

2025 DICKINSON COUNTY DRAINAGE DISTRICT
REPAIR PROJECT - DIVISION I
PROJECT No.: E24070

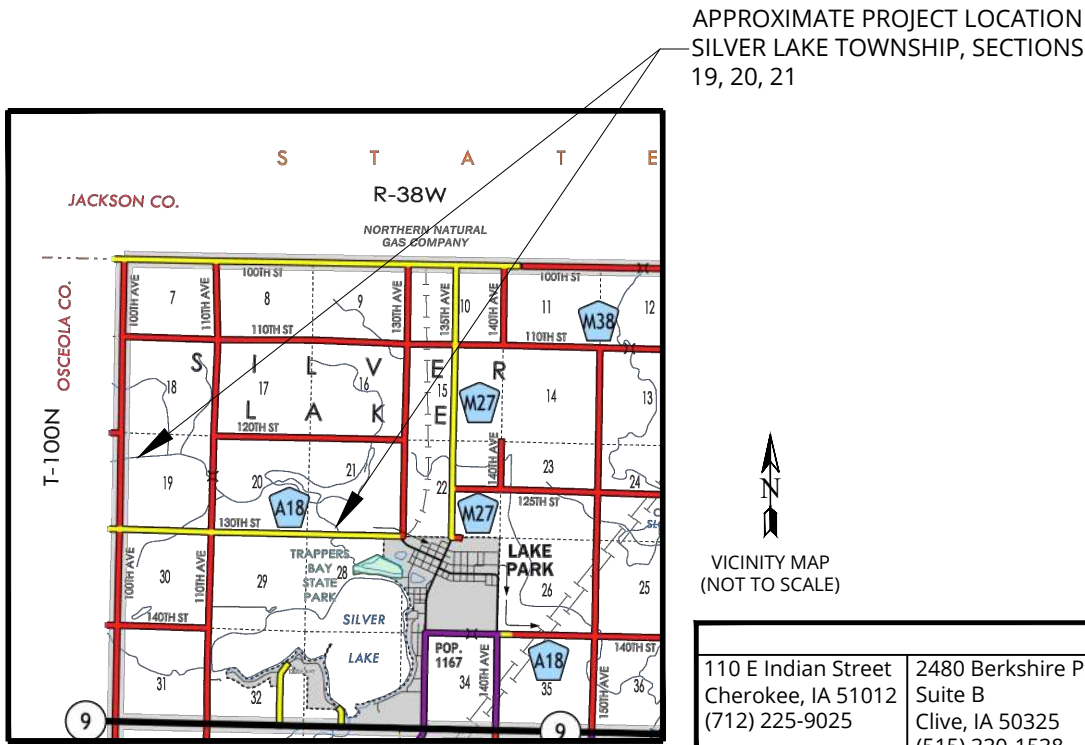
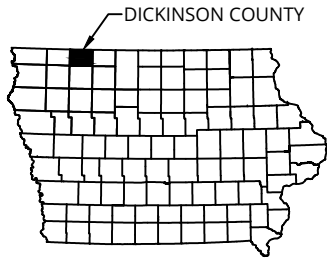
DICKINSON COUNTY

LETTING DATE:
TBD

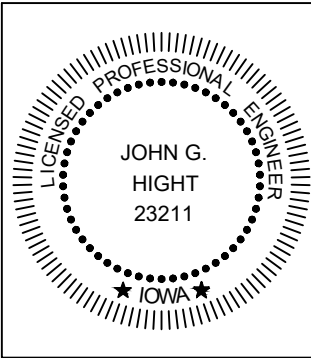
PLANS OF IMPROVEMENTS FOR
DICKINSON COUNTY DRAINAGE DISTRICTS
BEI PROJECT No.: E24070

2025 DICKINSON COUNTY DRAINAGE DISTRICTS REPAIR PROJECT - DIVISION I
VARIOUS LOCATIONS WITHIN JOINT DRAINAGE DISTRICT #1

Unless otherwise specified, the Iowa Statewide Urban Design and Specifications (SUDAS) for Public Improvements, 2025 edition, followed by the Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction, Series 2023, and applicable general supplemental specifications and special provisions shall apply to construction on this project. In case of conflicting requirements, the more stringent shall apply.



INDEX OF SHEETS	
NO.	DESCRIPTION
A.01	TITLE SHEET
A.02	LEGEND & GENERAL CONSTRUCTION NOTES
A.03	OVERALL PLAN VIEW
B.01	TYPICAL CROSS SECTIONS AND DETAILS
C.01	ESTIMATE OF PROJECT QUANTITIES AND ESTIMATE REFERENCE INFORMATION
D.01-D.04	PLAN AND PROFILE SHEETS
U.01	DETAILS



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

JOHN G. HIGHT, P.E.
LICENSE NUMBER 23211 (date)

My license renewal date is December 31, 2025

Pages or sheets covered by this seal: All

PRELIMINARY
NOT FOR CONSTRUCTION

Beck Engineering, Inc.				
110 E Indian Street Cherokee, IA 51012 (712) 225-9025	2480 Berkshire Parkway Suite B Clive, IA 50325 (515) 330-1538	806 Hartford PL SE Orange City, IA 51041 (712) 737-9225	301 10th Street Suite A Sheldon, IA 51201 (712) 631-4014	3301 Zenith Avenue PO Box 238 Spirit Lake, IA 51360 (712) 336-3596

Drawn	05-16-25 By JGH	Checked by	LJL
Revised		Project No.	E24070
Sheet A.01			

2025 Dickinson County Drainage Districts
Repair Project - Division I
Title Sheet



Client:			
Beck Engineering, Inc.		Dickinson County	
Cherokee, Iowa	Clive, Iowa	1802 Hill Avenue	
Orange City, Iowa	Sheldon, Iowa	Spirit Lake, IA 51360	
		Spirit Lake, Iowa	

●

FOUND BOUNDARY MONUMENT AS NOTED

BUILDING SETBACK LIMITS

—1400—

EXISTING MAJOR CONTOUR

—1401—

EXISTING MINOR CONTOUR

—1400—

PROPOSED CONTOUR

EXISTING CURB STOP

PROPOSED CURB STOP

EXISTING GATE VALVE

PROPOSED GATE VALVE

EXISTING FIRE HYDRANT

PROPOSED FIRE HYDRANT

EXISTING IOWA HYDRANT

EXISTING CISTERN

EXISTING WATER METER PIT

EXISTING SANITARY SEWER CLEANOUT

EXISTING SANITARY SEWER MANHOLE

PROPOSED SANITARY SEWER MANHOLE

EXISTING STORM SEWER MANHOLE

PROPOSED STORM SEWER MANHOLE

COMMUNICATION PEDESTAL

COMMUNICATION VAULT

ELECTRIC PEDESTAL

ELECTRIC VAULT

ELECTRIC METER

GAS METER

GAS GATE VALVE

UTILITY PEDESTAL

UTILITY MANHOLE

AIR CONDITIONER

SPRINKLER CONTROL VALVE

EXISTING MAILBOX

EXISTING STREET LIGHT

EXISTING LIGHT POLE

EXISTING GUY WIRE

EXISTING UTILITY POLE

EXISTING TRAFFIC LIGHT

911 (ADDRESS) SIGN

STREET OR INFORMATIONAL SIGN

DECIDUOUS TREE (DIA. GIVEN)

