

CITY OF
WATERLOO, IA
SERGEANT RD TRAIL BRIDGES REPLACEMENT
TAP-U-8155(788)-8I-07
LETTING DATE
9/15/2026

281_01
9/28/2022

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers 42, Permit No.CEMVR-RD-2023-1486. A copy of this permit is available from the Iowa DOT website (<http://www.envpermits.iowadot.gov/>). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

IOWA IDOT

TRANSPORTATION DEVELOPMENT DIVISION

PLANS FOR

URBAN ROAD SYSTEM

CITY OF WATERLOO, IA

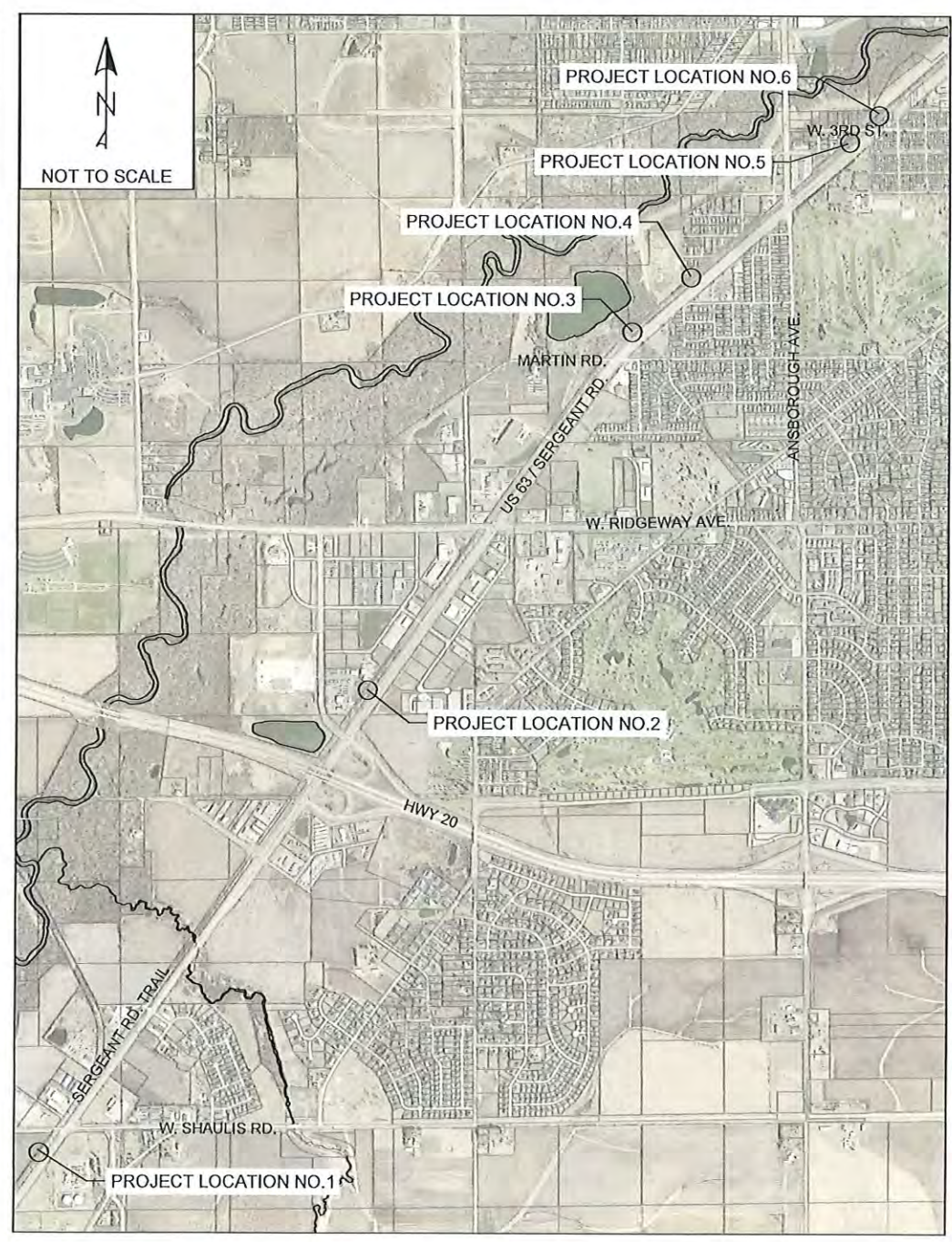
SERGEANT RD TRAIL BRIDGES REPLACEMENT

CULVERTS & PIPES
BRIDGE REPLACEMENT - OTHER

IN THE CITY OF WATERLOO, ON SERGEANT RD TRAIL BRS, FROM 550' SW OF W SHAULIS RD NE
4.1 MILES TO 90' NE OF W 3RD ST

TAP-U-8155(788)-8I-07

REVISIONS	PROJECT IDENTIFICATION NO.	52416
	TOTAL PAGES	37



PROJECT LOCATIONS

REFER TO THE PROPOSAL FORM FOR LIST OF APPLICABLE SPECIFICATIONS.

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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.
7/2/2026
WILLIAM W. CASTLE, P.E.
License Number 19715
My License Renewal Date is December 31, 2027.
Pages or sheets covered by this seal :
ALL

Li/CONT 1091 - 63 Trail Bridge Repairs TAP/CAD Drawings/Overall Location Map & Traffic Control - ACCESS PLAN.dwg 7/2/2026 9:58 AM

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT IOWADOT STANDARD SPECIFICATIONS EXCEPT WHERE NOTED IN THE SPECIAL PROVISIONS AND OR ESTIMATE REFERENCE NOTES.
2. THE LOCATION OF ALL EXISTING UTILITIES AND SEWERS INDICATED ON THESE PLANS ARE TAKEN FROM EXISTING RECORDS AND ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. THE CONTRACTOR SHALL CONFIRM THE EXACT LOCATIONS AND ELEVATIONS OF THESE AND OTHER FACILITIES THAT MAY EXIST BUT ARE NOT SHOWN ON THE PLANS PRIOR TO SUBMITTING BIDS. THE CONTRACTOR SHALL EXPOSE THOSE UTILITIES AND SEWERS AS DIRECTED IN THE FIELD BY THE ENGINEER PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS SO THE EXACT LOCATIONS AND ELEVATIONS MAY BE DETERMINED. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK AND IT SHALL BE CONSIDERED INCIDENTAL TO OTHER APPLICABLE WORK, EXCEPT AS NOTED.
3. THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITIES AND/OR CITY DEPARTMENTS PRIOR TO COMMENCING WORK ON THE PROJECT AND TO THEREAFTER COORDINATE NECESSARY ADJUSTMENT AND/OR RELOCATIONS SO AS TO ELIMINATE DELAYS AND SERVICE INTERRUPTIONS. THE CONTRACTOR SHALL NOT BE COMPENSATED FOR DELAYS AND/OR EXTRA COSTS DUE TO CONFLICTS WITH ANY UNDERGROUND UTILITY OR SEWER FACILITY UNLESS OTHERWISE NOTED. IF THE CONTRACTOR BELIEVES THAT ADDITIONAL COSTS HAVE BEEN INCURRED DUE TO A UTILITY BEING IMPROPERLY LOCATED, THE RESOLUTION OF THE ADDITIONAL COSTS INCURRED SHALL BE MADE BETWEEN THE CONTRACTOR AND THE RESPECTIVE UTILITY COMPANY.
4. CONTRACTORS WISHING TO MAKE SUBSURFACE EXPLORATIONS PRIOR TO SUBMITTING BIDS ON THE PROJECT SHALL CONTACT ENGINEERING TO MAKE THE NECESSARY ARRANGEMENTS PRIOR TO CONDUCTING SAID INVESTIGATIONS.
5. UTILITY COMPANIES/CITY DEPARTMENTS MAY BE CONTACTED AT THE FOLLOWING PHONE NUMBERS DURING THE CONSTRUCTION OF THIS PROJECT:

ONE-CALL--FIELD LOCATES 1-800-292-8989 OR 811

LUMEN
KRYSTAL HUNTER
PHONE: 563--355--2592
EMAIL: KRYSTAL.HUNTER@LUMEN.COM

MIDAMERICAN - ELECTRIC
DAVID KLINE
PHONE: 319--291--4426
EMAIL: DAVID.KLINE@MIDAMERICAN.COM

UNITE PRIVATE NETWORK(SEGRA)
JOE ERNSTER
PHONE: 319--252--7463
EMAIL: JOE.ERNSTER@SEGRAFIBER.COM

MIDAMERICAN GAS
KAREN SPEICHER
PHONE: 319--291--4728
EMAIL: KAREN.SPEICHER@MIDAMERICAN.COM

CITY OF WATERLOO - SANITARY
BRITTNEY RIEGER
PHONE: 319--291--4553
EMAIL: BRITTNEY.RIEGER@WATERLOO-IA.ORG

METRONET
TIM KNACK
PHONE: 319--404--7354
EMAIL: TIMKNACK@METRONET.COM

CITY OF WATERLOO STORM
BRITTNEY RIEGER
PHONE: 319--291--4553
EMAIL: BRITTNEY.RIEGER@WATERLOO-IA.ORG

WATERLOO WATER WORKS
CHAD COON
PHONE: 319--232--6280 EXT. 5013
EMAIL: CHAD.COON@WATERLOO-IA.ORG

WATERLOO FIBER
IAN CROWTHER GREEN
PHONE: 319 239 4489
EMAIL: IAN.CROWTHER-GREEN@WATERFIBER.COM

6. CONSTRUCTION SCHEDULING: THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE OF WORK WHICH SHALL BE SUBMITTED ONE DAY BEFORE THE PRE-CONSTRUCTION CONFERENCE. THE SCHEDULE SHALL SHOW ANTICIPATED EQUIPMENT AND MATERIAL DELIVERIES, STAGING AND COMPLETION OF MAJOR TASKS IN THE PROJECT. THE ENGINEER SHALL APPROVE CONTRACTOR'S WORK SCHEDULE PRIOR TO STARTING. ALL REVISIONS SHALL ALSO BE APPROVED THE ENGINEER. THE ENGINEER MAY CHANGE THE SCHEDULE TO FACILITATE CHANGING CONDITIONS OR TO ACCOMMODATE EVENTS. THE CONTRACTOR SHALL COMMENCE WORK WITHIN TEN (10) DAYS AFTER RECEIPT OF "NOTICE TO PROCEED" AND DILIGENTLY EXECUTE THE WORK OF THE CONTRACT TOWARD COMPLETION. SHOULD WINTER WEATHER CONDITIONS OCCUR PRIOR TO THE COMPLETION OF THE CONTRACT WORK, A TEMPORARY STOP WORK ORDER WITH A DATE AGREED UPON BY BOTH THE CONTRACTOR AND THE CITY OF WATERLOO WILL BE ISSUED. DAYS DURING WHICH THE TEMPORARY STOP WORK ORDER IS IN EFFECT SHALL NOT BE COUNTED AS CONTRACT WORKING DAYS. CONSTRUCTION SHALL NOT BE INITIATED WITHOUT ASSURING THE COMPLETION OF WORK IN THAT AREA WITHIN THE SAME CONSTRUCTION SEASON.
7. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND TREES OUTSIDE THE CONSTRUCTION LIMITS. ALL STORAGE, PARKING AND SERVICE AREA(S) WILL BE SUBJECT TO APPROVAL BY THE ENGINEER.
8. THIS DESIGN ASSUMES TEMPORARY STOCKPILING OF MATERIALS CAN BE ACCOMPLISHED WITHIN THE CONSTRUCTION AREA PROVIDED FOR THIS IMPROVEMENT. THE CONTRACTOR MAY ELECT TO PROCURE STOCKPILE LOCATIONS OUTSIDE THE CONSTRUCTION AREA AT HIS OWN EXPENSE, TO FACILITATE HIS CONSTRUCTION STAGING SEQUENCE.
9. ALL WASTE AREAS OR DISPOSAL SITES PROVIDED BY CONTRACTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO DISPOSAL OF ANY EXCESS MATERIAL. NO PAYMENT FOR OVERHAUL WILL BE MADE FOR THE AFOREMENTIONED ITEMS.
10. THE PRIME CONTRACTOR SHALL APPLY, OR ENSURE ALL NECESSARY MOISTURE HAS BEEN APPLIED TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST. THE PRIME CONTRACTOR SHALL ENSURE THAT ANY MATERIAL TRACKED OR DEPOSITED ONTO CITY STREETS SHALL BE REMOVED AT THE END OF THE WORKING, OR SOONER, IF NECESSARY, OR AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS WORK, AND IT SHALL BE CONSIDERED INCIDENTAL TO APPLICABLE ITEMS.
11. REMOVED MATERIALS:
ALL MATERIALS REMOVED AS PART OF THIS CONTRACT SHALL REMAIN THE PROPERTY OF THE CITY UNLESS THE CITY DETERMINES THAT THE MATERIALS ARE NOT SALVAGEABLE AND THE CITY DOES NOT WANT TO RETAIN OWNERSHIP OF THE MATERIALS. MATERIALS DESIGNATED IN THE FIELD BY THE ENGINEER AS NON-SALVAGEABLE SHALL BE HAULED AND DISPOSED OF BY THE CONTRACTOR AT NO COST TO THE CITY. ALL OTHER MATERIALS SHALL BE TRANSPORTED TO LOCATIONS AS DIRECTED BY THE ENGINEER. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR HAULING OR DISPOSING OF REMOVED MATERIALS, AND IT SHALL BE CONSIDERED INCIDENTAL TO APPLICABLE ITEMS.

12. CONSTRUCTION STAGING -- ACCESS TO PROPERTIES:
THE INTENT OF CONSTRUCTION STAGING IS TO MAINTAIN ACCESS TO ALL PROPERTIES WITHIN THE PROJECT AREA. OTHER STAGING PROPOSALS SUBMITTED BY THE CONTRACTOR WILL BE CONSIDERED AS LONG AS ADEQUATE ACCESS IS MAINTAINED. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE THE AMOUNT OF TIME THAT ACCESS TO AN INDIVIDUAL PROPERTY IS BLOCKED. WHERE REPAIR WORK WILL AFFECT DRIVEWAY ACCESS, THE CONTRACTOR SHALL INFORM THE PROPERTY OWNERS OF THE IMPENDING WORK A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF THE ANTICIPATED CONSTRUCTION COMMENCEMENT.

13. TRAFFIC SIGNS AND STREET SIGNS:
THE CONTRACTOR SHALL CONTACT THE CITY OF WATERLOO TRAFFIC OPERATIONS DEPARTMENT TO HAVE ANY STREET SIGN THAT WILL BE AFFECTED BY CONSTRUCTION REMOVED AND REPLACED WHEN THE WORK HAS BEEN COMPLETED.

14. TRAFFIC CONTROL DURING CONSTRUCTION:
THE CONTRACTOR SHALL, AT HIS OWN EXPENSE AND WITHOUT FURTHER OR OTHER ORDER, PROVIDE, ERECT, AND MAINTAIN, AT ALL TIMES DURING THE PROGRESS AND SUSPENSION OF THE WORK AND UNTIL COMPLETION AND FINAL ACCEPTANCE THEREOF, SUITABLE AND REQUISITE BARRICADES, SIGNS, OR OTHER ADEQUATE PROTECTION, AS REQUIRED BY THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES - MUTCD", LATEST EDITION, AND SHALL PROVIDE, KEEP, AND MAINTAIN SUCH BARRICADES, SIGNS, ETC., AS MAY BE REQUIRED OR AS MAY BE ORDERED BY THE ENGINEER, TO ENSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED ON THE WORK. ALL BARRICADING PLANS SHALL BE REVIEWED BY THE ENGINEER. WHEN USED FOR TRAFFIC CONTROL OR PROTECTION OF THE WORK SITE, FENCING MUST BE FIRMLY SUPPORTED IN AN UPRIGHT POSITION. THE ENGINEER MAY DIRECT THE USE OF ADDITIONAL SUPPORTS, OR OTHER SUPPLEMENTS TO ENSURE PROPER PLACEMENT AND DURABILITY OF THE INSTALLATION. THESE SUPPLEMENTS SHALL BE INCIDENTAL TO THE TRAFFIC CONTROL BID ITEM.

15. CARE IN CONSTRUCTION AREA:
SPECIAL CARE SHALL BE TAKEN TO PREVENT DAMAGE TO ANY EXISTING VEGETATION, LANDSCAPING MATERIALS, SIDEWALKS, AND DRIVEWAYS LOCATED IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY SIDEWALK, CURB OR DRIVEWAYS NOT DESIGNATED FOR REPAIR BY THE ENGINEER. THE CONTRACTOR SHALL RESTRICT HIS OPERATIONS TO THE DESIGNATED CONSTRUCTION AREA UNLESS PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER IN WRITING.

16. EXCESS DIRT:
EXCESS DIRT RESULTING FROM CONSTRUCTION OPERATIONS AND WHICH IS NOT TO BE INCORPORATED INTO THE PROJECT AT LOCATIONS INDICATED IN THE PLANS OR SPECIFICATIONS SHALL BE HAULED TO APPROVED RUBBLE SITES OR OTHER LOCATIONS APPROVED BY THE CITY. RUBBLE, RUBBISH AND OTHER UNSUITABLE BACKFILL MATERIALS, AS DESIGNATED BY THE CITY ENGINEER, SHALL BE HAULED TO THE COUNTY LANDFILL OR OTHER APPROVED RUBBLE SITE. ALL LANDFILL CHARGES ARE TO BE CONSIDERED INCIDENTAL TO THE CONTRACT AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

17. OVERHAUL:
OVERHAUL WILL NOT BE PAID FOR "SURPLUS MATERIAL" OBTAINED FROM ANY OF THE ITEMS OF CONSTRUCTION UNDER THIS CONTRACT. THE COST OF OVERHAUL WILL BE CONSIDERED AS INCIDENTAL TO THE ITEMS TO WHICH IT APPLIES.

