

Attachment No. 2
Revised set of Plans

IDALS CAL883432B NUTRIENT REDUCTION WETLAND

CALHOUN COUNTY, IOWA

CONSTRUCTION PLANS

ISG PROJECT # 24-30402



IA NRCS JOB CLASS III

TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, JUDGEMENT, BELIEF, THE PLANS MEET APPLICABLE NRCS STANDARDS.

ENGINEER'S SIGNATURE _____ DATE _____

CONTRACTOR IS RESPONSIBLE FOR CALLING IOWA ONE CALL

ONE CALL TICKET NO. _____

I HAVE REVIEWED AND AGREE WITH THE CONTENTS OF THE PLAN AND SPECIFICATIONS AS PREPARED.

LANDOWNER SIGNATURE _____ DATE _____

IF A CULTURAL RESOURCE IS IDENTIFIED DURING CONSTRUCTION, WORK WILL STOP IMMEDIATELY AND THE LOCAL NRCS FIELD OFFICE WILL BE NOTIFIED.

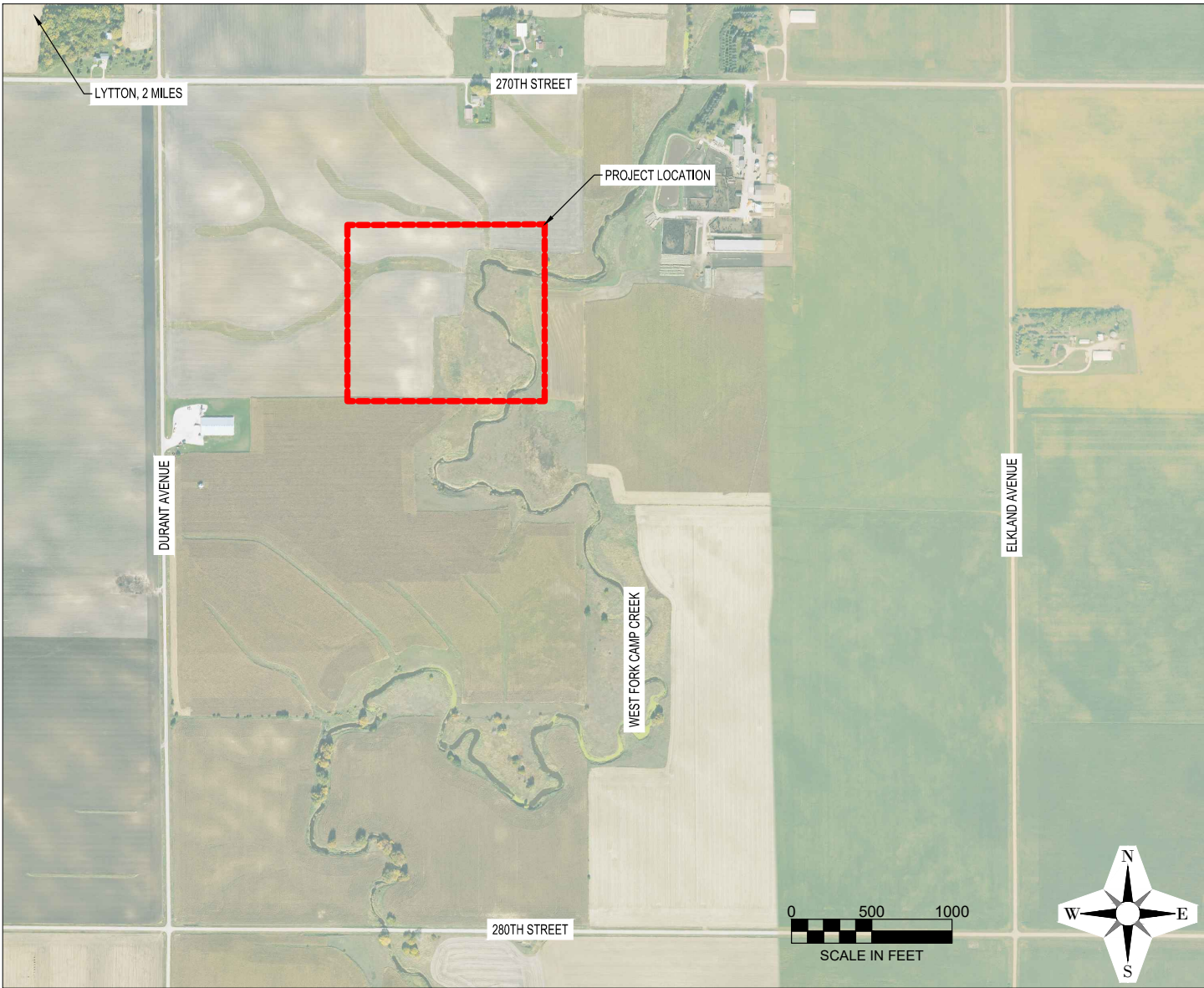
I CERTIFY THAT THIS PRACTICE HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

CONTRACTORS SIGNATURE _____ DATE _____

ENGINEER'S REP. SIGNATURE _____ DATE _____

SHEET INDEX

- C0-10 TITLE
- C0-20 NOTES AND QUANTITIES
- C0-30 DETAILS
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- C0-32 DETAILS
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- C3-20 INLET PLAN & PROFILE
- C3-21 OUTLET PLAN & PROFILE
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- C4-30 CROSS SECTION



LOCATION MAP

SEAL	I hereby certify that this engineering document was prepared by me or under direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa. <i>Spencer D Pech</i> (signature) 8-19-2026 (date) Printed or typed name SPENCER DEAN PECH License number 25713 My license renewal date is December 31, 2026 Pages or sheets covered by this seal: REVISIONS ON SHEETS C0-10, C0-20, C0-30, C0-31, C1-10, C3-10, AND C3-21
SEAL	I hereby certify that this engineering document was prepared by me or under direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa. <i>Caleb Rasmussen</i> (signature) 2-13-2025 (date) Printed or typed name CALEB RASMUSSEN License number 25713 My license renewal date is December 31, 2026 Pages or sheets covered by this seal: All Sheets

TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, JUDGEMENT, AND BELIEF, THESE PLANS MEET THE APPLICABLE NRCS STANDARDS AND APPLICABLE LAWS AND REGULATIONS.

GIS DISCLAIMER:

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

PROJECT GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS, WHICH INCLUDE, BUT ARE NOT LIMITED TO, THE OWNER - CONTRACTOR AGREEMENT, THE PROJECT MANUAL (WHICH INCLUDES GENERAL SUPPLEMENTARY CONDITIONS AND SPECIFICATIONS), DRAWINGS OF ALL DISCIPLINES AND ALL ADDENDA, MODIFICATIONS, AND CLARIFICATIONS ISSUED BY ARCHITECT/ENGINEER.
- CONTRACT DOCUMENTS SHALL BE ISSUED TO ALL SUBCONTRACTORS BY THE GENERAL CONTRACTOR IN COMPLETE SETS IN ORDER TO ACHIEVE THE FULL EXTENT AND COMPLETE COORDINATION OF ALL WORK.
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- DETAILS SHOWN ARE INTENDED TO BE INDICATIVE OF THE PROFILES AND TYPE OF DETAILING REQUIRED THROUGHOUT THE WORK. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO DETAILS SHOWN, WHERE SPECIFIC DIMENSIONS, DETAILS, OR DESIGN INTENT CANNOT BE DETERMINED, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, CLEANED, AND CONDITIONED ACCORDING TO MANUFACTURERS' INSTRUCTIONS. IN CASE OF DISCREPANCIES BETWEEN MANUFACTURERS' INSTRUCTIONS AND THE CONTRACT DOCUMENTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL DISSIMILAR METALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO AVOID GALVANIC CORROSION.
- THE LOCATION AND TYPE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY AND ARE ACCURATE AND COMPLETE TO THE BEST OF THE KNOWLEDGE OF I & S GROUP, INC. (ISG). NO WARRANTY OR GUARANTEE IS IMPLIED. THE CONTRACTOR SHALL VERIFY THE SIZES, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM PLAN.
- THE CONTRACTOR IS TO CONTACT "IOWA ONE CALL" FOR UTILITY LOCATIONS A MINIMUM OF 2 BUSINESS DAYS PRIOR TO ANY EXCAVATION / CONSTRUCTION (1-800-292-8989).

SPECIFICATIONS REFERENCE

ALL CONSTRUCTION SHALL COMPLY WITH CALHOUN COUNTY'S REQUIREMENTS AND WITH THE MOST RECENT NRCS CONSTRUCTION SPECIFICATION, UNLESS DIRECTED OTHERWISE.

PROJECT DATUM

HORIZONTAL COORDINATES HAVE BEEN REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), ON THE IOWA REGIONAL ZONE 4 COORDINATE SYSTEM, IN U.S. SURVEY FEET. ELEVATIONS HAVE BEEN REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). RTK GPS METHODS WERE USED TO ESTABLISH HORIZONTAL AND VERTICAL COORDINATES FOR THIS PROJECT.

TOPOGRAPHIC SURVEY

THIS PROJECT'S TOPOGRAPHIC SURVEY CONSISTS OF DATA COLLECTED IN APRIL 2024 BY ISG.

B.M. ELEVATION=1216.76
CUT "X" IN TOP OF RCP CULVERT SOUTH SIDE OF FIELD DRIVE ALONG DURANT AVE AND SOUTH PROPERTY LINE.



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PROJECT		
IDALS CAL883432B NUTRIENT REDUCTION WETLAND		
CALHOUN COUNTY IOWA		

REVISION SCHEDULE		
DATE	DESCRIPTION	BY
8-18-2026	REVISIONS FOLLOWING PRE-BID MEETING	HLC

PROJECT NO.	24-30402
FILE NAME	30402-C0-TITLE
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE
TITLE
SHEET
C0-10

PROJECT INDEX:

OWNER:

IDALS
WATER RESOURCES BUREAU
HOOVER STATE OFFICE BUILDING
1305 E. WALNUT STREET
DES MOINES, IA 50319

PROJECT
ADDRESS / LOCATION:

SECTION 32/T88N/R34W
GARFIELD TWP
LYTTON, IA

MANAGING OFFICE:

STORM LAKE OFFICE
1725 LAKE AVE. NORTH
STORM LAKE, IA 50588
PHONE: 712.732.7745

PROJECT MANAGER: CALEB RASMUSSEN
EMAIL: CALEB.RASMUSSEN@ISGINC.COM



ALL CONSTRUCTION SHALL COMPLY WITH CALHOUN COUNTY'S REQUIREMENTS AND WITH THE MOST RECENT NRCS CONSTRUCTION SPECIFICATION, UNLESS DIRECTED OTHERWISE.

PROJECT DATUM

HORIZONTAL COORDINATES HAVE BEEN REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), ON THE IOWA REGIONAL ZONE 4 COORDINATE SYSTEM, IN U.S. SURVEY FEET. ELEVATIONS HAVE BEEN REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). RTK GPS METHODS WERE USED TO ESTABLISH HORIZONTAL AND VERTICAL COORDINATES FOR THIS PROJECT.

TOPOGRAPHIC SURVEY

THIS PROJECT'S TOPOGRAPHIC SURVEY CONSISTS OF DATA COLLECTED IN APRIL 2024 BY ISG.

CONSTRUCTION NOTES:

GENERAL NOTES

1. ACCESS - CONTRACTOR IS TO ARRANGE ACCESS WITH LANDOWNER PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO SECURE PERMISSION OF THE COUNTY ENGINEER TO CONSTRUCT TEMPORARY ACCESS IF NECESSARY.
2. EQUIPMENT STAGING: CONTRACTOR TO DESIGNATE EQUIPMENT STAGING AREA AT PRE-CONSTRUCTION MEETING.

2.1. REFER TO THE PLANS FOR FLOOD PLAIN EXTENTS. THE CONTRACTOR IS RESPONSIBLE FOR MONITORING WEATHER AND REMOVING EQUIPEMENT FROM THE FLOODPLAIN IF AN ADVERSE EVENT IS EXPECTED.
3. WORK LIMITS ARE CONFINED TO THE EASEMENT AREA EXCEPT WHERE INDICATED ON PLANS. CONTRACTOR SHALL TRY TO MINIMIZE DISTURBANCE FOOTPRINT.
4. UTILITIES: CONTRACTOR IS RESPONSIBLE FOR CALLING IOWA ONE CALL (1-800-292-8989) AND MUST PROVIDE VERIFICATION (TICKET NO.) TO THE ENGINEER PRIOR TO MOBILIZATION. CONTRACTOR RESPONSIBLE FOR PROTECTION OF ALL UTILITIES AND IS RESPONSIBLE TO VERIFY LOCATION/ELEVATION OF ALL UTILITIES IN WORK AREA PRIOR TO EXCAVATION. A DESIGN ONE CALL WAS PERFORMED ON DECEMBER 31, 2024.