CONIFEROUS TREE (DIA. GIVEN)

STUMP

BUSH

BRUSH

PROPOSED RETAINING WALL

EXISTING BUILDING FOOTPRINT

PROPOSED BUILDING FOOTPRINT

✕

FG

1305.00

✕

ME

1305.00

✕

TOC

1305.00

(UAC)

UNDISTURBED AFTER CONSTRUCTION

— GAS —

EXISTING GAS LINE

— E —

EXISTING UNDERGROUND ELECTRIC LINE

— OH —

EXISTING OVERHEAD UTILITY LINE

— CLN —

EXISTING CENTURY LINK NETWORK LINE

— FO —

EXISTING FIBER OPTIC LINE

— COM —

EXISTING COMMUNICATION LINE

— SAN —

EXISTING SANITARY SEWER LINE

— SAN —

PROPOSED SANITARY SEWER LINE

— SAN —

ABANDONED UTILITY PIPE

— FM —

EXISTING SANITARY SEWER FORCE MAIN

— ST —

EXISTING STORM SEWER LINE

PROPOSED STORM SEWER LINE

PROPOSED SUBDRAIN

— W —

EXISTING WATER MAIN

— W —

PROPOSED WATER MAIN

— ROW —

RIGHT OF WAY LINE

PROJECT BOUNDARY

— SF —

PROPOSED SILT FENCE

— SC —

PROPOSED FLOATING SILT CURTAIN

— SL —

PROPOSED SEDIMENT LOG

— FS —

PROPOSED FILTER SOCK

EXISTING CHAIN LINK FENCE

EXISTING WOOD FENCE

EXISTING WOOD DECK

EXISTING PAVERS

PROPOSED PAVERS

PROPOSED RIP-RAP

EXISTING DETECTABLE WARNING

PROPOSED DETECTABLE WARNING

PROPOSED SOD

EXISTING GRAVEL

PROPOSED GRAVEL

EXISTING PCC PAVEMENT

EXISTING ASPHALT PAVEMENT

DISTRICT	CONTACT NAME	CONTACT PHONE	CONTACT EMAIL
ALLIANT ENERGY	FIELD ENGINEER	800-255-4268	locate_IPL@alliantenergy.com
PREMIER COMMUNICATIONS	JEFF REZABECK	712-346-7994	jrezabeck@mypremieronline.com

WHERE PUBLIC UTILITY LINES AND FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER OF THOSE UTILITIES PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PROVIDE ACCESS TO THOSE UTILITIES THAT REQUIRE SERVICE. UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN FROM LOCATES, SURVEYS AND RECORDS, AND SHALL BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THAT OTHERS MAY EXIST OF WHICH THE LOCATION IS NOT KNOWN. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING THE EXISTENCE AND EXACT LOCATION OF ALL UTILITIES AND STRUCTURES AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR INTERFERENCE OR DELAY CAUSED BY UTILITY COORDINATION OR RELOCATION WORK.

THE CONTRACTOR SHALL CONTACT THE IOWA ONE-CALL SERVICE (1-800-292-8989) AT LEAST 48 HOURS PRIOR TO COMMENCING ANY WORK ON THE CONSTRUCTION SITE.

GENERAL CONSTRUCTION NOTES:

-HEAVY TRUCK TRAFFIC ON THE EXISTING ADJACENT PAVEMENTS SHALL BE KEPT TO THE MINIMUM NECESSARY FOR THE REQUIRED CONSTRUCTION OPERATIONS. ALL BASE AND EXISTING PAVEMENT REPAIRS NECESSARY DUE TO HAULING DURING CONSTRUCTION ACTIVITIES SHALL BE COMPLETED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. LIGHTER HAUL LOADS MAY BE REQUIRED TO PROTECT THE EXISTING SURFACES AND SHALL BE INCLUDED IN THE BID. NO COMPENSATION WILL BE MADE FOR ADDITIONAL HAULING ACTIVITIES OR PLACEMENT MACHINES/OPERATIONS THAT MAY BE REQUIRED TO PROTECT THE EXISTING SURFACES AND BASE MATERIALS.

-LOCATION OF UTILITIES IS APPROXIMATE. CONTRACTOR SHALL CONTACT IOWA ONE-CALL (1-800-292-8989) AT LEAST 48 HOURS PRIOR TO COMMENCING WORK ON THE PROJECT TO VERIFY LOCATION OF UTILITIES.

-NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR INTERFERENCE OR DELAY CAUSED BY UTILITY COORDINATION OR RELOCATION WORK.

-ALL EXISTING UTILITY POLES, STREET LIGHTS, PEDESTALS AND TRANSFORMERS, EXCEPT THOSE NOTED IN THE PLANS, SHALL REMAIN UNDISTURBED AND FUNCTIONAL DURING CONSTRUCTION.

-ALL WORK SHALL TAKE PLACE WITHIN THE CURRENT ADJACENT PUBLIC ROAD RIGHT-OF-WAY, EASEMENT AREAS OR PROJECT BOUNDARY AS SHOWN IN THE PLAN SHEETS. NO PAYMENT WILL BE MADE FOR REPLACEMENT OR REPAIR TO ITEMS THAT ARE DAMAGED OUTSIDE OF THIS AREA OR WITHIN SAID WORK ZONE THAT ARE NOT NOTED IN THE PLANS.

-THE CONTRACTOR WILL BE REQUIRED TO PROVIDE CONSTRUCTION ACCESS TO THE SITE. THIS SHALL INCLUDE REMOVING, SALVAGING AND REPLACING ANY REQUIRED ITEMS NECESSARY TO ACCOMMODATE CONSTRUCTION TRAFFIC.

-ACCESS TO THE ADJACENT PROPERTIES SHALL BE MAINTAINED TO THE FULL EXTENT POSSIBLE AT ALL TIMES DURING CONSTRUCTION. THIS SHALL REQUIRE KEEPING THE ADJACENT ROADWAYS AND AREAS CLEAN AND FREE OF EQUIPMENT AND DEBRIS.

-THE PROJECT AREA WILL BE CONTROLLED THROUGH TRAFFIC CONTROL DURING CONSTRUCTION. THE ADJACENT ROADWAYS SHALL REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION.

