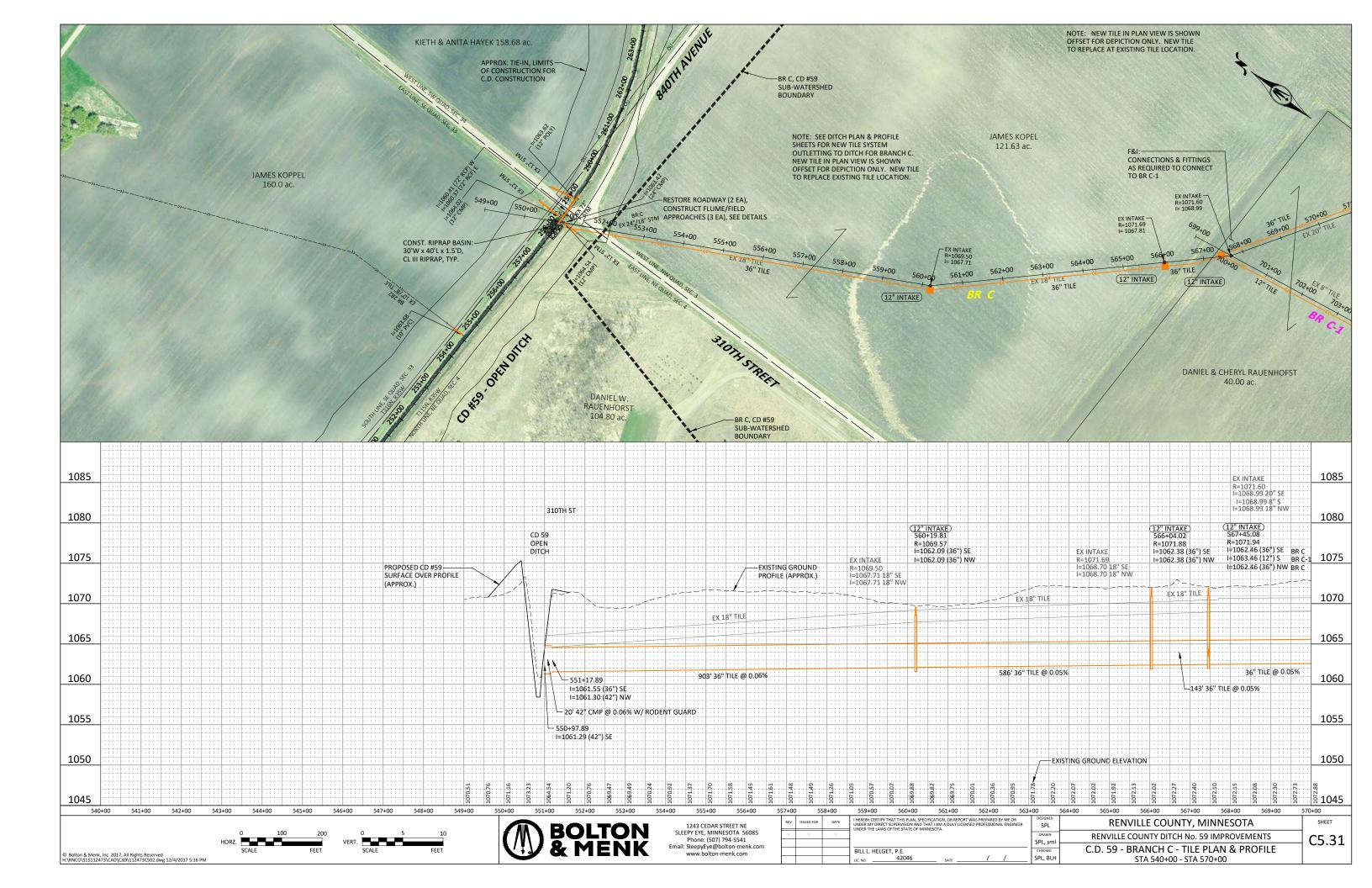


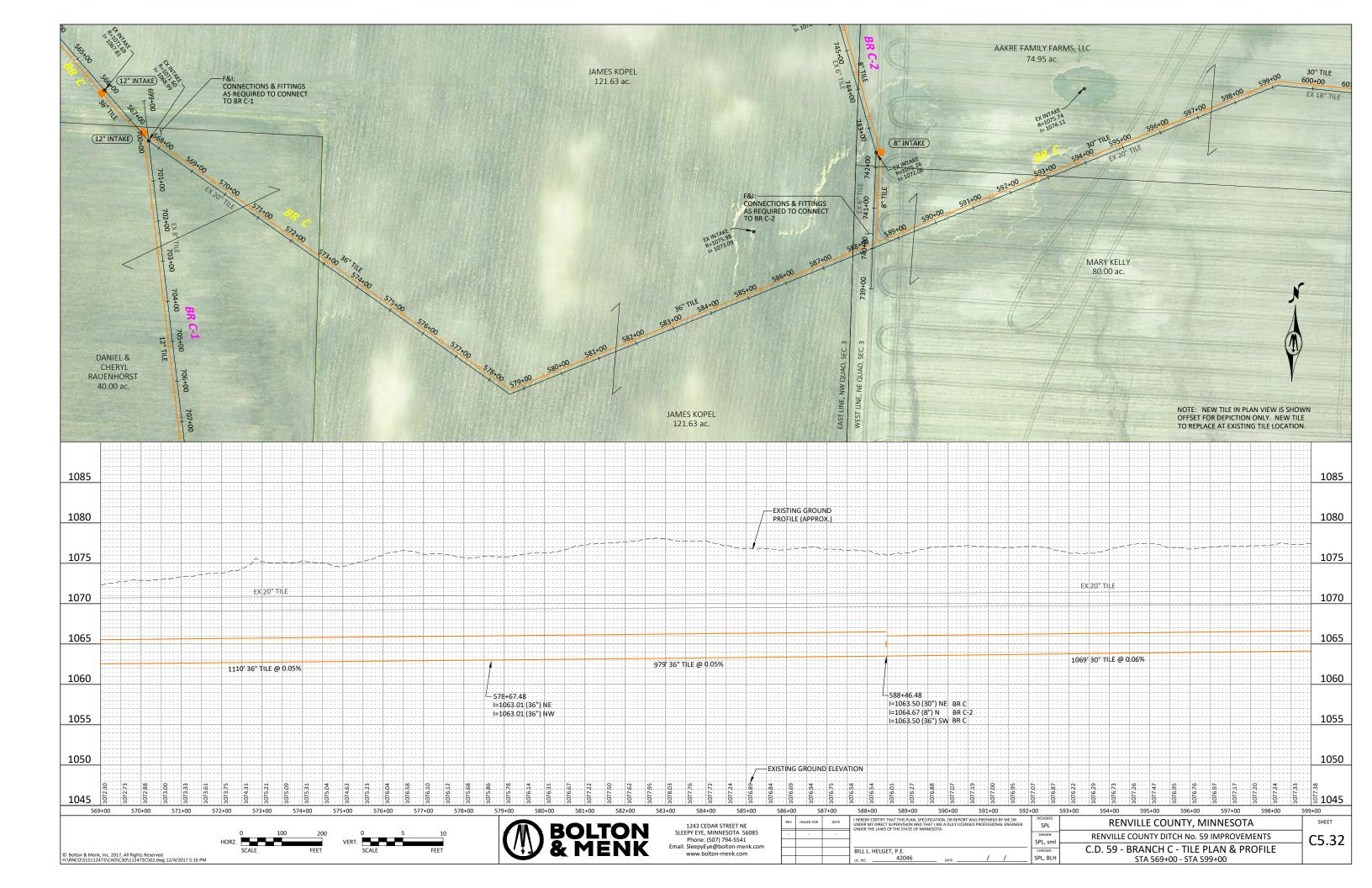


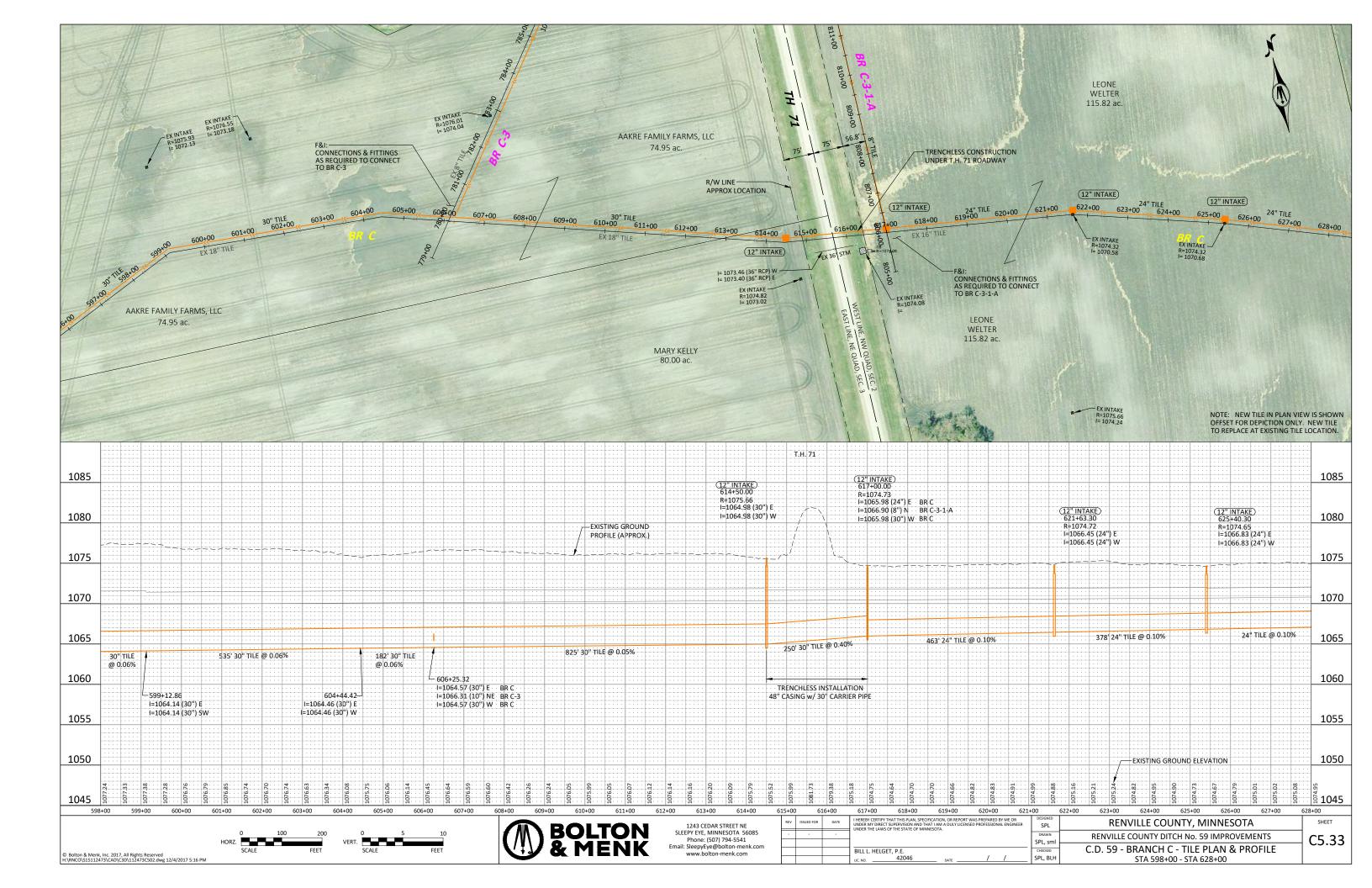


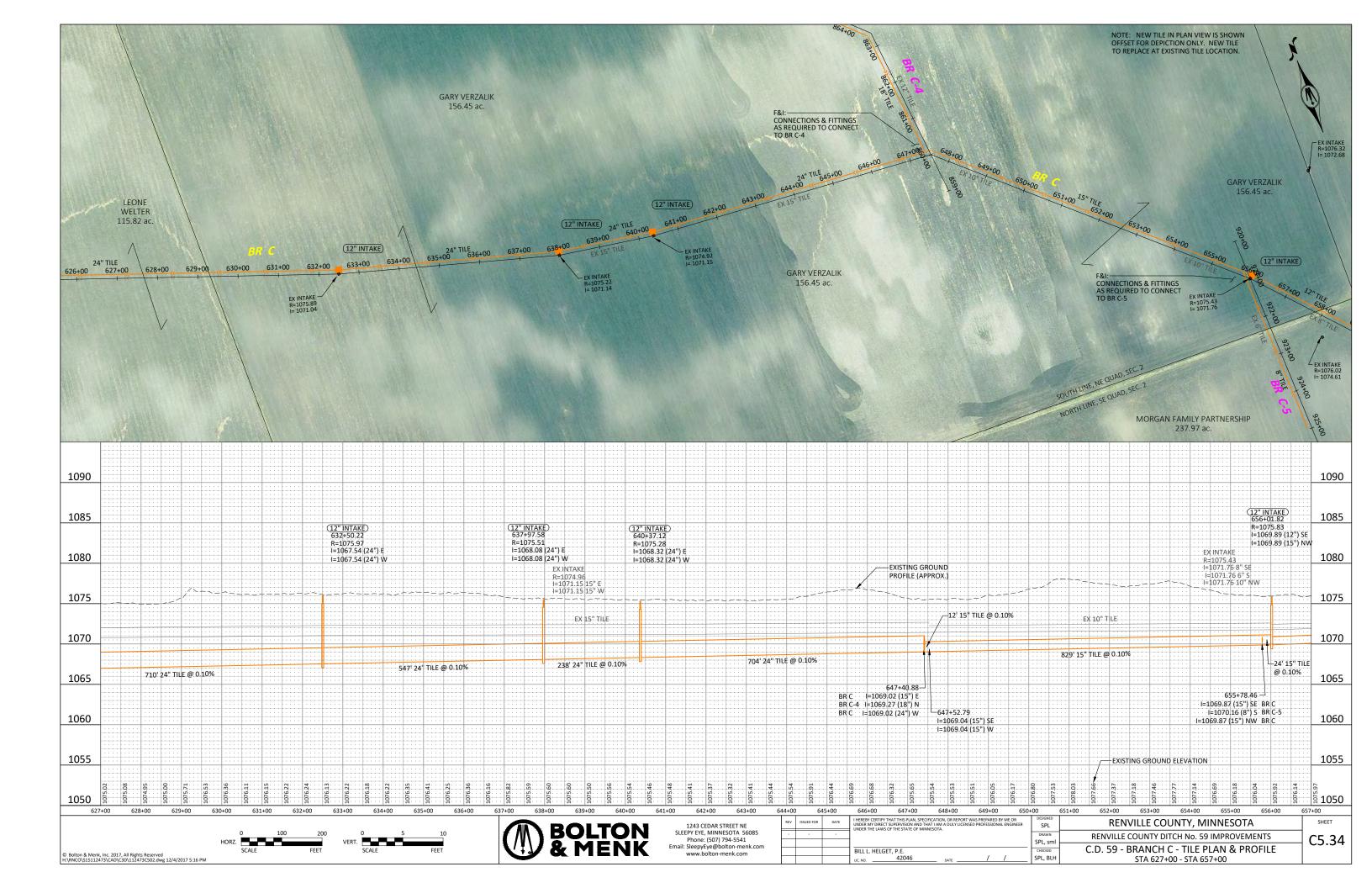


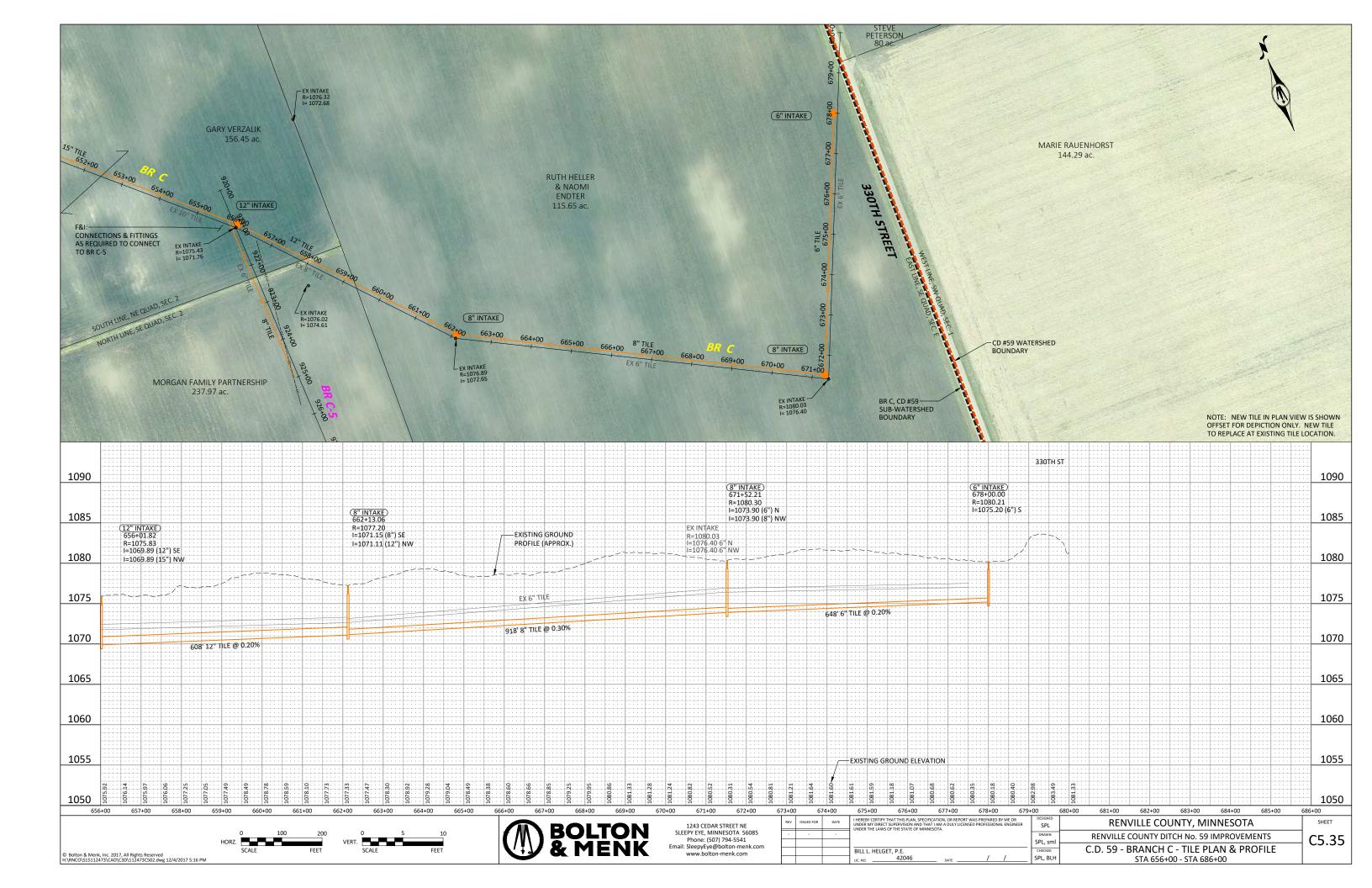


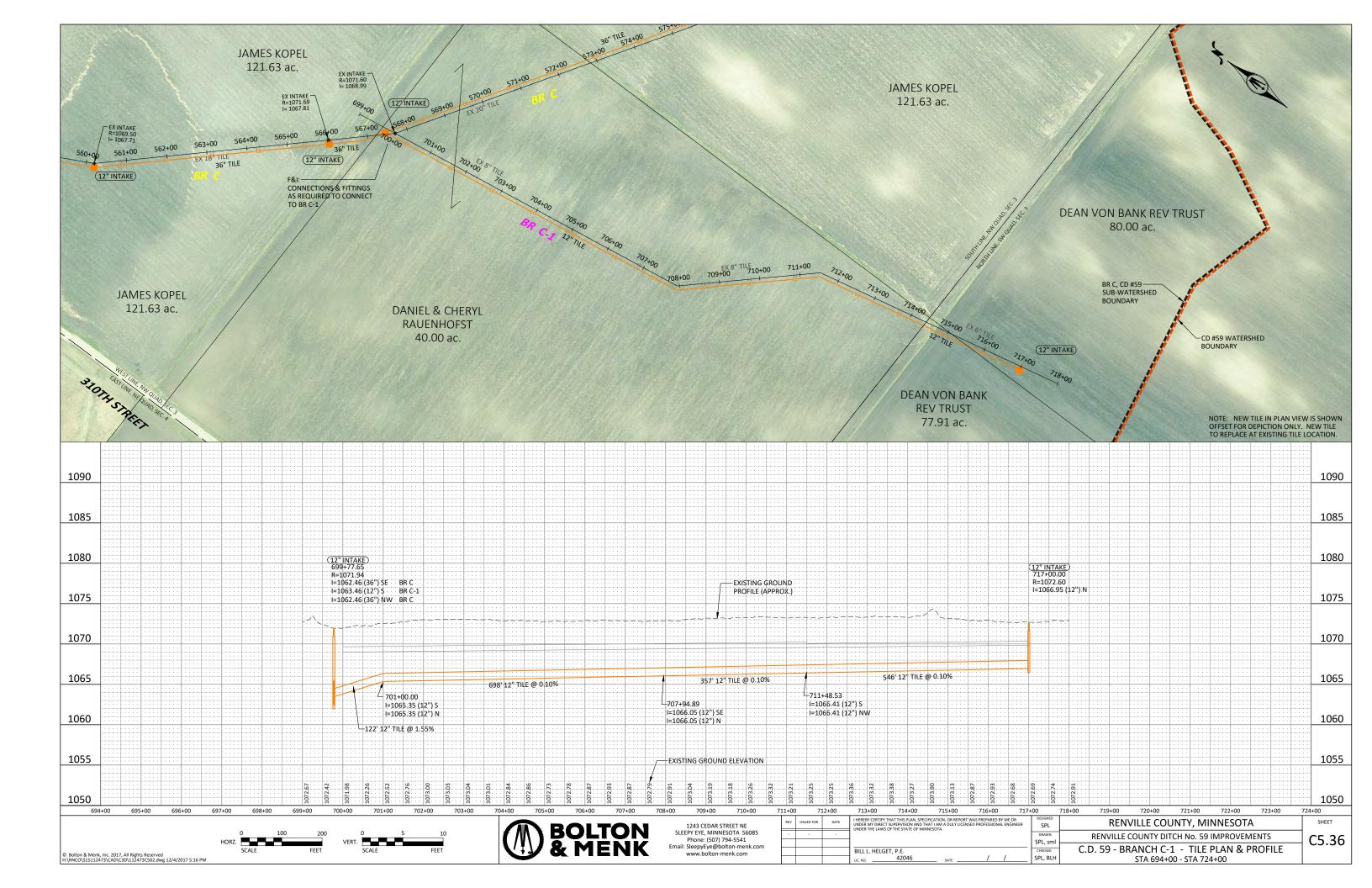


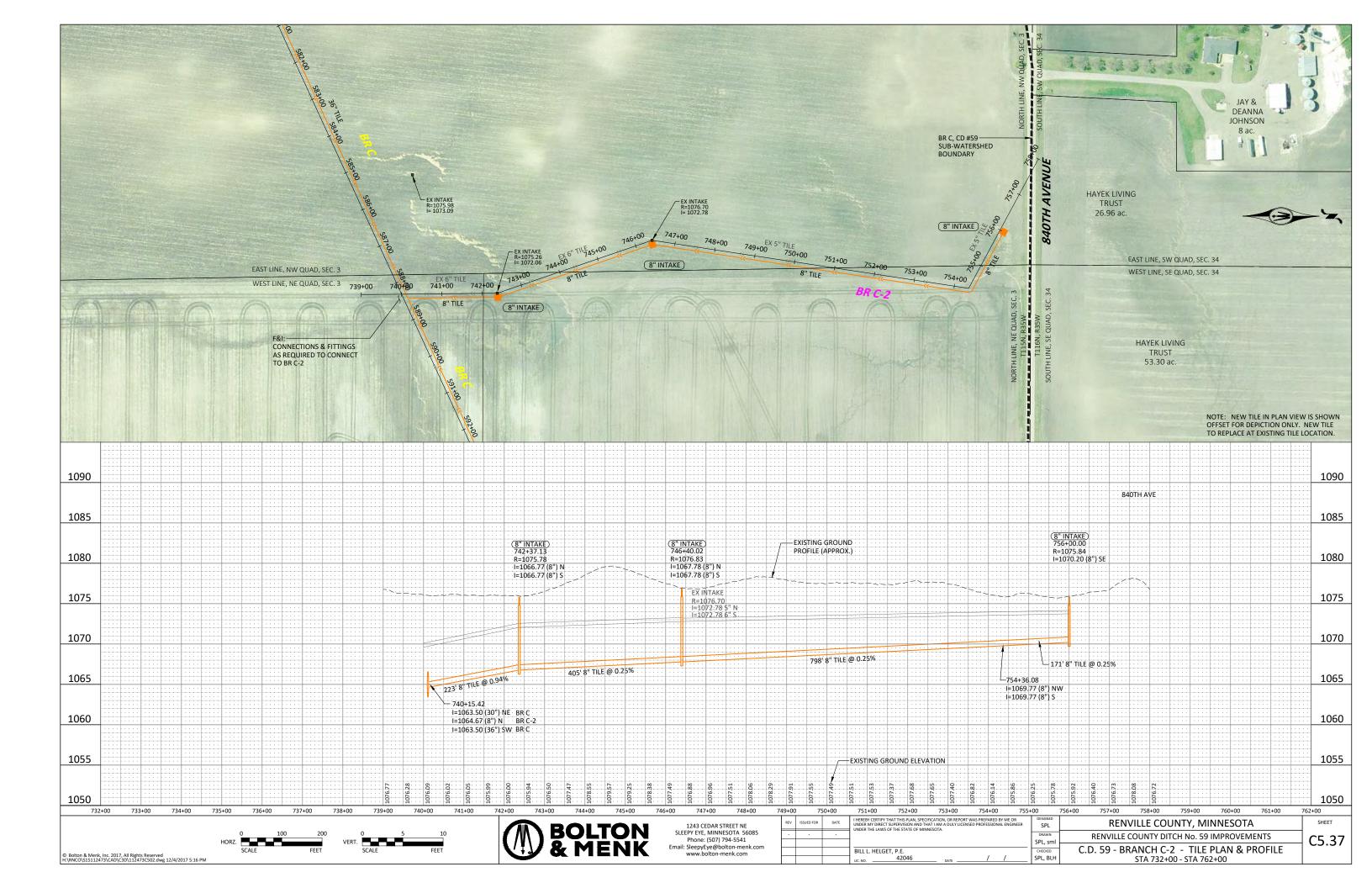


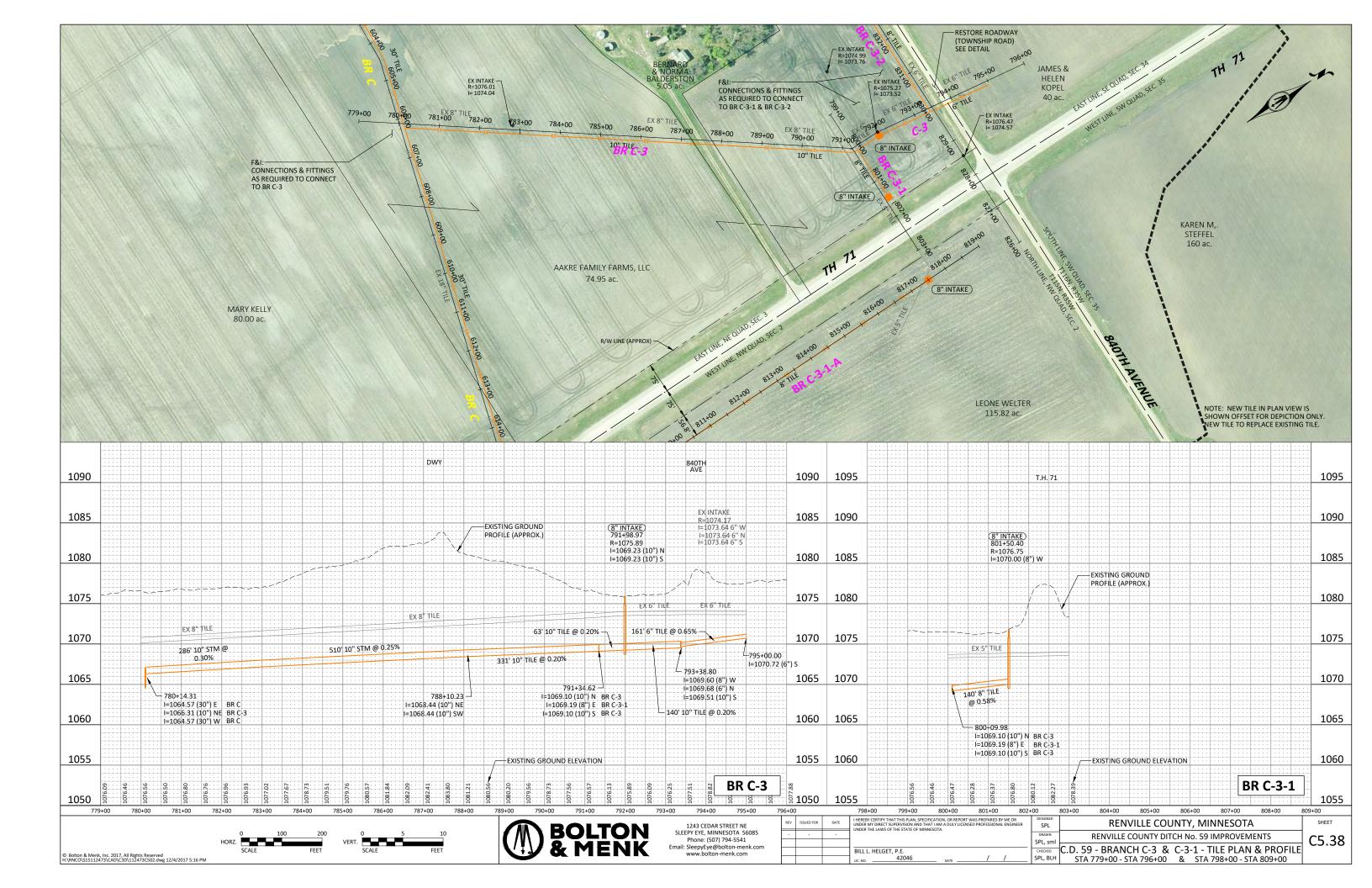


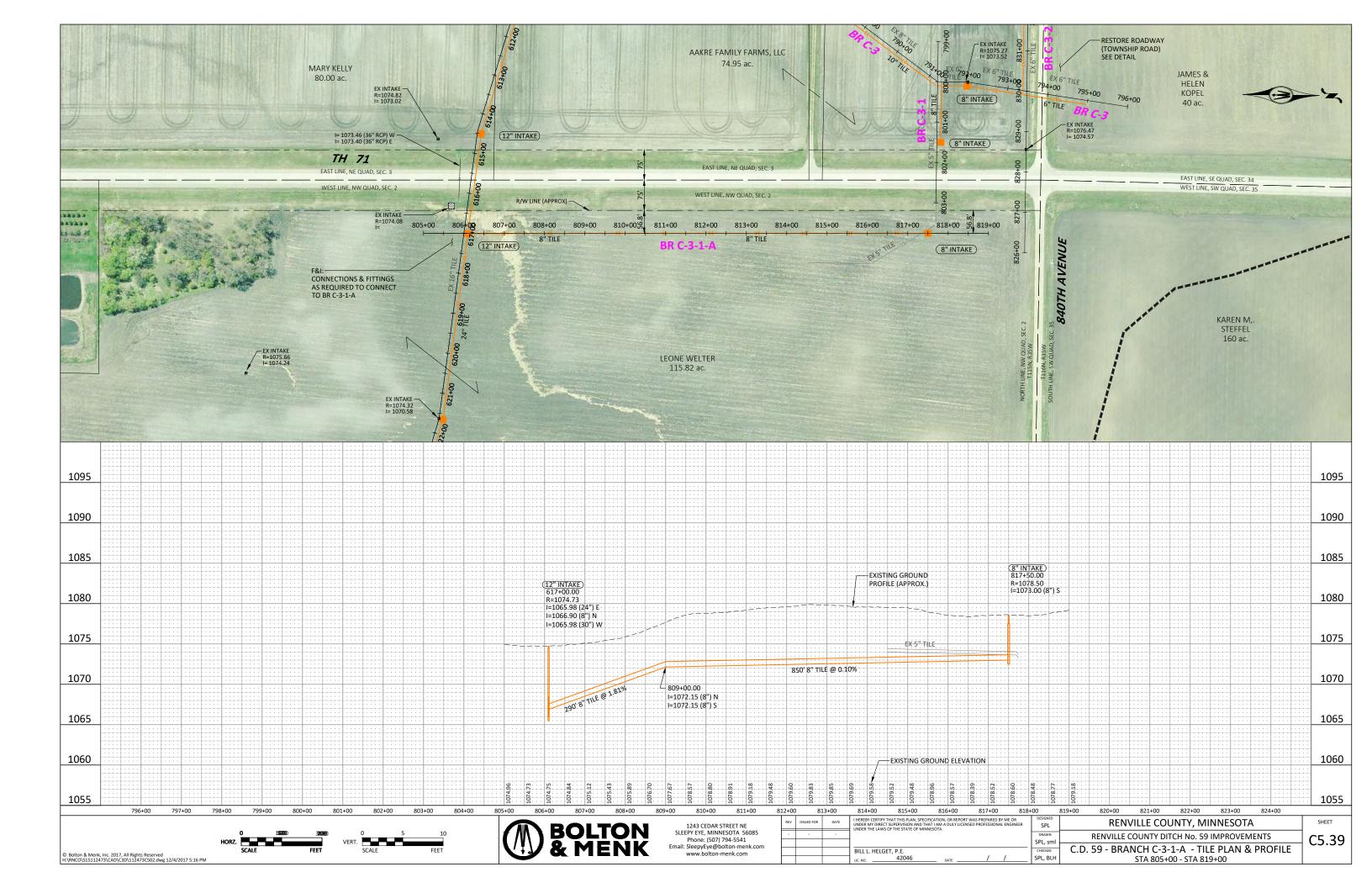


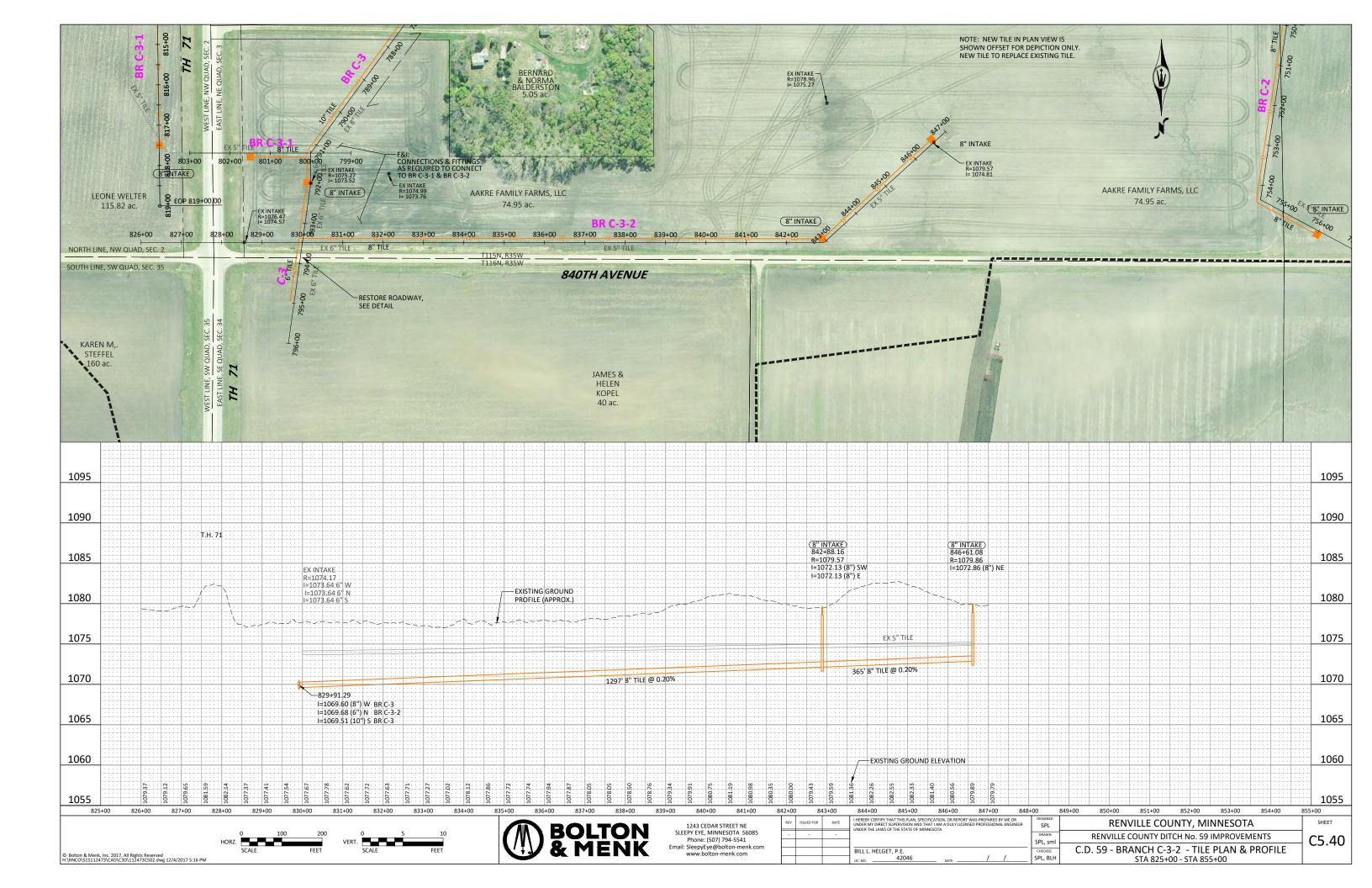


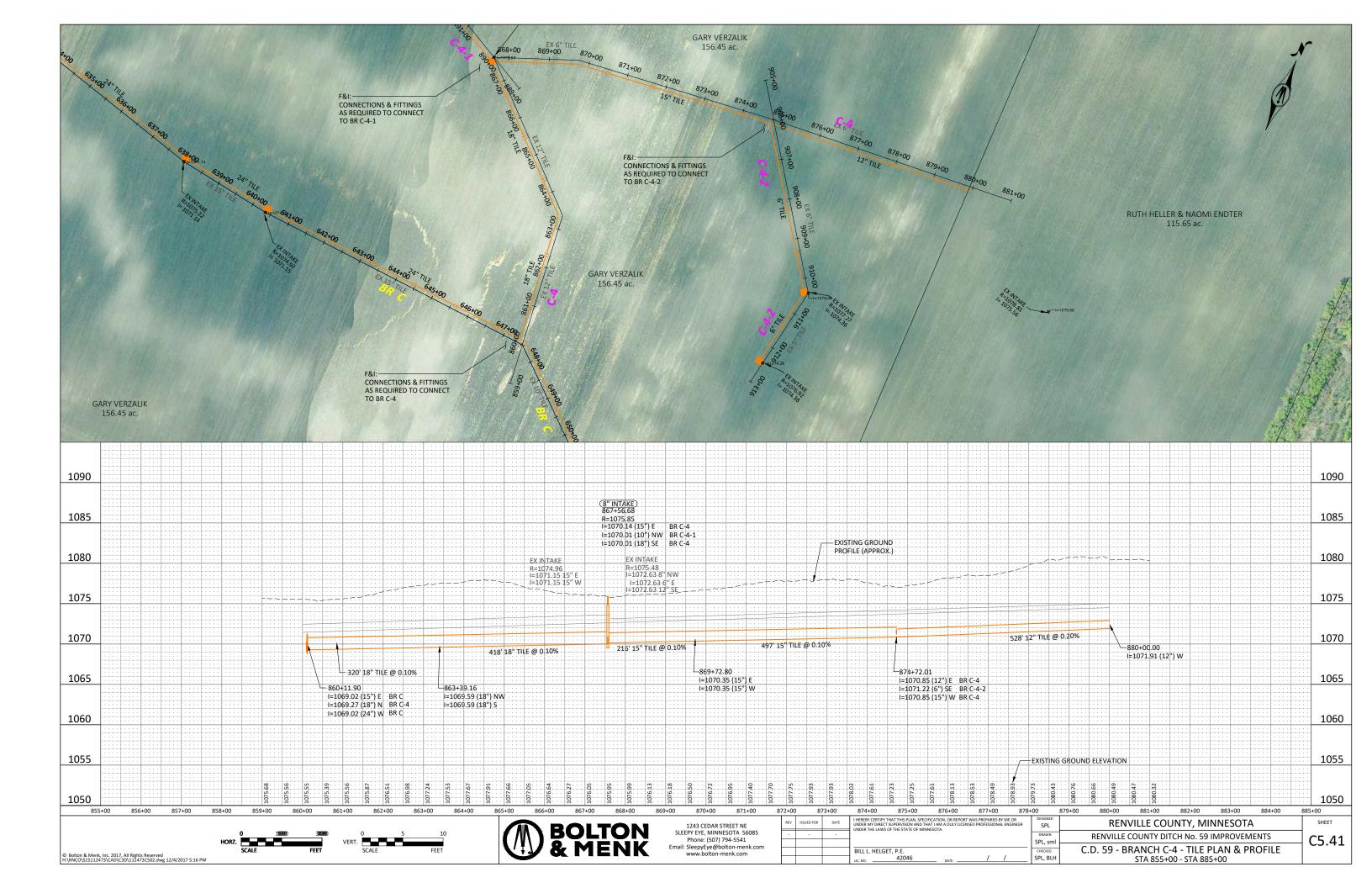


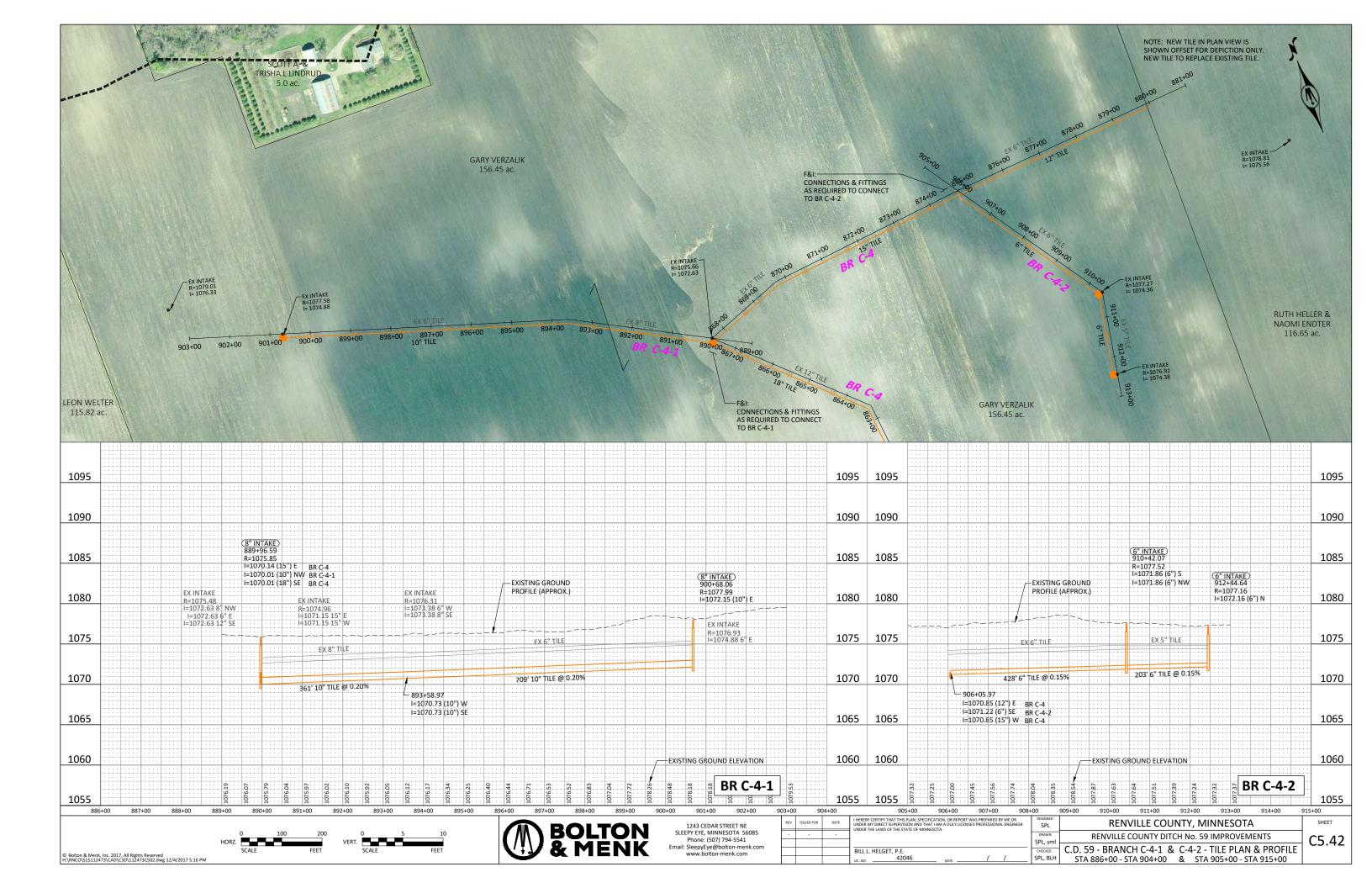


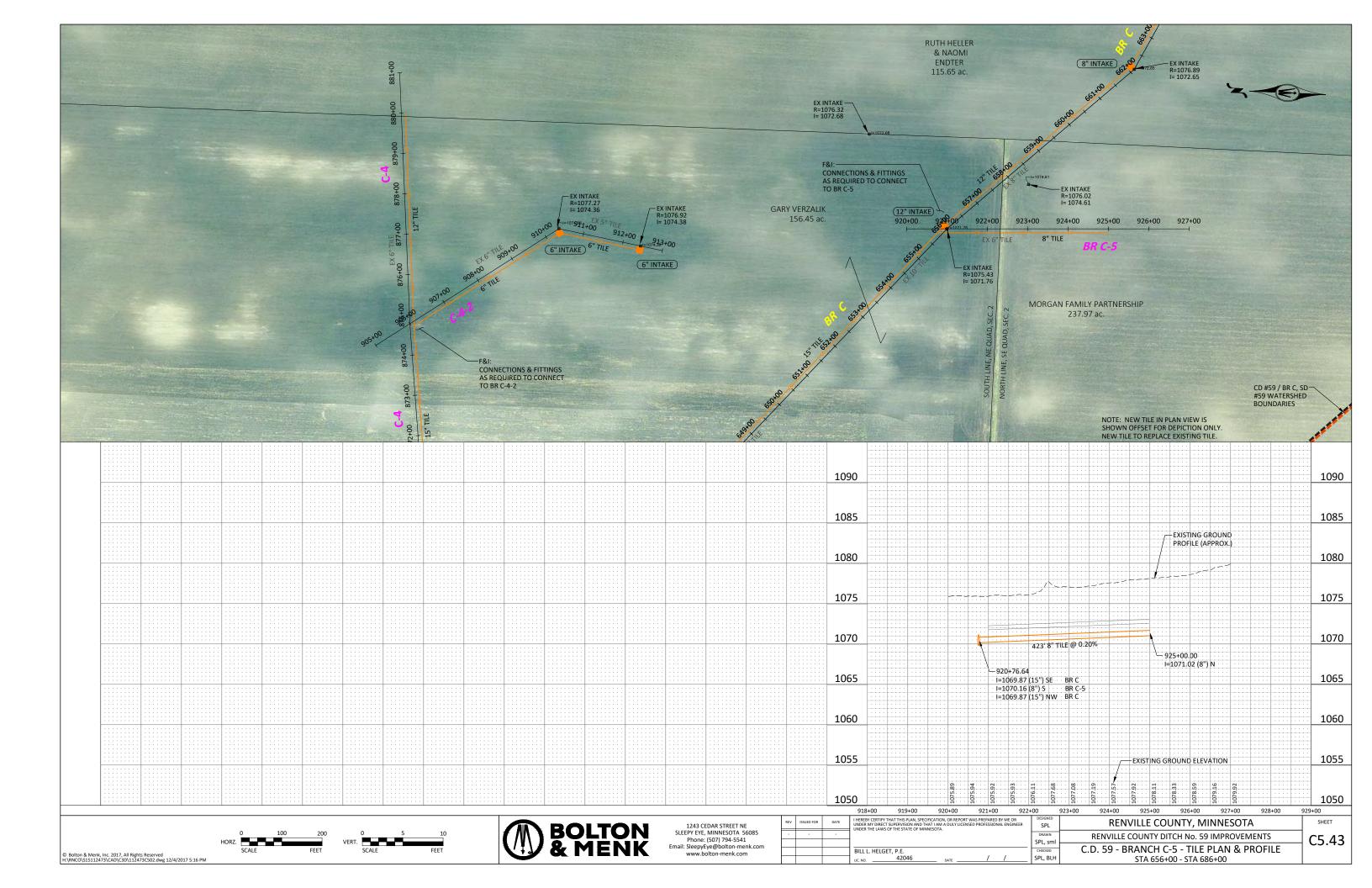


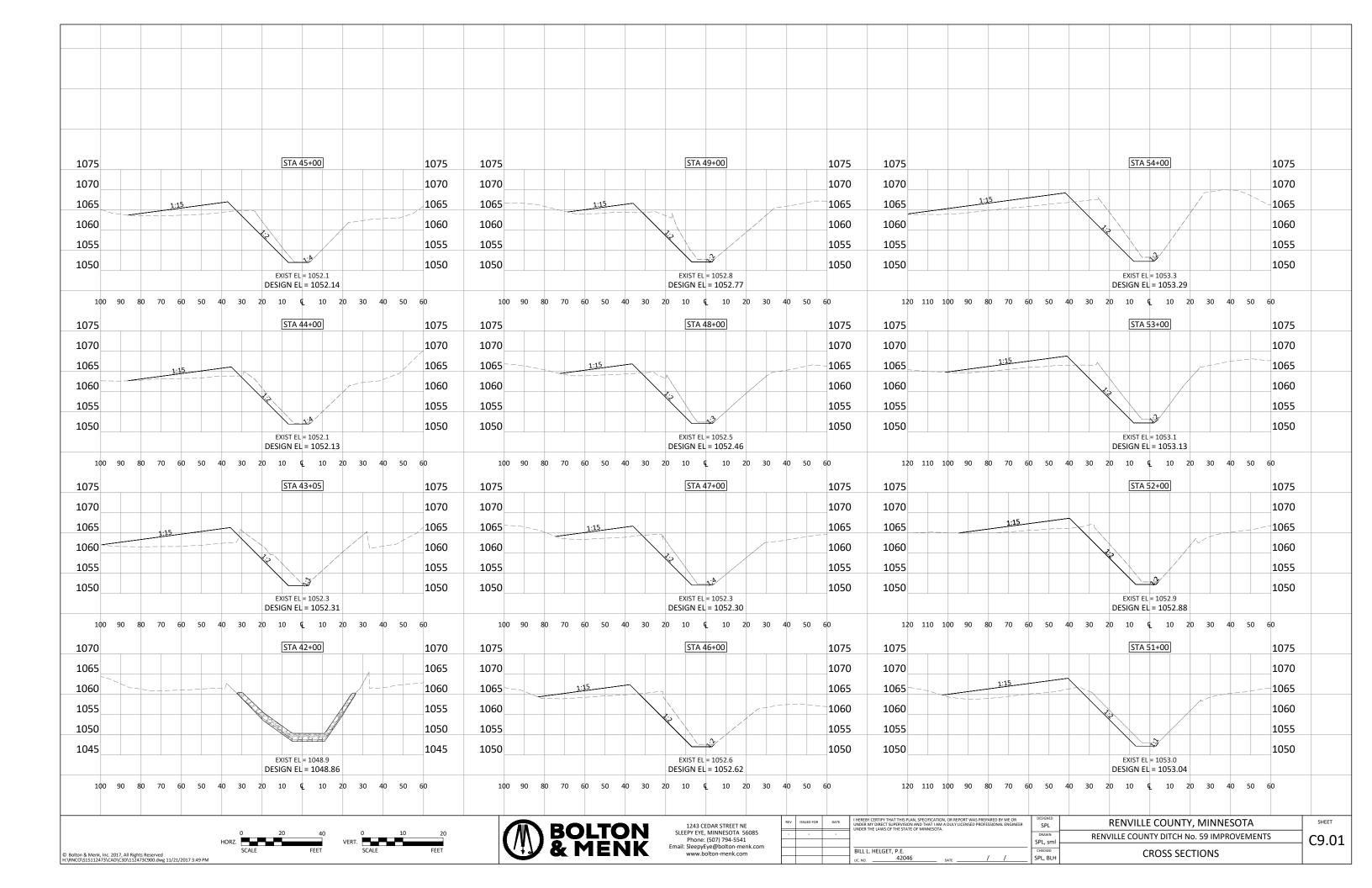


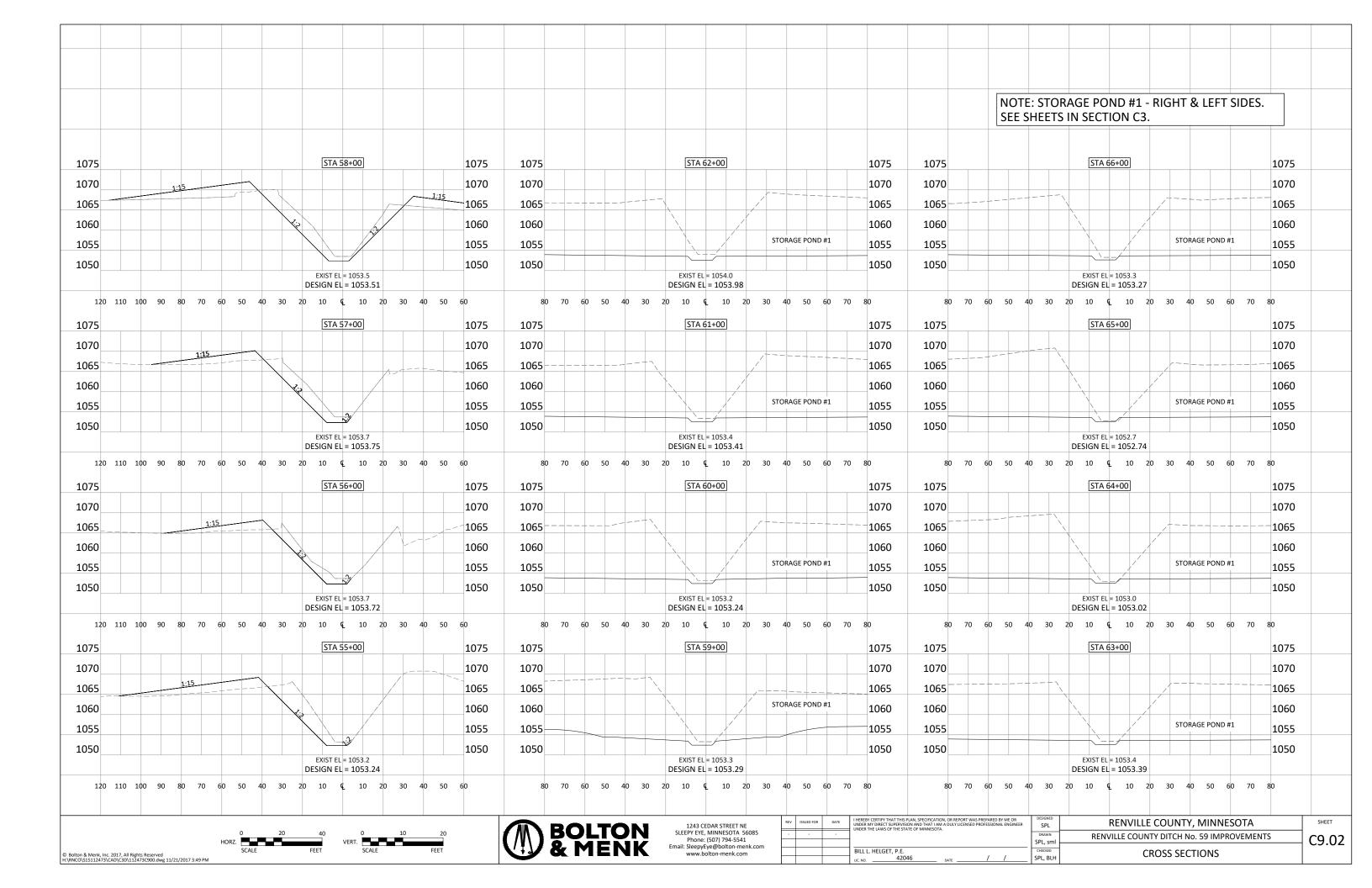


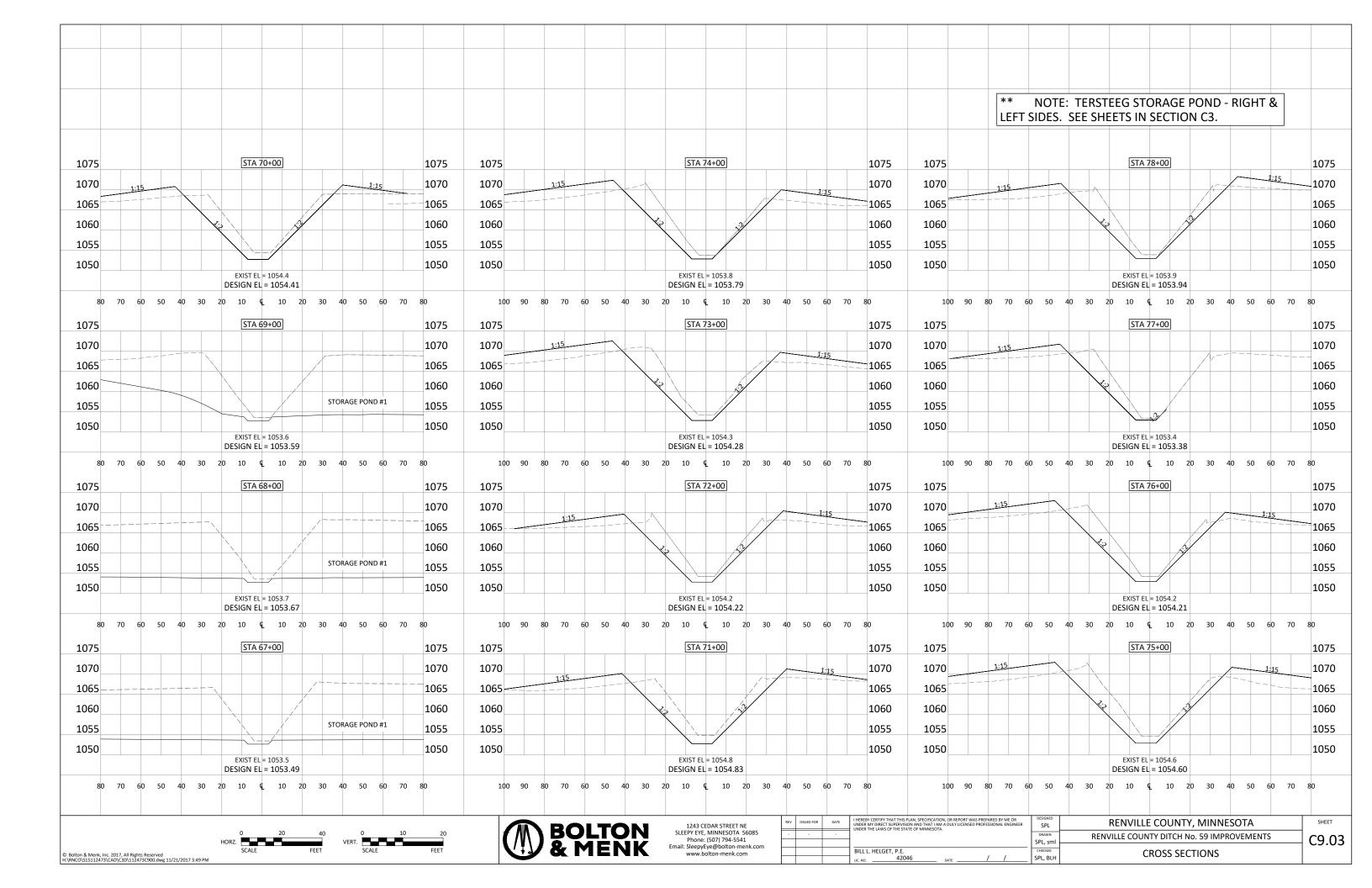


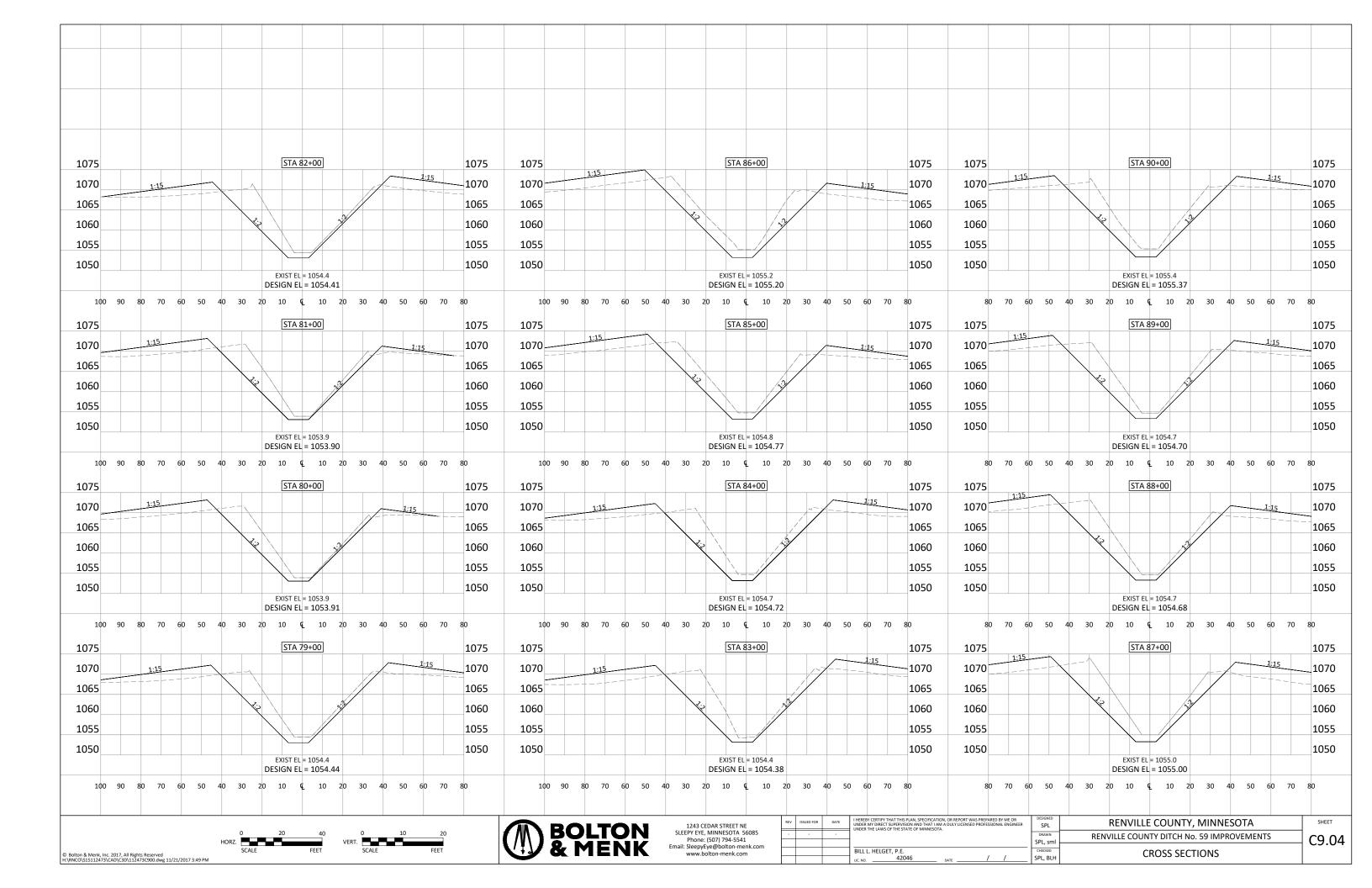


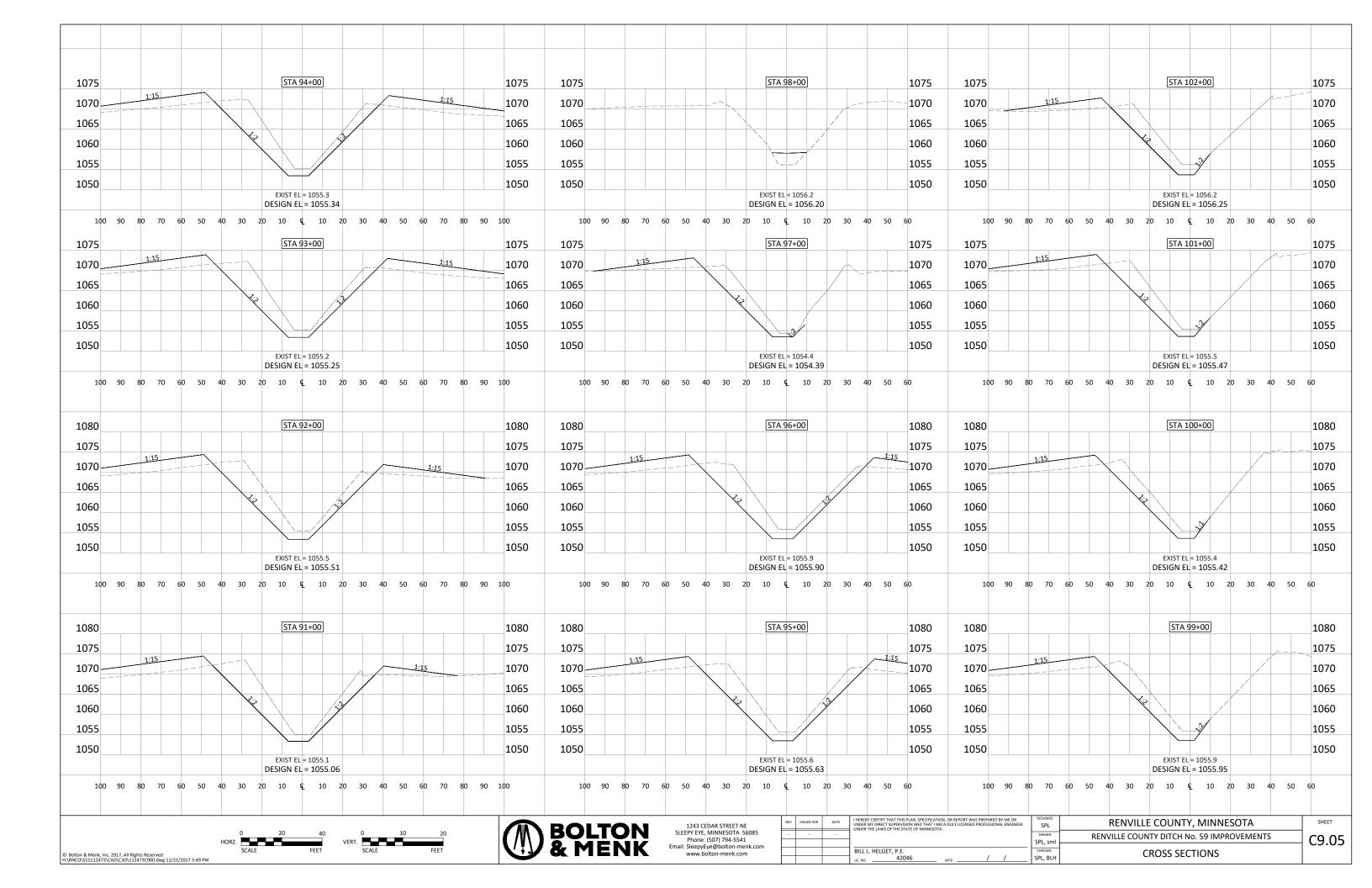


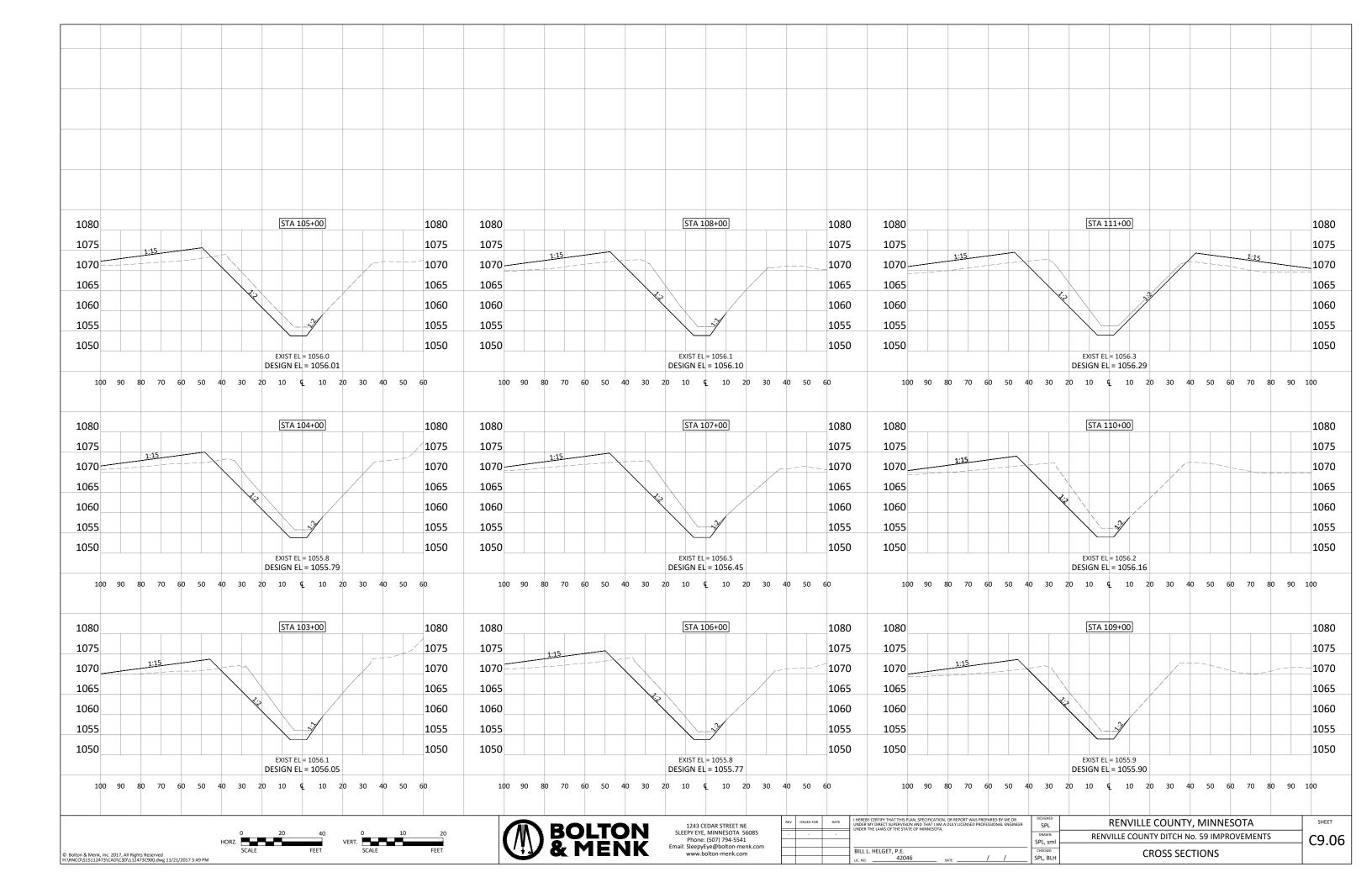


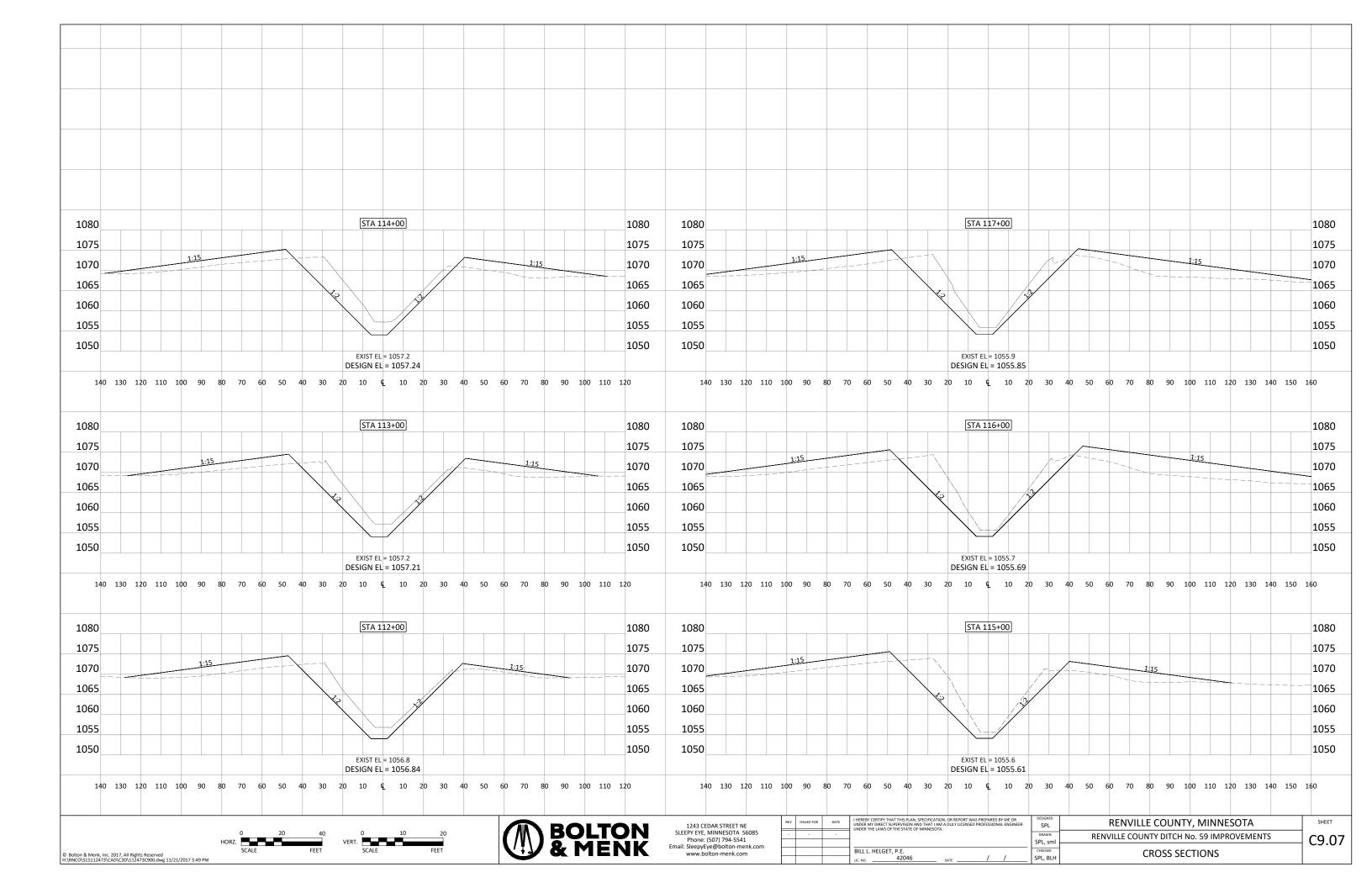


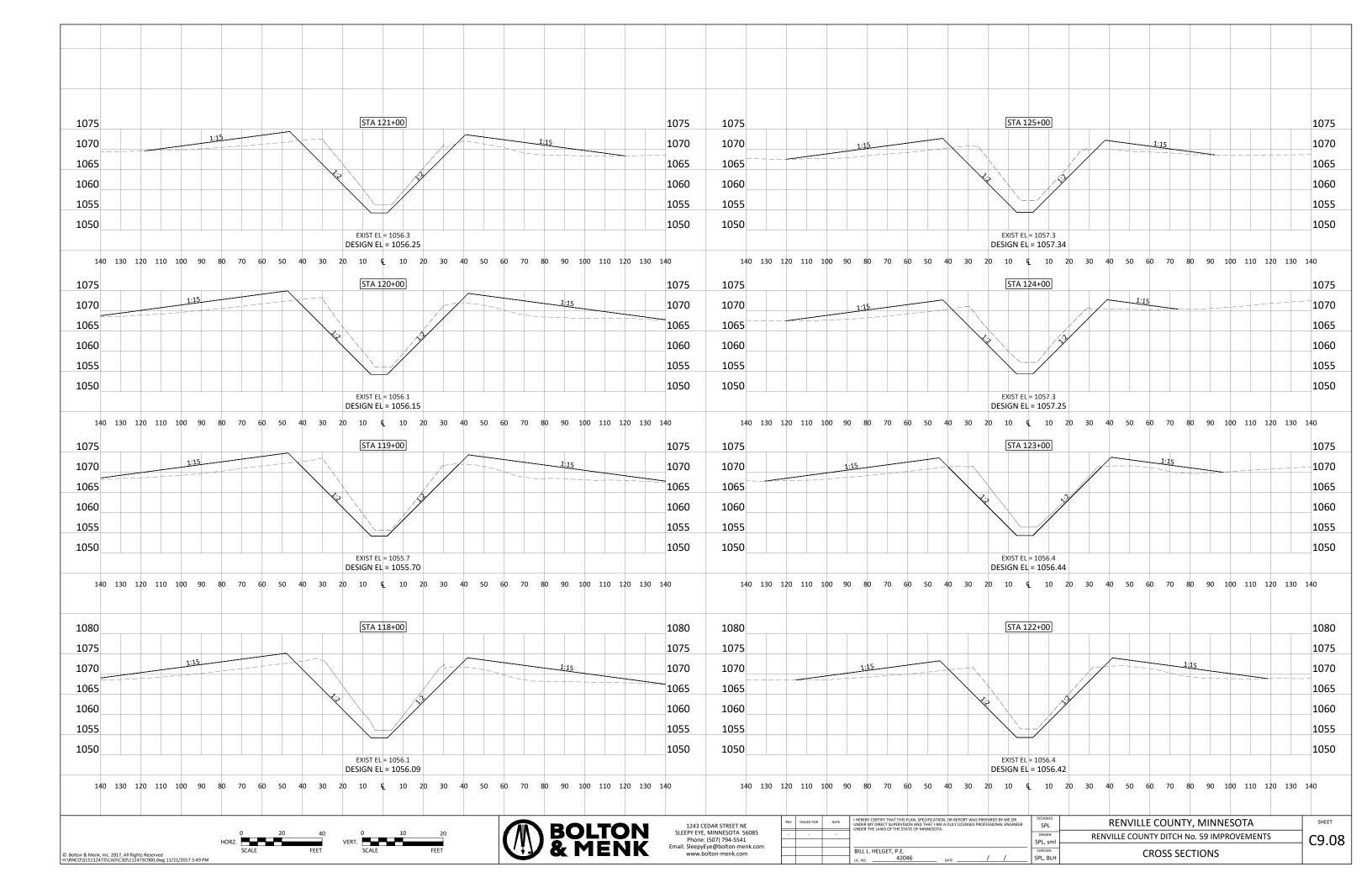


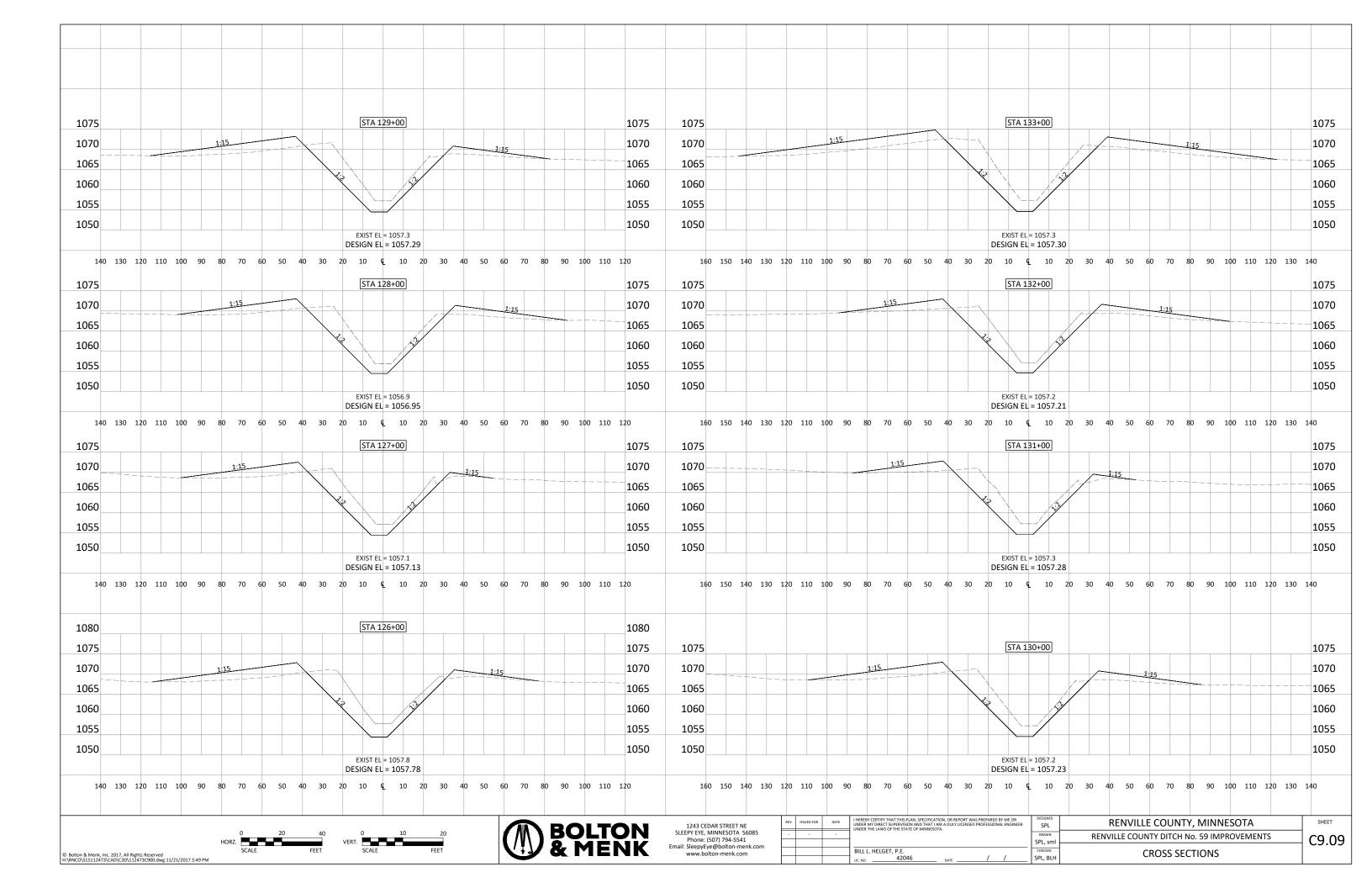


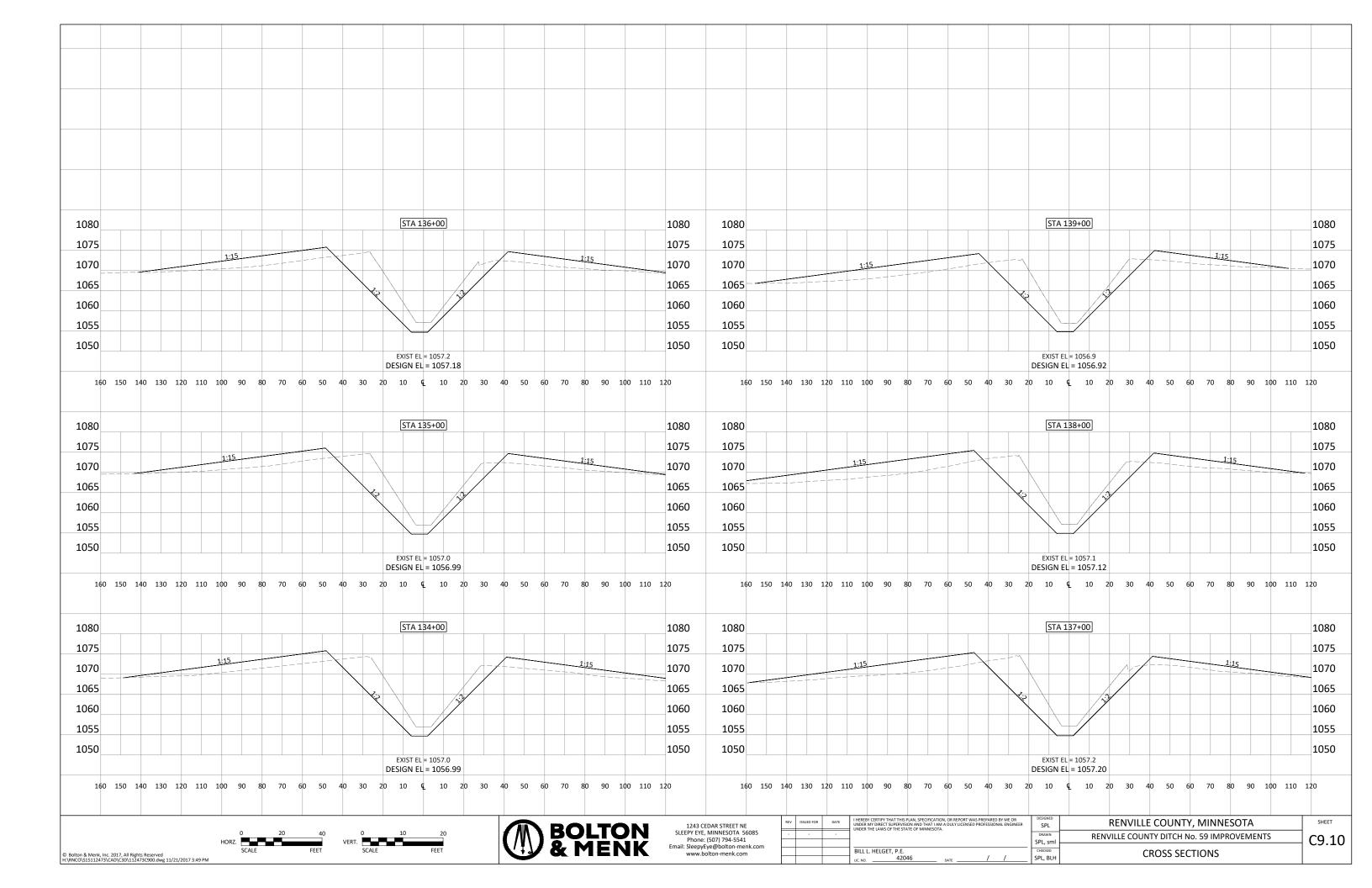


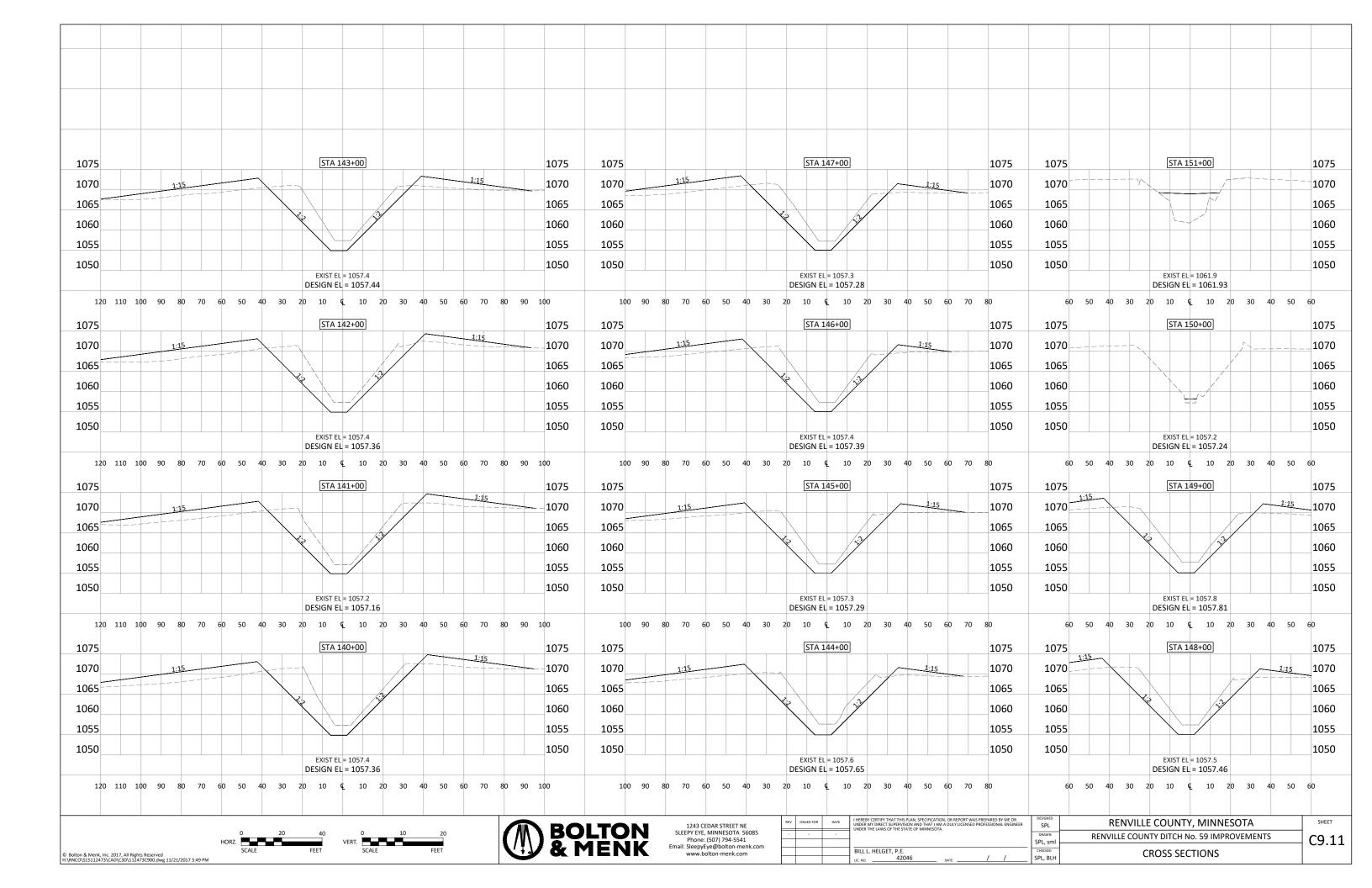


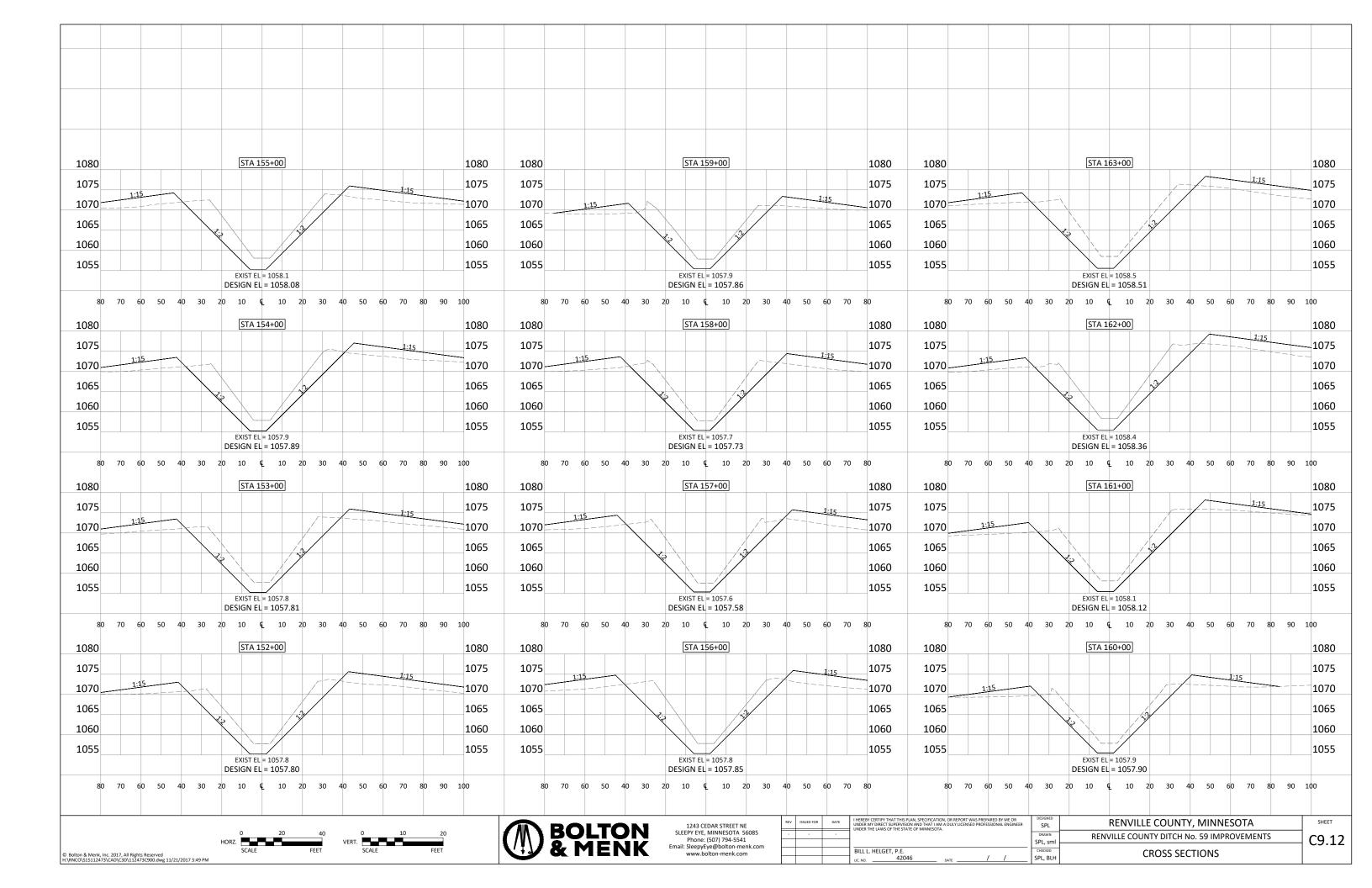


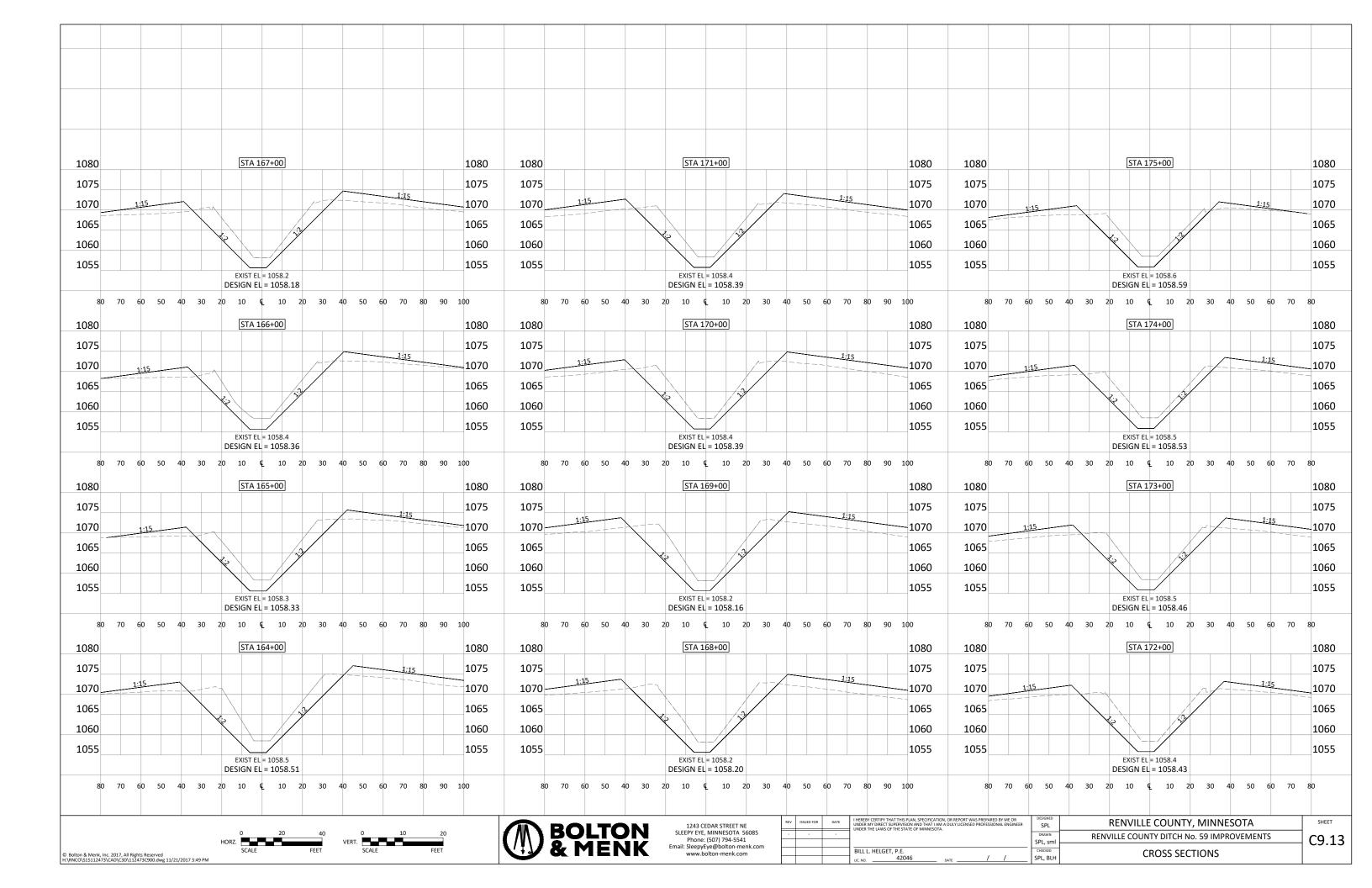


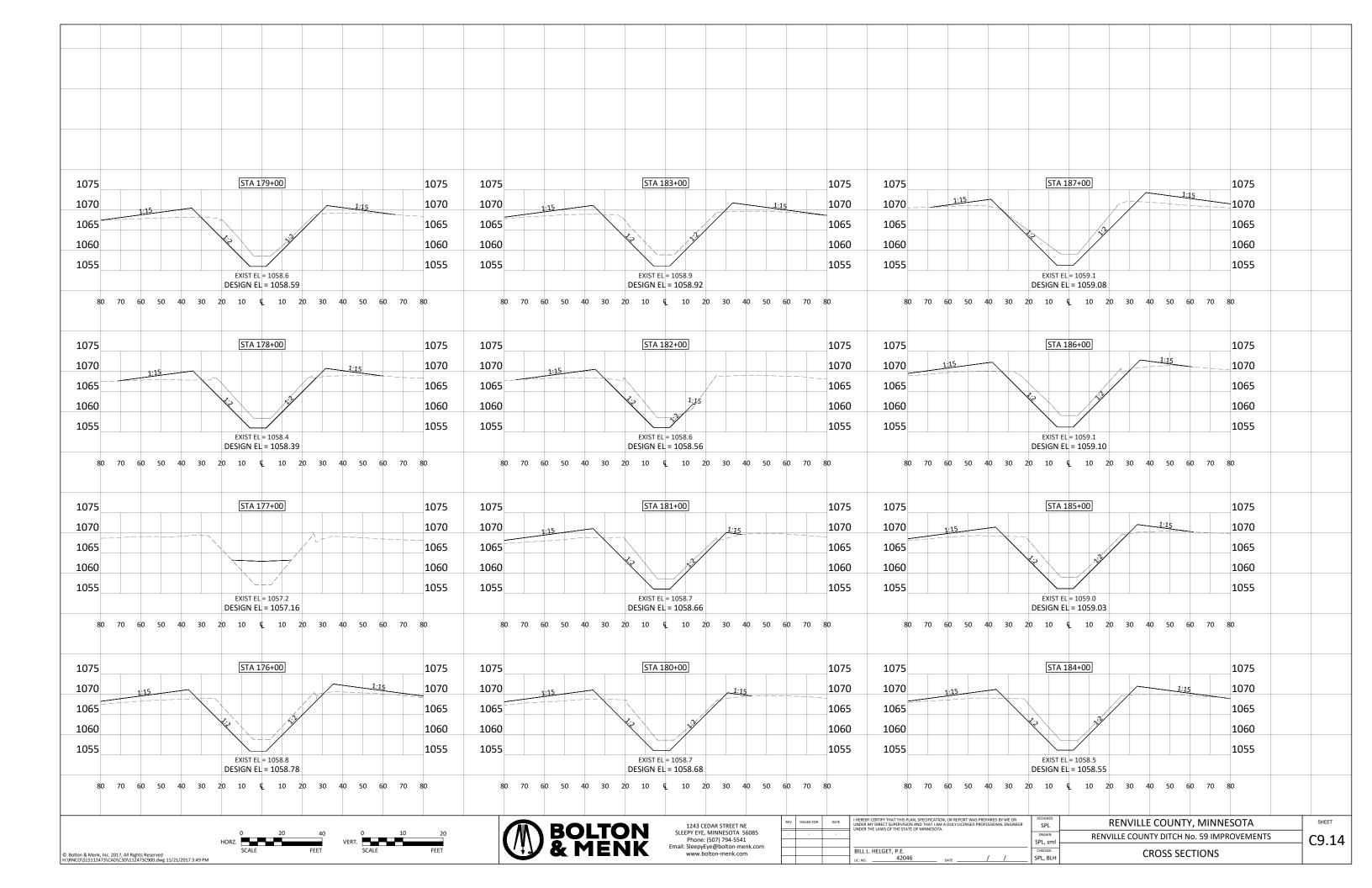


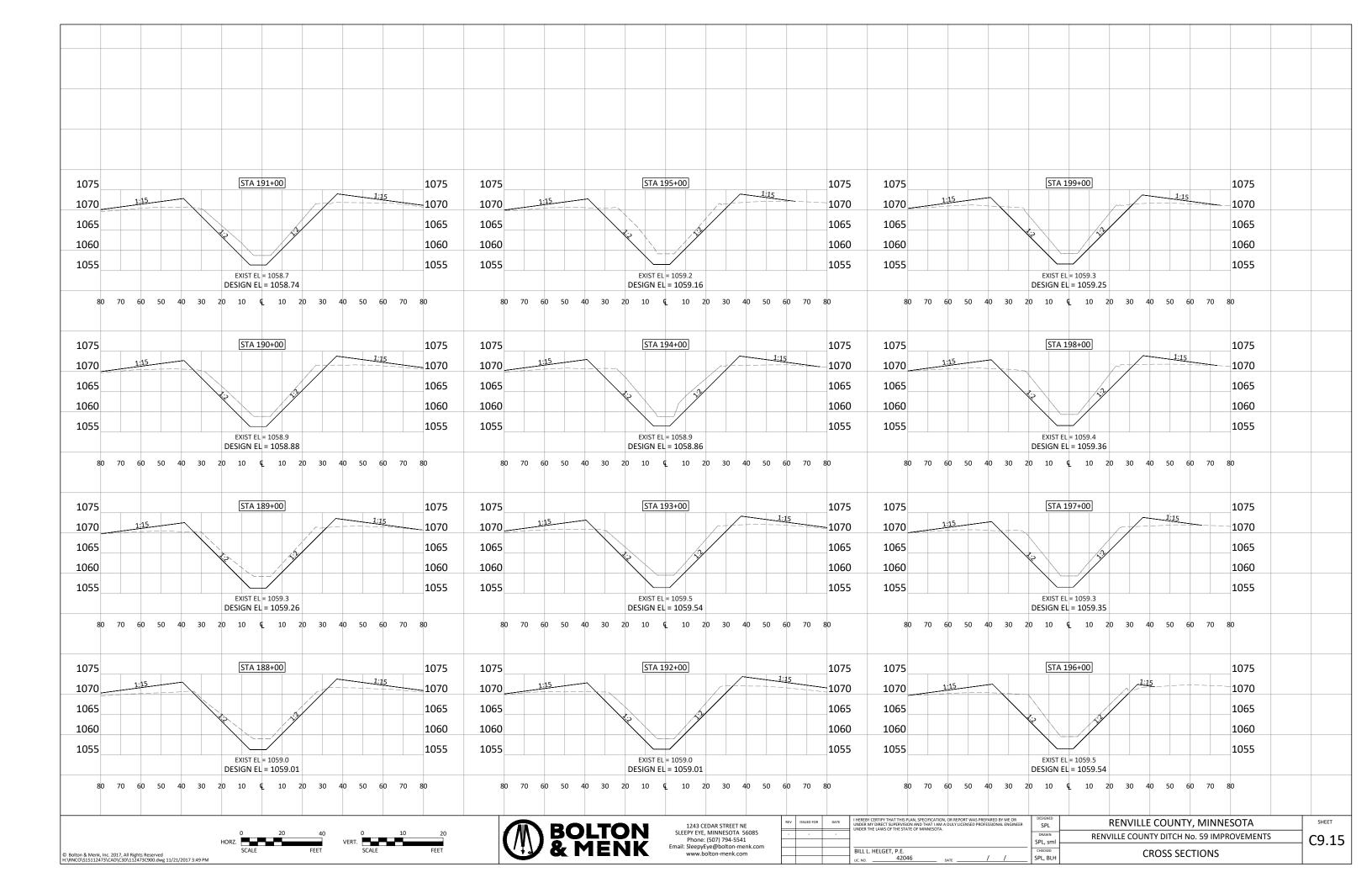


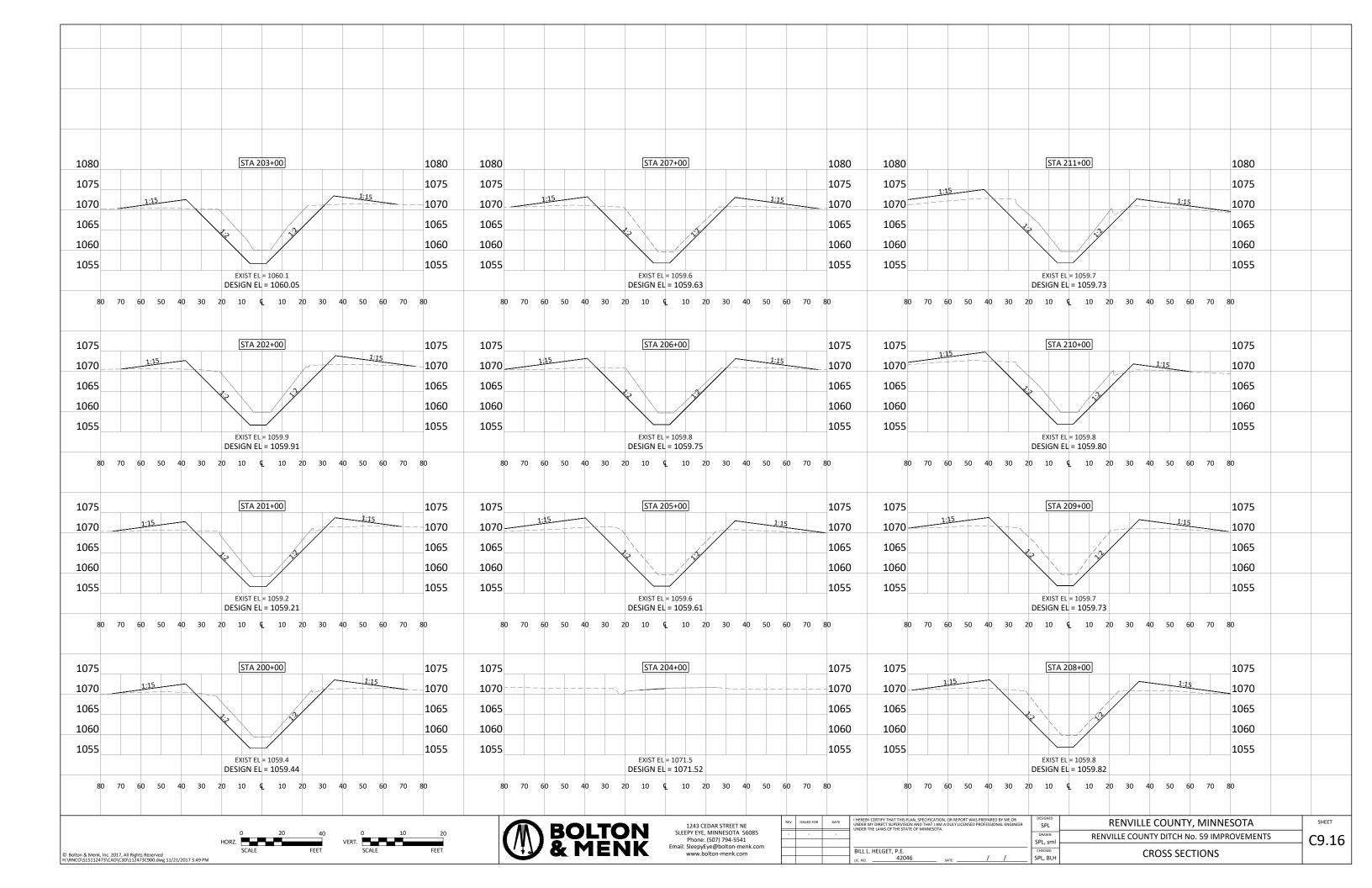


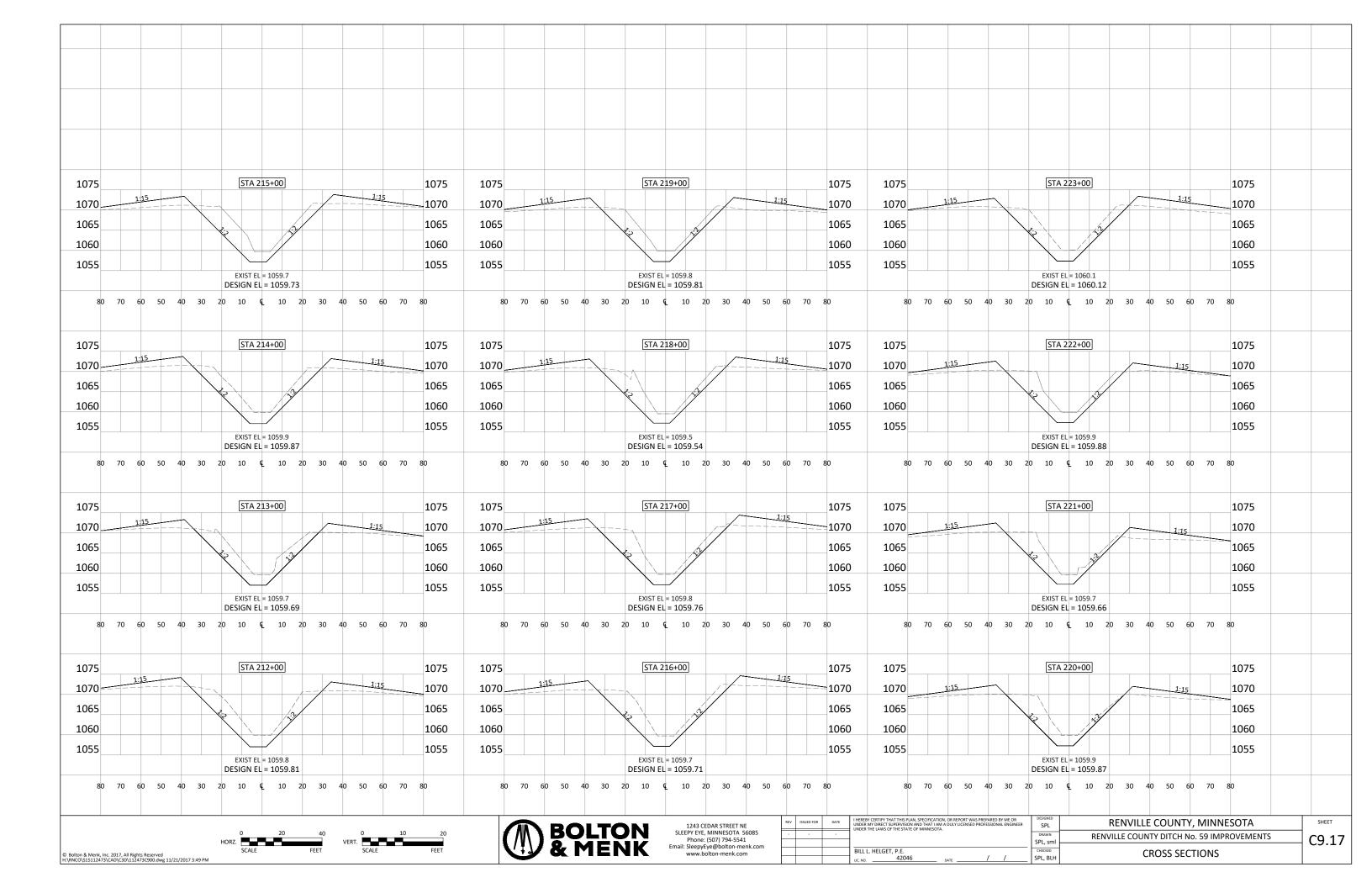


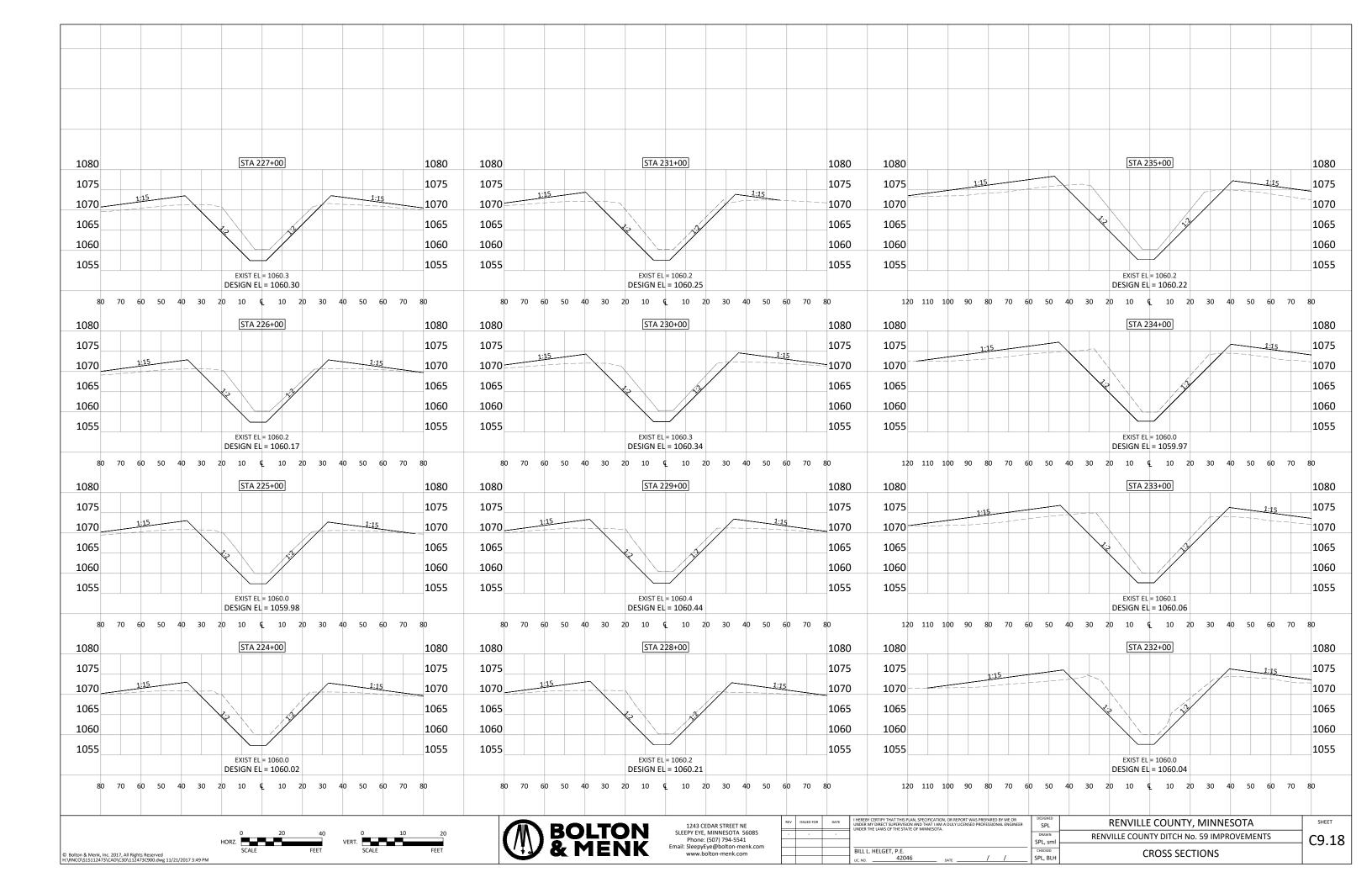


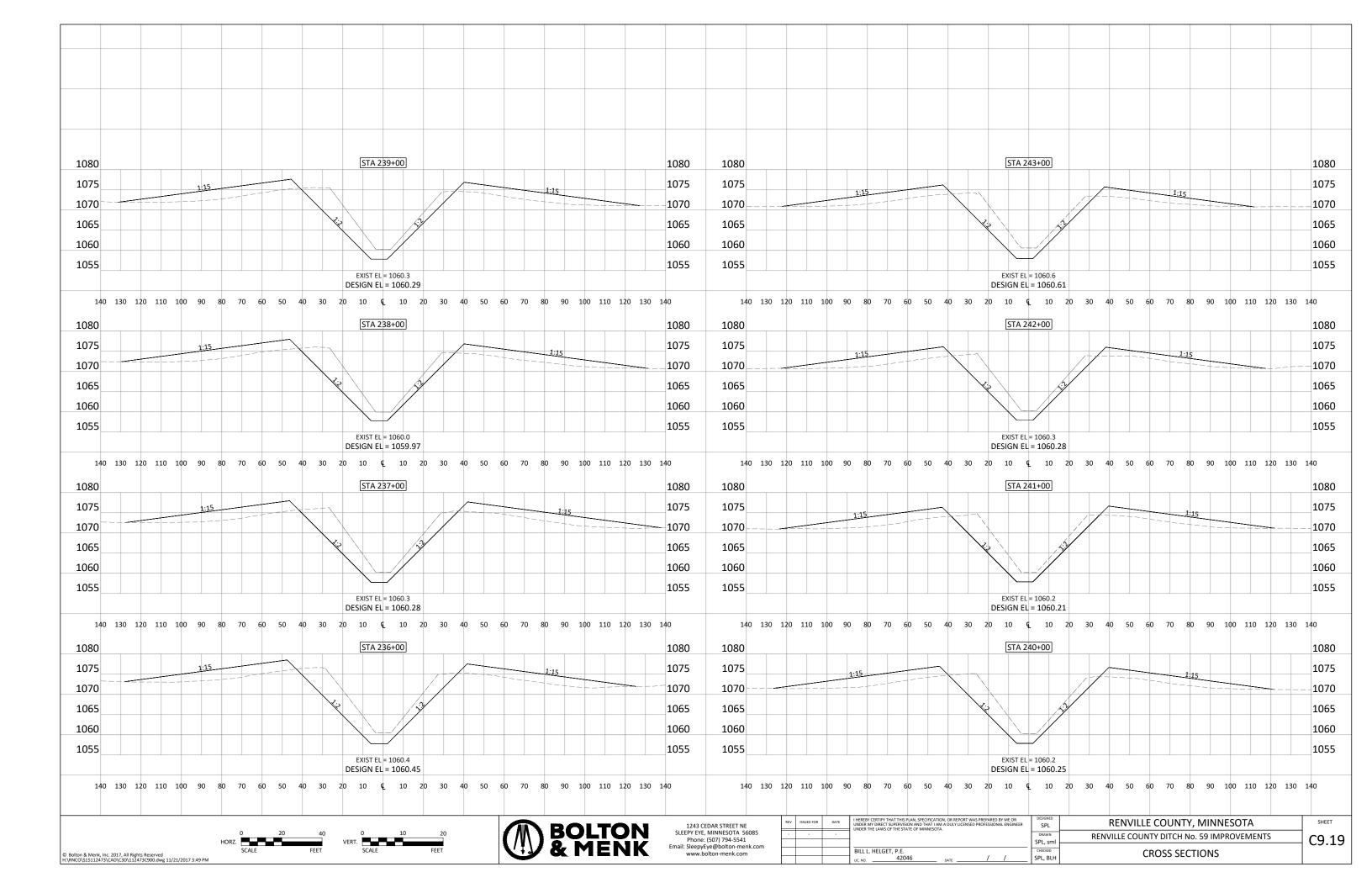


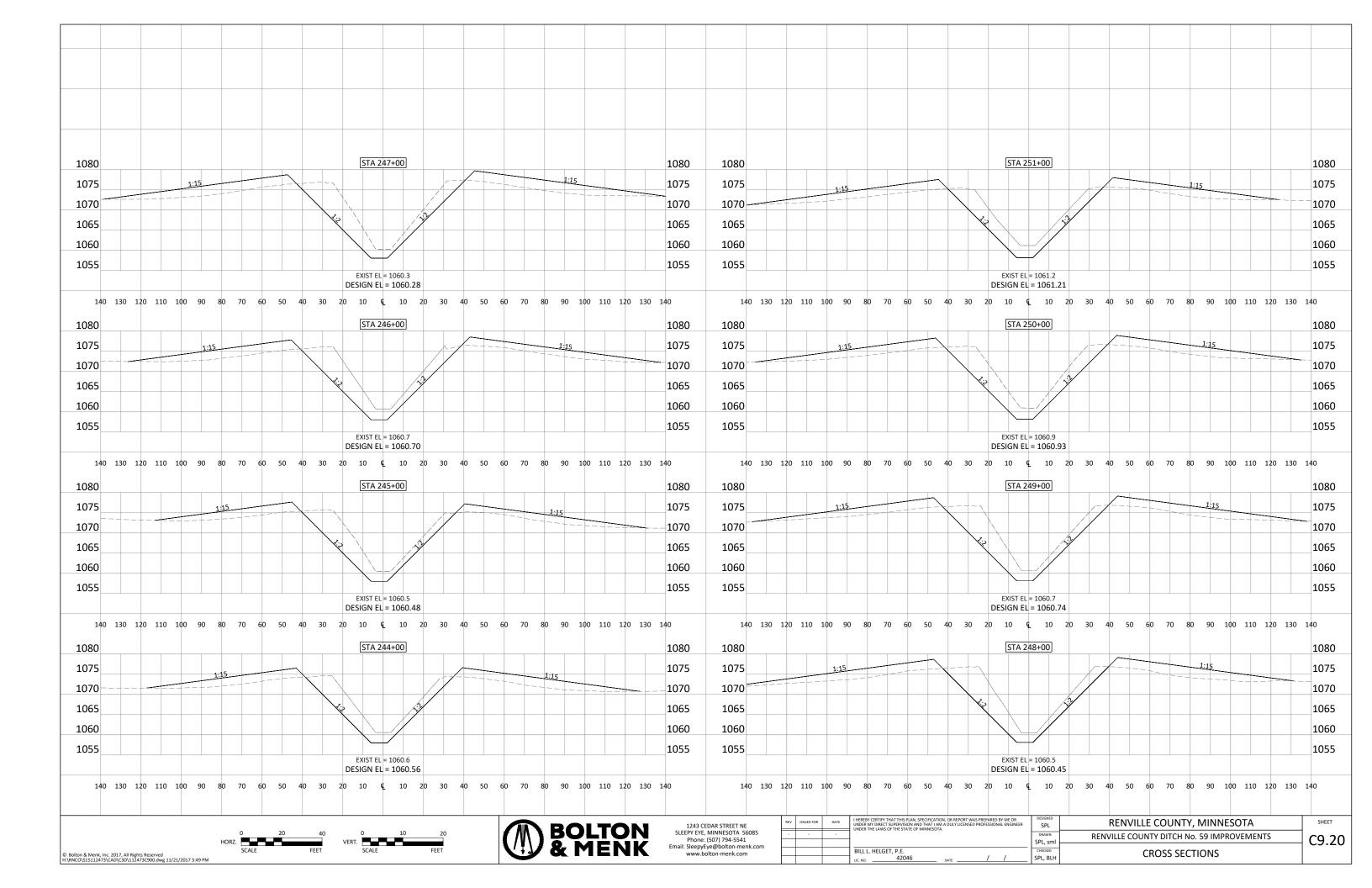


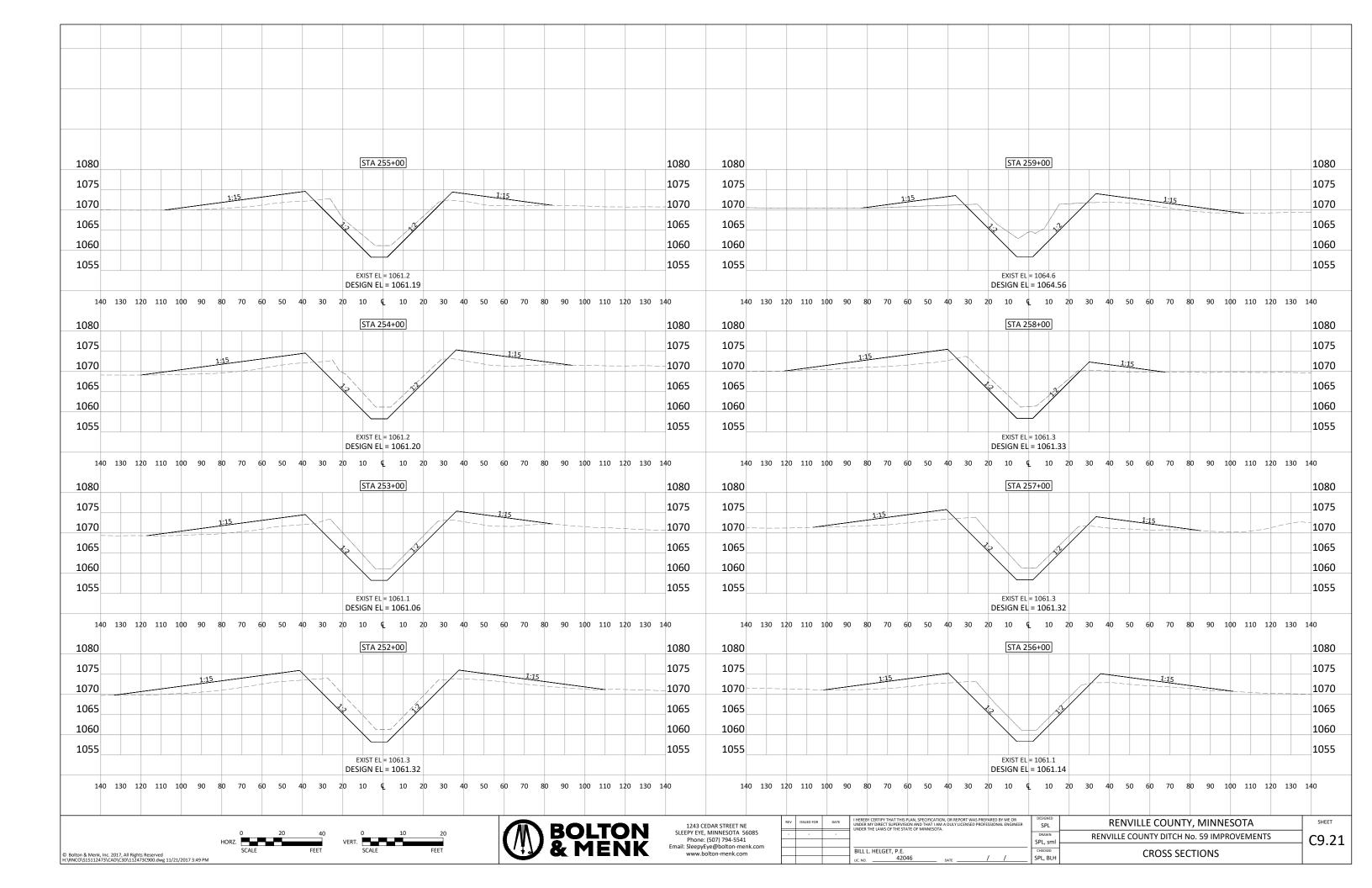


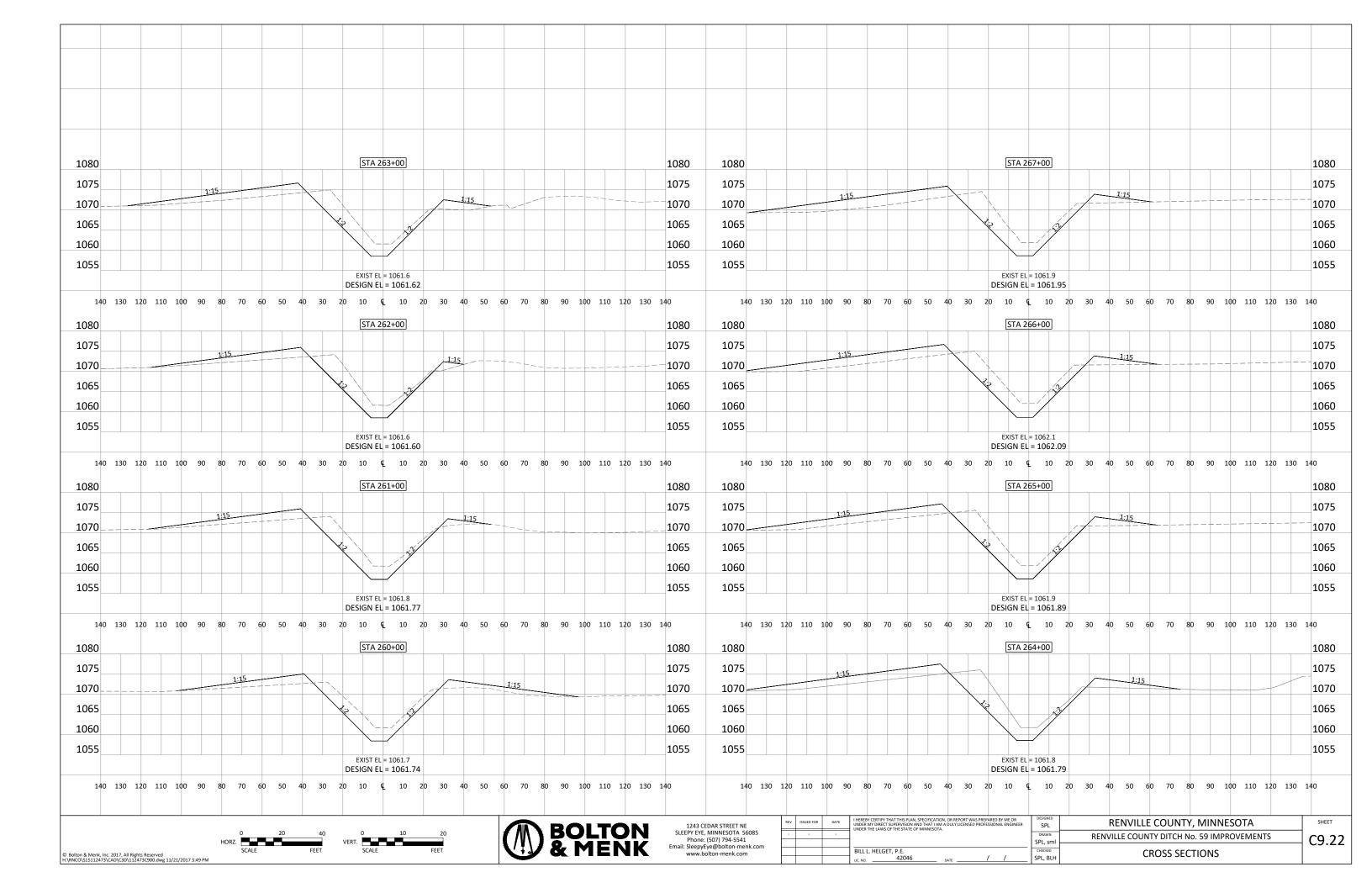


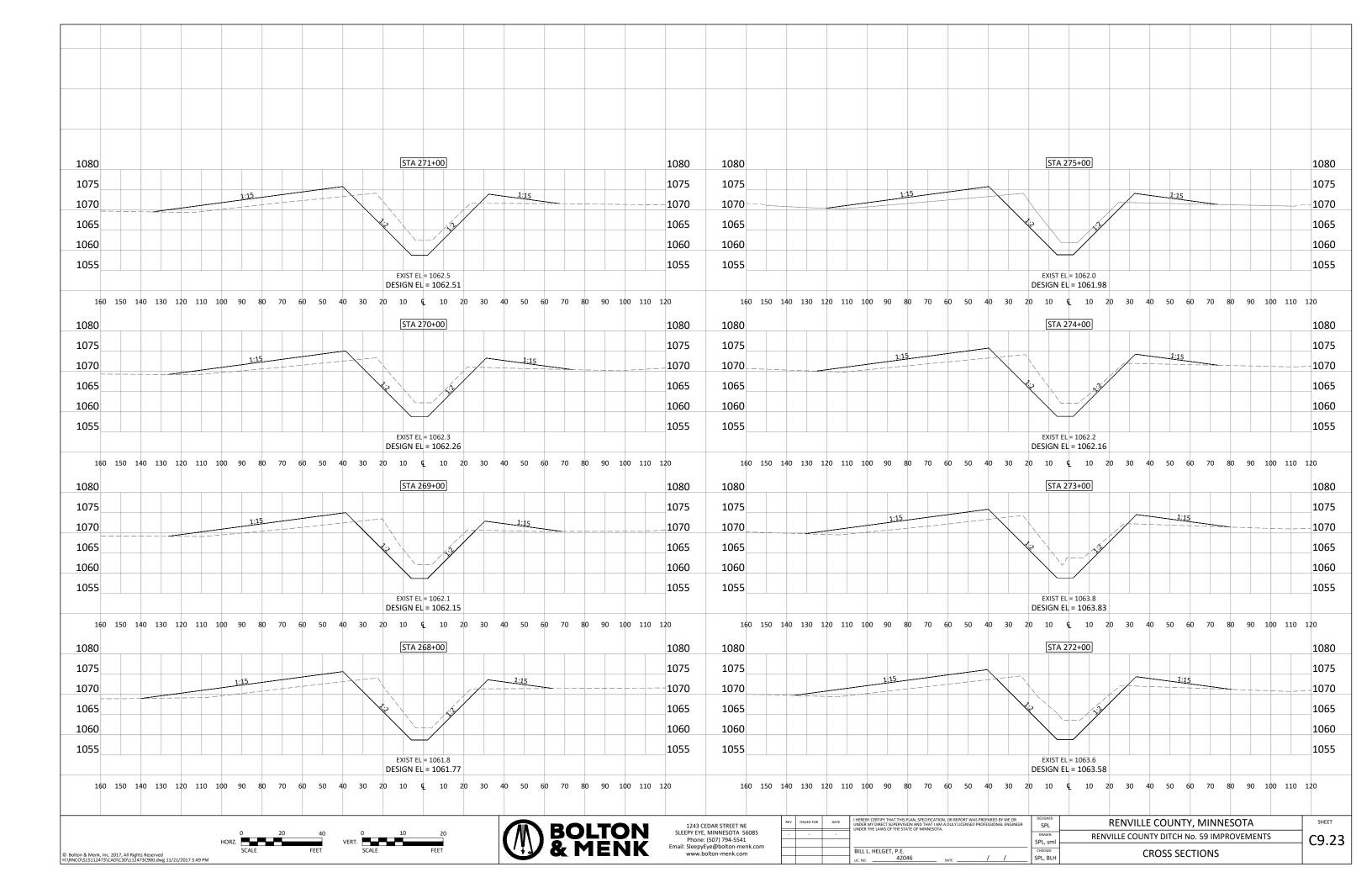


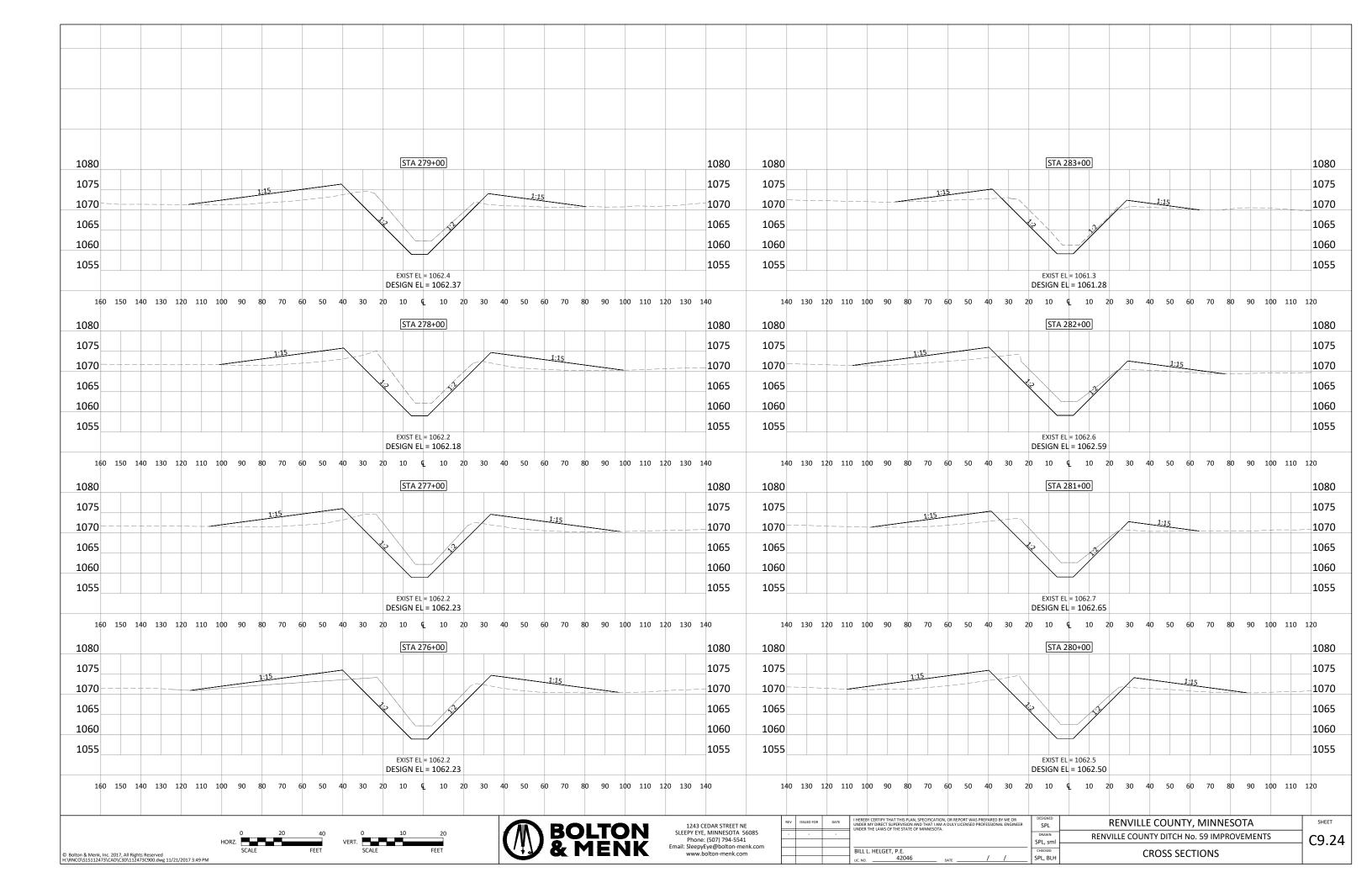


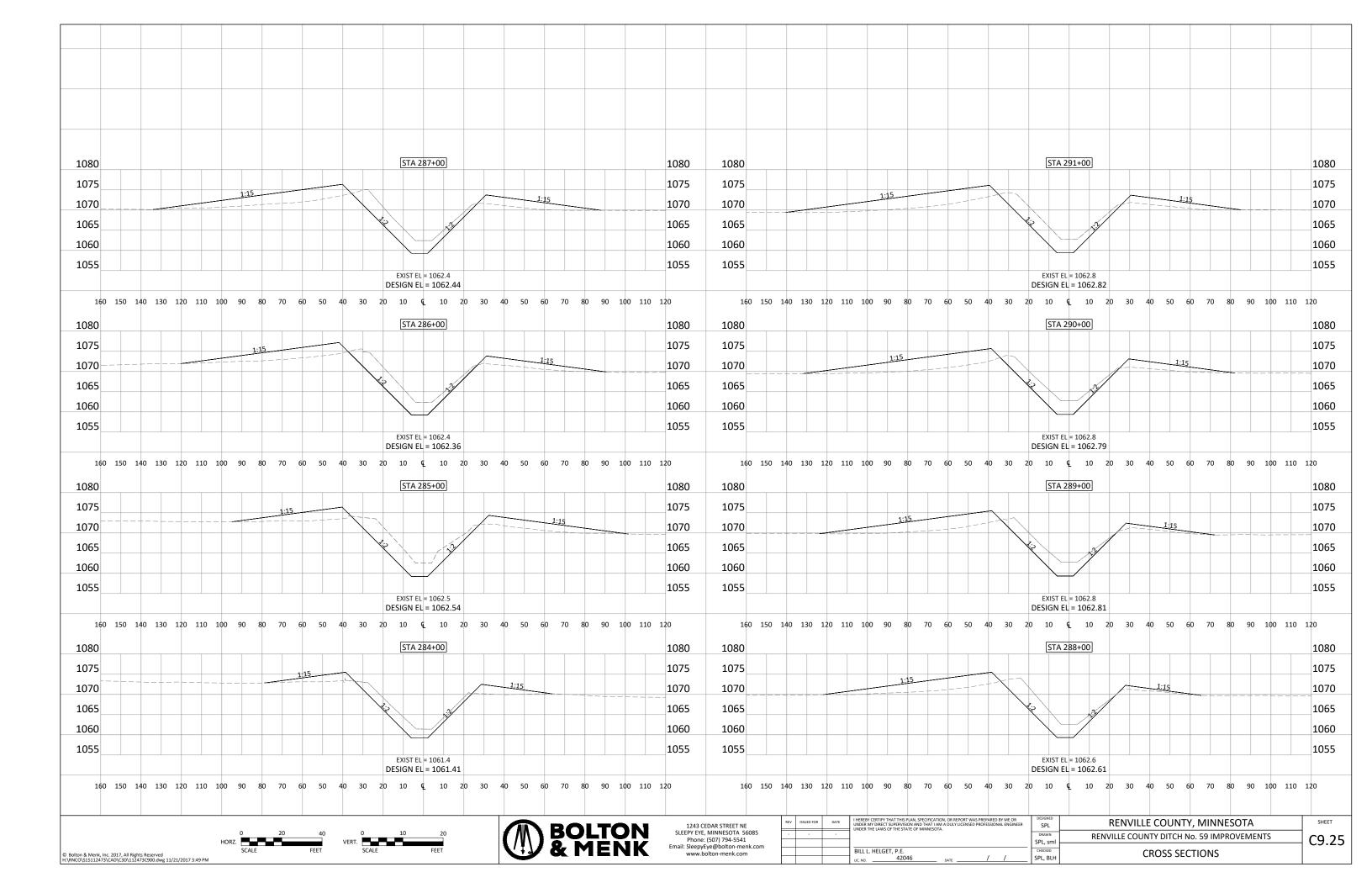


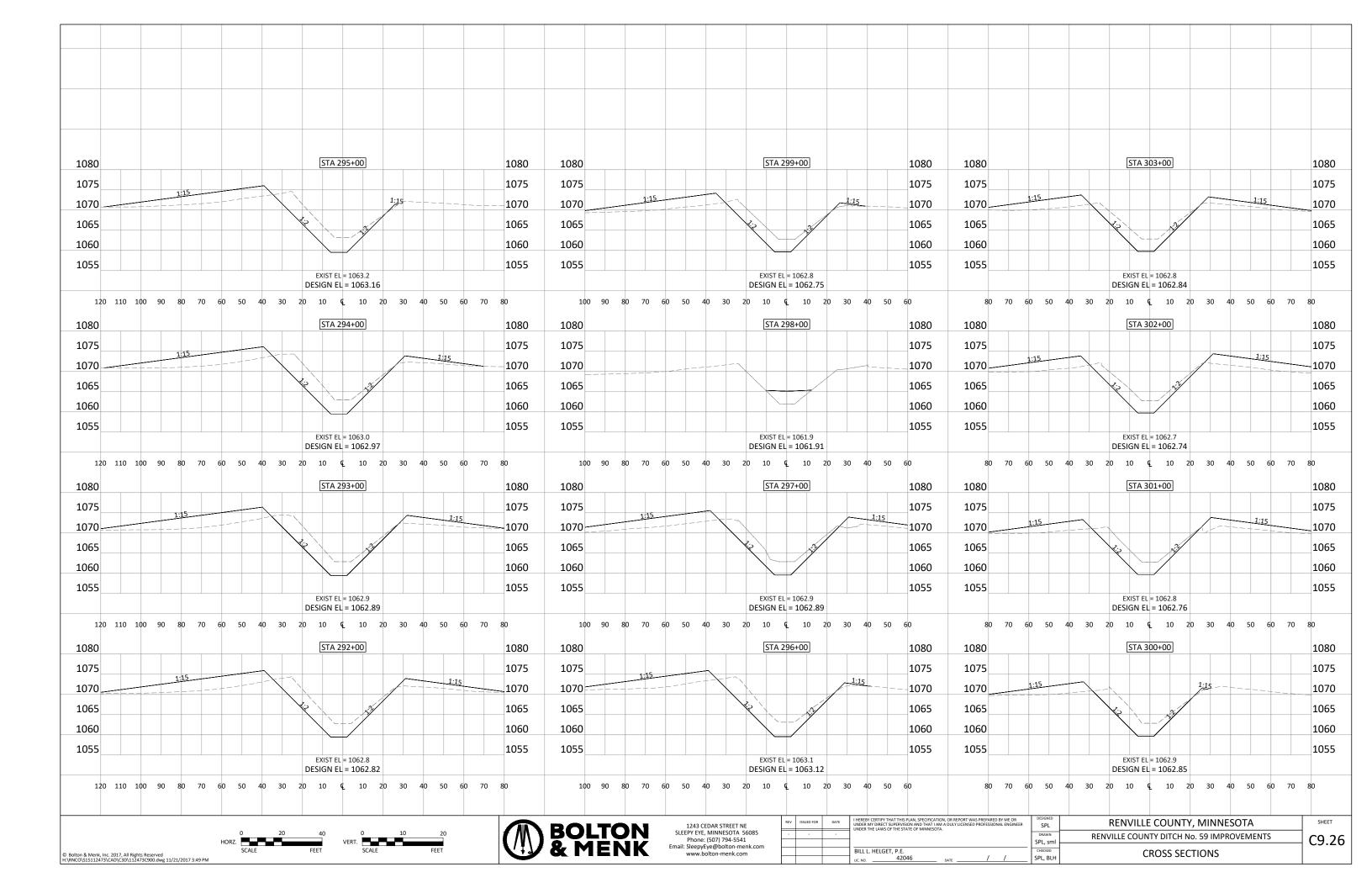


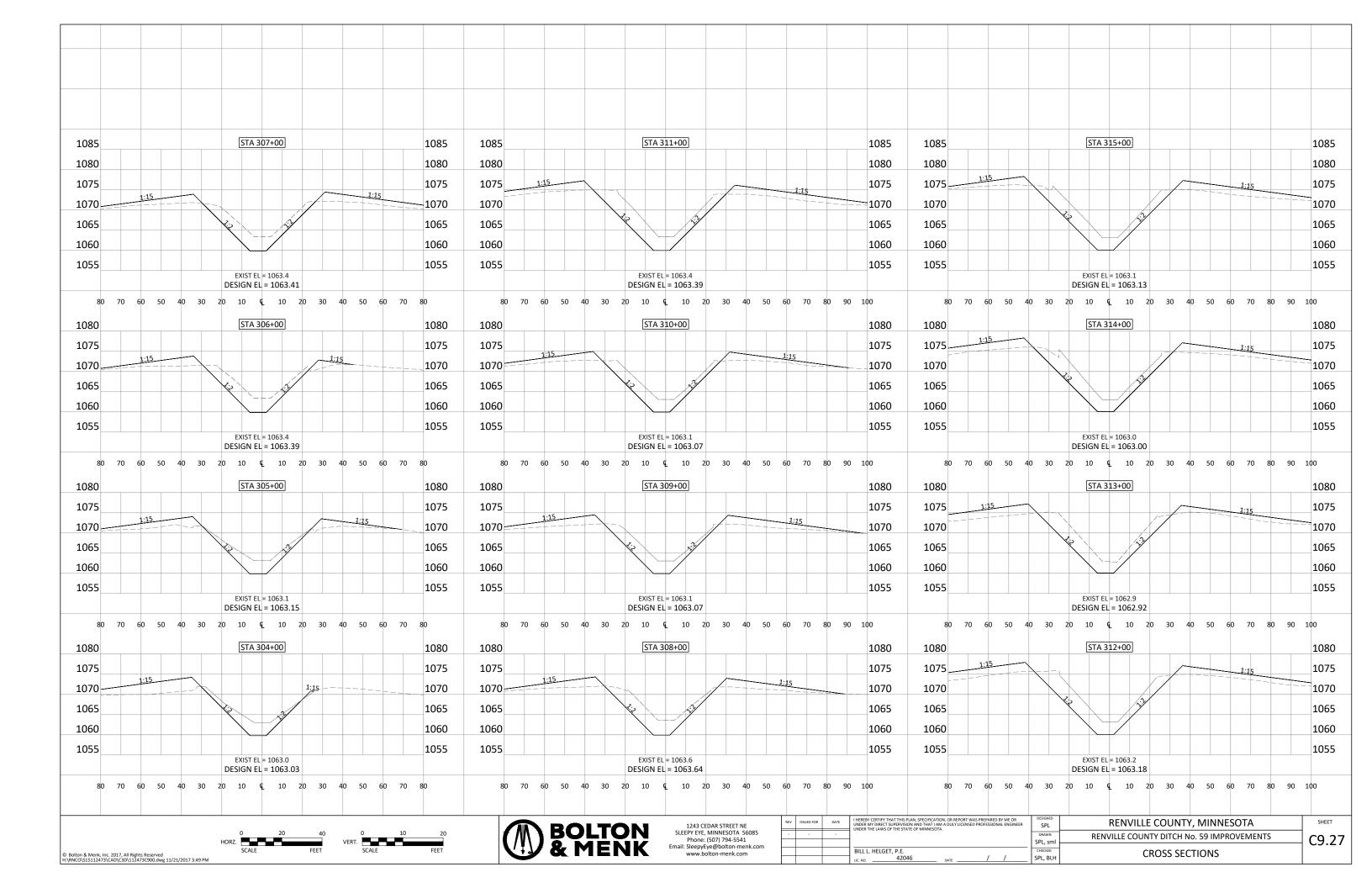


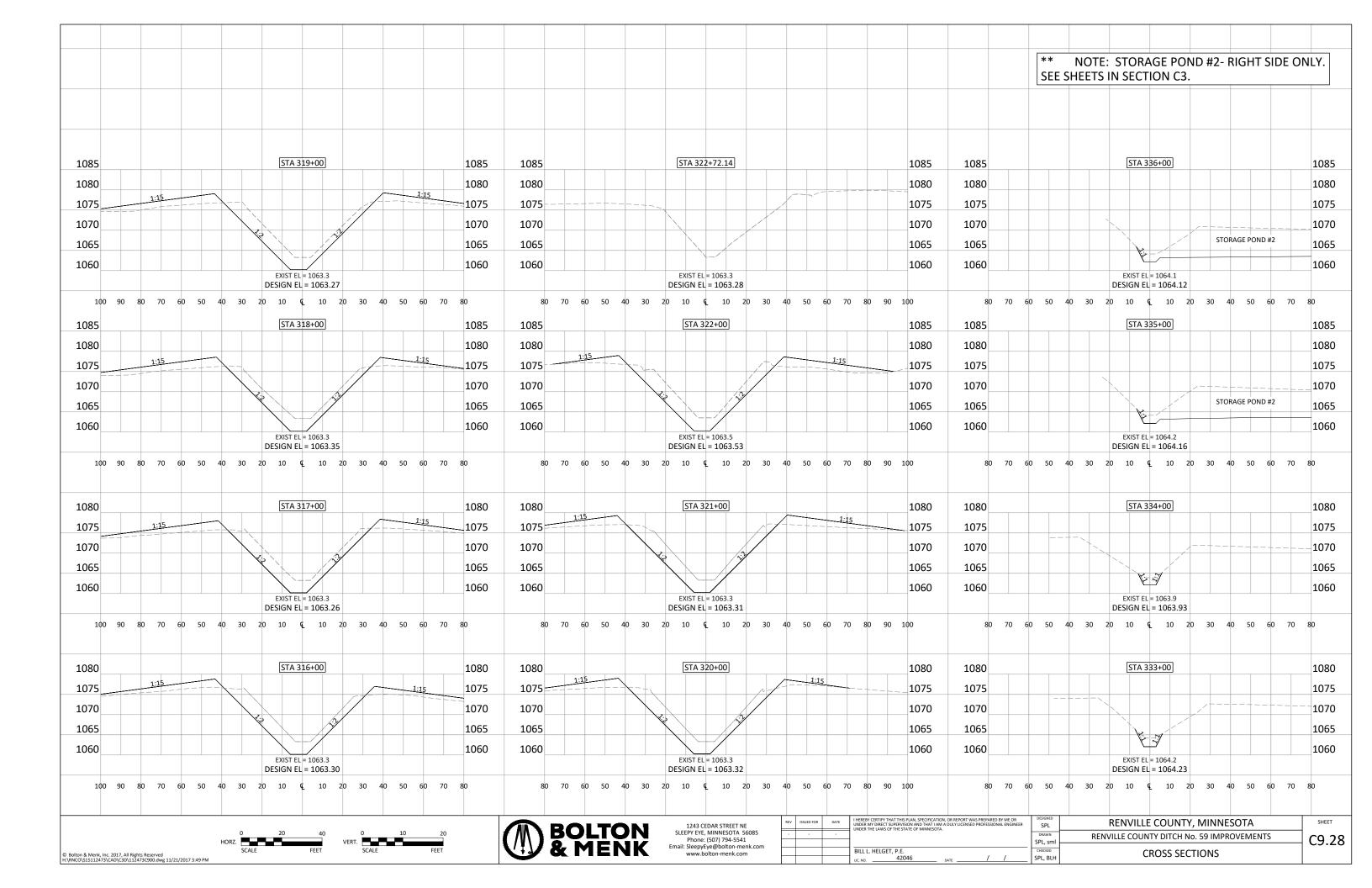


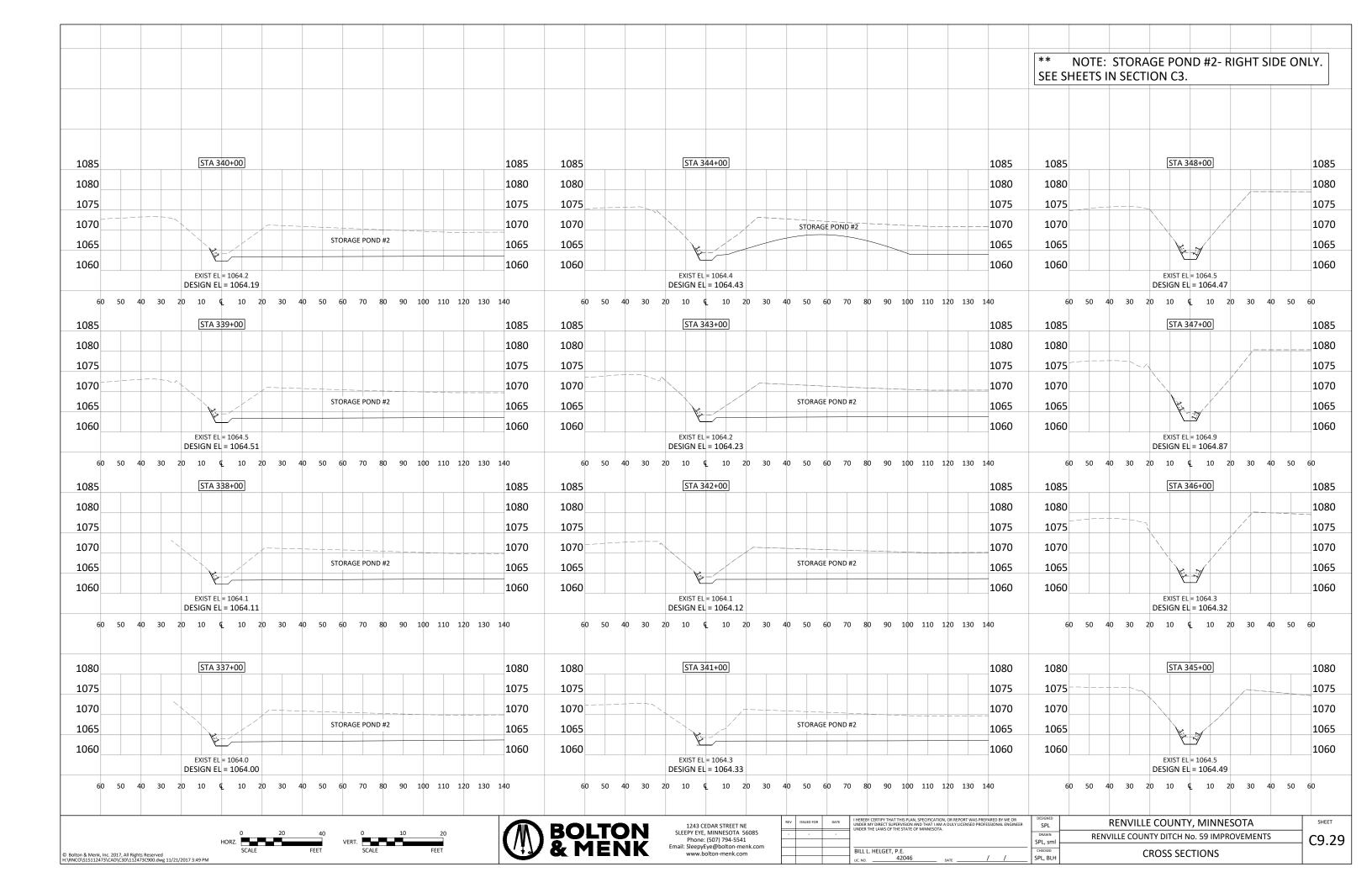


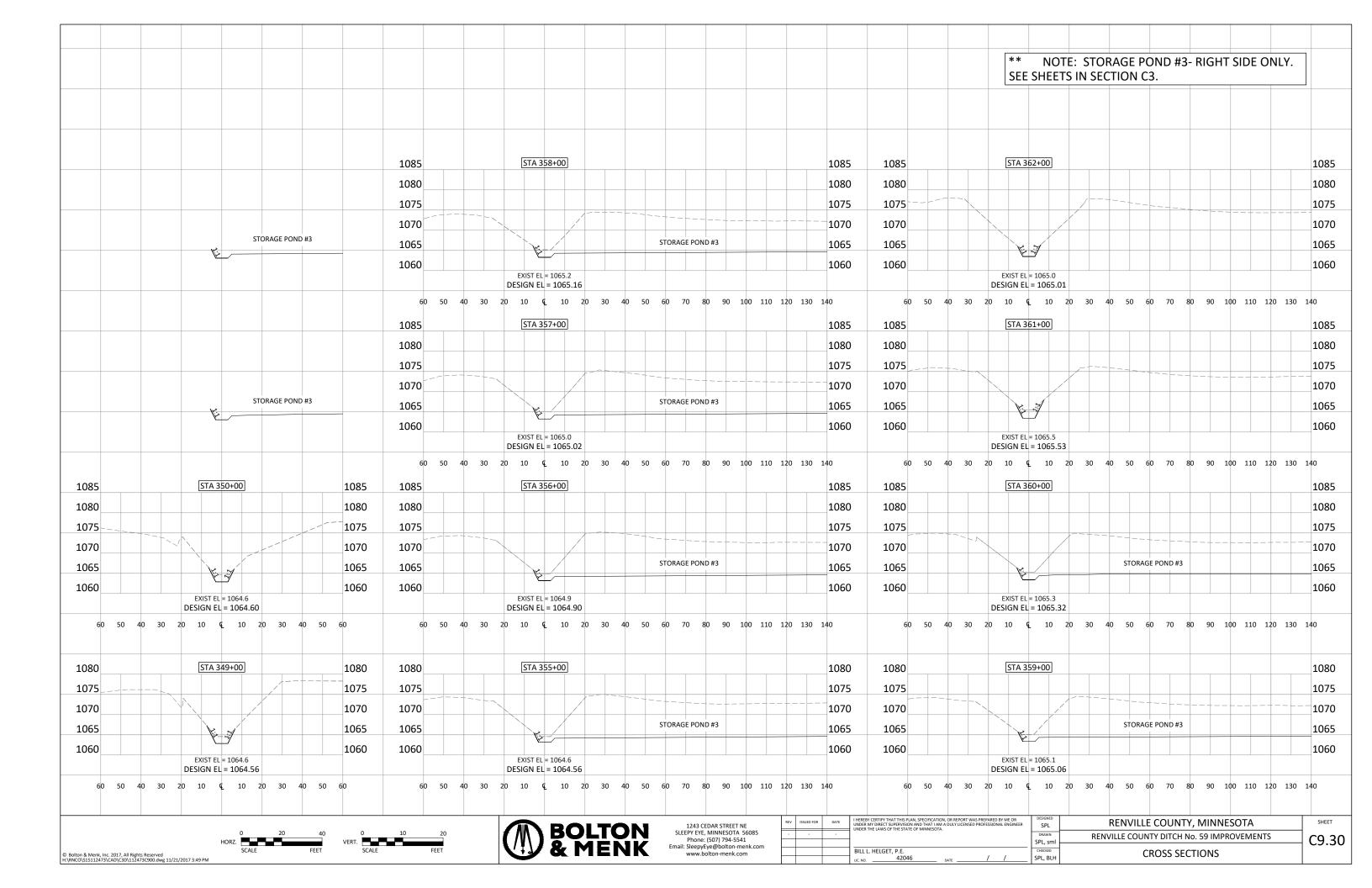


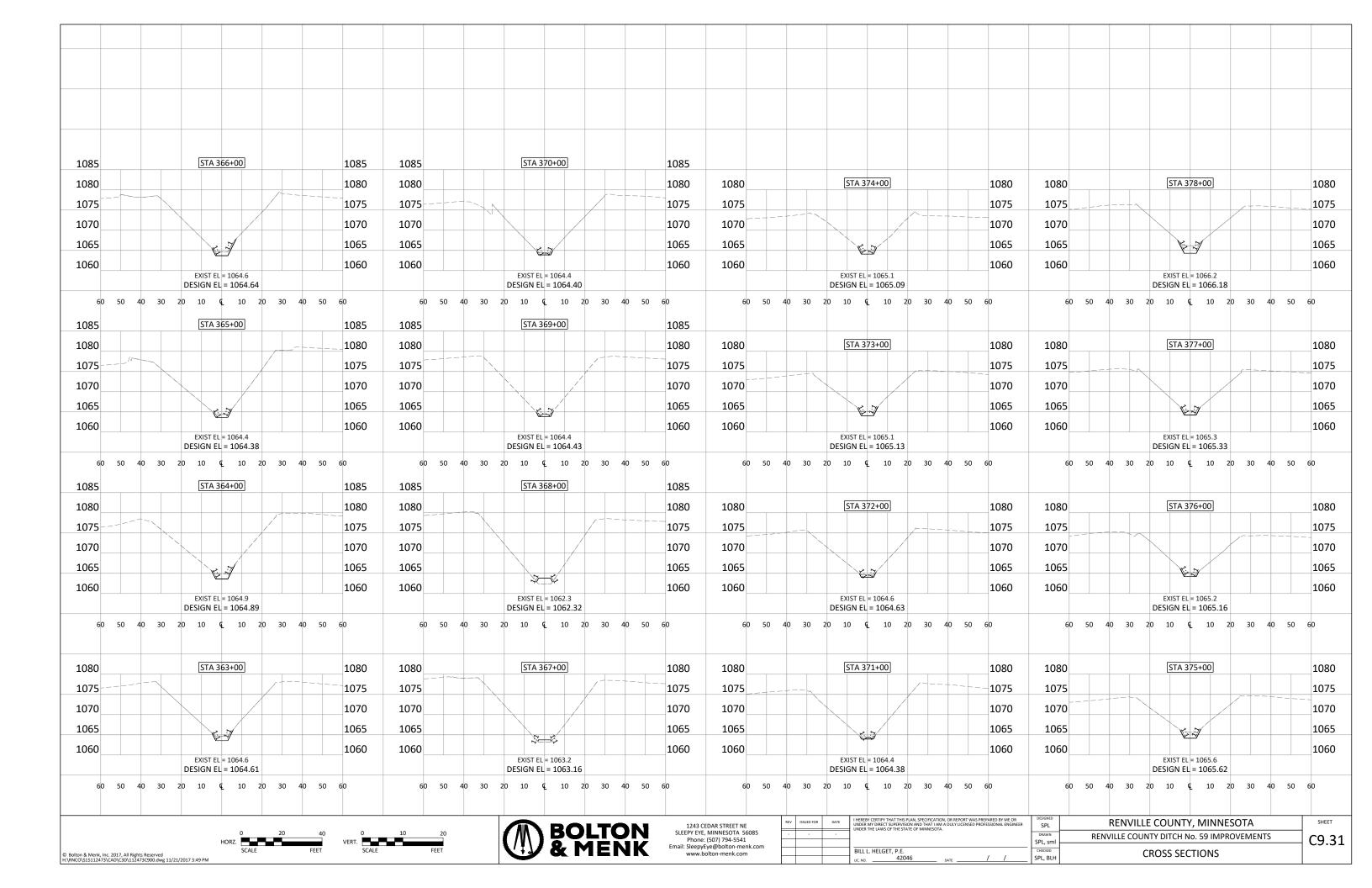


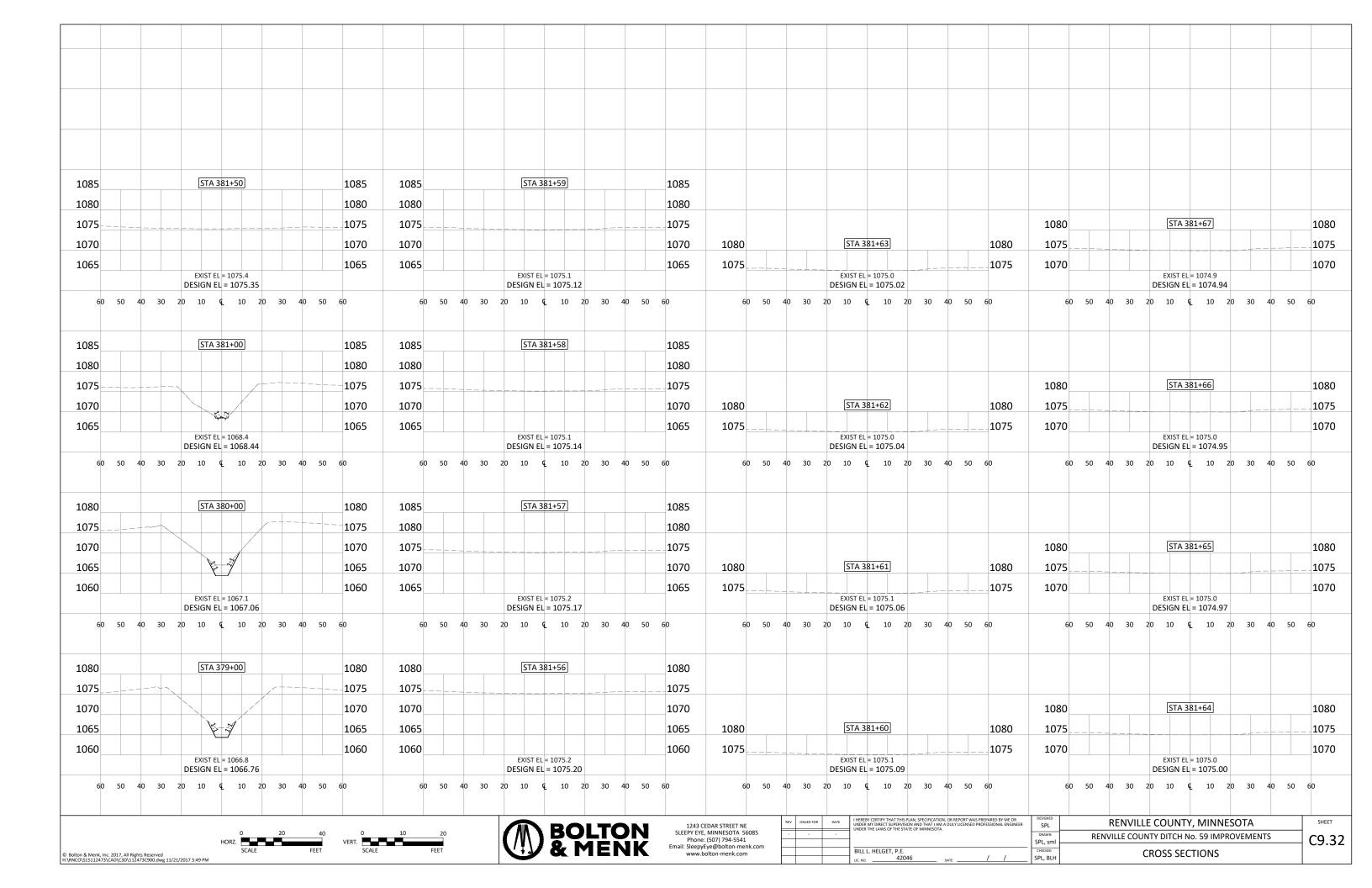














STATE OF MINNESOTA COUNTY OF RENVILLE

In Re:

Renville County Ditch No. 59, Renville County, Minnesota.

PETITION FOR IMPROVEMENT OF DRAINAGE SYSTEM

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

Petitioners respectfully represent, state and request the following:

1. Jurisdiction.

The undersigned Petitioners constitute: (1) at least 26% of the owners of the property affected by the proposed improvement; (2) at least 26% of the owners of property that the proposed improvement passes over; (3) the owners of at least 26% of the property area affected by the proposed improvement; or (4) the owners of at least 26% of the property area that the proposed improvement passes over.

2. Designation of Drainage System.

This Petition requests the improvement of the drainage system known by and designated as County Ditch No. 59 located in Renville County, Minnesota.

3. Need for Improvement.

The drainage system has insufficient capacity or needs enlarging or extending to furnish sufficient capacity or a better outlet.

4. Description of Proposed Improvement.