4.1. EXPECTED WETLAND UTILITIES: NONE.

4.2. EXPECTED FIELD ENTRANCE UTILITIES:

4.2.1. MID-AMERICAN ELECTRIC

4.2.2. MID-AMERICAN GAS

4.2.3. WINDSTREAM COMMUNICATIONS
5. DEWATERING: CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING REASONABLE DRY WORKING CONDITIONS DURING CONSTRUCTION. ANY TEMPORARY DEWATERING IS TO BE AT CONTRACTOR'S DISCRETION AND INCIDENTAL TO ITEMS OF WORK.
6. TOPSOIL STRIPPING (CS-IA-01):

a. STRUCTURE AND BORROW AREAS SHALL BE STRIPPED OF NO LESS THAN TWELVE (12) INCHES.

b. AREAS FOR TILE WORK SHALL BE STRIPPED NO LESS THAN TWELVE (12) INCHES.

c. ALL OTHER AREAS TO BE STRIPPED TO NINE (9) INCHES.
7. TOPSOIL STOCKPILE: CONTRACTOR IS RESPONSIBLE FOR SEGREGATION TOPSOIL FROM EXCAVATION SPOILS THROUGHOUT CONSTRUCTION. CONTRACTOR IS TO DESCRIBE TOPSOIL MANAGEMENT AT PRECONSTRUCTION MEETING.
8. TOPSOIL SPREADING: ALL AREAS RECEIVING TOPSOIL DRESS SHALL BE UNDERCUT 6 INCHES AND TOPSOIL SHALL BE SPREAD AT LEAST 6 INCHES THICK TO THE DESIGN SURFACE, OR AS INDICATED ON PLANS.
9. EARTHFILL: ALL STRUCTURAL EARTHFILL SHALL BE PLACED AND COMPACTED IN LOOSE LIFTS NO THICKER THAN NINE (9) INCHES. ENGINEER MAY DIRECT THINNER LIFTS BASED ON AVAILABLE COMPACTION EQUIPMENT.
10. AREAS UNDER FILL SHALL BE SCARIFIED LIGHTLY BEFORE FIRST LIFT TO A DEPTH OF SIX (6) INCHES AND RECOMPACTED IN ACCORDANCE WITH SPECIFICATION IA-23, SECTION 6, METHOD 1.
11. CONSTRUCT CORE TRENCH UNDER ENTIRE DIKE ALIGNMENT AT CENTERLINE.
12. TESTING: CONTRACTOR TO ENSURE ADEQUATE MOISTURE AND DENSITY THROUGHOUT CONSTRUCTION. COMPACTION IS TO BE PERFORMED IN ACCORDANCE WITH SPECIFICATION IA-23 EARTHFILL. CONTRACTOR IS RESPONSIBLE FOR ENSURING SOILS MEET ADEQUATE MOISTURE REQUIREMENTS.
13. WEED CONTROL IA CS-06: CONTRACTOR IS REQUIRED TO CONTROL WEED GROWTH WITHIN THE WORK LIMITS AS NEEDED WITHIN THE CONSTRUCTION LIMITS, FOR THE APPROVED CONSTRUCTION WINDOW.
14. RUBBISH DISPOSAL IA CS-01: ROCKS, FENCE, AND RUBBISH ENCOUNTERED WITHIN THE EASEMENT AREA ARE TO BE DISPOSED OF BY BURIAL OR OTHER APPROVED MEANS. MISCELLANEOUS ROCKS AND RUBBISH ENCOUNTERED DURING EXCAVATION ARE TO BE INCLUDED FOR BURIAL AS WELL. A MINIMUM OF THREE (3) FEET OF COVER OVER BURIED RUBBISH IS REQUIRED. CONTACT ENGINEER PRIOR TO REMOVING ANY FENCE.
15. WORKMANSHIP: CONTRACTOR SHALL PERFORM ALL WORK WITH CRAFTSMAN-LIKE APPEARANCE AND LEAVE NO TRASH/DEBRIS AFTER DEMOBILIZATION.
16. SAFETY - CONTRACTOR IS RESPONSIBLE FOR SAFETY ON THE WORK SITE, INCLUDING THE BRACING OF, SHORING OF, AND/OR USE OF TRENCH BOX IN THE EXCAVATIONS. THIS INCLUDES KNOWLEDGE AND COMPLIANCE WITH ALL RULES AND REGULATIONS INTENDED TO PROTECT THE HEALTH AND SAFETY OF THE CONTRACTOR, ENGINEERS, AND OWNER'S PERSONNEL. ALL TRENCHING SHALL BE DONE ACCORDING TO OSHA STANDARDS FOR THE PROTECTION OF LIFE.
17. FLOODPLAIN: PROJECT WORK LIMITS RESIDE IN A MAPPED FLOODPLAIN. MATERIALS, EQUIPMENT, AND EXCESS SPOIL MAY NOT BE STOCKPILED OR STORED WITHIN THE FLOODPLAIN. FINAL GRADING SHOULD BE DONE TO ENSURE ANY SPOIL PLACEMENT AND FILL WITHIN THE FLOODPLAIN DOES NOT DEViate SIX (6) INCHES FROM EXISTING GRADE.
18. VEGETATION CLEARING & TREATMENT: VEGETATION MANAGEMENT TO BE DETERMINED BASED ON CONSTRUCTION SCHEDULE AND AVAILABLE SEEDING WINDOWS. CONTRACTOR IS EXPECTED TO BE ABLE TO PERFORM, MOWING/HAYING WITH REMOVAL (SUCH AS BIG ROUND BALES), CONTROL FIRE BURN, CHEMICAL BURN (BY LICENSED APPLICATOR), AND DISCING-HARROWING. FOR THE PURPOSES OF BIDDING, A CONTROL FIRE BURN, FOLLOWED BY 2 APPLICATIONS FOR CHEMICAL TERMINATION, FOLLOWED BY LIGHT DISCING WITH DRAG HARROW FOLLOWER IS EXPECTED.
19. IDALS AND ISG DO NOT GUARANTEE THE WETLAND WILL FILL OR REMAIN FILLED WITH WATER.

TILE INSTALLATION

20. WORK LIMITS - OUTSIDE OF EASEMENT AREA, CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITY TO WITHIN A 90 FOOT WIDE CORRIDOR ALONG THE LENGTH OF THE TILE ALIGNMENTS AS SHOWN ON THE PLANS.
21. TILE INVESTIGATION - VERIFY LOCATIONS AND ELEVATIONS OF EXISTING TILE PRIOR TO CONSTRUCTION. TILE INVESTIGATION INCLUDES TIME NECESSARY TO LOCATE AND DIG EXISTING TILES. EXPLORATION FOR DESIGN FOR TILE ENCOUNTERED, BUT NOT SHOWN ON THE PLANS WILL BE PAID UNDER THIS ITEM.
22. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL TILE FOUND DURING THE TILE INVESTIGATION AND DURING WETLAND EXCAVATION.
23. CONTRACTOR SHALL MAKE EFFORT TO SEGREGATE ORGANIC TOPSOIL TO MINIMUM DEPTH OF 12 INCHES FOR ALL TILE WORK OUTSIDE OF EXCAVATION AND FILL AREAS.
24. FIELD TILE CONNECTIONS - CONNECTIONS TO INTERCEPTED FIELD TILE 12" DIAMETER AND LESS SHALL BE MADE AND ENCASED IN A PORTLAND CEMENT CONCRETE (PCC) COLLAR AT LEAST TWELVE (12) INCHES WIDE AND FOUR (4) INCHES THICK, CONTINUOUS AROUND THE JOINTS. ALTERNATIVE CONNECTIONS MUST BE APPROVED BY THE ENGINEER.
25. ALL TILE SHALL BE BLINDED WITH NATIVE SOILS OR ASTM CLASS 2 MATERIAL WHEN REQUIRED IN REGULAR INTERVALS AS INSTALLATION PROCEEDS. TILE FOUND TO BE FLOATING IN THE TRENCH SHALL BE REMOVED, THE TRENCH DEWATERED, AND THE TILE IMMEDIATELY INSTALLED AND BLINDED.
26. TILE SHALL BE INSTALLED ACCORDING TO MANUFACTURERS' SPECIFICATIONS USING EITHER A SPOON TRENCH CONFORMING TO THE CURVE OF THE PIPE UP TO THE HAUNCH/SPRING LINE, FOR A BLAT BOTTOM TRENCH THE PIPE SHALL BE BEDDED AND BACKFILLED WITH AGGREGATE TO THE SPRING LINE.

RISER INLET & CONTROL STRUCTURE NOTES

27. STRUCTURE SHOP DRAWINGS ARE REQUIRED FOR ENGINEER'S REVIEW AND APPROVAL BEFORE FABRICATION OF STRUCTURES, REFER TO INSPECTION TABLE.
28. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
29. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE.
30. USE ASTM CLASS 2 MATERIAL TO BED AND LEVEL STRUCTURE. LOOSE EARTH FILL IS NOT PERMITTED AS BACKFILL TO LEVEL THE STRUCTURE.
31. CHECK TO ENSURE STRUCTURE IS LEVEL PRIOR TO BACKFILLING. PLACE BACK FILL MATERIAL AROUND STRUCTURE IN 6" LIFTS AND COMPACT BY HAND. DO NOT USE POWERED EQUIPMENT.
32. BACKFILL AROUND STRUCTURES SHALL BE COMPACTED BY HAND. NO MECHANICAL PACKING METHODS MAY BE USED.

ITEMS OF WORK TABLE

Bid Item	Sub Item	Description	Spec. Ref	Quantity	Unit	As-Built
1	-	Site stripping & preparation (Wetland)	IA CS-001	1	LS	
2	-	Site stripping & preparation (Wasting)	IA CS-001	1	LS	
3	-	Crop damage	IA CS-001	0	AC	
4	-	Structure, waterway, & channel seeding	IA CS-006	1.0	AC	
5	-	Buffer seeding	IA CS-006	3.0	AC	
6	-	Temporary Seeding	IA CS-006	1.2	AC	
7	-	Mobilization and demobilization	CS-008	1	LS	
8	-	Drain tile investigation	IA CS-009	2	HR.	
9	-	Connect to Existing Tile	IA CS-009	1	EA	
10	-	Cap Existing Tile	IA CS-009	1	EA	
11	-	Excavation (General)	IA CS-021	4269	CY	
12	-	Earthfill (General)	IA CS-023	2551	CY	
13	-	Earthfill (Wasting)	IA CS-023	1889	CY	
14	-	Drainfill	IA CS-024	18	TN	
15	-	Topsoil Placement	IA CS-026	5174	CY	
16	-	Tied Concrete Block Mat	IA CS-031	2750	SF	
17	-	Water Control Structure Assembly	IA CS-046	1	EA	
18	-	Trench Dam	IA CS-046	1	EA	
19	-	Corrugated Polyethylene pipe (non-perforated):				
	A.	12"	IA CS-046	581	LF	
	B.	10"	IA CS-046	148	LF	
20	-	Slotted 18" CMP Riser Structure	IA CS-051	1	EA	
21	-	CMP tile outlets with Animal Guard (20 LF each):				
	A.	15" x 20'	IA CS-051	1	EA	
	B.	12" x 20'	IA CS-051	1	EA	
22	-	Riprap, IDOT Class E	IA CS-061	15	TN	
23	-	Erosion Stone	IA CS-061	16	TN	
24	-	Straw Wattle	IA-CS-005	100	LF	
25	-	Silt Fence	IA-CS-005	1325	LF	

INSPECTION TABLE

Bid Item	Sub Item	Description	Spec. Ref	Shop Drawing Required	Required Inspection or Survey
1	-	Site stripping & preparation (Wetland)	IA CS-001		Inspection: verify topsoil strip depth Review: by survey or contractor equipment (laser level, machine control)
2	-	Site stripping & preparation (Wasting)	IA CS-001		Inspection: verify topsoil strip depth Review: by survey or contractor equipment (laser level, machine control)
3	-	Crop damage	IA CS-001		Inspection: area damaged Review: engineer's survey of damaged area
4	-	Structure, waterway, & channel seeding	IA CS-006	X	Inspection: seed bed preperation Review: visual
5	-	Buffer seeding	IA CS-006	X	Inspection: seed bed preperation Review: visual
6	-	Temporary Seeding	IA CS-006	X	Inspection: seed bed preperation Review: visual
7	-	Mobilization and demobilization	CS-008		
8	-	Drain tile investigation	IA CS-009		Inspection: encountered drain tile not shown on plans Review: visual inspection + survey as conditions dictate
9	-	Connect to Existing Tile	IA CS-009		Inspection: soil tight joint Review: visual
10	-	Cap Existing Tile	IA CS-009		Inspection: soil tight joint Review: visual
11	-	Excavation (General)	IA CS-021		Inspection: soils suitability for earthen berm and core trench Review: visual, non-destructive field testing (ribboning)
12	-	Earthfill (General)	IA CS-023		Inspection: Compaction of earthen berm and core trench Review: visual, field testing as required (proof roll, denting)
13	-	Earthfill (Wasting)	IA CS-023		Inspection: Final grading Review: visual + survey as conditions dictate
14	-	Drainfill	IA CS-024		Inspection: Full-time observation of tile installation Review: visual + survey as conditions dictate
15	-	Topsoil Placement	IA CS-026		Inspection: subgrade to verify topsoiling depth Review: by survey or contractor equipment (laser level, machine control)
16	-	Tied Concrete Block Mat	IA CS-031	X	Inspection: subgrade prior to installation, keys, anchors. Review: visual
17	-	Water Control Structure Assembly	IA CS-046	X	Inspection: Structure installation (concrete base, dissimilar pipe connection, backfill) Review: Visual
18	-	Trench Dam	IA CS-046	X	Inspection: Installation Review: Visual
19	-	Corrugated Polyethylene pipe (non-perforated):			
	A.	12"	IA CS-046	X	Inspection: Initial blinding, use of ASTM Class 2 backfill Review: visual, engineer supplied pipe crawler (if conditions dictate), survey of flow line elevations upon notice from contractor
	B.	10"	IA CS-046	X	Inspection: Initial blinding, trench dam Review: visual, engineer supplied pipe crawler (if conditions dictate), survey of flow line elevations upon notice from contractor
20	-	Slotted 18" CMP Riser Structure	IA CS-051	X	Inspection: Dissimilar pipe connection Review: visual
21	-	CMP tile outlets with Animal Guard (20 LF each):			
	A.	15" x 20'	IA CS-051	X	Inspection: soil tight joint
	B.	12" x 20'	IA CS-051	X	Review: visual
22	-	Riprap, IDOT Class E	IA CS-061	X	Inspection: Subgrade preperation with base (less around riser), final installation Review: visual, survey or contractor equipment (laser level, machine control) as conditions dictate
23	-	Erosion Stone	IA CS-061	X	Inspection: Subgrade preperation with base (less around riser), final installation Review: visual, survey or contractor equipment (laser level, machine control) as conditions dictate
24	-	Straw Wattle	IA-CS-005	X	Inspection: Verify proper installation and total linear feet of material Review: visual
25	-	Silt Fence	IA-CS-005	X	Inspection: Verify proper installation and total linear feet of material Review: visual