-IF THE PROJECT IS OPEN TO PROPERTIES ALONG THE PROJECT SITE, THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN TEMPORARY DRIVEWAY RAMPS AND ACCESSES DURING CONSTRUCTION. RAMPS CAN BE CONSTRUCTED OF MODIFIED SUBBASE TO BE USED FOR LATER GRADING OPERATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS TEMPORARY ACCESS TO LOCAL RESIDENTS.

-THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN SANITARY SEWER AND WATER SERVICES TO ALL ADJACENT PROPERTIES TO THE FULL EXTENT POSSIBLE. A WRITTEN NOTICE SHALL BE PROVIDED TO THE CITY AND ANY INDIVIDUAL PROPERTY OWNERS INFORMING OF AN EXPECTED SERVICE INTERRUPTION. THIS NOTICE SHALL BE GIVEN AT LEAST 24 HOURS PRIOR TO SERVICE INTERRUPTION.

-ALL STRUCTURES AND FIXTURES, INCLUDING, BUT NOT LIMITED TO, MANHOLE COVERS AND STORM SEWER INTAKES, SHALL BE CLEAN AND FREE OF ALL DEBRIS AFTER CONSTRUCTION ACTIVITIES.

-THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE TO THE CONSTRUCTION AREA TO PREVENT THE SPREAD OF DUST. SEE SECTION 1107.07 OF THE IOWA DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION.

-ALL VEGETATION SHALL BE SCARIFIED PRIOR TO GRADING OF THE PROJECT. EXCEPT FOR BACKFILLING, NO VEGETATION SHALL BE PLACED UNDER, OR WITHIN 2 FEET OF ANY PAVING.

-ALL FILL MATERIAL SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY UNLESS STATED OTHERWISE.

-THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE OF THE CONSTRUCTION LIMITS AS SHOWN IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL PROTECT ALL GRASS AREAS, TREES, BUSHES AND LANDSCAPING WITHIN THE WORK ZONE UNLESS NOTED OTHERWISE IN THE PLANS. DAMAGE TO SUCH ITEMS WILL BE AT THE CONTRACTOR'S EXPENSE.

-CONTRACTOR SHALL PROTECT EXISTING TREES AND SUCH THAT ARE NOT NOTED TO BE CLEARED/GRUBBED.

-THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE UNDISTURBED AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING, AND SERVICE AREAS WILL BE SUBJECT TO APPROVAL OF THE ENGINEER.

-ALL TOPSOIL IN THE DISTURBED AREAS SHALL BE FREE OF ROCK AND DEBRIS AND SHALL BE SUITABLE FOR THE ESTABLISHMENT OF VEGETATION, SOD AND SEEDING OPERATIONS, SUBJECT TO APPROVAL OF THE ENGINEER.

-ANY WASTE MATERIALS THAT ARE GENERATED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS REMOVAL.

-INSTALLATION OF THE EROSION CONTROL DEVICES MAY REQUIRE MULTIPLE MOBILIZATIONS. THESE ITEMS MUST BE INSTALLED AS SPECIFIED AND NO ADDITIONAL PAYMENT WILL BE MADE FOR MULTIPLE MOBILIZATIONS.

-OWNER WILL PROVIDE CONSTRUCTION SURVEY AND QUALITY CONTROL TESTING.

Client:

Beck Engineering, Inc.

Dickinson County

Cherokee, Iowa

Orange City, Iowa

Clive, Iowa

Sheldon, Iowa

Spirit Lake, Iowa

2025 Dickinson County

Drainage District Repair Project - Division I

Legend, General Construction Notes

Drawn

Revised

Sheet A.02

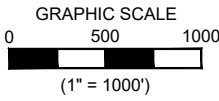
05-16-2025 By JGH

Checked by

LJL

Project No.