Attached as **Exhibit A** is a map which shows the general location of the proposed improvement. Exhibit A also depicts the approximate watershed limits in the area of the proposed improvement, the parcels over which the proposed improvement will pass, and the approximate location of the properties affected by the proposed improvement. The proposed improvement would include improvement of the Main Ditch, Branch C and various sub-branches thereof as identified below, and Branch 309 and various sublaterals thereof as designated below. The general location of the Main Ditch, Branch C and its sublaterals and Branch 309 and its sublaterials are, to the best of Petitioners' information, depicted on the attached Exhibit A.

The proposed improvement would be constructed in Sections 1 and 2 of Township 115 North, Range 36 West (Emmet Township), Sections 2, 3, 4, 5, and 6 of Township 115 North, Range 35 West (Troy Township), Sections 35 and 36 of Township 116 North, Range 36 West (Crooks Township), and Sections 27, 28, 32, 33, 34, and 35 of Township 116 North, Range 35 West (Winfield Township), all in Renville County, Minnesota.

The starting point and general course of the proposed improvement are as follows:

Main Ditch

Beginning at the outlet of the Main open ditch in the Southeast Quarter of Section 2, Township 115 North, Range 36 West, said point of beginning being approximately 2,240 feet north and 1,400 feet west of the Southeast Corner of said Section 2; thence northerly and northeasterly along the Main ditch across the Southeast and Northeast Quarters of said Section 2 and the Southeast Quarter of Section 35, Township 116 North, Range 36 West to the east line of said Section 35, said point being approximately 60 feet north of the Southeast Corner of said Section 35; thence easterly across the Southwest Quarter of Section 36-116-36, the North Half of Section 1-115-36, the North Half of Sections 6, 5, and 4 of Township 115 North, Range 35 West to the Northeast Corner of said Section 4; thence northeasterly across the Southwest, Southeast and Northeast Quarter of Section 34-116-35 and the Northwest Quarter of Section 35-116-35 to the Northwest Corner of said Section 35; thence northwesterly across the Southeast Quarter of Section 27-116-35 to the north-south ½ line, said point being approximately 1,150 feet north of the South Quarter Corner and there terminating.

Branch C

Beginning at the outlet of the Branch C tile into the Main open ditch in the Northeast Quarter of the Northeast Quarter of Section 4, Township 115 North, Range 35 West, said point of beginning being approximately 130 feet west and 130 feet south of the Northeast Corner of said Section 4, thence southeasterly and easterly generally following the current alignment of Branch C of County Ditch 59, across the Northeast Quarter of the Northeast Quarter of Section 4, across the West Half and the Southeast Quarter of the Northwest Quarter of Section 3, across the North Half of the Northeast Quarter of Section 2, across the Southwest Quarter of the Northeast Quarter of Section 2; and into the Northeast Quarter of the Southeast Quarter of Section 2 and there terminating, said point of termination being about 110 feet west and 30 feet south of the east Quarter Corner of said Section 2.