18. CONTRACT REQUIREMENTS:
THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE CONTRACT REQUIREMENTS FOR AFFIRMATIVE ACTION PROGRAM AND WORKER RESIDENCY CONTAINED IN THE CONTRACT DOCUMENTS.

19. QUANTITY ADJUSTMENT EXEMPTION:
CERTAIN BID ITEMS HAVE BEEN EXEMPTED FROM THE 20 PERCENT VARIANCE PROVISION. REFER TO SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

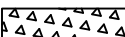
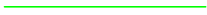
20. MANHOLE/BOXOUT ADJUSTMENTS:
MANHOLE AND INLET BOXOUT AND ADJUSTMENT IS INCIDENTAL TO PAVING, UNLESS OTHERWISE NOTED.

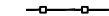
21. WEEKEND/HOLIDAY WORK:
THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING FORTY-EIGHT (48) HOURS IN ADVANCE IF WORK ON SATURDAY IS PLANNED. WORK ON SUNDAY REQUIRES PRIOR APPROVAL OF THE ENGINEER IN ACCORDANCE WITH THE WATERLOO STANDARD SPECIFICATIONS. NO WORK WILL BE ALLOWED ON LEGAL HOLIDAYS OR THE SATURDAY AND SUNDAY PRECEDING A MONDAY HOLIDAY OR THE SATURDAY AND SUNDAY FOLLOWING A FRIDAY HOLIDAY.

22. PROGRESSIVE WORK AND LIQUIDATED DAMAGES:
AFTER CONSTRUCTION IS STARTED ON ANY PHASE, MEANINGFUL PROGRESSIVE WORK SHALL CONTINUE EACH WORKING DAY THAT IS NOT AFFECTED BY ADVERSE WEATHER CONDITIONS OR CONCRETE CURING REQUIREMENTS. LIQUIDATED DAMAGES IN THE AMOUNT OF \$1,000.00 PER DAY SHALL BE ASSESSED FOR NON-COMPLIANCE WITH THIS REQUIREMENT.

23. LIQUIDATED DAMAGES:
TIME IS AN ESSENTIAL ELEMENT OF THIS CONTRACT. IT IS IMPORTANT THAT THE WORK BE DILIGENTLY PURSUED TO COMPLETION WITHIN THE ALLOTTED TIME PERIOD. IF THE WORK IS NOT COMPLETED WITHIN THE SPECIFIED CONTACT PERIOD (PLUS AUTHORIZED EXTENSIONS), THE CONTRACTOR SHALL PAY TO THE CITY LIQUIDATED DAMAGES IN THE AMOUNT OF ONE-THOUSAND DOLLARS (\$1,000.00) PER DAY FOR EACH DAY IN EXCESS OF THE AUTHORIZED TIME, AS FURTHER DESCRIBED IN THE NOTICE TO BIDDERS.

PLAN LEGEND

	EXISTING CURB AND GUTTER		REVTMENT, D		WATER VALVE
	EXISTING SANITARY SEWER		EROSION STONE		TREE
	EXISTING STORM SEWER		SEEDING & FERTILIZING, WOOD EXCELSIOR MAT		GAS VALVE
	EXISTING DRAIN TILE		TRM & SEEDING		GUY WIRE
	PROPOSED DRAIN TILE		SEEDING & FERTILIZING, WOOD CELLULOSE FIBER		UTILITY POLE
	EXISTING SIDEWALK		GRANULAR SHOULDER		HYDRANT
	6" PCC TRAIL				
	TRAIL REMOVAL				

	PROPOSED CONTOUR ELEVATION		WATER LINE (WATERLOO WATERWORKS)
	EXISTING CONTOUR ELEVATION		FIBER LINE (LUMEN)
	PRE CONSTRUCTION SILT FENCE		FIBER LINE (METRONET)
	POST CONSTRUCTION 9" STRAW WATTLE		FIBER LINE (UNITE PRIVATE NETWORK)
			OVERHEAD ELECTRIC LINE (MIDAMERICAN ELECTRIC)
			GAS LINE (MIDAMERICAN GAS)

TAP-U-8155(788)-81-07
SERGEANT RD TRAIL BRIDGES
REPLACEMENT
CONTRACT #1091

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 7/2/2026

SHEET
A.2



GENERAL NOTES AND PLAN LEGEND

L:\CONT 1091 - 63 Trail Bridge Repairs\TAPCAD DRAWINGS\OVERALL LOCATION MAP & TRAFFIC CONTROL - ACCESS PLAN.dwg 7/2/2026 9:58 AM



- NOTE:
- TRAIL PATH SHALL BE CLOSED DURING CONSTRUCTION.
 - NO PEDESTRIAN DETOUR IS PROVIDED AT THIS LOCATION.CONTRACTOR TO MAKE SURE THAT CONSTRUCTION ACTIVITIES MUST BE PROGRESSIVE AT THIS LOCATION
 - THROUGH TRAFFIC OF US 63 AND ALL SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES



PROJECT LOCATION NO.1
TRAFFIC CONTROL

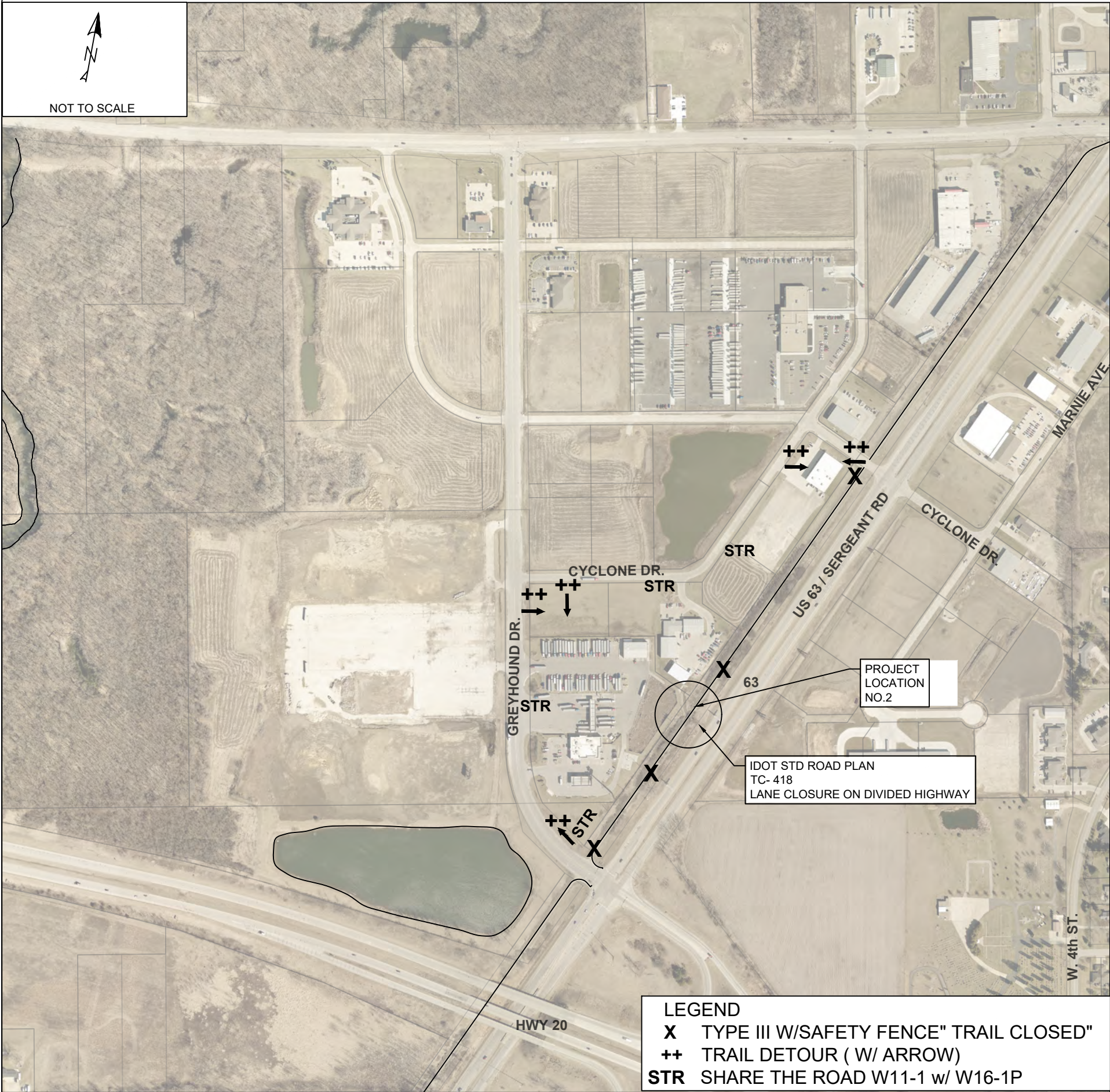
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SHEET
A.3