E24070



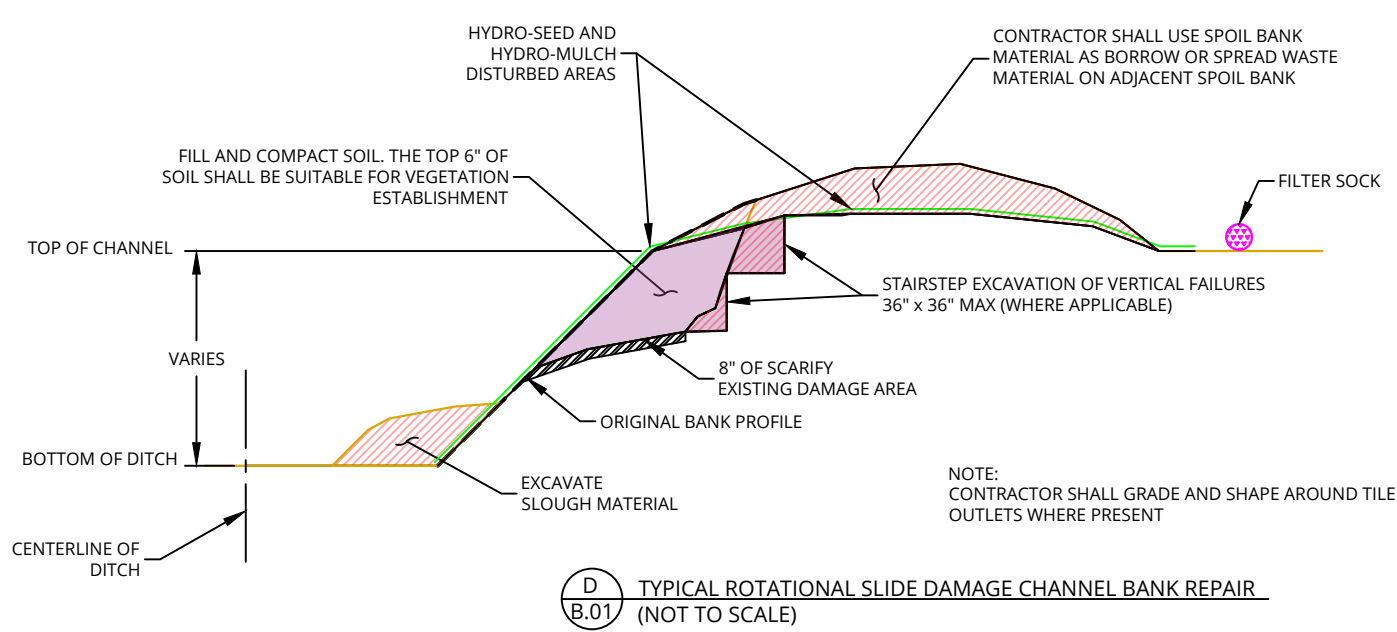
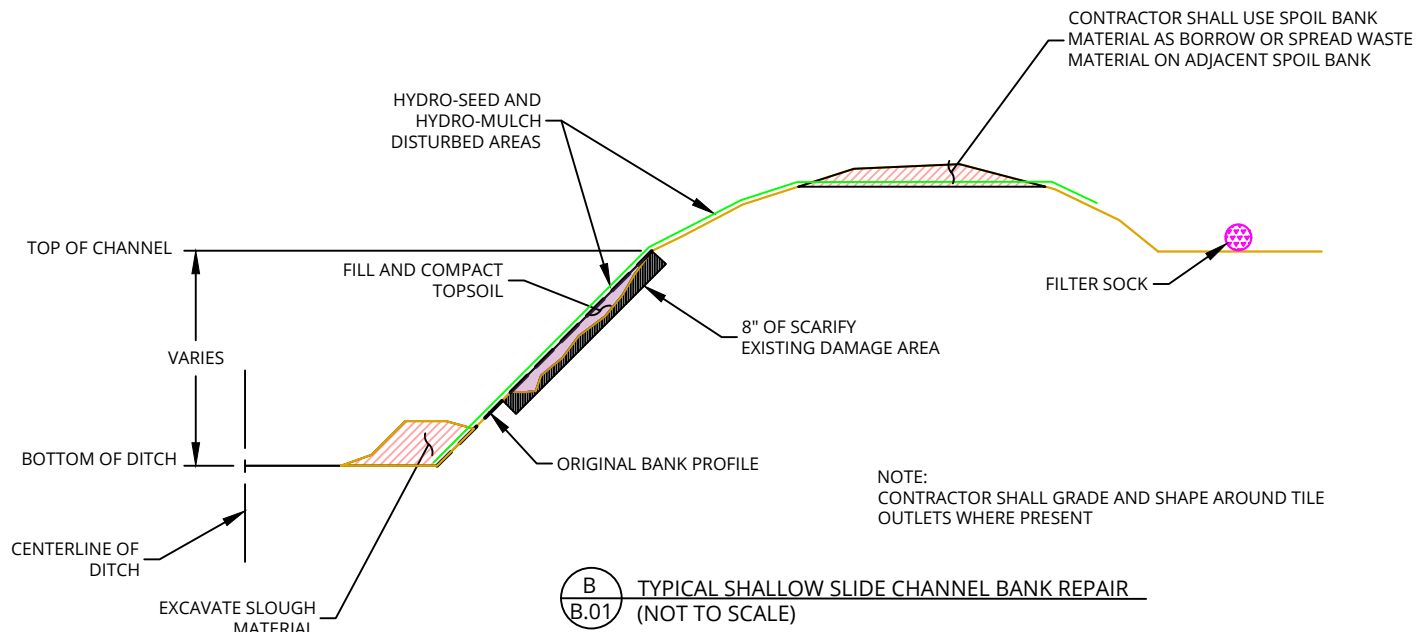
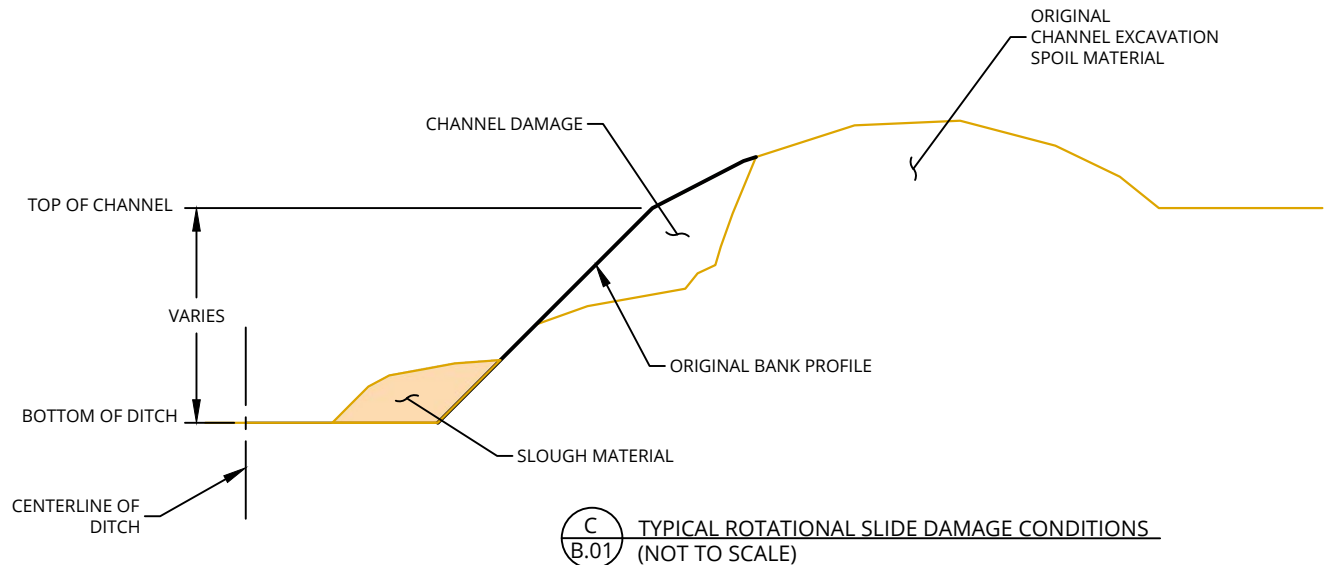
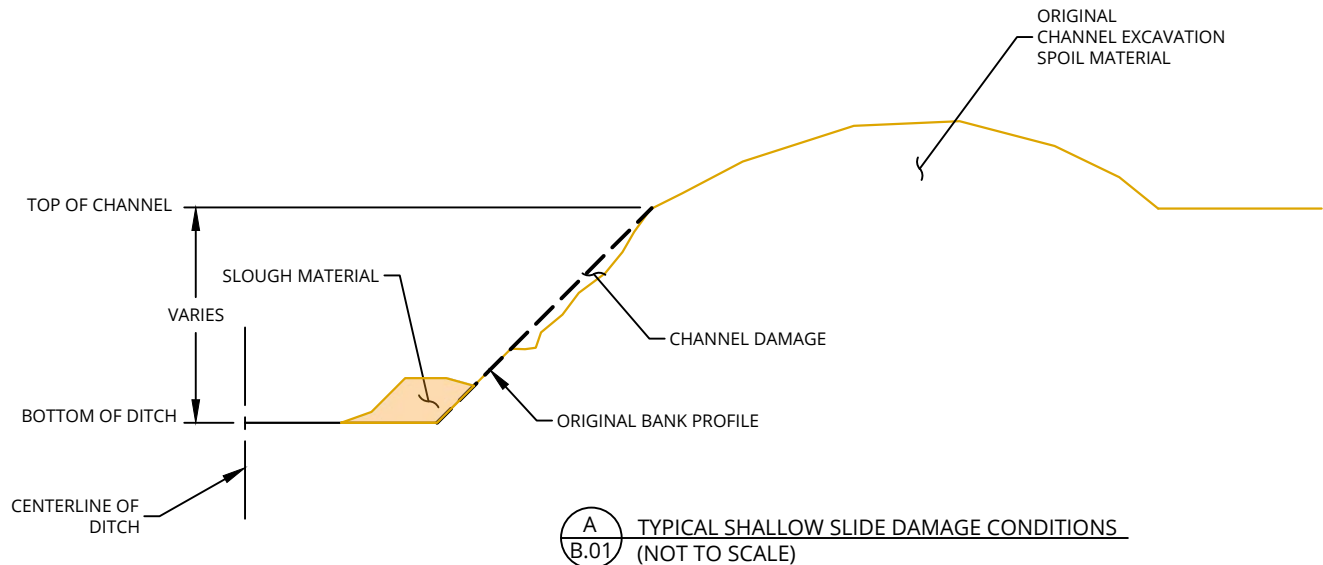
Drawn	05-16-25 By JGH	Checked by	LJL
Revised		Project No.	E24070
Sheet A.03			