Note: Provide engineer with 48 hours notice prior to anticipated inspection date



IOWA DEPARTMENT OF AGRICULTURE & LAND STEWARDSHIP

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PROJECT

IDALS
CAL883432B
NUTRIENT
REDUCTION
WETLAND

CALHOUN COUNTY IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY
8-13-2026	ADD SILT FENCE TO IOW & INSPC	HLC

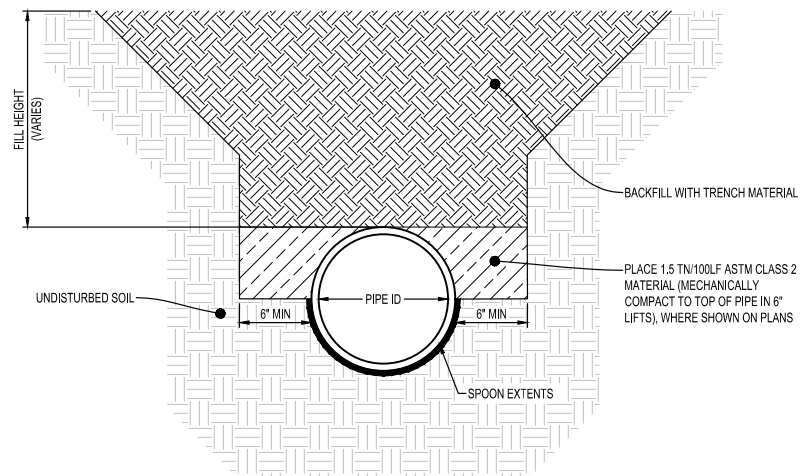
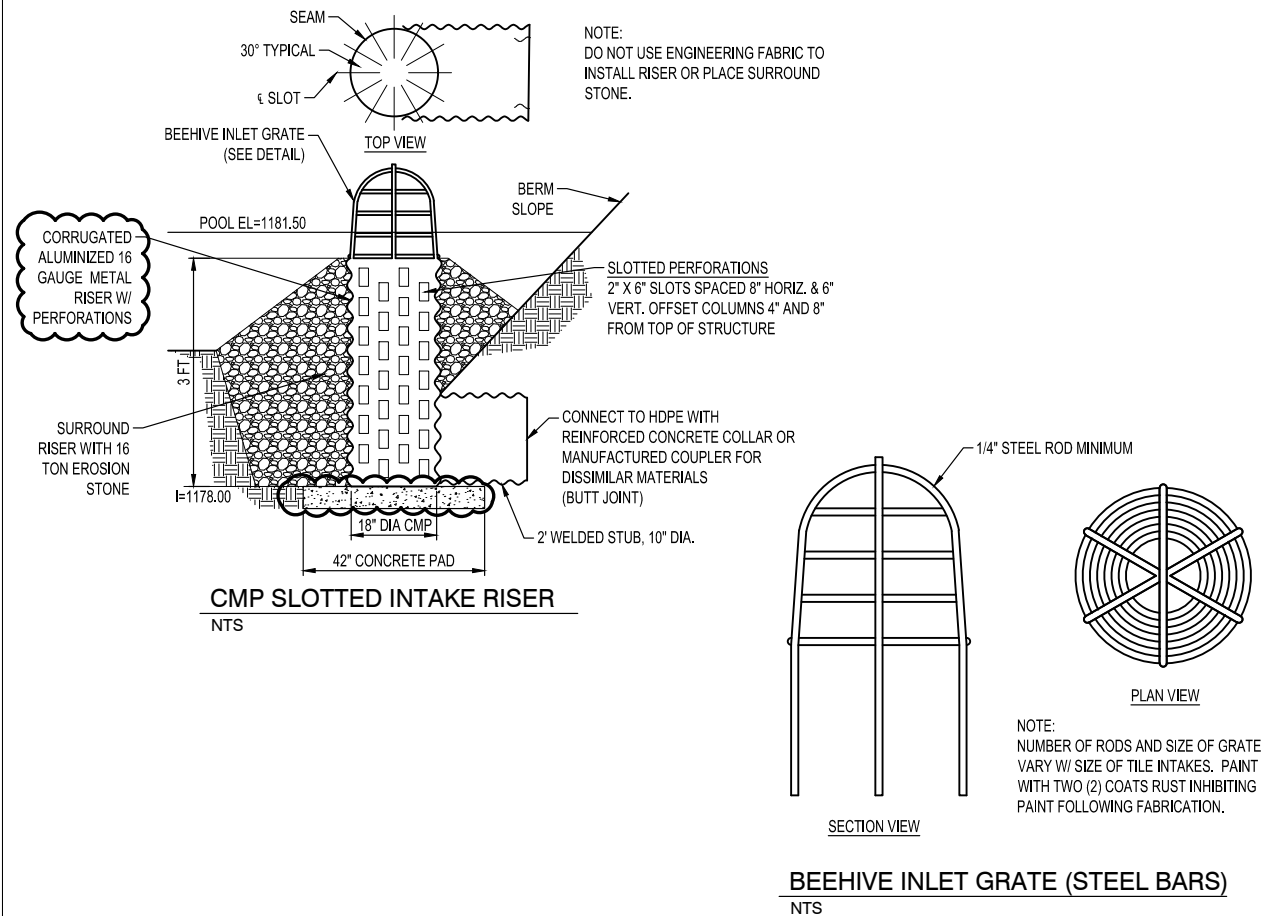
PROJECT NO.	24-30402
FILE NAME	30402-C0-DETAILS
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE

NOTES AND
QUANTITIES

SHEET

C0-20



- NOTES:**
1. ASTM CLASS 2 AND BACKFILL SHALL BE INCIDENTAL TO CONSTRUCTION.
 2. SPOON DIMENSIONS SHALL COMPLY WITH PIPE MANUFACTURER'S SPECIFICATIONS.
 3. THE FIRST LIFT OF BACKFILL SHALL BE PLACED WITH AN EXCAVATOR WITH NO MORE THAN 2' OF DROP.
 4. CRUSHED CONCRETE, MEETING THE REQUIREMENTS OF ASTM CLASS 2 MATERIAL MAY BE USED, ENGINEER TO AUTHORIZE USE, PRIOR TO MATERIAL STAGING.

HDPE SPOON TRENCH



**IOWA DEPARTMENT OF
AGRICULTURE &
LAND STEWARDSHIP**

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PROJECT

**IDALS
CAL883432B
NUTRIENT
REDUCTION
WETLAND**

CALHOUN COUNTY IOWA

[illegible]

PROJECT NO.	24-30402
FILE NAME	30402-C0-DETAILS
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE

DETAILS

SHEET

C0-30

LID TO BE FURNISHED WITH STRUCTURE

FLASH BOARD GUIDE CHANNEL

EXTRA FLASH BOARDS TO BE
PULLED ABOVE SET WEIR ELEVATION
FOR STORAGE

ALL FLASH BOARDS SHALL BE FITTED
WITH LIFTING HOOKS AND EDPM SEAL
(NOT SHOWN)

WATER TIGHT FITTING
FOR UPSTREAM
CONNECTING PIPE

WATER TIGHT FITTING
FOR DOWNSTREAM
CONNECTING PIPE

FLOW

FLOW

OPTION 1
WATER CONTROL STRUCTURE DETAIL
NTS

OPTION 1 WCS SPECIFIC:

- FLASH BOARDS SHALL BE PVC.
- ALL RIVETS SHALL BE STAINLESS STEEL.
- FLASHBOARD CHANNEL SHALL BE ANODIZED ALUMINUM.
- FLASHBOARDS WILL REMAIN IN STRUCTURE DURING INSTALLATION.
- FLASHBOARDS SHALL BE LUBRICATED UPON REMOVAL.

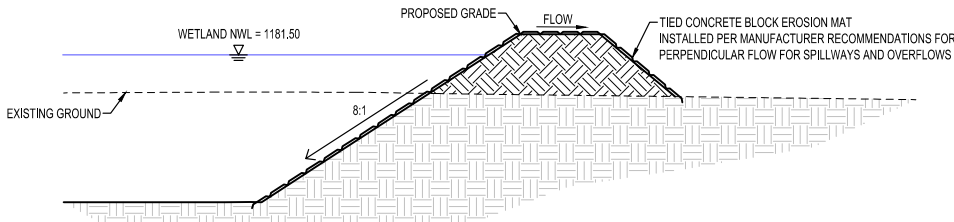
WCS GENERAL NOTES:

- TOOL TO REMOVE FLASHBOARDS/ACTUATE VALVE IS TO REMAIN IN WCS FOLLOWING INSTALLATION.
- FOR INLET ADAPTER, MAX SIZE IS TWO SIZES DOWN FROM STRUCTURE SIZE (I.E. 8" ADAPTER ON 12" STRUCTURE).
- CHECK TO ENSURE THE STRUCTURE IS LEVEL PRIOR TO BACKFILLING. PLACE THE BACKFILL MATERIAL AROUND THE STRUCTURE IN 6" LIFTS AND COMPACT BACKFILL BY HAND ONLY. DO NOT USE POWERED EQUIPMENT TO COMPACT THE BACKFILL.
- WATER CONTROL STRUCTURES WILL HAVE A MINIMUM OF 20' NONPERFORATED PIPE BETWEEN WATER CONTROL STRUCTURE AND DITCH.
- ONE ANTISEEP COLLAR WILL BE INSTALLED ON THE 20' OF NONPERFORATED PIPE BETWEEN THE WATER CONTROL STRUCTURE AND DITCH.
- FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION OF WATERTIGHT TEE, INCLUDING MINIMUM ANGLE OF SEPARATION.
- WATER TIGHT TEE, QUANTITY, AND INSTALLATION METHOD DEPENDENT ON WCS MANUFACTURER.
- FINAL CONFIGURATION OF WATER CONTROL STRUCTURES WILL BE DETERMINED BY AVAILABILITY FROM THE MANUFACTURER.
- COMPONENTS OF WATER CONTROL STRUCTURES MAY BE PRICED SEPARATELY DEPENDING ON THE SUPPLIER.

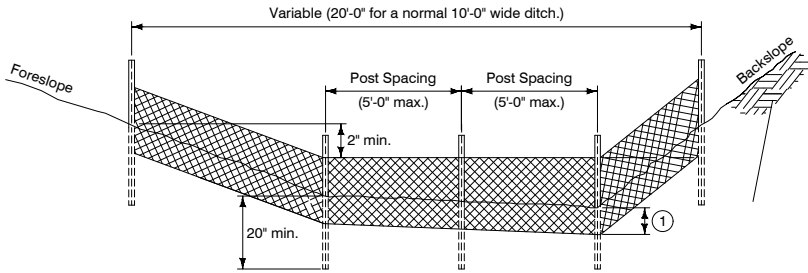
NRCS NOTES:

- WATER CONTROL STRUCTURE (WCS) MATERIALS AND INSTALLATION SHALL BE IN CONFORMANCE WITH IOWA NRCS CONSTRUCTION SPECIFICATION (CS) IA-45, PLASTIC (PVC, PE) PIPE.
- CONNECTING PIPE MATERIALS AND INSTALLATION SHALL BE IN CONFORMANCE WITH CS IA-45; IA-46, TILE DRAINS FOR LAND DRAINAGE; IA-51, CORRUGATED METAL PIPE CONDUITS; OR IA-52, STEEL PIPE CONDUITS.
- WCS SHALL BE FABRICATED OF PVC WITH INTEGRAL UPSTREAM AND DOWNSTREAM WATER-TIGHT COUPLING CONNECTIONS, CORROSION-RESISTANT STOP BOARDS, ALUMINUM EXTRUSIONS AND STAINLESS STEEL FASTENERS AND APPURTENANCES. ACCEPTABLE MODELS INCLUDE AGRI DRAIN, NYLOPLAST, OR APPROVED EQUAL.
- WCS SHALL PROVIDE FLOW CAPACITY EQUAL TO OR GREATER THAN THAT OF ADJACENT PIPE UNDER EXPECTED FLOW CONDITIONS.
- STOP BOARDS SHALL PROVIDE A WATER-TIGHT SEAL UNDER 4 FT OF PRESSURE HEAD (MIN.).
- IN SITUATIONS WHERE WATER LEVELS HIGHER THAN MAXIMUM DESIGN ELEVATION WOULD IMPACT NEIGHBORING PROPERTIES OR OTHER ASPECTS OF THE SITE DESIGN, CONSIDER A CUSTOM-ORDER BOX WHICH LIMITS EXTENT OF STOP BOARD TRACKS TO THE MAXIMUM DESIGN WEIR ELEVATION.
- STOP BOARD REMOVAL TOOL SHALL BE PROVIDED.
- AS AN ALTERNATIVE TO A STOP BOARD STRAIGHT WEIR STRUCTURE, A CIRCULAR INNER STANDPIPE MAY BE PROVIDED WHICH MEETS THE DESIGN FLOW REQUIREMENTS, WITH APPROVAL OF THE ENGINEER (NYLOPLAST STANDPIPE WCS OR EQUAL).
- ALL CONNECTIONS SHALL BE WATER-TIGHT.
- STRUCTURE LID SHALL BE PROVIDED WITH LOCKING MECHANISM.
- BACKFILL AROUND THE WCS SHALL MEET THE REQUIREMENTS OF CS IA-45. NORMAL STOP BOARD OPERATION SHALL BE VERIFIED FOLLOWING BACKFILL.
- MARK LOCATION OF EACH STRUCTURE USING POST OR MANUFACTURED MARKER FLAG FOR SAFETY IN THE FIELD