Branch C-1

Beginning at the outlet of the Branch C-1 tile into the Branch C tile in the Southwest Quarter of the Northwest Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 1,150 feet east and 1,740 feet south of the Northwest Corner of said Section 3, thence southerly and southeasterly generally following the current alignment of Branch C-1 of County Ditch 59, across the South Half of the Northwest Quarter of Section 3, and into the Northeast Quarter of the Southwest Quarter of Section 3 and there terminating, said point of termination being

2 2044183.1

approximately 1,400 feet east and 270 feet south of the west Quarter Corner of said Section 3.

Branch C-2

Beginning at the outlet of the Branch C-2 tile into the Branch C tile in the Northwest Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 2,520 feet west and 1,280 feet south of the Northeast Corner of said Section 3, thence northerly generally following the current alignment of Branch C-2 of County Ditch 59 across the Northwest Quarter of the Northwest Quarter of Section 3; and into the Northeast Quarter of the Northwest Quarter of Section 3 and there terminating, said point of termination being approximately 2,580 feet east and 90 feet south of the Northwest Corner of said Section 3.

Branch C-3

Beginning at the outlet of the Branch C-3 tile into the Branch C tile in the Northeast Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 600 feet west and 1,070 feet south of the Northeast Corner of said Section 3, thence northeasterly generally following the current alignment of Branch C-3 of County Ditch 59 across the Northeast Quarter of the Northeast Quarter of Section 3; and into the Southeast Quarter of the Southeast Quarter of Section 34, Township 116 North, Range 35 West, said point of termination being approximately 200 feet west and 110 feet north of the Southeast Corner of said Section 34.

Branch C-3-1

Beginning at the outlet of the Branch C-3-1 tile into the Branch C-3 tile in the Northeast Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 280 feet west and 400 feet south of the Northeast Corner of said Section 3, thence easterly and southeasterly generally following the current alignment of Branch C-3-1 of County Ditch 59 across the Northeast Quarter of the Northeast Quarter of Section 3; and into the Northwest Quarter of the Northwest Quarter of Section 2 and there terminating, said point of termination being approximately 540 feet east and 670 feet south of the Northwest Corner of said Section 2.

Branch C-3-2

Beginning at the outlet of the Branch C-3-2 tile into the Branch C-3 tile in the Northeast Quarter of the Northeast Quarter of Section 3, Township 115 North, Range 35 West, said point of beginning being approximately 240 feet west and 30 feet south of the Northeast Corner of said Section 3, thence westerly generally following the current alignment of Branch C-3-2 of County Ditch 59 across the North Half of the Northeast Quarter of Section 3 and there terminating, said point of termination being approximately 1,960 feet west and 220 feet south of the Northeast Corner of said Section 3.