L:\CONT 1091 - 63 Trail Bridge Repairs TAP\CAD DRAWINGS\OVERALL LOCATION MAP & TRAFFIC CONTROL - ACCESS PLAN.dwg 7/2/2026 9:59 AM



- NOTE:
- TRAIL PATH SHALL BE CLOSED DURING CONSTRUCTION.
 - PEDESTRIAN TRAFFIC SHALL BE DETOURED AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL NECESSARY SIGNAGE, BARRICADES, AND PEDESTRIAN CONTROL DEVICES.
 - THROUGH TRAFFIC OF US 63 AND ALL SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES



PROJECT LOCATION NO.2
TRAFFIC CONTROL

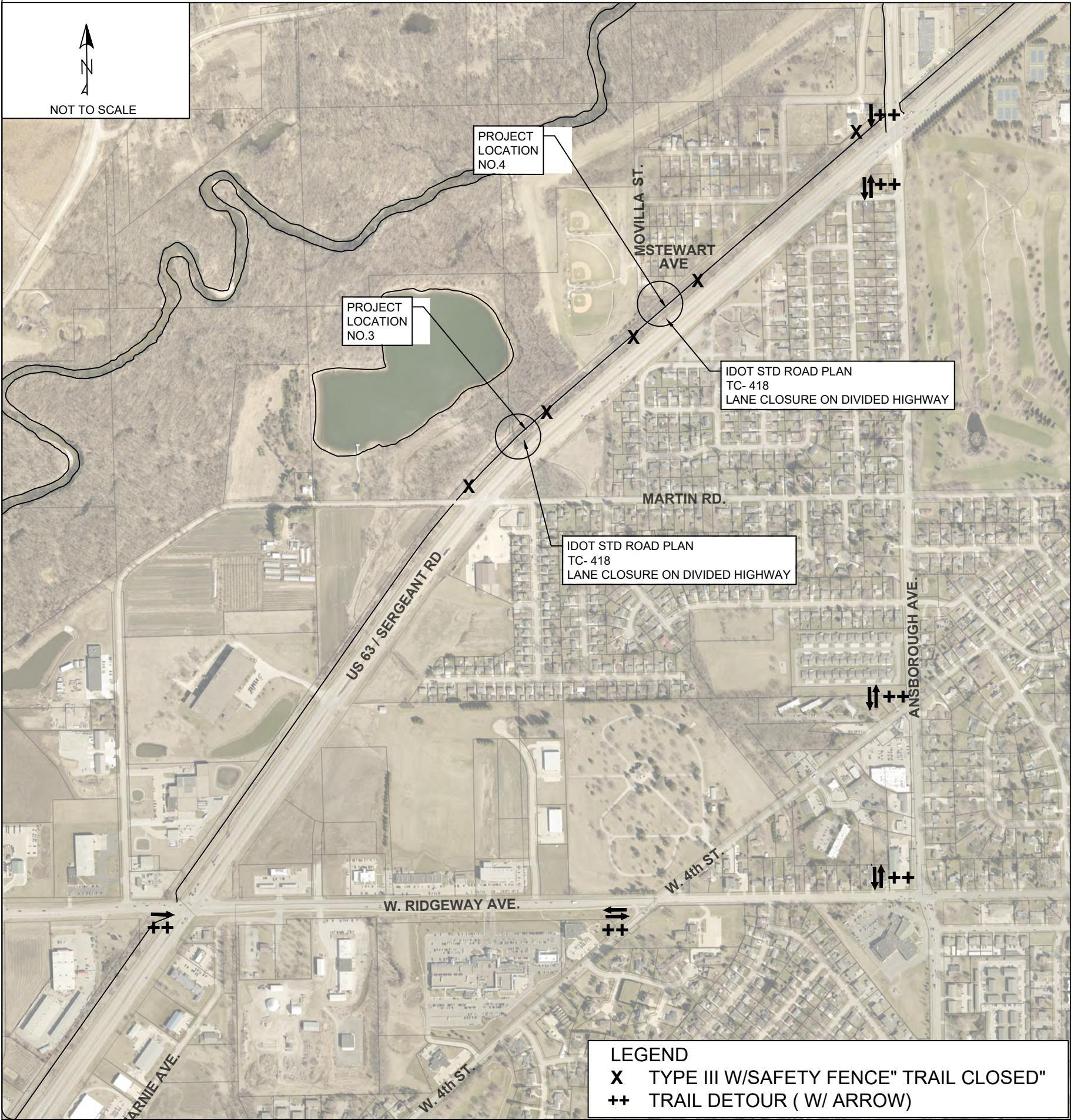
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SHEET
A.4

L:\CONT 1 091 - 63 Trail Bridge Repairs TAP\CAD DRAWINGS\OVERALL LOCATION MAP & TRAFFIC CONTROL - ACCESS PLAN.dwg 7/2/2026 9:59 AM



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 - THROUGH TRAFFIC OF US 63 AND ALL SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES



PROJECT LOCATION NO.3 & 4
TRAFFIC CONTROL

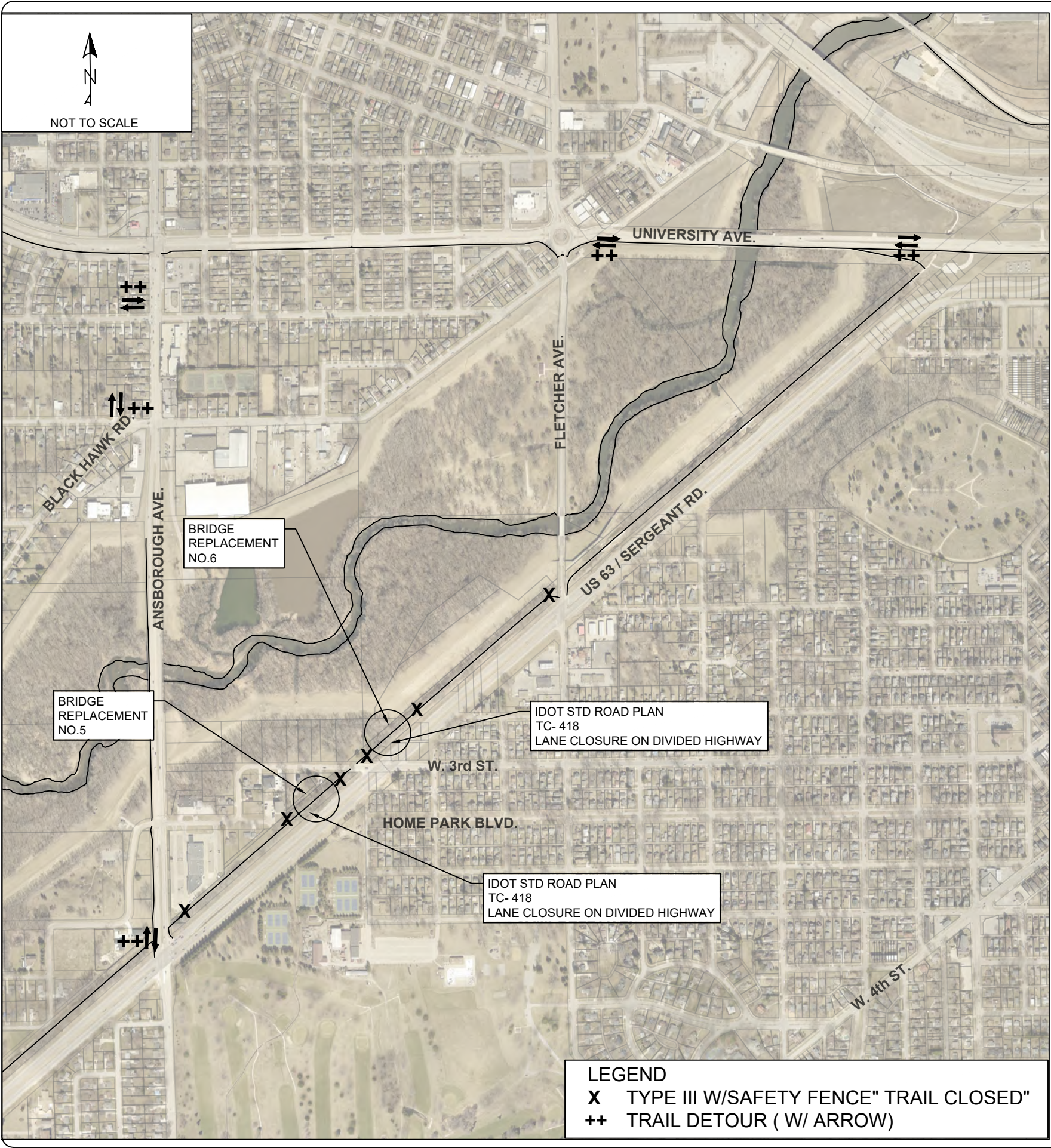
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SHEET
A.5