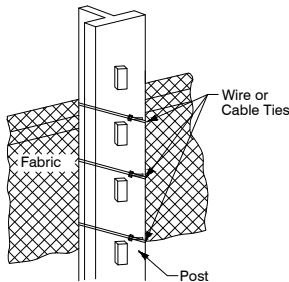
*FROM USDA-NRCS IA-1530 STANDARD DRAWING
STRIKEOUT ITEMS ARE NOT REQUIRED FOR THIS SET



AUXILIARY SPILLWAY
WITH CONCRETE EROSION MAT
NTS



TYPICAL SILT FENCE DITCH CHECK



ATTACHMENT TO POST

**SUDAS**

REVISION
210-21-14
SHEET 1 of 1

SUDAS Standard Specifications

SILT FENCE



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PROJECT

**IDALS
CAL883432B
NUTRIENT
REDUCTION
WETLAND**

CALHOUN COUNTY IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY
8-13-2026	ADDED SILT FENCE DETAIL	HLC

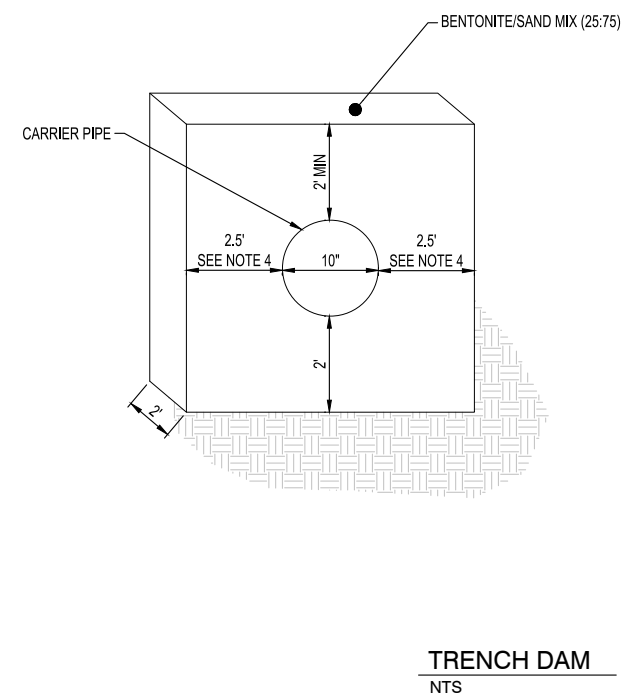
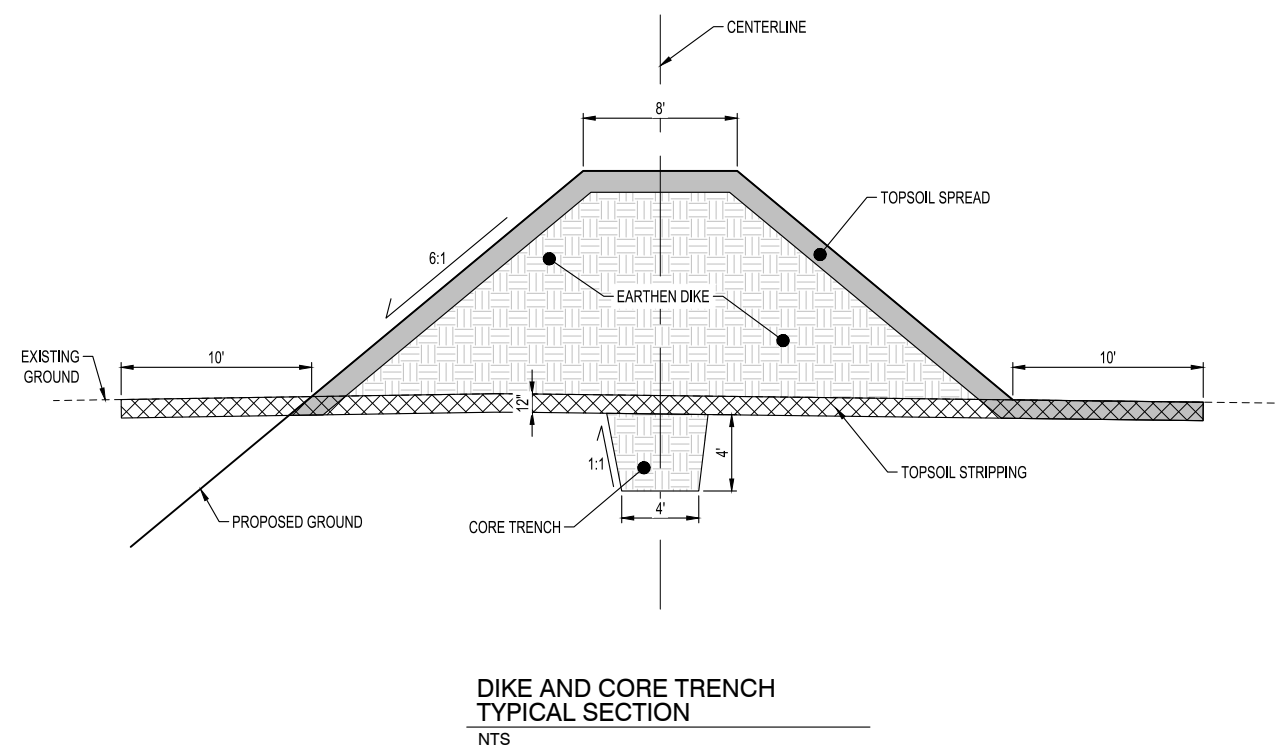
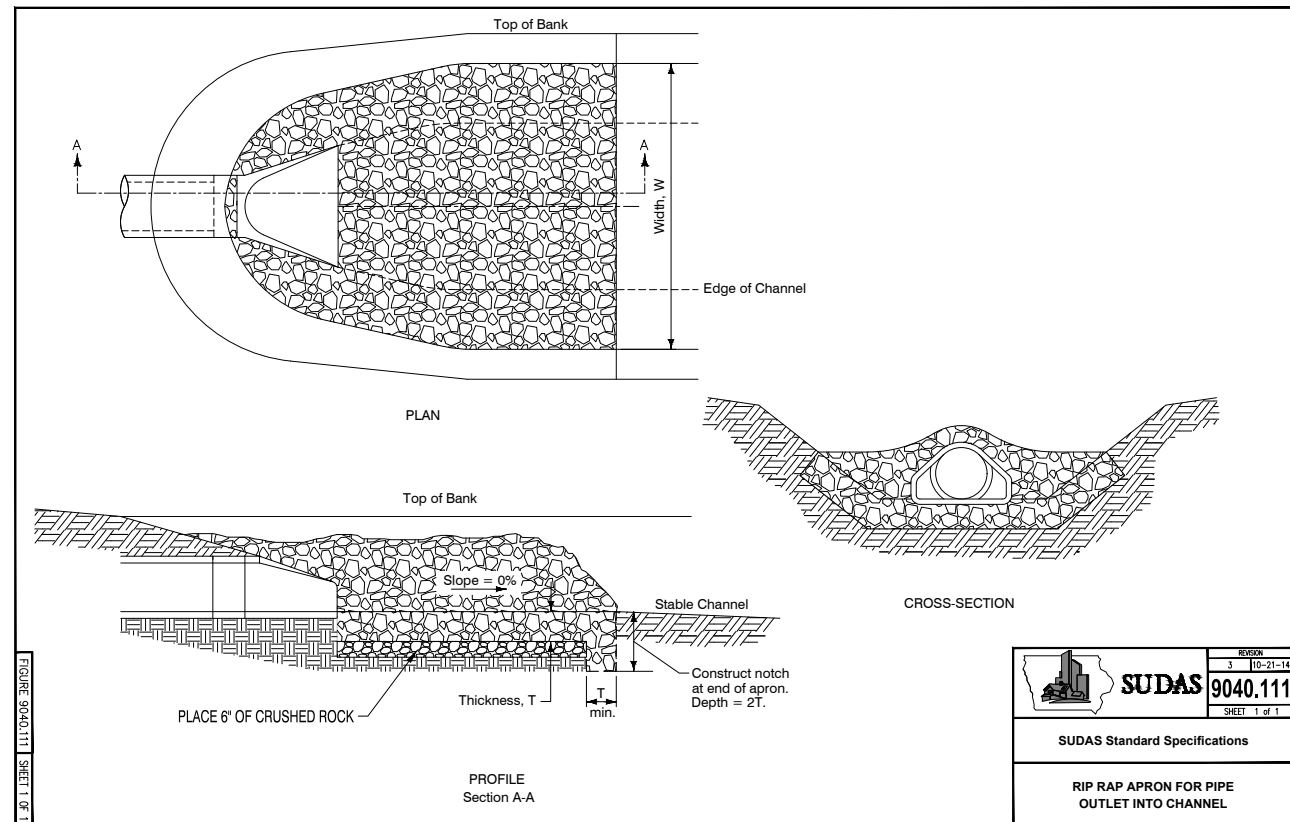
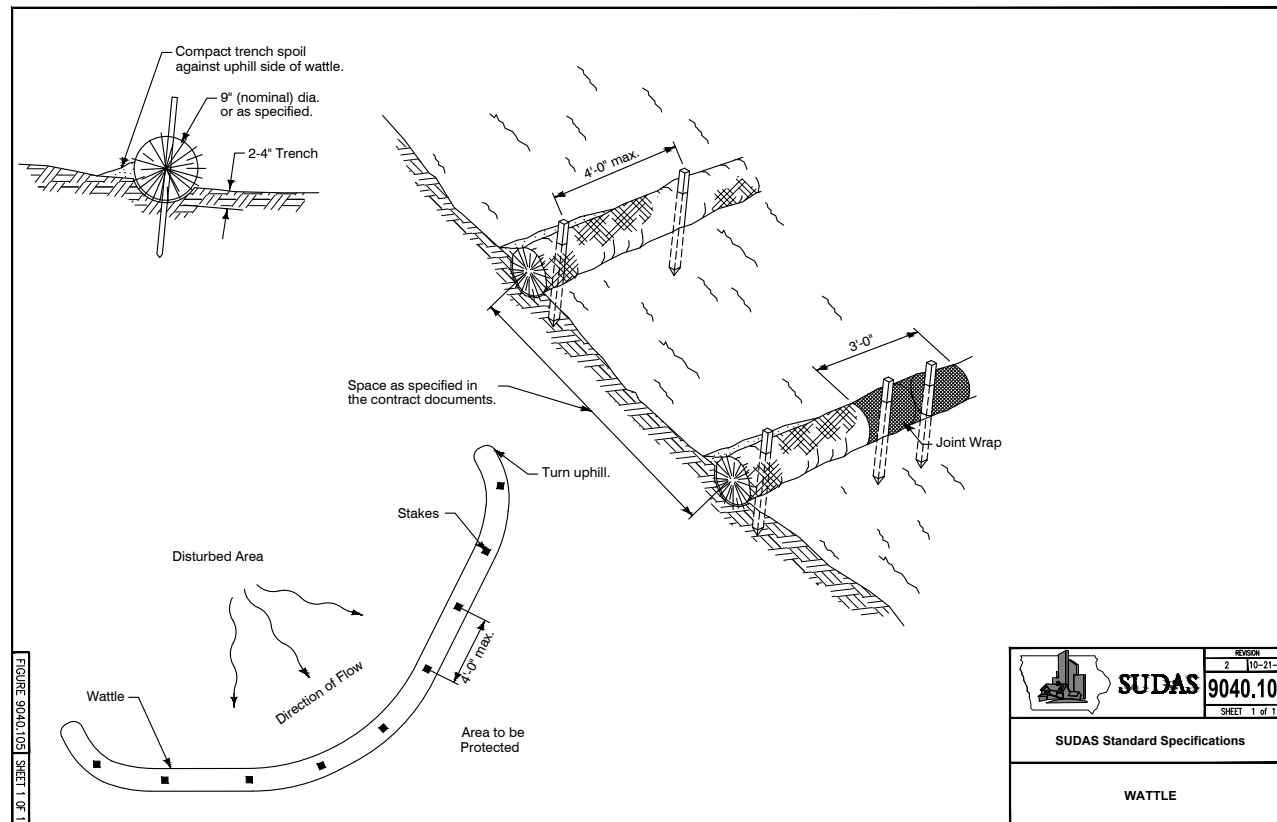
PROJECT NO.	24-30402
FILE NAME	30402-C0-DETAILS
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE

DETAILS

SHEET

C0-31



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**IDALS
CAL883432B
NUTRIENT
REDUCTION
WETLAND**

CALHOUN COUNTY	IOWA
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[illegible]

PROJECT NO.	24-30402
FILE NAME	30402-CO-DETAILS
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE

DETAILS

SHEET

C0-32



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**IDALS
CAL883432B
NUTRIENT
REDUCTION
WETLAND**