2025 Dickinson County Drainage Districts
Repair Project - Division 1
Overall Plan View



Beck Engineering, Inc.			
Cherokee, Iowa	Clive, Iowa		
Orange City, Iowa	Sheldon, Iowa		
	Spirit Lake, Iowa		

Client:
Dickinson County
1802 Hill Avenue
Spirit Lake, IA 51360



Drawn	02-18-25 By JGH	Checked by	LJL
Revised		Project No.	E24070
Sheet B.01			

2025 Dickinson County Drainage Districts
Repair Project - Division I
Typical Cross Sections



Beck Engineering, Inc.	Cherokee, Iowa	Clive, Iowa	Orange City, Iowa	Sheldon, Iowa	Spirit Lake, Iowa
------------------------	----------------	-------------	-------------------	---------------	-------------------

Client:
Dickinson County
1802 Hill Avenue
Spirit Lake, IA 51360

ESTIMATED PROJECT QUANTITIES - DIVISION I - JOINT DRAINAGE DISTRICT #1				
ITEM NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	QUANTITIES
1	SPECIAL	ROTATIONAL SLIDE BANK CHANNEL REPAIR	LF	253
2	SPECIAL	SHALLOW SLIDE BANK CHANNEL REPAIR	LF	673
3	9040-A	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, NON CRP DRAINAGE DITCH	AC	1.1
4	9040-D-1	FILTER SOCK, 8"	LF	1558
5	9040-D-2	FILTER SOCK, REMOVAL	LF	1558
6	9040-Q-2	EROSION CONTROL MULCHING, HYDRO-MULCH	AC	1.1
7	11,020-A	MOBILIZATION	LS	1

ESTIMATE REFERENCE INFORMATION - DIVISION I - JOINT DRAINAGE DISTRICT #1		
ITEM NO.	ITEM CODE	ITEM DESCRIPTION
1	SPECIAL	ROTATIONAL SLIDE BANK CHANNEL REPAIR Bid item shall include all equipment, material and labor required to repair bank as shown in the typical sections. Bid item shall be paid based upon linear foot of bank repair and shall include, but not limited to; a uniform 8" of scarification of the existing damaged areas prior to fill placement, all required on-site excavation of slough material, excavation borrow of waste bank, excavation of bank for reconstruction. All fill material shall be compacted to a minimum of 95% Standard Proctor Density. Borrow material shall be excavated from slough material adjacent to the damaged bank. Bid item shall include requirements for temporary access and coordination with landowners to complete the repairs, including the temporary removal and replacement of any fencing or channel crossing.
2	SPECIAL	SHALLOW SLIDE BANK CHANNEL REPAIR Bid item shall include all equipment, material and labor required to repair bank as shown in the typical sections. Bid item shall be paid based upon linear foot of bank repair and shall include, but not limited to; a uniform 8" of scarification of the existing damaged areas prior to fill placement, all required on-site excavation of slough material, excavation borrow of waste bank, excavation of bank for reconstruction. All fill material shall be compacted to a minimum of 95% Standard Proctor Density. Borrow material shall be from the owner supplied location shown in the plan sheets. Material shall be provided by the owner at no charge to the contractor. No payment shall be made for overhauling. Bid item shall include requirements for temporary access and coordination with landowners to complete the repairs, including the temporary removal and replacement of any fencing or channel crossing.
3	9040-A	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, NON CRP DRAINAGE DITCH Bid item includes areas that are disturbed during construction. Seed areas with Type 2 Seed Mixture as specified in Section 9010-2.02 of the SUDAS Standard Specifications. Seed and fertilizer shall be placed conventionally.
4	9040-D-1	FILTER SOCK, 8" Bid item includes all labor and material necessary for the complete installation of 8" filter sock as shown on the plans or as directed. Filter sock shall be continuous. Bid item shall include the removal of sediment and debris during the duration of construction. Filter socks shall be in accordance with Section 9040 of the SUDAS Standard Specifications.
5	9040-D-2	FILTER SOCK, REMOVAL Bid item includes all labor necessary for the complete removal of 8" filter sock. Filter sock shall remain in place during the duration of construction operations until substantial completion is determined or as directed by the Engineer and once vegetation has been established to a minimum coverage of 70% along the entire project site.
6	9040-Q-2	EROSION CONTROL MULCHING, HYDRO-MULCH Bid item shall include all equipment, material, and labor required for application of the hydro-mulch. Hydro-mulch shall be Flexterra HP-FGM from Profile. Contractor shall apply product per manufacturer recommendations. Hydro-mulch shall be uniformly placed at a rate of 3500lbs/acre.
7	11,020-A	MOBILIZATION Refer to Section 11,020 of the SUDAS Standard Specifications. Shall include preparatory work and operations of all items under the contract.