L:\CONT 1091 - 63 Trail Bridge Repairs\TAPCAD DRAWINGS\OVERALL LOCATION MAP & TRAFFIC CONTROL - ACCESS PLAN.dwg 7/2/2026 9:59 AM



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 - THROUGH TRAFFIC OF US 63 AND ALL SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES



PROJECT LOCATION NO.5 & 6
TRAFFIC CONTROL

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SERGEANT RD TRAIL BRIDGES
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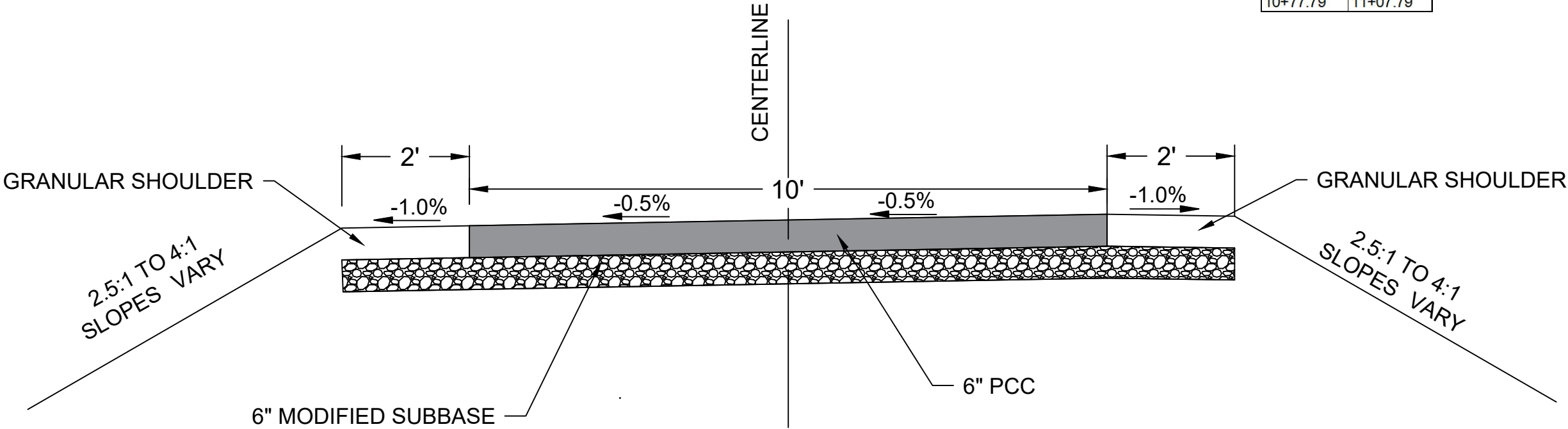
SHEET
A.6

L:\CONT 1091 - 63 Trail Bridge Repairs TAPICAD DRAWINGS\OVERALL LOCATION MAP & TRAFFIC CONTROL - ACCESS PLAN.dwg 7/2/2026 9:59 AM

SERGEANT ROAD TRAIL TYPICAL SECTION

PROJECT LOCATION No. 1

BEGIN STA	END STA
10+77.79	11+07.79

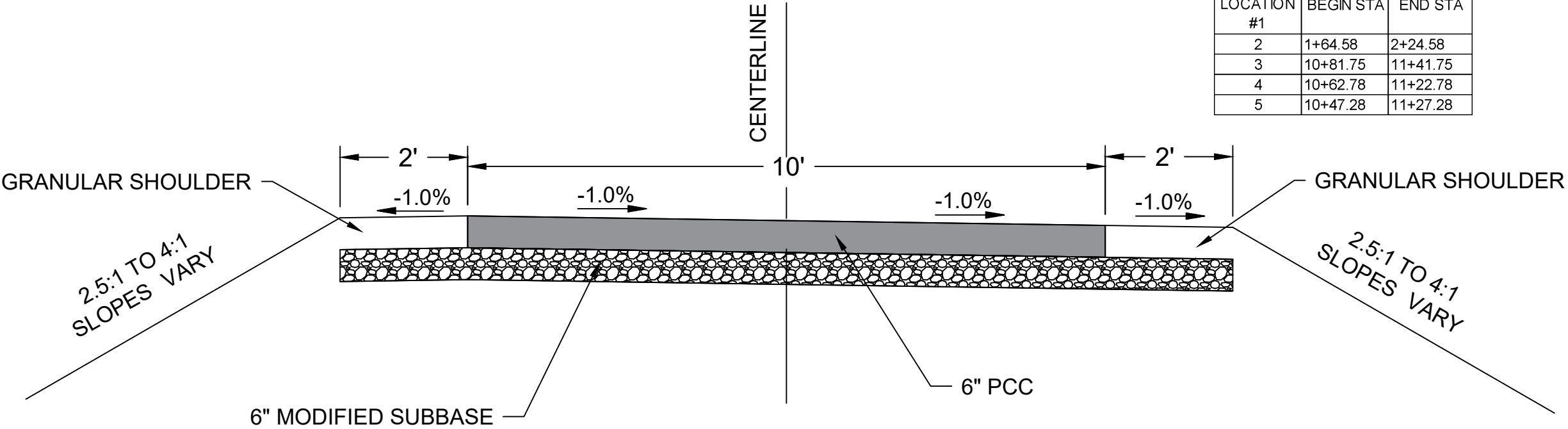


CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS IN PCC TRAIL AT 10 FT SPACING & ALL JOINTS SHALL BE SEALED.

SERGEANT ROAD TRAIL TYPICAL SECTION

PROJECT LOCATION No. 2, 3, 4 & 5

PROJECT LOCATION #1	BEGIN STA	END STA
2	1+64.58	2+24.58
3	10+81.75	11+41.75
4	10+62.78	11+22.78
5	10+47.28	11+27.28



TYPICAL CROSS SECTION - BRIDGE
NO.1,2,3,4,5

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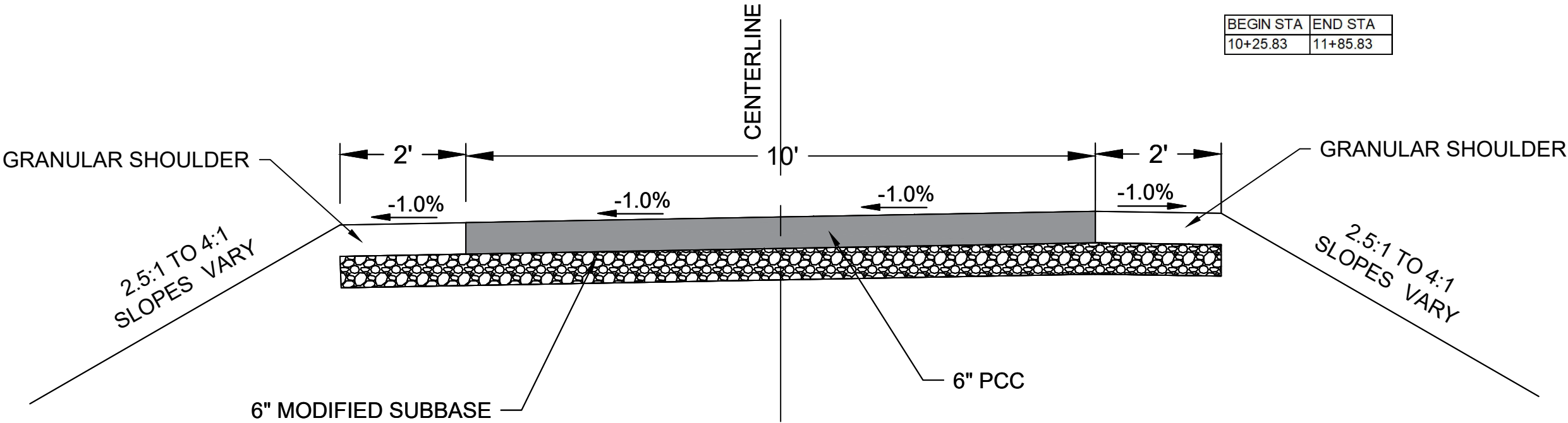
DATE: 7/2/2026

**SHEET
B.1**

L:\CONT 1091 - 63 Trail Bridge Repairs TAP\CAD DRAWINGS\OVERALL LOCATION MAP & TRAFFIC CONTROL - ACCESS PLAN.dwg 7/2/2026 9:59 AM

SERGEANT ROAD TRAIL TYPICAL SECTION

PROJECT LOCATION No.6



BEGIN STA	END STA
10+25.83	11+85.83

CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS IN PCC TRAIL AT 10 FT SPACING & ALL JOINTS SHALL BE SEALED.