CALHOUN COUNTY IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	24-30402
FILE NAME	30402-C0-DETAILS
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

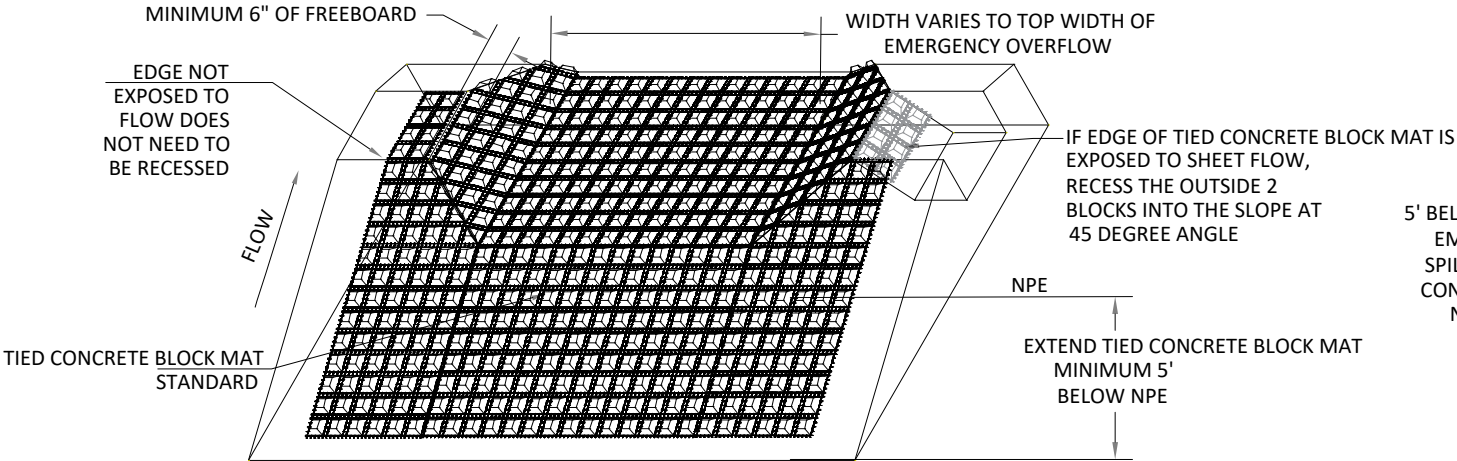
TITLE

DETAILS

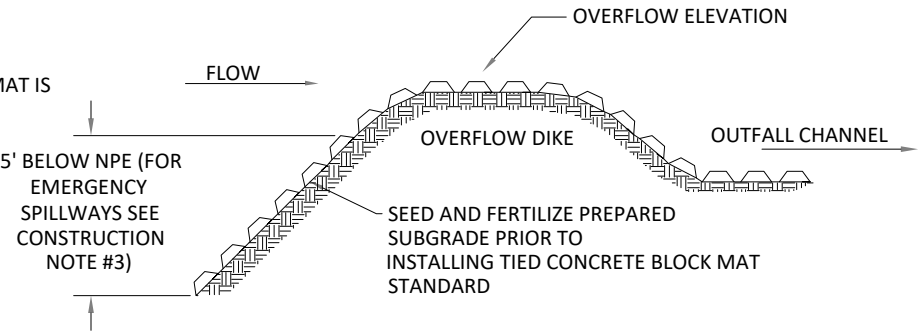
SHEET

C0-33

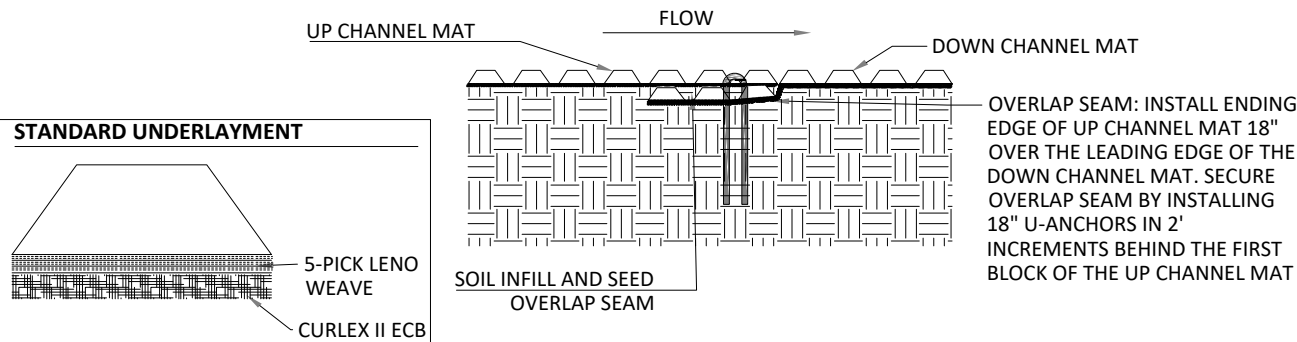
EMERGENCY SPILLWAY - ISOMETRIC VIEW



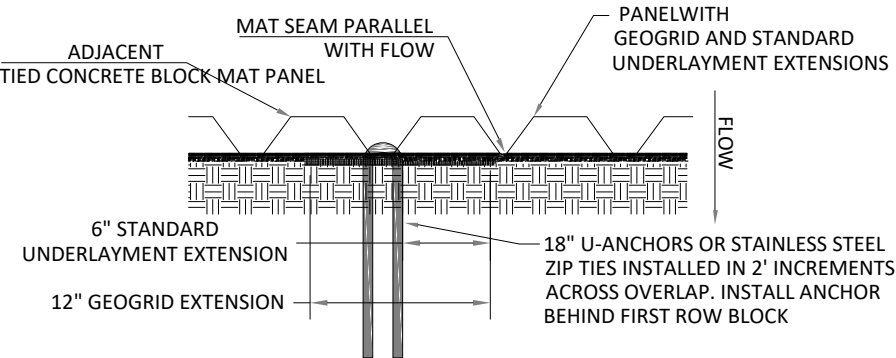
OVERFLOW DIKE - PROFILE VIEW



1. OVERLAP METHOD FOR SEAMS PERPENDICULAR TO FLOW



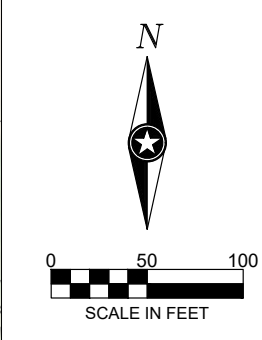
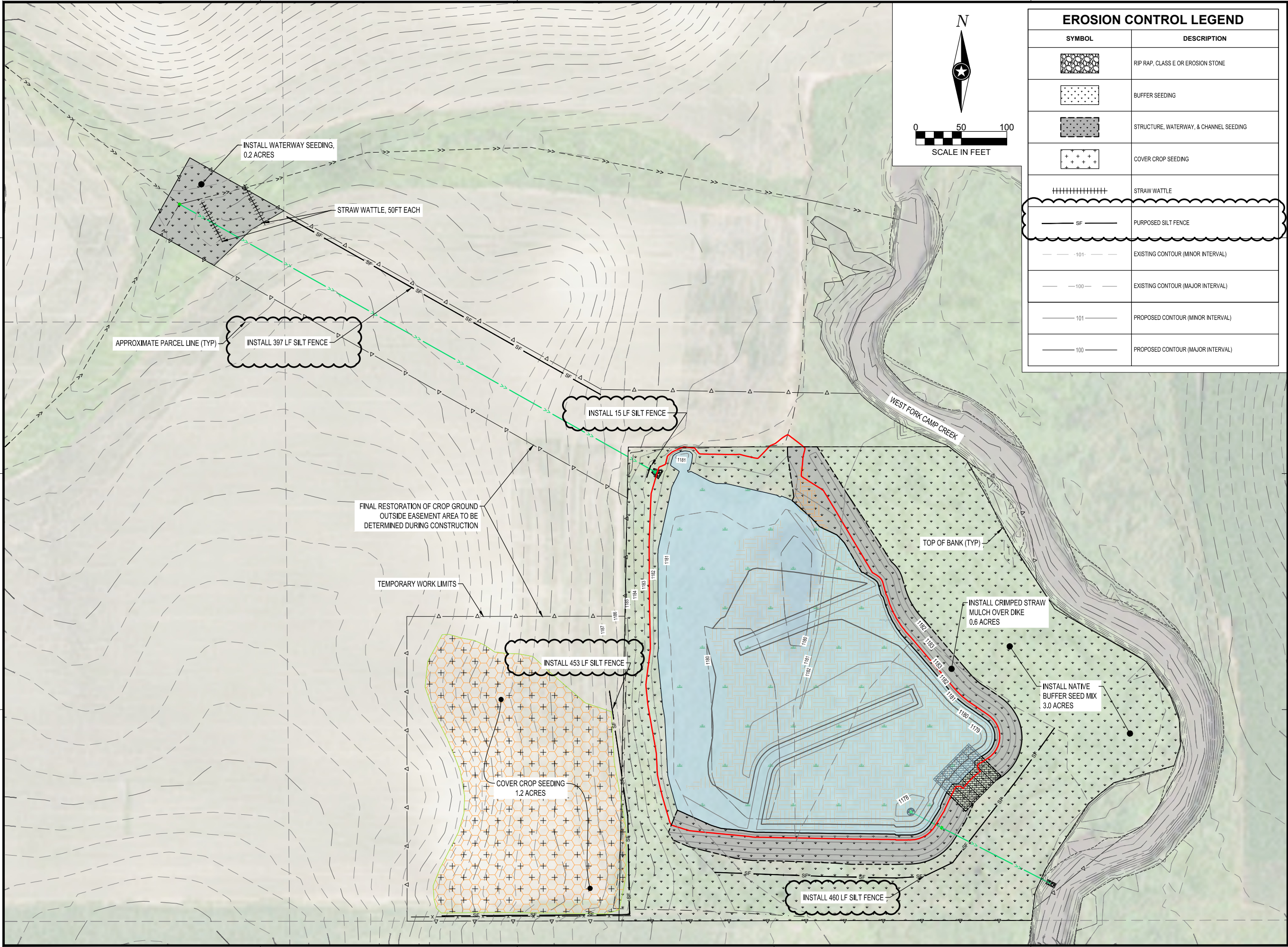
2. OVERLAP METHOD FOR SEAMS PARALLEL TO FLOW



TIED CONCRETE BLOCK MAT - OVERFLOW CHANNEL PARALLEL TO FLOW

CONSTRUCTION NOTES:

1. AN ENGINEER OR MANUFACTURERS REPRESENTATIVE SHALL BE ONSITE FOR THE START OF THE INSTALLATION.
2. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND. THE PREPARED SURFACE SHALL PROVIDE A FIRM UNYIELDING SUBGRADE FOR THE MATS.
3. PRIOR TO THE TIED CONCRETE BLOCK MAT INSTALLATION SEED AND FERTILIZE SUBGRADE WITH SITE SPECIFIC SEED MIX IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
4. MAT SHALL EXTEND 5' BELOW NORMAL POND ELEVATION. (FOR EMERGENCY OVERFLOW INSTALLATIONS EXTEND THE MAT 3' DOWN THE INSIDE FACE OF THE OVERFLOW DIKE.)
5. INSTALL TIED CONCRETE BLOCK MAT ROLLS. MANUFACTURER RECOMMENDS INSTALLING THE WIDEST MAT POSSIBLE FOR SPILLWAY APPLICATIONS.
 - 5.1. FOR WIDTHS WIDER THAN 16', INSTALL 15.5' WIDE MATS WITH GEOGRID AND STANDARD UNDERLAYMENT EXTENSIONS. INSTALL ADJACENT MAT OVER THE 12" GEOGRID AND 6" STANDARD UNDERLAYMENT EXTENSIONS OF THE ADJACENT MATS. ENSURE THE GEOGRID AND STANDARD UNDERLAYMENT EXTENSIONS ARE LAYING FLAT ON THE SUBGRADE BEFORE INSTALLING ADJACENT MAT OVER THE EXTENSIONS. INSTALL #3 REBAR 18" U-ANCHORS IN 2' INCREMENTS ACROSS THE GEOGRID AND STANDARD EXTENSION ABUTMENT. INSTALL ANCHORS PERPENDICULAR TO THE FLOW DIRECTLY BEHIND FIRST ROW OF BLOCKS ON THE ADJACENT MAT.
 - 5.2. FOR ADDITIONAL SECTIONS OF MAT, OVERLAP THE DOWNSTREAM SECTION 18" WITH UPSTREAM SECTION OF MAT. PRIOR TO INSTALLING OVERLAP, FLIP UPSTREAM MAT BACK 24". EXCAVATE 2.25" OF SOIL 18" FROM THE END OF THE UPSTREAM MAT. DOWNSTREAM SECTION IS THEN LAID IN THE SHALLOW TRENCH. RETURN AND TAMP SOIL OVER INITIAL EDGE AND SEED AREA. FLIP END OF UPSTREAM MAT OVER THE SOIL COVERED INITIAL LEADING EDGE. SEED AND FERTILIZE SOIL INFILL PRIOR TO FLIPPING END OF UPSTREAM MAT OVER THE SOIL COVERED INITIAL LEADING EDGE OF DOWNSTREAM MAT. SECURE PERPENDICULAR OVERLAP SEAMS BY INSTALLING #3 REBAR - 18" U ANCHORS PERPENDICULAR TO FLOW IN 2' INCREMENTS.
6. AT THE END OF THE ARMORED SPILLWAY, EMBED THE MAT 18" IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH SUITABLE FILL. (AS SPECIFIED BY EOR.)