Branch C-4

Beginning at the outlet of the Branch C-4 tile into the Branch C tile in the Southwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 2,210 feet west and 1,680 feet south of the Northeast Corner of said Section 2, thence northerly and easterly generally following the current alignment of Branch C-4 of County Ditch 59 across the West Half of the Northeast Quarter of Section 2; and into the Northeast Quarter of the Northeast Quarter of Section 2 and there terminating, said point of termination being 1,120 feet west and 910 feet south of the Northeast Corner of said Section 2.

Branch C-4-1

Beginning at the outlet of the Branch C-4-1 tile into the Branch C-4 tile in the Northwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 2,210 feet west and 1,030 feet south of the Northeast Corner of said Section 2, thence northwesterly generally following the current alignment of Branch C-4-1 of County Ditch 59 across the Northwest Quarter of the Northeast Quarter of Section 2; and into the Northeast Quarter of the Northwest Quarter of Section 2 and there terminating, said point of termination being approximately 1,990 feet east and 770 feet south of the Northwest Corner of said Section 2

Branch C-4-2

Beginning at the outlet of the Branch C-4-2 tile into the Branch C-4 tile in the Northwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 1,530 feet west and 870 feet south of the Northeast Corner of said Section 2, thence southeasterly generally following the current alignment of Branch C-4-2 of County Ditch 59 across the Northwest Quarter of the Northeast Quarter of Section 2 and there terminating, said point of termination being approximately 1,400 feet west and 1,360 feet south of the Northeast Corner of said Section 2.

Branch C-5

Beginning at the outlet of the Branch C-5 tile into the Branch C tile in the Southwest Quarter of the Northeast Quarter of Section 2, Township 115 North, Range 35 West, said point of beginning being approximately 1,480 feet west and 2,540 feet south of the Northeast Corner of said Section 2, thence southerly generally following the current alignment of Branch C-5 of County Ditch 59 across the Southwest Quarter of the Northeast Quarter of Section 2; and into the Northwest Quarter of the Southeast Quarter of Section 2 and there terminating, said point of termination being approximately 1,550 feet west and 2,440 feet north of the Southeast Corner of said Section 2.

Branch 309

Beginning at the outlet of the Branch 309 tile into the Main open ditch in the Northeast Quarter of the Northwest Quarter of Section 4, Township 115 North, Range 35 West, said point of beginning being approximately 2,200 feet east and 60 feet south of the Northwest Corner of said Section 4, thence northerly and westerly generally following the current alignment of Branch 309 of County Ditch 59 across

the Northeast Quarter of the Northwest Quarter of Section 4, across the East Half and the Northwest Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, across the Northeast Quarter of the Southeast Quarter of Section 32, and into the Southeast Quarter of the Northeast Quarter of Section 32 and there terminating, said point of termination being approximately 100 feet west and 1,960 feet south of the Northeast Corner of said Section 32.