TYPICAL CROSS SECTION - BRIDGE NO.6

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SHEET
B.2

L:\CONT 1081 - 63 Trail Bridge Repairs TAP\CAD DRAWINGS\OVERALL LOCATION MAP & TRAFFIC CONTROL - ACCESS PLAN.dwg 7/2/2026 9:59 AM

Item No.	Item Code	Item	Unit	Estimated							As Built					
				Project Location #1	Project Location #2	Project Location #3	Project Location #4	Project Location #5	Project Location #6	Total Qty's	Project Location #1	Project Location #2	Project Location #3	Project Location #4	Project Location #5	Project Location #6
1	2101-0850001	CLEARING AND GRUBBING	ACRE	0.16	0.24	0.30	0.15	0.21	0.45	1.51						
2	2102-2625000	EMBANKMENT-IN-PLACE	CY					204.00		204.00						
3	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	4.00	146.00	308.00	98.70	178.80	288.60	1024.10						
4	2102-2710090	EXCAVATION, CLASS 10, WASTE	CY	288.00	216.70	402.40	92.80		812.60	1812.50						
5	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	204.60	258.50	395.00	269.20	255.20	502.00	1884.50						
6	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN	CY			28.00			23.30	51.30						
7	2115-0100000	MODIFIED SUBBASE	CY	10.00	20.00	20.00	20.00	26.70	53.30	150.00						
8	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	4.20	8.40	8.40	8.40	11.20	22.40	63.00						
9	2210-0475290	MACADAM STONE BASE	TON			97.70			81.70	179.40						
10	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS		0.20	0.20	0.20	0.20	0.20	1.00						
11	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1.00						1.00						
12	2415-2110806	PRECAST CONCRETE BOX CULVERT, 8 FT. X 6 FT.	LF			62.00				62.00						
13	2415-2111004	PRECAST CONCRETE BOX CULVERT, 10 FT. X 4 FT.	LF						36.00	36.00						
14	2415-3510000	PRECAST CONCRETE WINGWALL	EACH			4.00			4.00	8.00						
15	2416-0100048	APRONS, CONCRETE, 48 IN. DIA.	EACH	4.00	6.00		4.00			14.00						
16	2416-1165048	CULVERT, 2000D CONCRETE ENTRANCE PIPE, 48 IN. DIA.	LF	52.00	72.00		64.00	132.00		320.00						
17	2435-0251230	INTAKE, SW-512, 30 IN.	EACH				1.00			1.00						
18	2435-0700010	CONNECTION TO EXISTING MANHOLE	EACH				1.00			1.00						
19	2502-8212204	SUBDRAIN, PERFORATED PLASTIC PIPE, 4 IN. DIA.	LF			164.00			120.00	284.00						
20	2502-8221303	SUBDRAIN OUTLET, DR-303	EACH			4.00			4.00	8.00						
21	2503-0114224	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 24 IN.	LF				112.00			112.00						
22	2507-6800042	REVTMENT, CLASS D	TON			91.00			194.00	285.00						
23	2507-8029000	EROSION STONE	TON	86.80	212.00		81.30	117.00		497.10						
24	2511-0300000	REMOVAL OF RECREATIONAL TRAIL	SY	33.30	66.70	66.70	66.70	90.00	177.80	501.20						
25	2511-0302600	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN.	SY	33.30	66.70	66.70	66.70	90.00	177.80	501.20						
26	2524-9100020	OBJECT MARKER, TYPE 2	EACH	2.00	2.00	2.00	2.00	2.00	2.00	12.00						
27	2528-8445110	TRAFFIC CONTROL	LS	0.16	0.16	0.17	0.17	0.17	0.17	1.00						
28	2533-4980005	MOBILIZATION	LS	0.16	0.16	0.17	0.17	0.17	0.17	1.00						
29	2601-2634150	MULCHING, WOOD CELLULOSE FIBER	ACRE	0.13	0.16	0.25	0.17	0.16	0.31	1.18						
30	2601-2636041	SEEDING AND FERTILIZING	ACRE	0.13	0.16	0.25	0.17	0.16	0.31	1.18						
31	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	SQ	55.20	70.00	106.10	51.30	68.90	135.60	487.10						
32	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	0.13	0.16	0.25	0.17	0.16	0.31	1.18						
33	2601-2643411	TURF REINFORCEMENT MAT, TYPE 1	SQ			21.60				21.60						
34	2602-0000020	SILT FENCE	LF	130.00	30.00	192.00	408.00	130.00	178.00	1068.00						
35	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	130.00	30.00	192.00	408.00	130.00	178.00	1068.00						
36	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	130.00	30.00	192.00	408.00	130.00	178.00	1068.00						
37	2602-0000150	STABILIZED CONSTRUCTION ENTRANCE, EC-303	LF	100.00	100.00	40.00	75.00	85.00	75.00	475.00						
38	2602-0000309	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 9 IN. DIA.	LF	210.00	415.00	320.00	192.00	351.00	578.00	2066.00						
39	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	LF	210.00	415.00	320.00	192.00	351.00	578.00	2066.00						
40	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	1.00	1.00	1.00	1.00	1.00	1.00	6.00						
41	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1.00	1.00	1.00	1.00	1.00	1.00	6.00						