Drawn05-16-25 By JGH

Revised

Sheet C.01

Checked byLJL

Project No.E24070

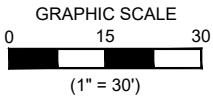
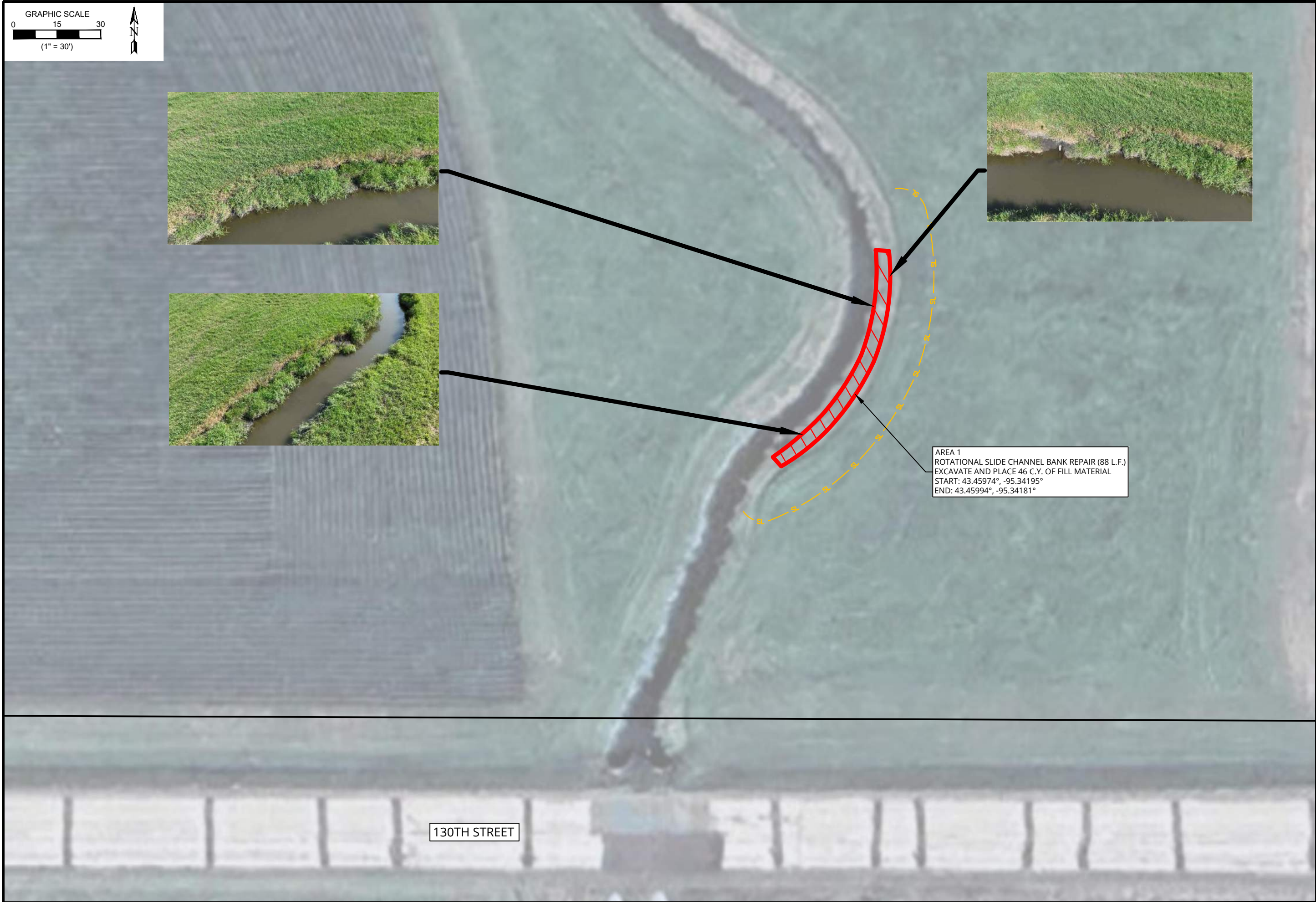
2025 Dickinson County Drainage Districts
Repair Project - Division I
Estimated Project Quantities &
Estimate Reference Information



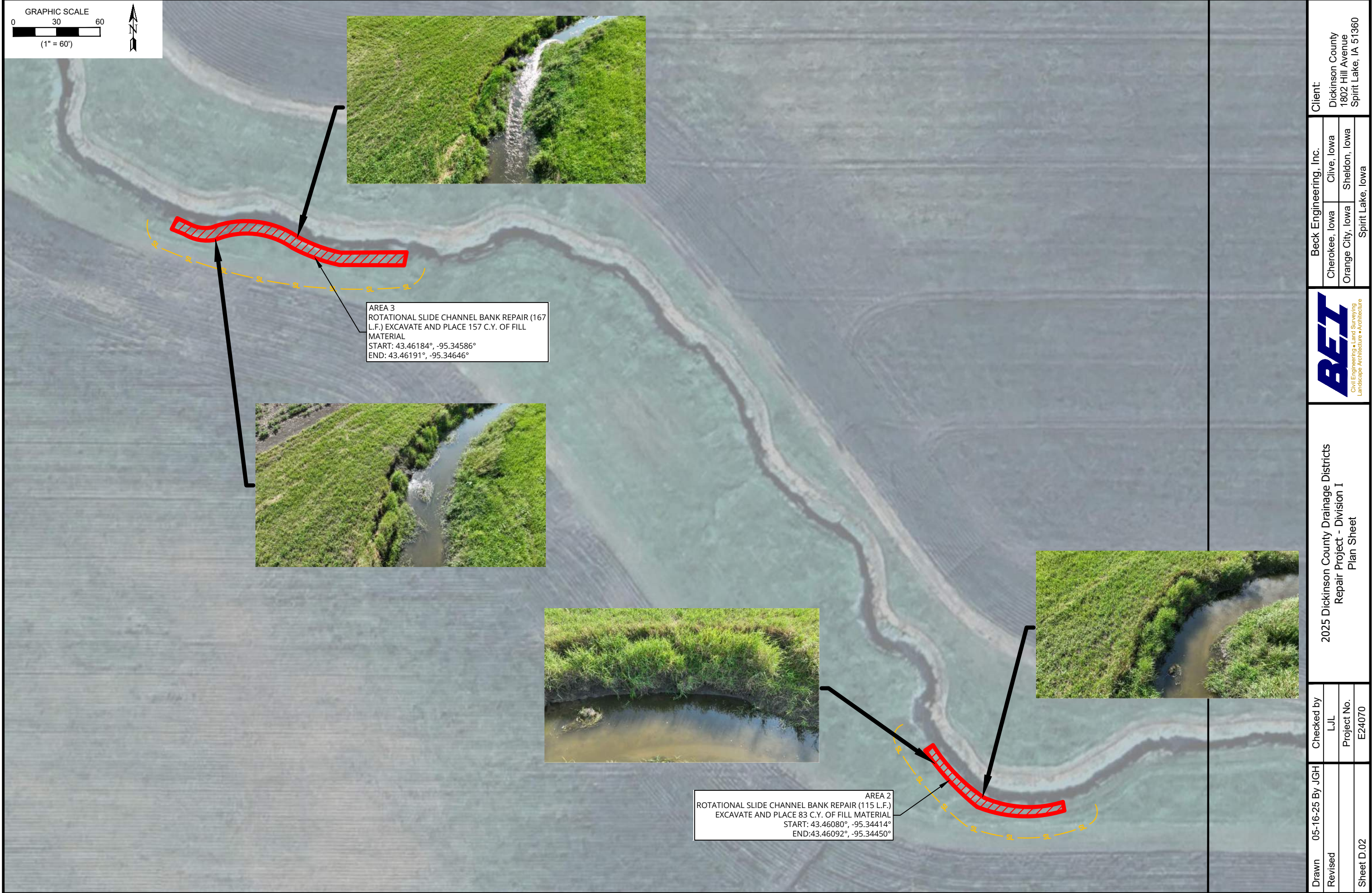
Beck Engineering, Inc.	
Cherokee, Iowa	Clive, Iowa
Orange City, Iowa	Sheldon, Iowa
Spirit Lake, Iowa	