Branch 309-1

Beginning at the outlet of the Branch 309-1 tile into the Branch 309 tile in the Southeast Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, said point of beginning being approximately 2,340 feet east and 560 feet north of the Southwest Corner of said Section 33, thence northeasterly generally following the current alignment of Branch 309-1 of County Ditch 59 across the Southeast Quarter of the Southwest Quarter of Section 4, and into the Southwest Quarter of the Southeast Quarter of Section 33 and there terminating, said point of termination being approximately 2,550 feet west and 770 feet north of the Southeast Corner of said Section 33.

Branch 309-2

Beginning at the outlet of the Branch 309-2 tile into the Branch 309 tile in the Northeast Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, said point of beginning being approximately 2,550 feet east and 1,440 feet north of the Southwest Corner of said Section 33, thence northeasterly generally following the current alignment of Branch 309-2 of County Ditch 59 across the Northeast Quarter of the Southwest Quarter of Section 33, and into the Northwest Quarter of the Southeast Quarter of Section 33 and there terminating, said point of termination being approximately 1,790 feet west and 1,810 feet north of the Southeast Corner of said Section 33.

Branch 309-3

Beginning at the outlet of the Branch 309-3 tile into the Branch 309 tile in the Northeast Quarter of the Southwest Quarter of Section 33, Township 116 North, Range 35 West, said point of beginning being approximately 2,550 feet east and 1,440 feet north of the Southwest Corner of said Section 33, thence northerly across the Northeast Quarter of the Southwest Quarter of Section 33, across the East Half of the Northwest Quarter of Section 33, across the Northeast Quarter of the Northeast Quarter of the Northeast Quarter of Section 33, and into the Southwest Quarter of the Southeast Quarter of Section 28 and there terminating, said point of termination being approximately 2,350 feet west and 110 feet north of the Southeast Corner of said Section 28.

Set forth on **Exhibit B** is a list of the 40-acre tracts or government lots that the proposed improvement would pass over, together with the names and addresses of the owners of those tracts.

5

5. Public Utility and Health.

The proposed improvement will be of public utility and will promote the public health.

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 improvement proceedings are dismissed.

7. Cost Bond.

One or more petitioners shall cause a bond to be filed in the amount of at least \$10,000.00 payable to the drainage authority. The bond will be conditioned to pay the costs incurred if the proceedings are dismissed or if a contract is not awarded to construct the proposed improvement described in the petition.

WHEREFORE, the Petitioners respectfully request the following:

- a. That the drainage authority accept this Petition, review it and determine that it is legally adequate; and
- b. That the drainage authority appoint an engineer for purposes of the proposed improvement and direct the engineer to prepare an engineer's preliminary report for the proposed improvement, including allowing the engineer to analyze other potential routes for the proposed improvement.

Dated this 14th day of December, 2016.

Jeff C. Braegelmann #174701

jbraegelmann@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]

Name of Pet	itioner(s) (please print or type):				
Gary	Verzalik				
Ownership (X	(check one): Individual Co-Owners (# of co-owners: Partner (name of partnership: Corporation or limited lial Trust (complete name of trust Other (explanation:	company			
Statement of	f Authority:	-			
capa	undersigned states and represent city, he or she has the authority oration, limited liability company	to execute on	behalf of the	_	
	above-named Petitioner(s) ow at will pass over or which is affect				proposed
	Tract Description	Section	Township	Range	
SE1/4	NW1/4	2	115	35	
SW¹⁄	4 NE ¹ / ₄	2	115	35	
NW!	/4 NE¹/4	- 2	115	35	
Part	of the NE¼ NW¼	2	115	35	
D. 1	11 11 2016		М	1/	16

Name of Petitioner(s) (please print or type)):									
Carol J. Lippert										
Ownership (check one):										
Partner (name of partnersh	ip:)								
)	-							
X Trust (complete name of tr	rust:)						
Other (explanation:	-)						
Carol J. Lippert vnership (check one):										
				proposed						
Tract Description	<u>Section</u>	<u>Township</u>	Range							
SW1/4 SE1/4	28	116	35							
Dated:	Carol J. Lin	L. Lygist,	Trustee	- S						

Name of Petitioner(s) (please print or type): Aakre Family Farms, LLC Ownership (check one): ____ Individual __ Co-Owners (# of co-owners: __) Partner (name of partnership: X Corporation or limited liability company (name of corporation or LLC: Aakre Family Farms, 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 Township Section Range NW1/4 NE1/4 35 3 115 Part of the NE¹/₄ NE¹/₄ 3 35 115 Dated: /1-9-/6

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

Dated: 11/9/16

Wat Family Farms LC									
Trust (complete name of trust:	Wat Family lity compa	ny (name of co	rporation or						
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						
Part of NE¼ SW¼	33	116	35						
Part of NW1/4 SW1/4	33	116	35						
SE1/4 NW1/4	33	116	35						
Part of NE ¹ /4 NW ¹ /4	33	116	35						
	WAT	FAMILY FA	RMS LL	٥					

1415 E. MAIN CTREET RICHMOND, UA 23219

EAWARD D. MITCHELL, MANAGER OF DEVON LC, MANAGER

Name of Petitioner(s) (please print or type):				
James Zenk				
Ownership (check one): X Individual Co-Owners (# of co-owners: Partner (name of partnership: Corporation or limited liabi Trust (complete name of trust: Other (explanation:	ility company	_)		
Statement of Authority:				
The undersigned states and represents capacity, he or she has the authority to corporation, limited liability company,	execute on be trust or other su	ehalf of the ach entity.	respective pa	rtnership,
The above-named Petitioner(s) own improvement will pass over or which is affected				proposed