ESTIMATED PROJECT QUANTITIES

TAP-U-8155(788)-81-07
SERGEANT RD TRAIL BRIDGES
REPLACEMENT
CONTRACT #1091

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 6/12/2026

SHEET
C.1

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Item No.	Item Code	Item	Estimate Reference Notes
1	2101-0850001	CLEARING AND GRUBBING	Some trees were felled and removed prior to construction. Contractor will be responsible for removing the remaining stumps required for grading. All material generated as a result of Clearing and Grubbings shall become the property of the contractor and must be disposed off site. All wood material must be disposed of according to Iowa Department of Agriculture and Land Stewardship Emerald Ash Borer Quarantine Order.
2	2102-2625000	EMBANKMENT-IN-PLACE	Provide borrow material according to Section 2102 of the Standard Specifications. Item pertains to Bridge location #2. Includes 178.8 cu. yds. of suitable roadway excavation material and 204.0 cu. yds. of contractor furnished borrow required to construct embankment. Includes 382.80 cu. yds. of Class 10 excavation for roadway and borrow. No waste material is anticipated for this location.
3	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	Engineer used a 1.3 shrink factor in quantities. Includes 1024.0 cu. yds. of suitable material to be used in the roadway fill., according to Article 1106.07 of the Standard Specifications. Overhaul will not be measured or paid for, but shall be considered incidental to excavation on this project.
4	2102-2710090	EXCAVATION, CLASS 10, WASTE	Includes 1815.5 cu. yds. of Class 10 to be wasted. All waste must be removed from the project site. Overhaul will not be measured or paid for, but shall be considered incidental to excavation on this project.
5	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	Strip 12 inches of topsoil within the limits of grading. After excavating to the sub grade elevations, spread the stockpiled topsoil to an 8 inch depth across the grading area. Seed the disturbed topsoil stockpile area as per section 2601.05 of the standard specifications. Seeding of the stockpile areas shall be considered incidental to this bid item.
6	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN	Refer to sheet B.3. Blanket extends 36 inches outside of box at a depth of 12". Includes fabric layer
7	2115-0100000	MODIFIED SUBBASE	Refer to Typical cross section on Sheet B.1-B.2. Subbase to extend 2' beyond edge of trail at a depth of 6".
8	2121-7425020	GRANULAR SHOULDERS, TYPE B	6" thick
9	2210-0475290	MACADAM STONE BASE	Includes furnish and placement of macadam stone base as a filter layer under revetment as shown on the drawings. Compaction requirements in accordance with Article 2210.03, C, of the Standard Specifications are waived. Material shall be compacted as required to provide a stable working surface for placement of revetment. Estimated at 1.75 ton/cu yd. Macadam layer extends 36 inches outside of box at a depth of 24". Macadam stone base may be constructed on natural soil subgrade as indicated on the drawings.
10	2401-6745625	REMOVAL OF EXISTING BRIDGE	Includes removal and disposal of abutments, piers and all other existing bridge materials.
11	2401-6745650	REMOVAL OF EXISTING STRUCTURES	This item pertains to project location #1 for the removal of existing culvert pipe and bridge. Measurement: Lump Sum This payment shall be full compensation for furnishing all material, equipment, and labor for the performance of all work necessary for removal
12	2415-2110806	PRECAST CONCRETE BOX CULVERT, 8 FT. X 6 FT.	Includes material and labor associated with providing and installing the culvert ties, lifting hole plugs, engineering fabric, joint material, and grout as required.
13	2415-2111004	PRECAST CONCRETE BOX CULVERT, 10 FT. X 4 FT.	Includes material and labor associated with providing and installing the culvert ties, lifting hole plugs, engineering fabric, joint material, and grout as required.
14	2415-3510000	PRECAST CONCRETE WING WALL	
15	2416-0100048	APRONS, CONCRETE, 48 IN. DIA	
16	2416-1165048	CULVERT, 2000D CONCRETE ENTRANCE PIPE, 48 IN. DIA	
17	2435-0251230	INTAKE, SW-512, 30 IN.	
18	2435-0700010	CONNECTION TO EXISTING MANHOLE	
19	2502-8212204	SUBDRAIN, PERFORATED PLASTIC PIPE, 4 IN. DIA	
20	2502-8221303	SUBDRAIN OUTLET, DR-303	
21	2503-0114224	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 24 IN.	
22	2507-6800042	REVEIMENT, CLASS D	Verify the specific locations with the Engineer prior to beginning placement. Class D revetment shall be mechanically processed to remove material 3 inches and less. Estimated at 1.6 ton/cu yd. Broken Concrete and granite is not allowed.
23	2507-8029000	EROSION STONE	Estimated at 1.6 ton/cu yd. Erosion Stone shall meet the requirements of Article 4130. Broken Concrete and granite is not allowed. 12" depth
24	2511-0300000	REMOVAL OF RECREATIONAL TRAIL	See traffic control plan for pedestrian staging or closings. Existing trail is HMA assumed to be 6" thick
25	2511-0302600	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN.	See traffic control plan for pedestrian staging or closings. Certified plant inspection (Section 2521 of the Specifications) is required for this item.
26	2524-9100020	OBJECT MARKER, TYPE 2	
27	2528-8445110	TRAFFIC CONTROL	Refer to Traffic Control Plan on Sheet A.3-A.6
28	2533-4980005	MOBILIZATION	
29	2601-2634150	MULCHING, WOOD CELLULOSE FIBER	
30	2601-2636041	SEEDING AND FERTILIZING	
31	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	Refer to Standard Road Plan EC-103. Prepare seedbed according to Article 2601.03, B, 4, of the Standard Specifications prior to seeding and fertilizing under the slope protection.
32	2601-2642100	STABILIZING CROP- SEEDING AND FERTILIZING	Item is included for disturbed areas. Seed and fertilize all disturbed areas according to Article 2601.03, C, 1, of the Standard Specifications. If permanent seeding cannot be placed due to the restrictive planting dates, stabilizing crop will need to be placed on all disturbed areas as temporary erosion control. Preparation and seeding shall be performed in accordance with Section 2601. Stabilizing crop will not be used when the application dates in Section 2601 allow permanent seeding. If stabilizing crop must be used, place immediately following completions of finished grading. Reseeding of these areas will be required at contractors expense if damage occurs due to contractors negligence during the contract period. It is not necessary to place stabilizing crop in locations that have been covered by Wood Excelsior Mat.
33	2601-2643411	TURF REINFORCEMENT MAT, TYPE 1	
34	2602-0000020	SILT FENCE	Verify the specific locations with the Engineer prior to beginning placement. See Standard Road Plan EC-201. The engineer may adjust silt fence locations to fit field conditions.
35	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	This item is included for silt fence and silt fence for ditch check removal required for staging reasons, removal to allow for replacement (replacement to be paid separately), or for areas that have achieved 70% permanent growth. Remove silt fence and posts after mulching or vegetation is established and approved by the engineer.
36	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	
37	2602-0000150	STABILIZED CONSTRUCTION ENTRANCE, EC-303	This item is included for clean-out and repair of the silt fence and silt fence for ditch checks during the project.
38	2602-0000309	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 9 IN. DIA.	Use Perimeter and Slope Sediment Control Devices fabricated using wood excelsior.
39	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	
40	2602-0010010	MOBILIZATIONS, EROSION CONTROL	
41	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	



ESTIMATED REFERENCE INFORMATION

TAP-U-8155(788)-81-07
SERGEANT RD TRAIL BRIDGES
REPLACEMENT
CONTRACT #1091

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
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WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 7/2/2026

SHEET
C.2

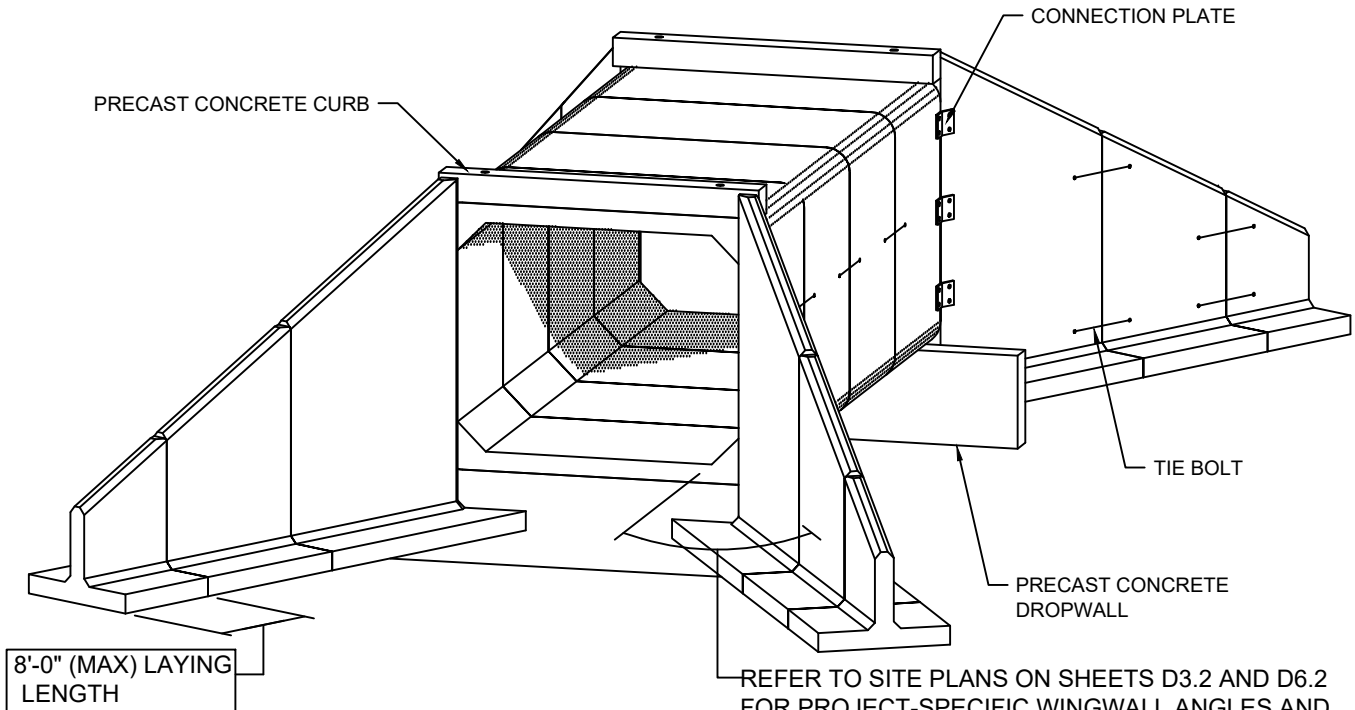
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105-4
10-18-11
STANDARD ROAD PLANS

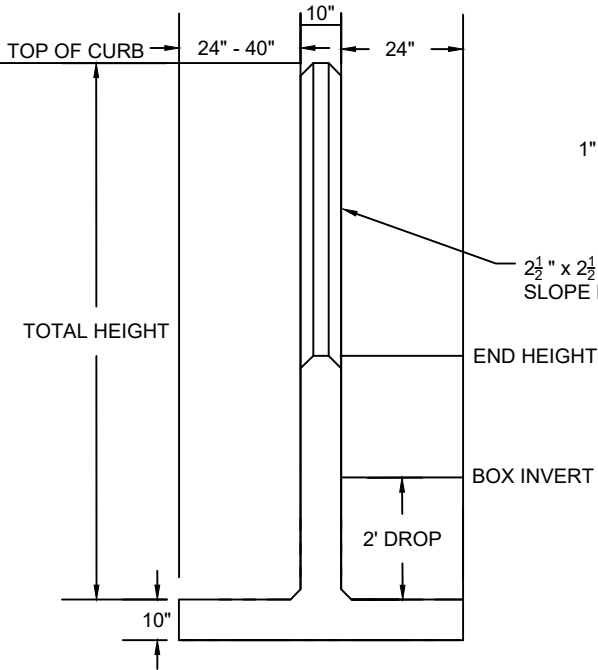
The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
DR-101	4/18/2017	Pipe Culvert (Bedding and Backfill)
DR-102	4/21/2015	Pipe Culvert (Cover and Camber)
DR-103	4/21/2015	Pipe Culvert (Installation Details)
DR-111	4/17/2018	Box Culvert (Backfill)
DR-121	4/18/2023	Connected Pipe Joints
DR-201	10/17/2023	Concrete Aprons
DR-213	10/18/2022	Pipe Apron Guard
DR-301	4/19/2022	Subdrains for Fill or Foundation Drainage (Standard)
DR-303	10/17/2017	Subdrains (Longitudinal)
DR-305	4/19/2022	Subdrain Outlets (Standard Subdrain, Pressure Release and Special)
DR-601	4/18/2017	Reinforced Concrete Pipe Culvert
EC-103	4/21/2015	Wood Excelsior Mat for Slope Protection
EC-104	4/17/2018	Turf Reinforced Mat (TRM)
EC-201	4/20/2021	Silt Fence
EC-204	10/19/2021	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-303	10/19/2021	Stabilized Construction Entrance
EW-101	10/17/2017	Embankment and Rebuilding Embankments
PV-101	10/21/2025	Joints
SI-173	4/19/2016	Object Markers
SW-101	10/21/2025	Trench Bedding and Backfill Zones
SW-102	10/21/2025	Rigid Gravity Pipe Trench Bedding
SW-512	10/21/2025	Circular Area Intake
TC-202	4/18/2023	Work Within 15 ft of Traveled Way
TC-418	4/18/2023	Lane Closure on Divided Highway