Client:

Dickinson County
1802 Hill Avenue
Spirit Lake, IA 51360



2025 Dickinson County Drainage Districts Repair Project - Division I Plan Sheet		 Civil Engineering • Land Surveying Landscape Architecture • Architecture		Client: Dickinson County 1802 Hill Avenue Spirit Lake, IA 51360	
Drawn	05-16-25 By JGH	Checked by	Beck Engineering, Inc.		
Revised		LJL	Cherokee, Iowa	Clive, Iowa	
		Project No.	Orange City, Iowa	Sheldon, Iowa	
Sheet D.01		E24070	Spirit Lake, Iowa		



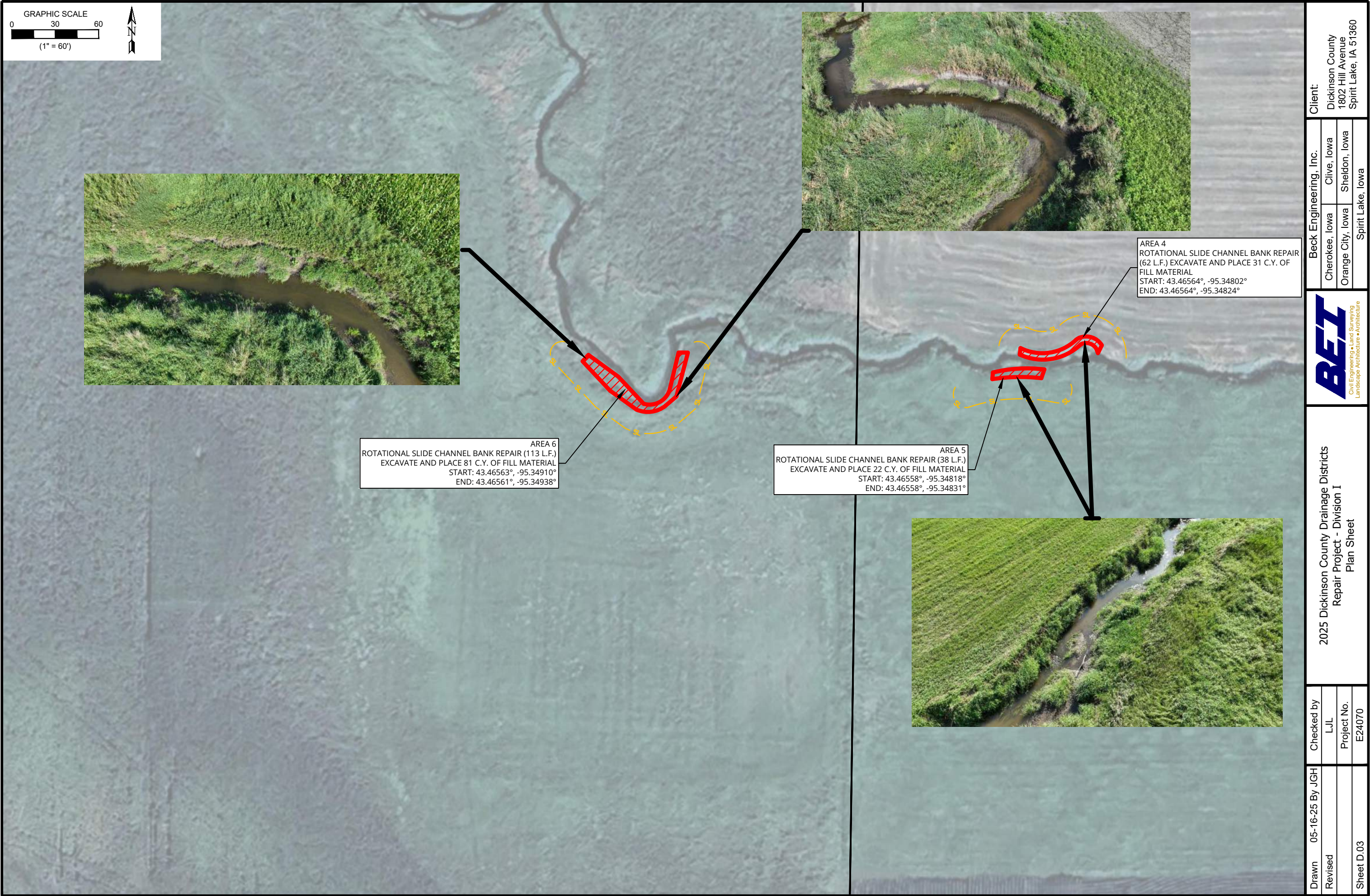
Drawn	05-16-25 By JGH	Checked by	LJL	
Revised			Project No.	
Sheet D.02			E24070	

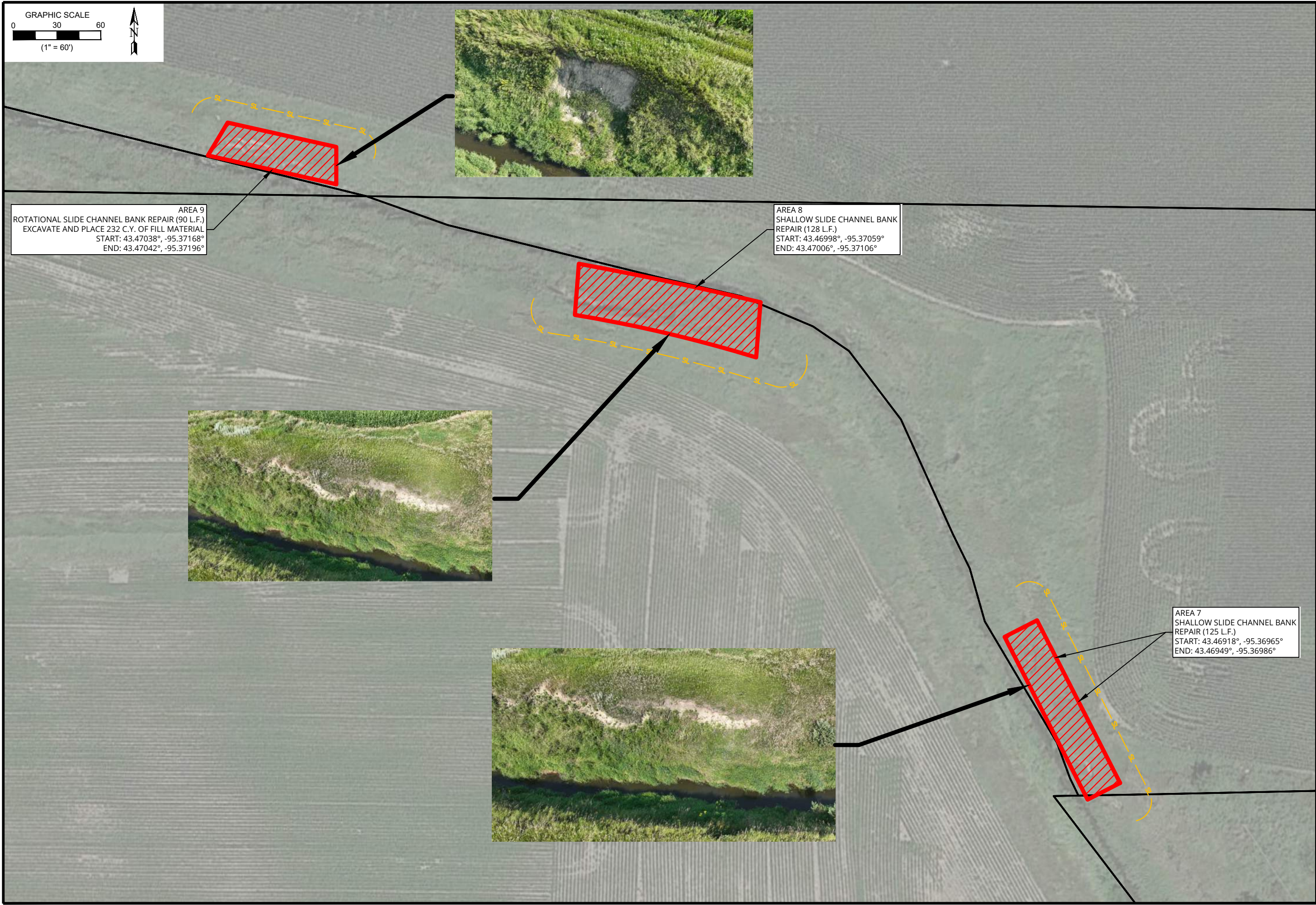
2025 Dickinson County Drainage Districts
Repair Project - Division I
Plan Sheet