Tract Description	Section	Township	Range	
SW1/4 NW1/4	35	116	35	
NW ¹ / ₄ NW ¹ / ₄	35	116	35	
Dated: <u>Duc, </u>	James Zenk	u B	ink	

Name of Petitioner(s) (please print or type):									
Daniel W. Rauenhorst Cheryl Rauenhorst									
Ownership (check one):									
	2)								
)						
Corporation or limited liab	oility company	(name of co	rporation 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.									
Cheryl Rauenhorst Ownership (check one): Individual X Co-Owners (# of co-owners: 2) 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,									
Tract Description	Section	Township	Range						
SW1/4 NW1/4	3	115	35						
Dated: $\frac{12-3-160}{1}$	Daniel W. R	W Foun	In I						
Dated: 12-3-16	Cheryl Raue	ALCU Inhorst	uenhorst						

company (name of corporation or LLC										
	1									
)									
Daniel W. Rauenhorst The 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:) 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 provement will pass over or which is affected by the proposed improvement. Tract Description Section Township Range NW¼ NE¼ 4 115 35 NE⅓ NE⅙ 4 115 35 NE⅙ NE⅙ 4 115 35										
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4 115 35										
4 115 35										
ani D w Fouenherst	_									
	if he or she is executing in a representative ecute on behalf of the respective partnership or other such entity. e following tract(s) which the proposed the proposed improvement. ection Township Range 4 115 35									

Name of Petitio	ner(s) (please print or type):
Robb J.	Zenk
Megan (
Ownership (che	ck one):
	Individual
X	Co-Owners (# of co-owners: <u>2</u>)
	Partner (name of partnership:)
	Corporation or limited liability company (name of corporation or LLC:
	Trust (complete name of trust:
	Other (explanation:)
Statement of Au	thority:
capacity	ersigned states and represents that if he or she is executing in a representative, he or she has the authority to execute on behalf of the respective partnership, ion, limited liability company, trust or other such entity.
	ove-named Petitioner(s) owns the following tract(s) which the proposed ill pass over or which is affected by the proposed improvement.
	<u>Tract Description</u> <u>Section</u> <u>Township</u> <u>Range</u>
Part of S	E¼ NE¼ 34 116 35
Dated: 12-2	8-16 Robb J. Zenk
Dated: 12 8	Megan C. Zenk

Name of Petitioner(s) (please print or type):				
Ruth Heller				
Naomi Endter				
Ownership (check one):				
Individual				
\underline{X} Co-Owners (# of co-owners:				
Partner (name of partnership)
Corporation or limited lia)		
Trust (complete name of trus	st:			
Other (explanation:)
Statement of Authority: The undersigned states and represent the contraction has a shear the contraction.				
capacity, he or she has the authority corporation, limited liability company			espective par	mersinp,
The above-named Petitioner(s) ov improvement will pass over or which is affect				proposed
Tract Description	Section	Township	Range	
NE ¹ / ₄ SE ¹ / ₄	2	115	35	
SE1/4 NE1/4	2	115	35	
Part of NE1/4 NE1/4	2	115	35	
		_		
Dated: 11/15/2016	Puth Heller	& Maomi Endt	er	8

By: Roger Heller, Power of Attorney

EXHIBIT A

[Map – attached]