EROSION CONTROL LEGEND	
SYMBOL	DESCRIPTION
	RIP RAP, CLASS E OR EROSION STONE
	BUFFER SEEDING
	STRUCTURE, WATERWAY, & CHANNEL SEEDING
	COVER CROP SEEDING
	STRAW WATTLE
	PURPOSED SILT FENCE
	EXISTING CONTOUR (MINOR INTERVAL)
	EXISTING CONTOUR (MAJOR INTERVAL)
	PROPOSED CONTOUR (MINOR INTERVAL)
	PROPOSED CONTOUR (MAJOR INTERVAL)



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PROJECT

**IDALS
CAL883432B
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REDUCTION
WETLAND**

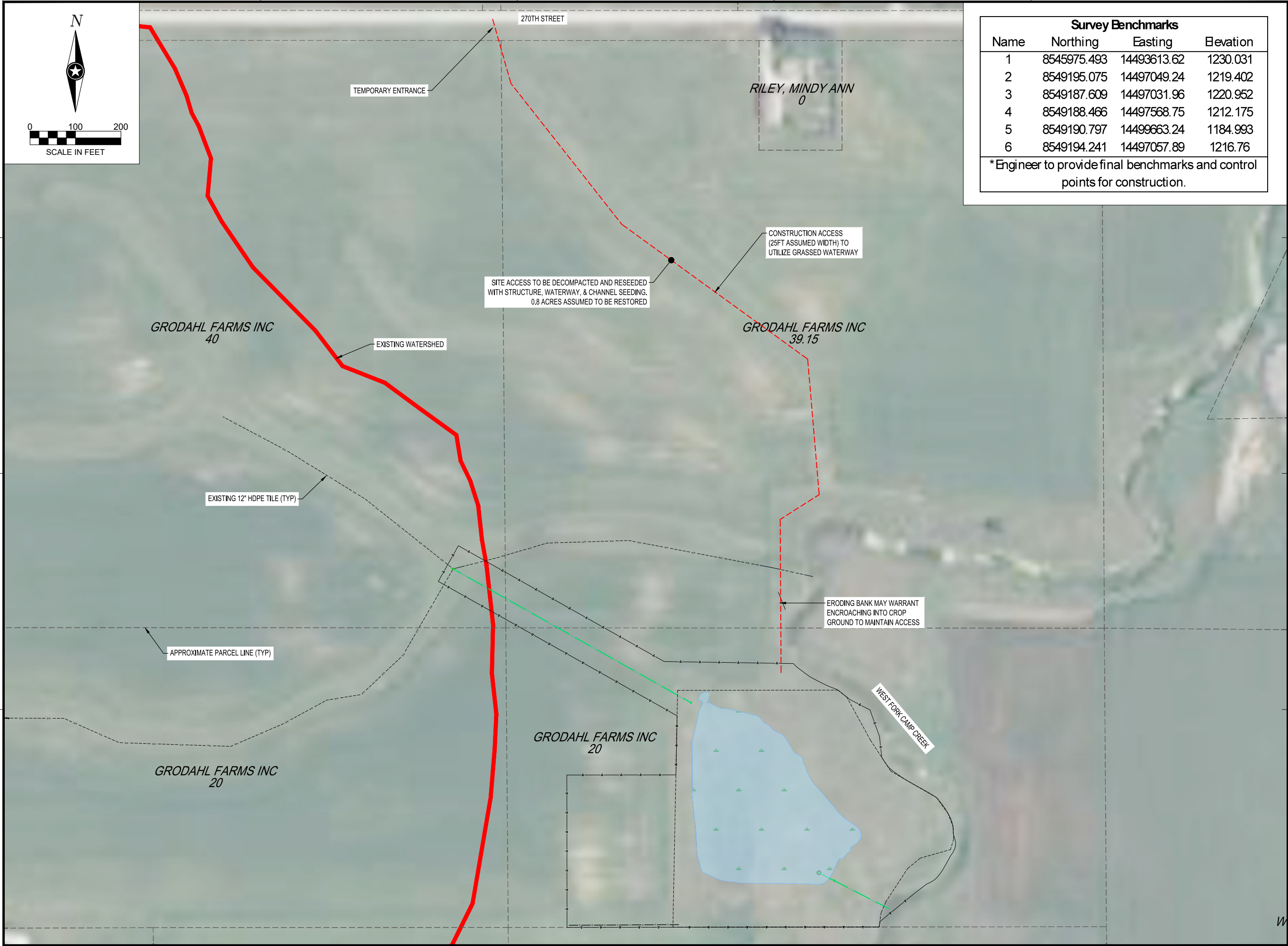
CALHOUN COUNTY IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY
8-13-2026	ADDED SILT FENCE OUTLINES AND ANNOTATIONS	HLC

PROJECT NO.	24-30402
FILE NAME	30402-C1-SWPPP
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE
**SITE
RESTORATION
PLAN**

SHEET
C1-10



Survey Benchmarks			
Name	Northing	Easting	Elevation
1	8545975.493	14493613.62	1230.031
2	8549195.075	14497049.24	1219.402
3	8549187.609	14497031.96	1220.952
4	8549188.466	14497568.75	1212.175
5	8549190.797	14499663.24	1184.993
6	8549194.241	14497057.89	1216.76
* Engineer to provide final benchmarks and control points for construction.			



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CAL883432B
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REDUCTION
WETLAND**

CALHOUN COUNTY IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

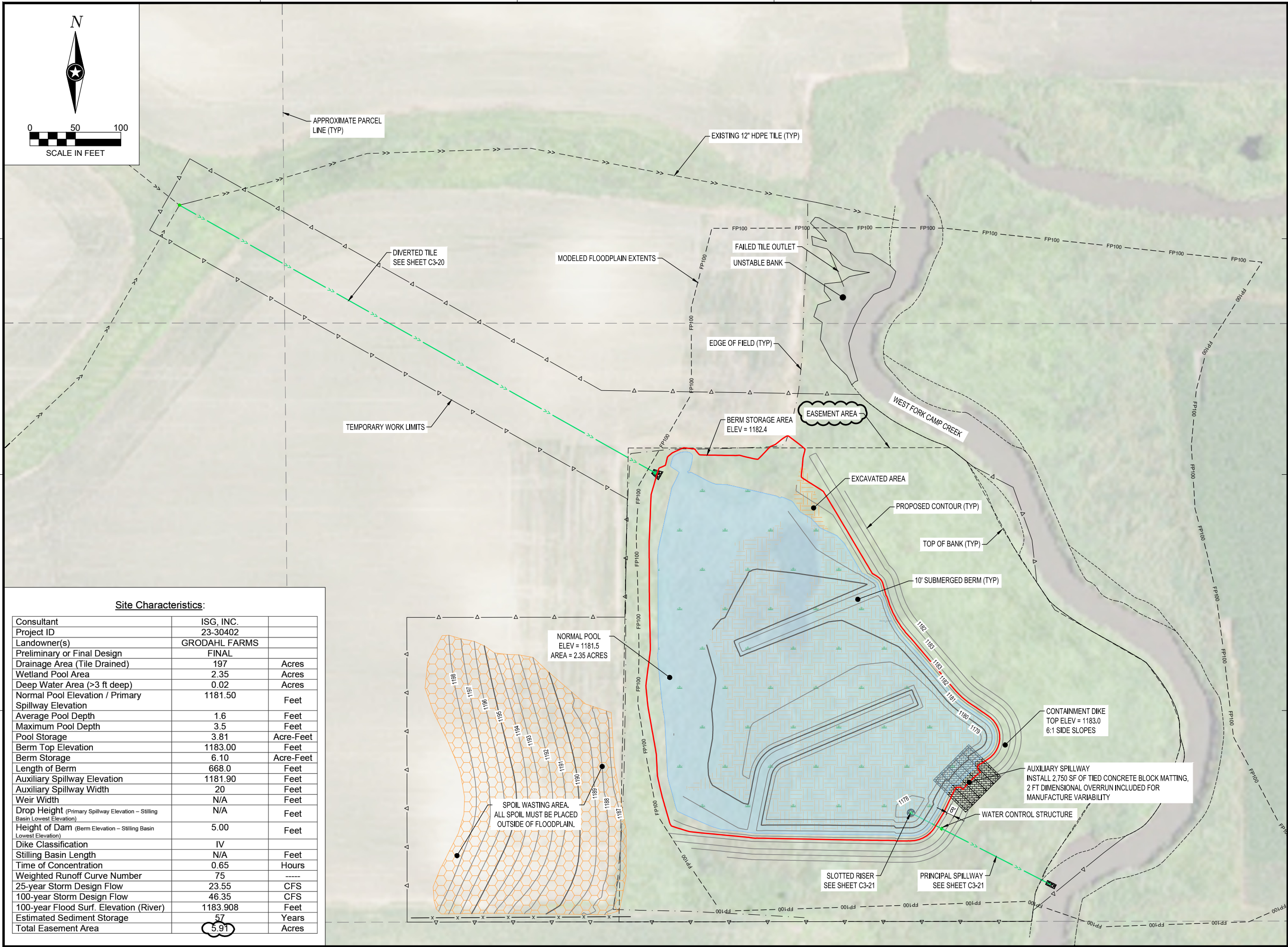
PROJECT NO.	24-30402
FILE NAME	30402-C2-EX-SITE
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE

**EXISTING SITE -
SITE ACCESS**

SHEET

C2-10



Site Characteristics:

Consultant	ISG, INC.	
Project ID	23-30402	
Landowner(s)	GRODAHL FARMS	
Preliminary or Final Design	FINAL	
Drainage Area (Tile Drained)	197	Acres
Wetland Pool Area	2.35	Acres
Deep Water Area (>3 ft deep)	0.02	Acres
Normal Pool Elevation / Primary Spillway Elevation	1181.50	Feet
Average Pool Depth	1.6	Feet
Maximum Pool Depth	3.5	Feet
Pool Storage	3.81	Acre-Feet
Berm Top Elevation	1183.00	Feet
Berm Storage	6.10	Acre-Feet
Length of Berm	668.0	Feet
Auxiliary Spillway Elevation	1181.90	Feet
Auxiliary Spillway Width	20	Feet
Weir Width	N/A	Feet
Drop Height (Primary Spillway Elevation - Stilling Basin Lowest Elevation)	N/A	Feet
Height of Dam (Berm Elevation - Stilling Basin Lowest Elevation)	5.00	Feet
Dike Classification	IV	
Stilling Basin Length	N/A	Feet
Time of Concentration	0.65	Hours
Weighted Runoff Curve Number	75	
25-year Storm Design Flow	23.55	CFS
100-year Storm Design Flow	46.35	CFS
100-year Flood Surf. Elevation (River)	1183.908	Feet
Estimated Sediment Storage	57	Years
Total Easement Area	5.91	Acres



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PROJECT

**IDALS
CAL883432B
NUTRIENT
REDUCTION
WETLAND**

CALHOUN COUNTY IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY
8-13-2026	CORRECTED EASEMENT ANNOTATION SITE CHARACTERISTIC TABLE VALUE	HLC

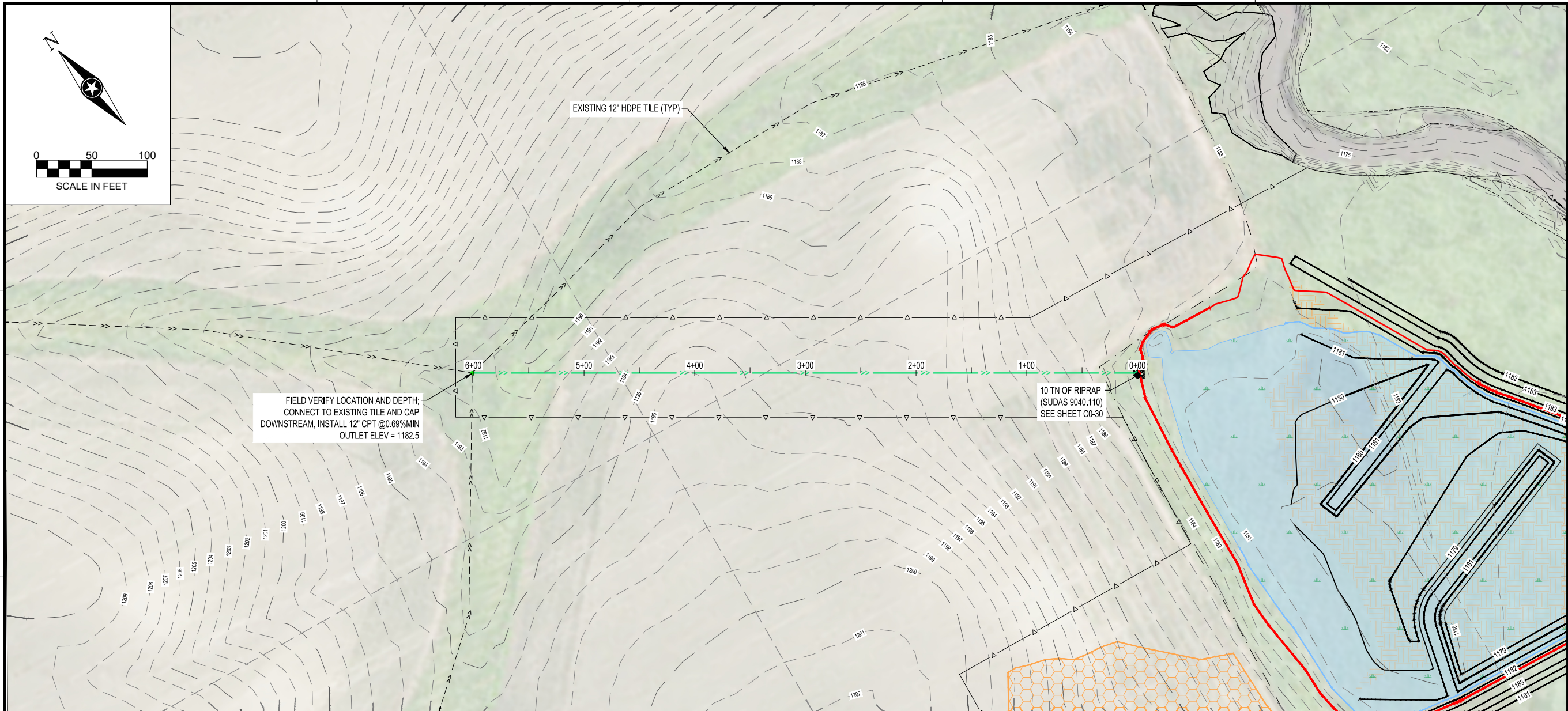
PROJECT NO.	24-30402
FILE NAME	30402-C3-SITE
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE

SITE PLAN

SHEET

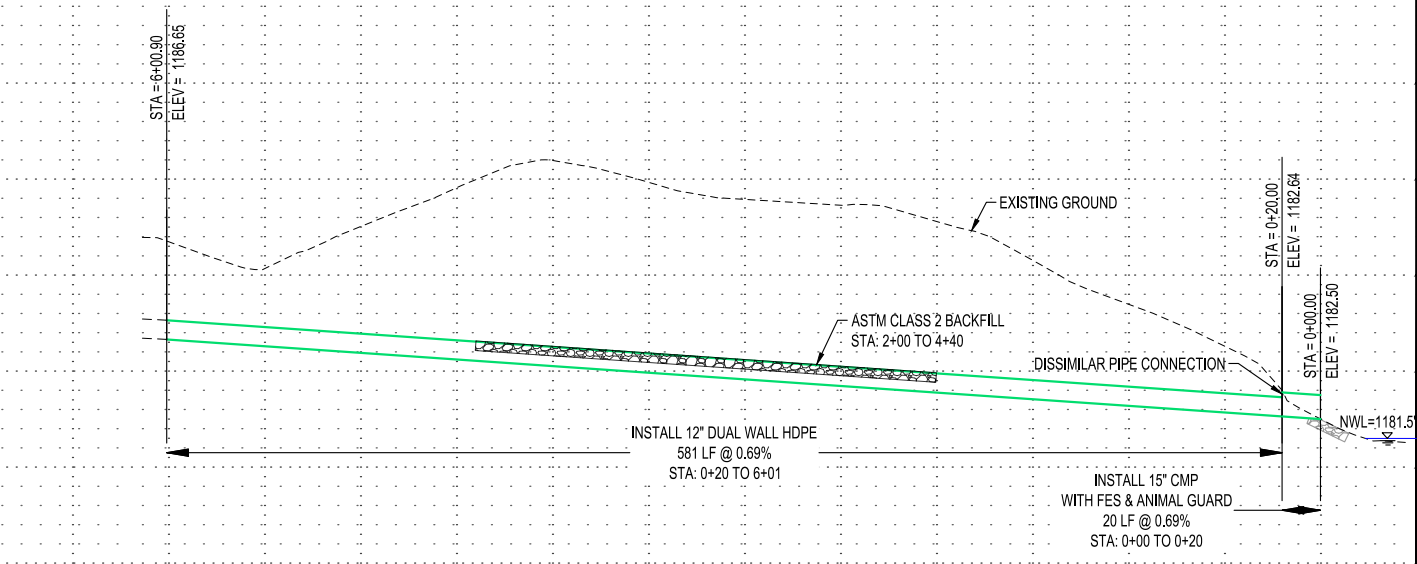
C3-10



FIELD VERIFY LOCATION AND DEPTH;
CONNECT TO EXISTING TILE AND CAP
DOWNSTREAM, INSTALL 12" CPT @0.69%MIN
OUTLET ELEV = 1182.5

10 TN OF RIPRAP
(SUDAS 9040.110)
SEE SHEET C0-30

NOTE:
XXXX.X - EXISTING GROUND ELEV
XXXX.XX - PROPOSED TILE GRADE



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PROJECT

**IDALS
CAL883432B
NUTRIENT
REDUCTION
WETLAND**

CALHOUN COUNTY IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

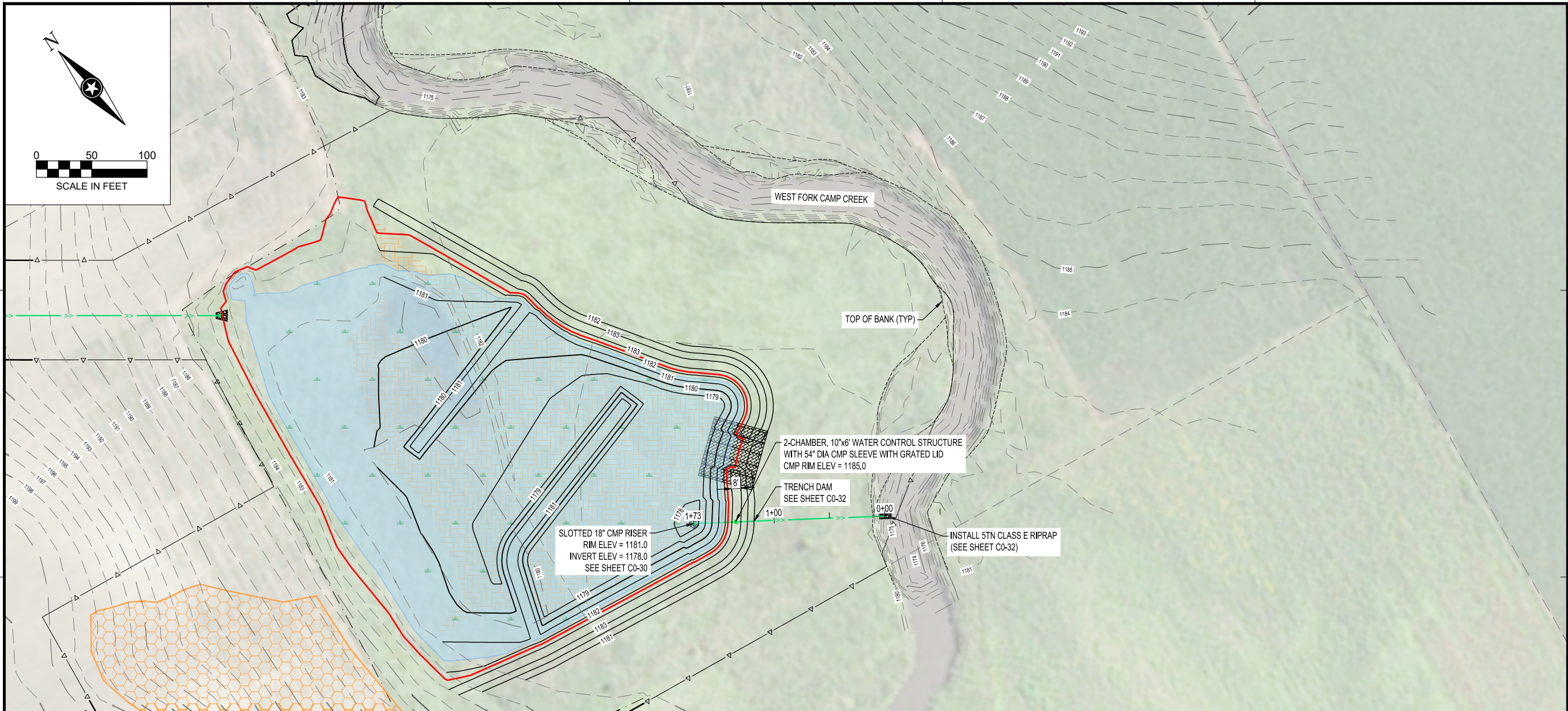
PROJECT NO.	24-30402
FILE NAME	30402-C3-PROFILE
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE

**INLET PLAN &
PROFILE**

SHEET

C3-20



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REDUCTION
WETLAND**

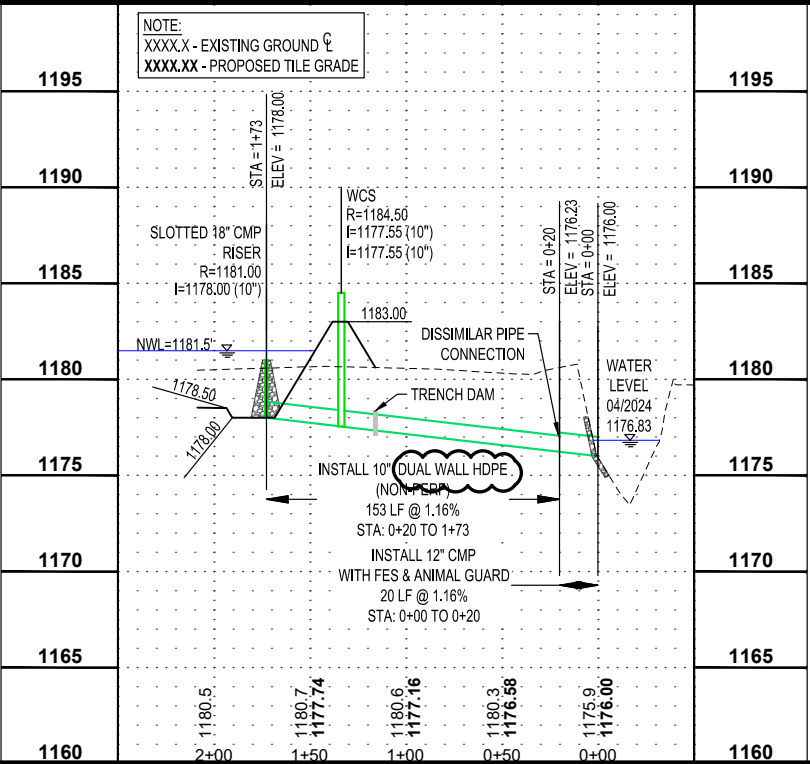
CALHOUN COUNTY IOWA

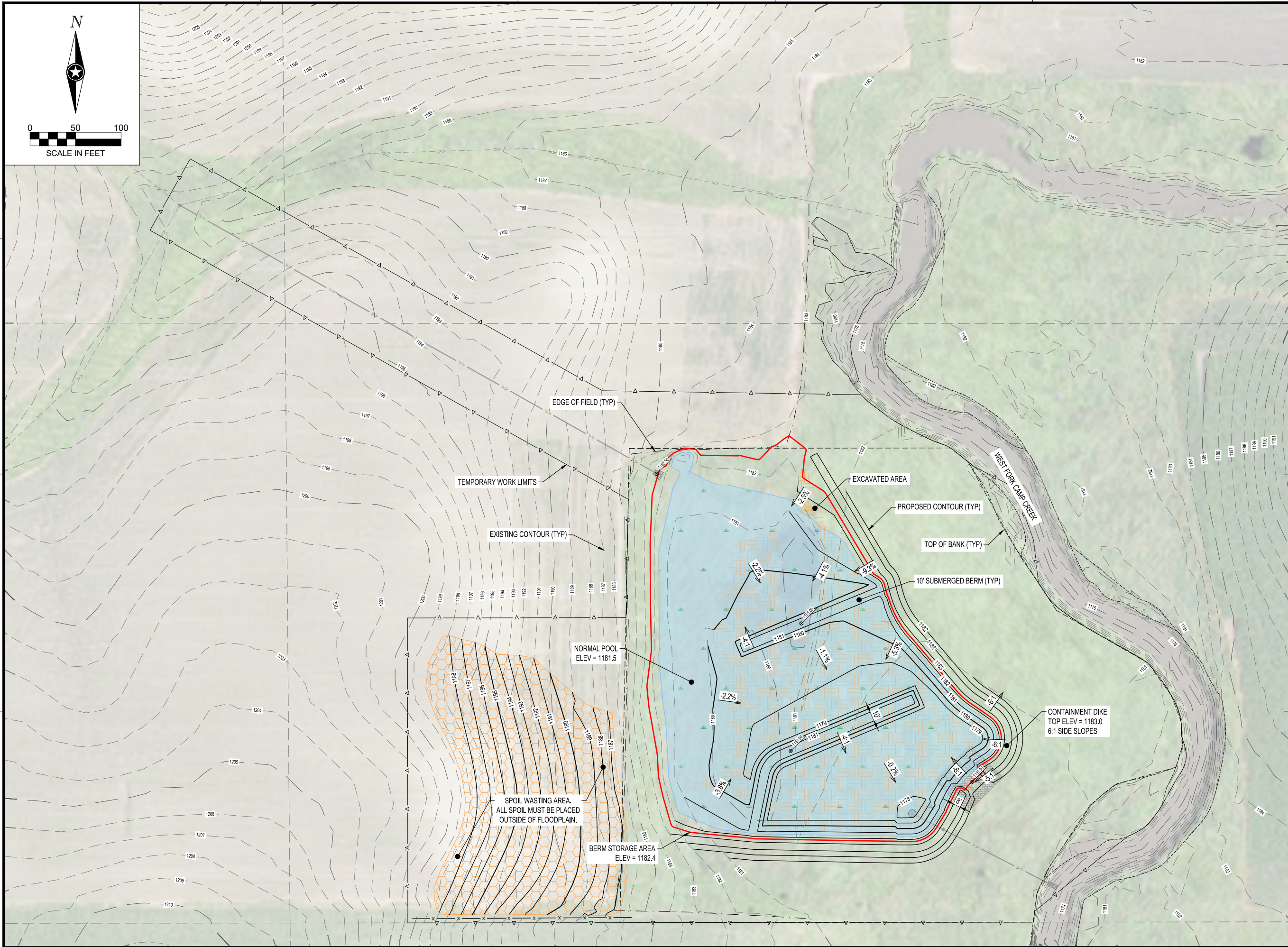
REVISION SCHEDULE		
DATE	DESCRIPTION	BY
8-13-2026	CORRECTED PIPE TO "DUAL WALLED"	HLC