Beck Engineering, Inc.	
Cherokee, Iowa	Clive, Iowa
Orange City, Iowa	Sheldon, Iowa
Spirit Lake, Iowa	

Client:
Dickinson County
1802 Hill Avenue
Spirit Lake, IA 51360





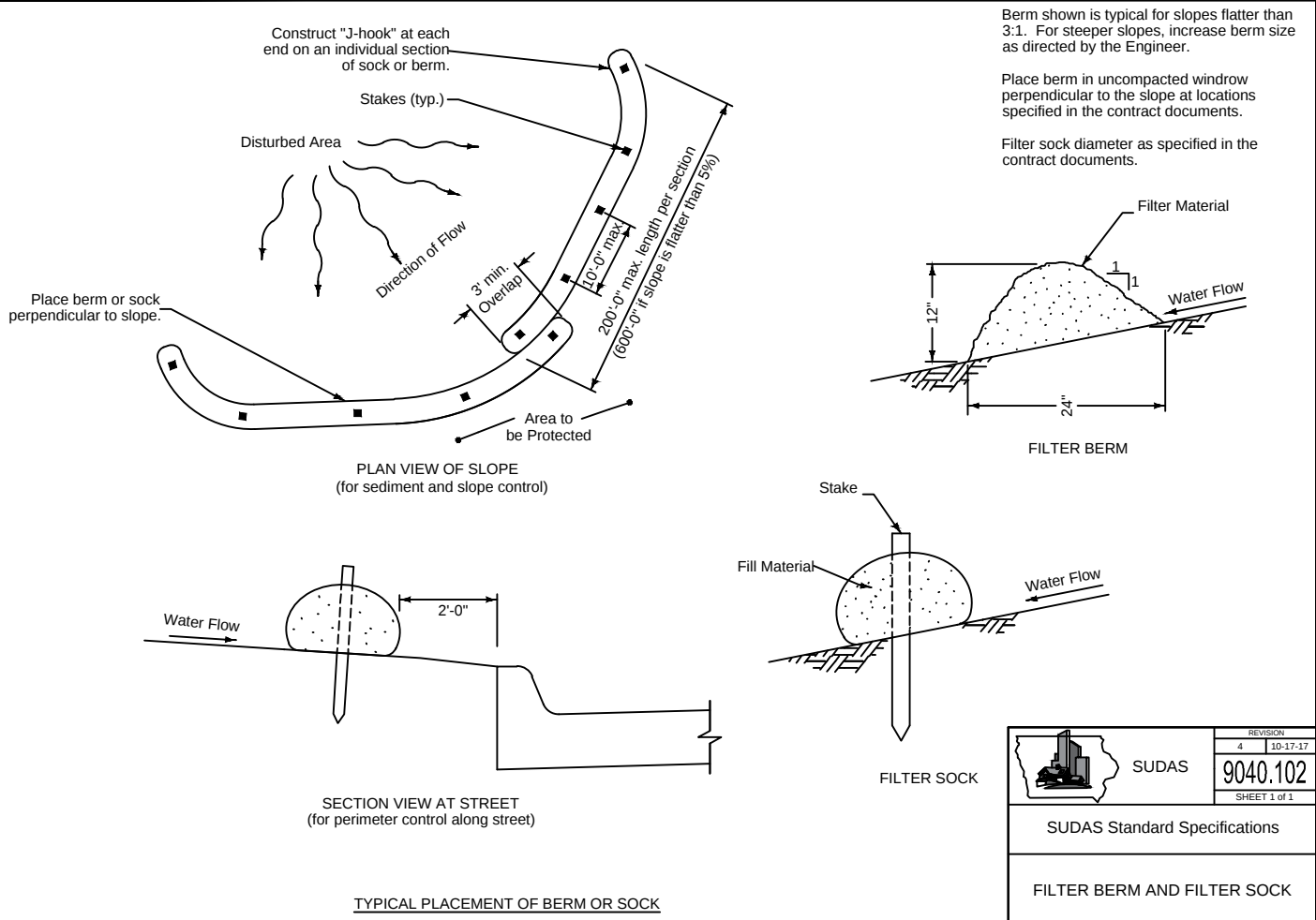
Drawn	05-16-25 By JGH	Checked by	LJL	
Revised			Project No.	
Sheet D.04			E24070	

2025 Dickinson County Drainage Districts
Repair Project - Division I
Plan Sheet



Beck Engineering, Inc.	
Cherokee, Iowa	Clive, Iowa
Orange City, Iowa	Sheldon, Iowa
Spirit Lake, Iowa	

Client:
Dickinson County
1802 Hill Avenue
Spirit Lake, IA 51360



Drawn	03-06-2025 By JGH	Checked by	
Revised		LJL	
Sheet U.01		Project No.	E24088

2025 Dickinson County
Drainage District Repair Project - Division I
Details



Beck Engineering, Inc.	Cherokee, Iowa	Clive, Iowa
	Orange City, Iowa	Sheldon, Iowa
		Spirit Lake, Iowa

Client:
Dickinson County
1802 Hill Avenue
Spirit Lake, IA 51360