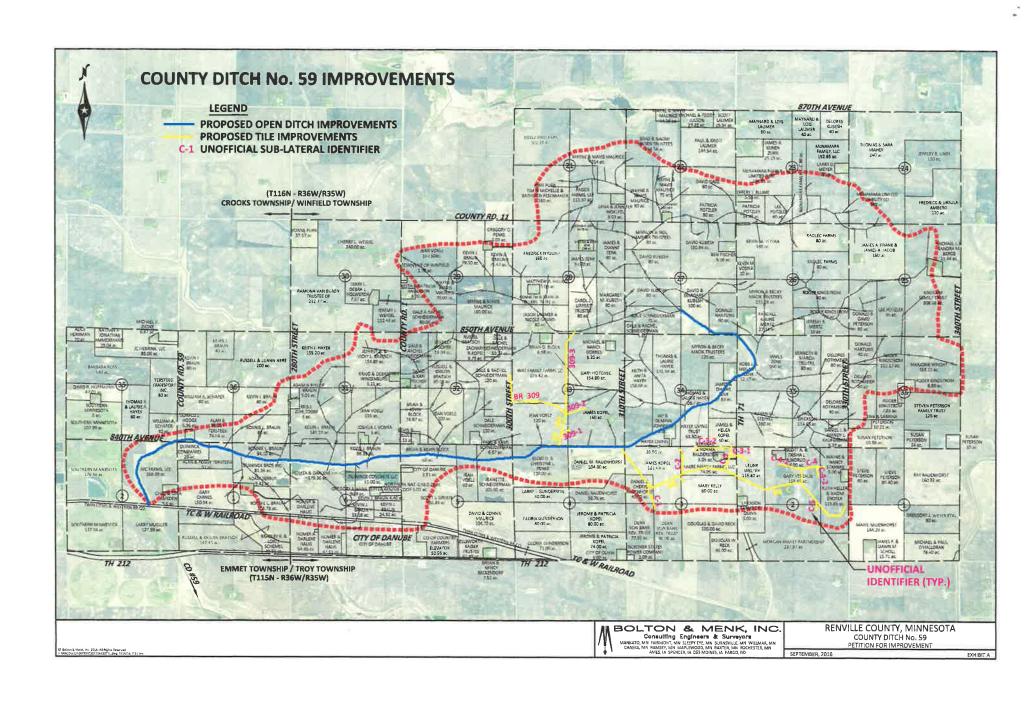
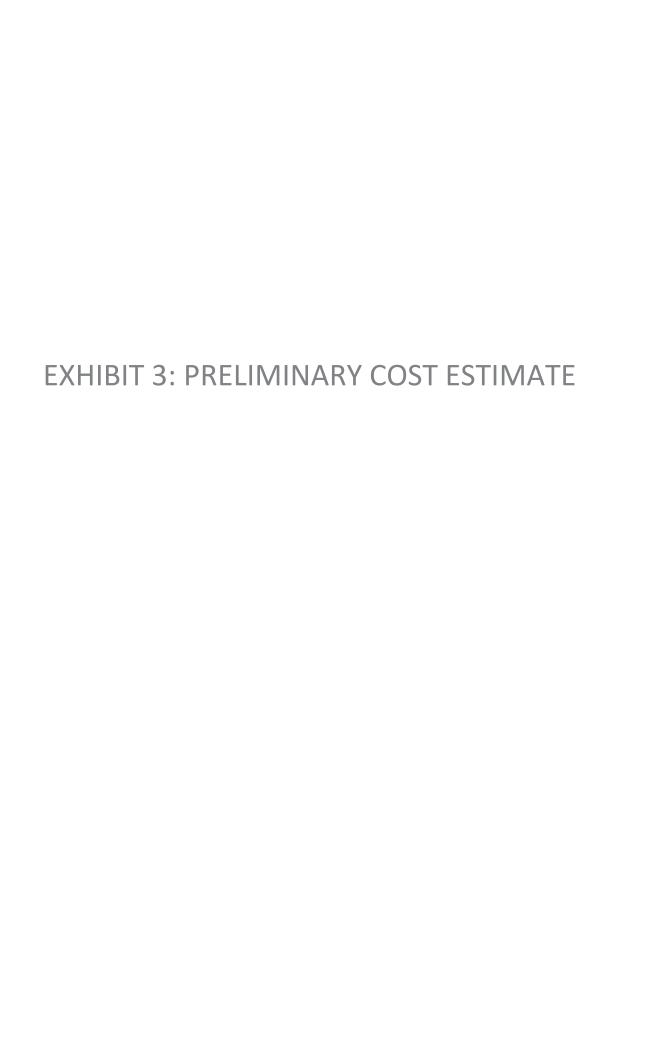


EXHIBIT B

[Tract Descriptions - attached]

	Location	Owner	Address	PID No.	Description	Section	Township	Range
1	Main Ditch	Larry Mueller	26826 US Hwy 212, Danube, MN 56230	10-00070-00	NW 1/4 SE 1/4	2	115	36
2	Main Ditch	WC Farms, LLC	18105 31st Ave. N, Plymouth, MN 55447	10-00060-00	SW 1/4 NE 1/4	2	115	36
3	Main Ditch	WC Farms, LLC	18105 31st Ave. N, Plymouth, MN 55447	10-00060-00	NW 1/4 NE 1/4	2	115	36
4	Main Ditch	WC Farms, LLC	18105 31st Ave. N, Plymouth, MN 55447	10-00060-00	NE 1/4 NE 1/4	2	115	36
5	Main Ditch	William A. Schafer	84213 270th St., Renville, MN 56284	09-00480-00	SE 1/4 SE 1/4	35	116	36
6	Main Ditch	Alan & Peggy Tersteeg	PO Box 163, Olivia, MN 56277	09-00500-00	Pt SW 1/4 SW 1/4	36	116	36
7	Main Ditch	Donald J Hodge	110 Chestnut Ave SE., Renville, MN 56284	09-00570-00	Pt SW 1/4 SW 1/4	36	116	36
8	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00050-00	Pt NW 1/4 NW 1/4	1	115	36
9	Main Ditch	Alan & Peggy Tersteeg	PO Box 163, Olivia, MN 56277	10-00040-00	Pt NE 1/4 NW 1/4	1	115	36
10	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00050-00	Pt NE 1/4 NE 1/4	1	115	36
11	Main Ditch	Bonnie L. Braun	80197 Co Rd 1, Danube, MN 56230	10-00020-00	Pt NW 1/4 NE 1/4	1	115	36
12	Main Ditch	Bonnie L. Braun	80197 Co Rd 1, Danube, MN 56230	10-00020-00	Pt NE 1/4 NE 1/4	1	115	36
13	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00021-00	Pt NW 1/4 NE 1/4	1	115	36
14	Main Ditch	Duininck Brothers, Inc.	PO Box 208, Prinsburg, MN 56281	10-00021-00	Pt NE 1/4 NE 1/4	1	115	36
15	Main Ditch	Homer & Darlene Haug	PO Box 356, Danube, MN 56230	24-00170-00	NW 1/4 NW 1/4	6	115	35
16	Main Ditch	Homer & Darlene Haug	PO Box 356, Danube, MN 56230	24-00170-00	NE 1/4 NW 1/4	6	115	35
17	Main Ditch	Kevin J. Braun	80197 Co. Rd 1, Danube, MN 56230	24-00160-00	NW 1/4 NE 1/4	6	115	35
18	Main Ditch	Kevin J. Braun	80197 Co. Rd 1, Danube, MN 56230	24-00160-00	NE 1/4 NE 1/4	6	115	35
19	Main Ditch	Brian Block & Kevin Block	30325 850th Ave., Danube, MN 56230	24-00130-00	NW 1/4 NW 1/4	5	115	35
20	Main Ditch	Brian Block & Kevin Block	30325 850th Ave., Danube, MN 56230	24-00130-00	NE 1/4 NW 1/4	5	115	35
21	Main Ditch	Jean Voelz	29438 840th Ave., Danube MN 56230	24-00110-00	Pt NW 1/4 NE 1/4	5	115	35
22	Main Ditch	Jeanette Schneiderman	29688 840th Ave., Danube, MN 56230	24-00120-00	Pt NW 1/4 NE 1/4	5	115	35
23	Main Ditch	Jeanette Schneiderman	29688 840th Ave., Danube, MN 56230	24-00120-00	NE 1/4 NE 1/4	5	115	35
24	Main Ditch	Eloid O & Christine Penke	29677 800th Avenue, Danube, MN 56230	24-00100-00	NW 1/4 NW 1/4	4	115	35
25	Main Ditch; Branch 309	Eloid O & Christine Penke	29677 800th Avenue, Danube, MN 56230	24-00100-00	NE 1/4 NW 1/4	4	115	35
26	Main Ditch; Branch 309; Branch 309-1	Jean Voelz	29438 840th Ave., Danube, MN 56230	27-01040-00	SE 1/4 SW 1/4	33	116	35
27	Main Ditch; Branch 309-1	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, MN 56277	27-01060-00	SW 1/4 SE 1/4	33	116	35
28	Main Ditch	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, MN 56277	27-01060-01	SE 1/4 SE 1/4	33	116	35
29	Main Ditch	Daniel W. Rauenhorst	81961 320th St., Olivia, MN 56277	24-00041-00	NW 1/4 NE 1/4	4	115	35
30	Main Ditch; Branch C	Daniel W. Rauenhorst	81961 320th St., Olivia, MN 56277	24-00041-00	NE 1/4 NE 1/4	4	115	35
31	Main Ditch; Branch C	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, MN 56277	24-00010-00	NW 1/4 NW 1/4	3	115	35
32	Main Ditch	Keith J. & Anita M. Hayek	1422 University Ave. NE, Minneapolis, MN 55413	27-01070-00	Pt SW 1/4 SW 1/4	4 115 4 115 33 116 33 116 33 116 4 115 4 115		35
33	Main Ditch	Hayek Living Trust c/o Mark & Ruth Hayek	3300 149th Ave., Ham Lake, MN 55304	27-01750-00	Pt SW 1/4 SW 1/4	_		35
34	Main Ditch	Hayek Living Trust c/o Mark & Ruth Hayek	3300 149th Ave., Ham Lake, MN 55304	27-01750-00	Pt SE 1/4 SW 1/4	34	116	35
35	Main Ditch	Jay L. & Deannea L. Johnson	31406 840th Ave., Olivia, MN 56277	27-01101-00	Pt SE 1/4 SW 1/4	34	116	35
36	Main Ditch	Thomas R. and Laurie A. Hayek	26158 Co. Rd. 4, Renville, MN 56284	27-01100-00	Pt SE 1/4 SW 1/4	34	116	35
37	Main Ditch	Hayek Living Trust c/o Mark & Ruth Hayek	3300 149th Ave., Ham Lake, MN 55304	27-01751-00	SW 1/4 SE 1/4	34	116	35
38	Main Ditch	Hayek Living Trust c/o Mark & Ruth Hayek	3300 149th Ave., Ham Lake, MN 55304	27-01751-00	Pt NW 1/4 SE 1/4	34	116	35
39	Main Ditch	Thomas R. and Laurie A. Hayek	26158 Co. Rd. 4, Renville, MN 56284	27-01102-00	Pt NW 1/4 SE 1/4	34	116	35
40	Main Ditch	James & Dianne Zenk	84691 US Hwy 71, Danube, MN 56230	27-01770-00	NE 1/4 SE 1/4	34	116	35
41	Main Ditch	James & Dianne Zenk	84691 US Hwy 71, Danube, MN 56230	27-01770-00	Pt. SE 1/4 NE 1/4	34	116	35
42	Main Ditch	Robb J. & Megan C. Zenk	84691 US Hwy 71, Danube, MN 56230	27-01771-00	Pt. SE 1/4 NE 1/4	34	116	35
43	Main Ditch	James Zenk	84691 US Hwy 71, Danube, MN 56230	27-01800-00	SW 1/4 NW 1/4	35	116	35
44	Main Ditch	James Zenk	84691 US Hwy 71, Danube, MN 56230	27-01800-00	NW 1/4 NW 1/4	35	116	35

	Location	Owner	PID No.	Description	Section	Township	Range	
45	Main Ditch	Donald L. Hartung	14941 St. Hwy 4, Cosmos, MN 56228	27-01730-00	SE 1/4 SE 1/4	27	116	35
46	Main Ditch	David & Margaret Kubesh	85554 310th St., Danube, MN 56230	27-01720-00	SW 1/4 SE 1/4	27	116	35
47	Branch C; Branch C-1	Daniel & Cheryl Rauenhorst	81961 320th St., Olivia, MN 56277	24-00030-00	SW 1/4 NW 1/4	3	115	35
48	Branch C	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W, Olivia, MN 56277	24-00010-00	SE 1/4 NW 1/4	3	115	35
49	Branch C; Branch C-2; Branch C-3-2	Aakre Family Farms, LLC C/O Sally Jo Aakre	80664 350th St., Olivia, MN 56277	24-01130-00	NW 1/4 NE 1/4	3	115	35
50	Branch C; Branch C-3; Branch C-3-1; Branch C-3-2	Aakre Family Farms, LLC C/O Sally Jo Aakre	80664 350th St., Olivia, MN 56277	24-01130-00	Pt. NE 1/4 NE 1/4	3	115	35
51	Branch C; Branch C-3-1;	Leone Welter C/O Virginia Hartmann	331 2nd Ave. SW, Forest Lake, MN 55025	24-01110-00	NW 1/4 NW 1/4	2	115	35
52	Branch C	Leone Welter C/O Virginia Hartmann	331 2nd Ave. SW, Forest Lake, MN 55025	24-01110-00	Pt SW 1/4 NW 1/4	2	115	35
53	Branch C	Gary Verzalik	15937 Cascade Path, Rosemount, MN 55068	24-01090-00	SE 1/4 NW 1/4	/4 2		35
54	Branch C; Branch C-4; Branch C-5	Gary Verzalik	15937 Cascade Path, Rosemount, MN 55068	24-01090-00	SW 1/4 NE 1/4	2	115 115	35
55	Branch C	Ruth Heller & Naomi Endter, TR C/O Roger Heller	PO Box 26, Olivia, MN 56277	24-01100-00	NE 1/4 SE 1/4	2	115	35
56	Branch C-1	Dean Von Bank & Susan Von Bank Revocable Trust	725 Forrest Road, Glenview, IL 60025	24-00020-00	NE 1/4 SW 1/4	3	115	35
57	Branch C-3	Bernard & Norma Balderston	509 10th St. S, Olivia, MN 56277	24-01131-00	Pt. NE 1/4 NE 1/4	3	115	35
58	Branch C-3	James & Helen Kopel	1107 Park Ave W, Olivia, MN 56277	27-01780-00	SE 1/4 SE 1/4	34	116	35
59	Branch C-4; Branch C-4-1; Branch C-4-2	Gary Verzalik	15937 Cascade Path, Rosemount, MN 55068	24-01090-00	NW 1/4 NE 1/4	2	115	35
60	Branch C-3 Branch C-4; Branch C-4-1; Branch C-4-2 Branch C-4 Ruth Heller & Naomi Endter, TR C/O Roger Heller		PO Box 26, Olivia, MN 56277	24-01100-00	Pt NE 1/4 NE 1/4	2	115	35
61	Branch C-4-1	Gary Verzalik	15937 Cascade Path, Rosemount, MN 55068	24-01090-00	Pt NE 1/4 NW 1/4	2	115	35
62	Branch C-5	Morgan Family Partnership C/O Patrick & Rita Morgan	PO Box 107, Elmore, MN 56027	24-01120-00	NW 1/4 SE 1/4	2	115	35
63	Branch 309; Branch 309-2; Branch 309-3	Jean Voelz	29438 840th Ave., Danube, MN 56230	27-01040-00	Pt. NE 1/4 SW 1/4	33	116	35
64	Branch 309; Branch 309-3	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	Pt. NE 1/4 SW 1/4	33	116	35
65	Branch 309	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	Pt. NW 1/4 SW 1/4	33	116	35
66	Branch 309	Dale & Rachel Schneiderman	31034 850th Ave., Danube, MN 56230	27-00981-00	NE 1/4 SE 1/4	32	116	35
67	Branch 309	Dale & Rachel Schneiderman	31034 850th Ave., Danube, MN 56230	27-00981-00	SE 1/4 NE 1/4	32	116	35
68	Branch 309-2	James Kopel & Kathy Dillon Tr of Helen Kopel	1107 Park Ave. W., Olivia, MN 56277	27-01060-00	NW 1/4 SE 1/4	33	116	35
69	Branch 309-3	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	SE 1/4 NW 1/4	33	116	35
70	Branch 309-3	Wat Family Farms LC	PO Box 377, Richmond, VA 23218	27-01030-00	Pt. NE 1/4 NW 1/4	33	116	35
71	Branch 309-3	Gary Hotovec ETAL	87308 US Hwy 71, Danube, MN 56230	27-01050-00	NW 1/4 NE 1/4	33	116	35
72	Branch 309-3	Carol J. Lippert, Trustee	89118 Co. Rd 1, Danube, MN 56230	27-00801-00	SW 1/4 SE 1/4	28	116	35



PRELIMINARY CONSTRUCTION COST ESTIMATE

County Ditch No. 59 Improvement

Renville County, MN
FILENAME: H:\RNCO\S15112473\2_Preliminary\A_Calculations\[112473 Preliminary Cost Estimate.xlsx]Engineers Estimate

DATE: January 9, 2018

						CD 59 I	MPROVEMENT	CD 59 II	MPROVEMENT	CD 59 IN	IPROVEMENT	CD 59 IN	PROVEMENT	CD 59 IMPROVEMENT		CD 59 IMPROVEMENT	
ITEM			UNIT	TOTAL			OPEN DITCH		E STORAGE #1		STORAGE #2		STORAGE #3		ANCH 309		RANCH C
NO.	ITEM	UNIT	PRICE	EST. QUANT.	AMOUNT	EST. QUANT.	AMOUNT	EST. QUANT.	AMOUNT	EST. QUANT.	AMOUNT	EST. QUANT.	AMOUNT	EST.	AMOUNT	EST.	AMOUNT
1	Mobilization & Traffic Control	Lump Sum	\$110,000.00	1.00	\$110,000.00	0.35	\$38,500.00	0.23	\$25,300.00	0.08	\$8,800.00	0.06	\$6,600.00	0.10	\$11,000.00	0.18	\$19,800.0
2	Exploratory Excavation	Hour	\$200.00	65	\$13,000.00	10	\$2,000.00	5	\$1,000.00	5	\$1,000.00	5	\$1,000.00	20	\$4,000.00	20	\$4,000.0
	Common Excavation (P)	Cubic Yard	\$2.50	715,000	\$1,787,500.00	210,000	\$525,000.00	325,000	\$812,500.00	105,000	\$262,500.00	75,000	\$187,500.00				
	Ditch Cleanout	Station	\$200.00	55	\$11,000.00	55	\$11,000.00										
	Salvage Pipe Culvert	Linear Foot	\$15.00	388	\$5,820.00	388	\$5,820.00										
	Wearing Course Mixture (SPWEA230B)	Ton	\$110.00 \$110.00	110 110	\$12,100.00 \$12,100.00	110 110	\$12,100.00 \$12,100.00										
	Non-wearing Course Mixture (SPNWB230B) Aggregate Surfacing, Class 1	Ton Ton	\$110.00	110	\$12,100.00	110	\$12,100.00										
	Aggregate Base, Class 5	Ton	\$20.00	875	\$17,500.00	800	\$16,000.00							25	\$500.00	50	\$1,000.0
	Pipe Bedding Material	Ton	\$25.00	3,000	\$75,000.00	1,500	\$37,500.00								700000	1,500	
	6" Tile Inlet	Each	\$250.00	10	\$2,500.00	5	\$1,250.00									5	\$1,250.0
	8" Tile Inlet	Each	\$260.00	35	\$9,100.00	15	\$3,900.00							5	\$1,300.00	15	\$3,900.0
	10" Tile Inlet	Each	\$300.00	10	\$3,000.00	10	\$3,000.00										
	12" Tile Inlet	Each	\$350.00	30	\$10,500.00	10								5	\$1,750.00	15	\$5,250.0
	15" Tile Inlet	Each	\$400.00	5	\$2,000.00	5	\$2,000.00									-	
	18" Tile Inlet 6" Drain Tile	Each Linear Foot	\$500.00 \$8.00	1,870	\$2,500.00 \$14,960.00	200	\$2,500.00 \$1,600.00	 	 					220	\$1,760.00	1,450	\$11,600.0
	8" Drain Tile	Linear Foot	\$10.00	6,860	\$68,600.00	200	\$2,000.00							760	\$7,600.00	5,900	\$59,000.0
	10" Drain Tile	Linear Foot	\$12.00	2,620	\$31,440.00	200	\$2,400.00		1					20	\$240.00	2,400	\$28,800.0
	12" Drain Tile	Linear Foot	\$16.00	5,590	\$89,440.00	100	\$1,600.00							2,630	\$42,080.00	2,860	\$45,760.0
21	15" Drain Tile	Linear Foot	\$20.00	2,130	\$42,600.00	100	\$2,000.00							450	\$9,000.00	1,580	\$31,600.0
	18" Drain Tile	Linear Foot	\$25.00	2,520	\$63,000.00	100	\$2,500.00							1,680	\$42,000.00	740	\$18,500.0
	24" Drain Tile	Linear Foot	\$30.00	3,895	\$116,850.00	40	\$1,200.00							815	\$24,450.00	3,040	\$91,200.0
	30" Drain Tile	Linear Foot	\$40.00	7,070	\$282,800.00	40	\$1,600.00							4,160	\$166,400.00	2,870	\$114,800.0
	36" Drain Tile	Linear Foot	\$50.00	5,150	\$257,500.00	200	42 200 00							1,425	\$71,250.00	3,725	\$186,250.0
	6" CS Drain Tile Outlet Pipe w Rodent Guard 8" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$16.00 \$18.00	200 300	\$3,200.00 \$5,400.00	200 300	\$3,200.00 \$5,400.00								-		-
	10" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot Linear Foot	\$18.00	300	\$6,600.00	300	\$6,600.00										
	12" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$24.00	300	\$7,200.00	300	\$7,200.00										
	15" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$30.00	200	\$6,000.00	200	\$6,000.00								1		
	18" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$32.00	200	\$6,400.00	200	\$6,400.00										
	24" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$42.00	60	\$2,520.00	60	\$2,520.00										
	30" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$50.00	20	\$1,000.00	20	\$1,000.00										
	42" CS Drain Tile Outlet Pipe w Rodent Guard	Linear Foot	\$80.00	40	\$3,200.00									20	\$1,600.00	20	\$1,600.0
	15" CS Pipe Culvert	Linear Foot	\$40.00	920	\$36,800.00	920	\$36,800.00										
	15" CS Safety Apron Install Pine Culvert	Each Linear Foot	\$300.00 \$50.00	23 168	\$6,900.00	23 168	\$6,900.00 \$8,400.00										
	84" RC Pipe Culvert	Linear Foot	\$500.00	144	\$72,000.00	144	\$72,000.00										
	96" RC Pipe Culvert	Linear Foot	\$600.00	280	\$168,000.00	280	\$168,000.00										
	84" RC Pipe Apron	Each	\$4,000.00	4	\$16,000.00	4	\$16,000.00										
41	96" RC Pipe Apron	Each	\$5,000.00	6	\$30,000.00	6	\$30,000.00										
	Random Riprap, Class II	Ton	\$45.00	800	\$36,000.00	800	\$36,000.00										
43	Random Riprap, Class III	Ton	\$50.00	780	\$39,000.00	700	\$35,000.00							40	\$2,000.00	40	\$2,000.0
	Random Riprap, Class IV	Ton	\$60.00	1,500	\$90,000.00	1,500	\$90,000.00										
	Filter Berm, Type 5 Storm Drain Inlet Protection	Linear Foot Each	\$50.00 \$100.00	150 170	\$7,500.00 \$17,000.00	150 100	\$7,500.00 \$10,000.00	 	 					20	\$2,000.00	50	\$5,000.0
	Sediment Control Log, Type Straw	Linear Foot	\$100.00 \$3.00	6.000	\$17,000.00	5.000	\$10,000.00	500	\$1,500.00	250	\$750.00	250	\$750.00	20	\$2,000.00	50	0.000,65
- ''	Immediate Ditch Slope Seeding	Station	\$100.00	336	\$33,600.00	336	\$33,600.00	300	71,300.00	230	\$7,50.00	230	\$7.50.00		1		1
	Seeding (Buffer Strip, Storage Disposal Area)	Acre	\$500.00	278.6	\$139,300.00	68.0	\$34,000.00	92.0	\$46,000.00	32.0	\$16,000.00	19.0	\$9,500.00	22.4	\$11,200.00	45.2	\$22,600.0
	Rapid Stabilization, Method 4	Square Yard	\$2.00	18,300	\$36,600.00	8,000	\$16,000.00	5,000	\$10,000.00	2,500	\$5,000.00	2,500	\$5,000.00	100	\$200.00	200	\$400.0
			_		-		-										
	SUBTOTAL ESTIMATED CONSTRUCTION BID ITEMS				\$3,839,630.00		\$1,346,790.00		\$896,300.00		\$294,050.00		\$210,350.00		\$400,330.00	ļ	\$691,810.0
	NAMES OF A SECURITION OF A SEC		40 :		4440		A		ļ						1		1
	IMPROVEMENT RIGHT-OF-WAY (DITCH WIDENING)	ACRE	\$8,000.00	18.5	\$148,000.00	18.5	\$148,000.00	 	 						 	 	1
	IMPROVEMENT RIGHT-OF-WAY (16.5' BUFFER STRIP EACH SIDE) IMPROVEMENT RIGHT-OF-WAY (STORAGE)	ACRE ACRE	\$8,000.00	26.0 41.0	\$208,000.00 \$328,000.00	26.0	\$208,000.00	22.0	\$176,000.00	12.0	\$96,000.00	7.0	\$56,000.00	-	 	1	
	TEMPORARY RIGHT-OF-WAY (80' EACH SIDE OF THE DITCH)	ACRE	\$600.00	124.0	\$74,400.00	124.0	\$74,400.00	22.0	3170,000.00	12.0	350,000.00	7.0	\$30,000.00		-	1	-
	TEMPORARY RIGHT-OF-WAY (STORAGE EXCAVATION DISPOSAL)	ACRE	\$600.00	102.0	\$61,200.00	124.0	\$74,400.00	70.0	\$42,000.00	20.0	\$12,000.00	12.0	\$7,200.00		1		1
	TEMPORARY RIGHT-OF-WAY (80' TILE CONSTRUCTION)	ACRE	\$600.00	67.6	\$40,560.00			1 2.0	, -,		, ,,,,,,,,,,		, ,	22.4	\$13,440.00	45.2	\$27,120.0
	TOTAL ESTIMATED CONSTRUCTION COST				\$4,699,790.00		\$1,777,190.00		\$1,114,300.00		\$402,050.00		\$273,550.00		\$413,770.00		\$718,930.0
	10% CONSTRUCTION CONTINGENCY				\$470,300.00		\$177,800.00		\$111,500.00		\$40,300.00		\$27,400.00		\$41,400.00	ļ	\$71,900.0
	TOTAL ESTIMATED CONSTRUCTION COST				\$5,170,090.00		\$1,954,990.00	ļ	\$1,225,800.00		\$442,350.00		\$300,950.00		\$455,170.00	1	\$790,830.0
	ENGINEERING, VIEWING, LEGAL, PERMITS, ADMIN (20%)				\$1,034,200.00		\$391,000.00		\$245,200.00		\$88,500.00		\$60,200.00		\$91,100.00	 	\$158,200.0
	TOTAL ESTIMATED PROJECT COST				\$6,204,290.00		\$2,345,990.00	 	\$1,471,000.00		\$530,850.00		\$361,150.00		\$546,270.00	1	\$949,030.0
	TOTAL ACRES IN UPSTREAM WATERSHED			 		-	9702	 	9702		9702		9702	-	1032	1	83
	ESTIMATED PROJECT COST/ACRE			\vdash			9702 \$242	 	9702 \$152		9702 \$55		9702 \$37		1032 \$529	1	\$1.13