PROJECT NO.	24-30402
FILE NAME	30402-C3-PROFILE
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE
**OUTLET PLAN &
PROFILE**

SHEET
C3-21





PROJECT

**IDALS
CAL883432B
NUTRIENT
REDUCTION
WETLAND**

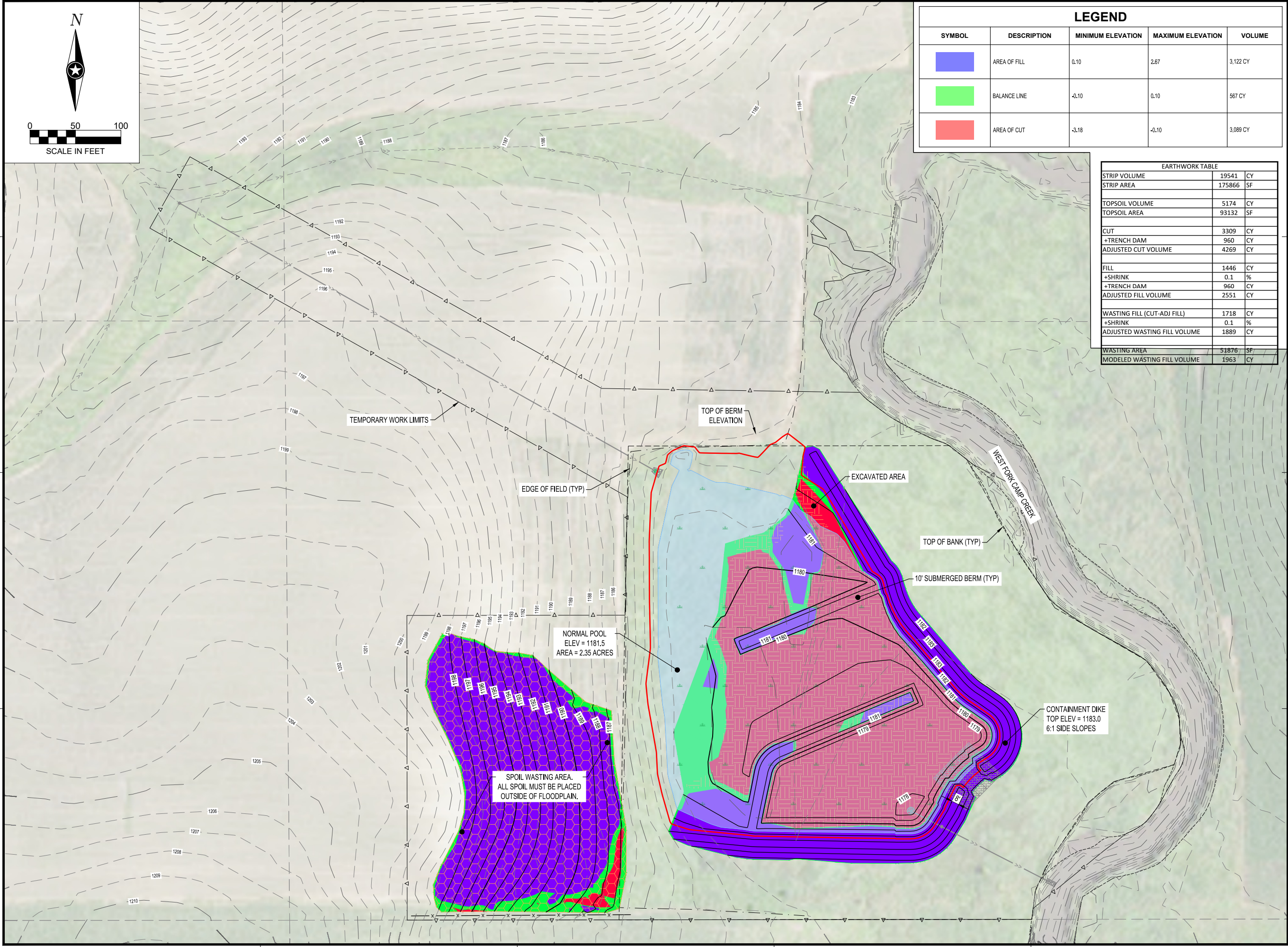
[illegible]

TITLE

GRADING PLAN

SHEET

C4-10



LEGEND				
SYMBOL	DESCRIPTION	MINIMUM ELEVATION	MAXIMUM ELEVATION	VOLUME
	AREA OF FILL	0.10	2.67	3,122 CY
	BALANCE LINE	-0.10	0.10	567 CY
	AREA OF CUT	-3.18	-0.10	3,089 CY

EARTHWORK TABLE		
STRIP VOLUME	19541	CY
STRIP AREA	175866	SF
TOPSOIL VOLUME	5174	CY
TOPSOIL AREA	93132	SF
CUT	3309	CY
+TRENCH DAM	960	CY
ADJUSTED CUT VOLUME	4269	CY
FILL	1446	CY
+SHRINK	0.1	%
+TRENCH DAM	960	CY
ADJUSTED FILL VOLUME	2551	CY
WASTING FILL (CUT-ADJ FILL)	1718	CY
+SHRINK	0.1	%
ADJUSTED WASTING FILL VOLUME	1889	CY
WASTING AREA	51876	SF
MODELED WASTING FILL VOLUME	1963	CY



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CAL883432B
NUTRIENT
REDUCTION
WETLAND**

CALHOUN COUNTY IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

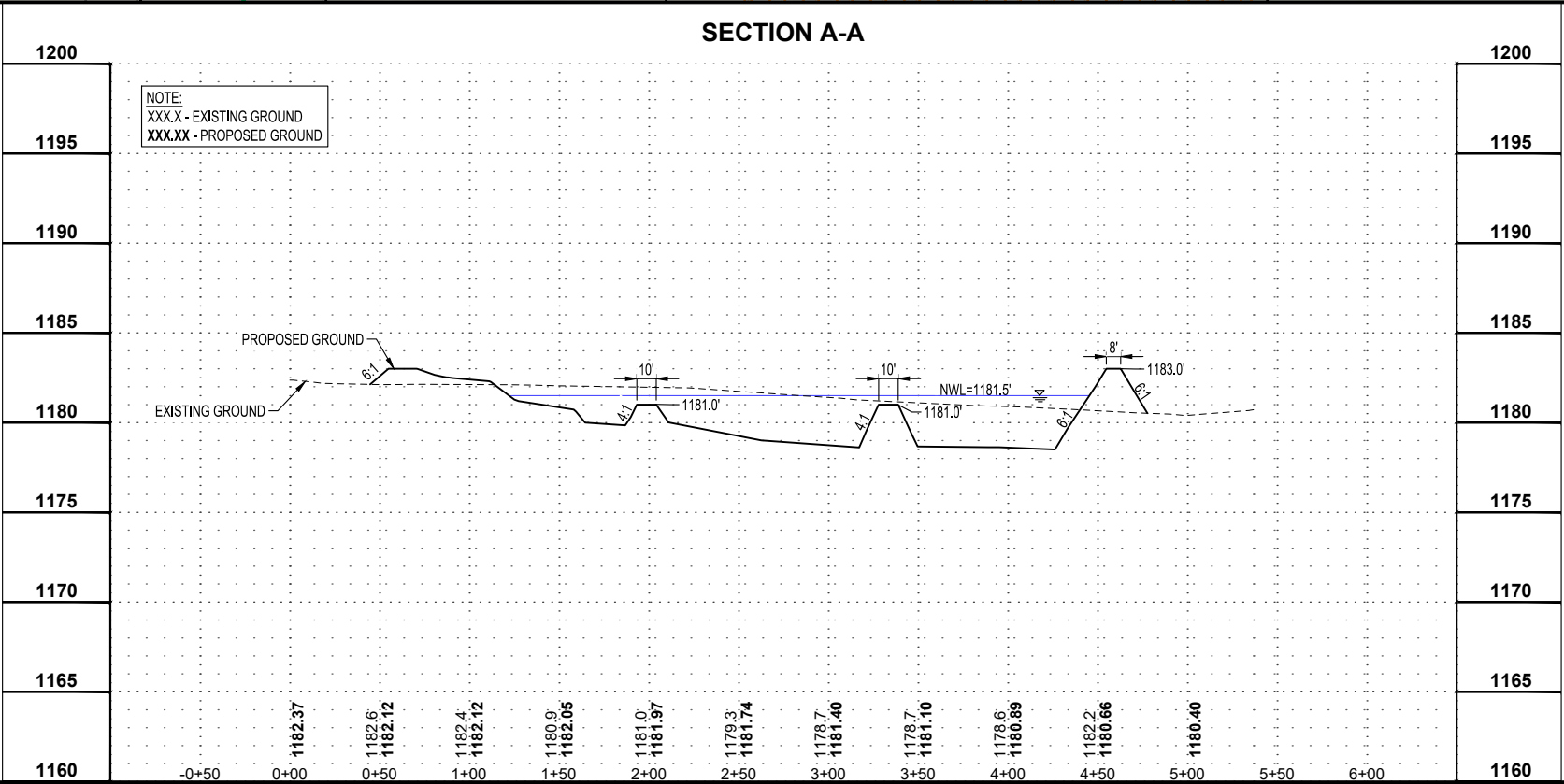
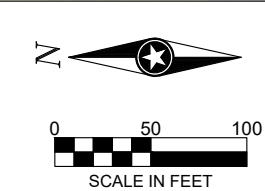
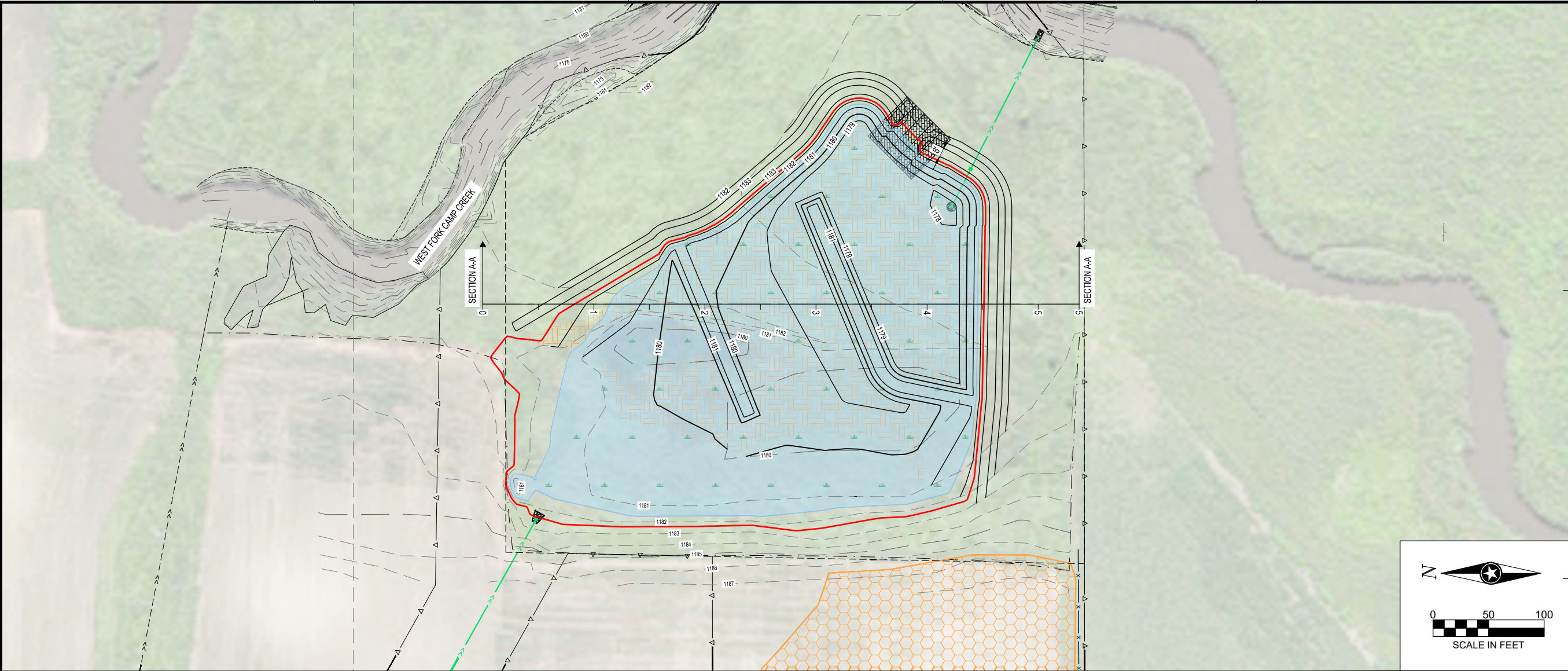
PROJECT NO.	24-30402
FILE NAME	30402-C4-CUTFILL
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE

CUT - FILL

SHEET

C4-20



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CALHOUN COUNTY IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	24-30402
FILE NAME	30402-C4-CROSS SECTION
DRAWN BY	JAT
DESIGNED BY	HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	2-13-2025
CLIENT PROJECT NO.	-

TITLE

CROSS SECTION

SHEET

C4-30