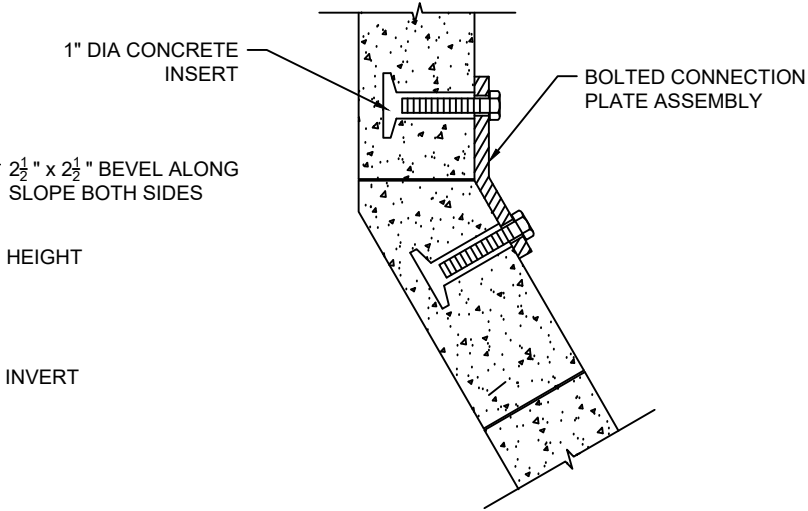
CONCRETE WINGWALL



REFER TO SITE PLANS ON SHEETS D3.2 AND D6.2 FOR PROJECT-SPECIFIC WINGWALL ANGLES AND DIMENSIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ANGLE AND DIMENSIONS AT EACH CULVERT LOCATION BEFORE FORMING.



END VIEW



CONNECTION PLATE DETAIL



STANDARD ROAD PLANS & WING WALL
DETAIL

TAP-U-8155(788)-81-07
SERGEANT RD TRAIL BRIDGES
REPLACEMENT
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SHEET
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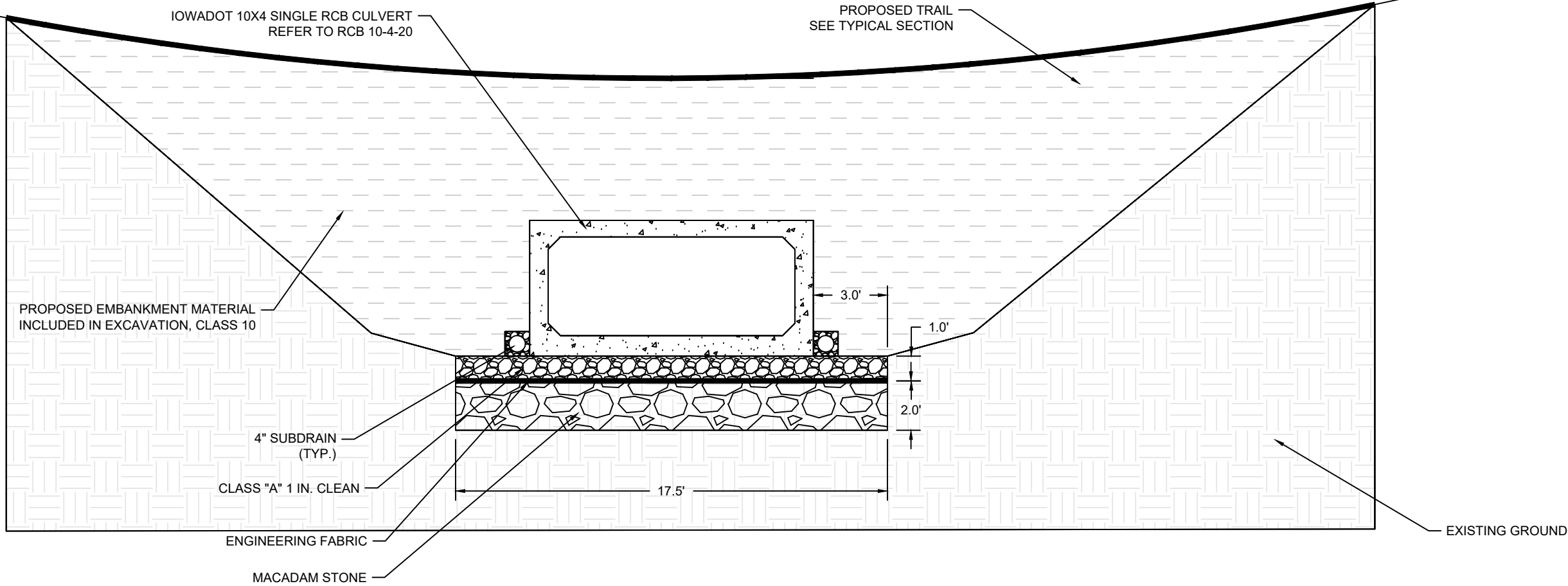
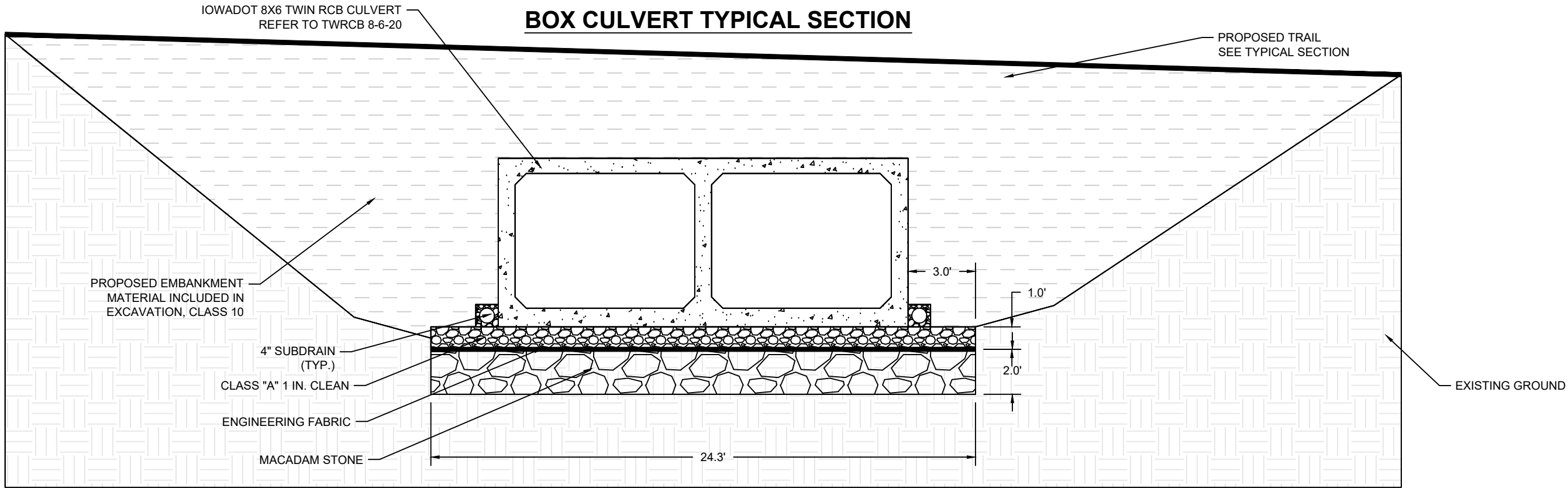
BOX CULVERT DETAIL

TAP-U-8155(788)-81-07
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CONTRACT #1091

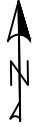
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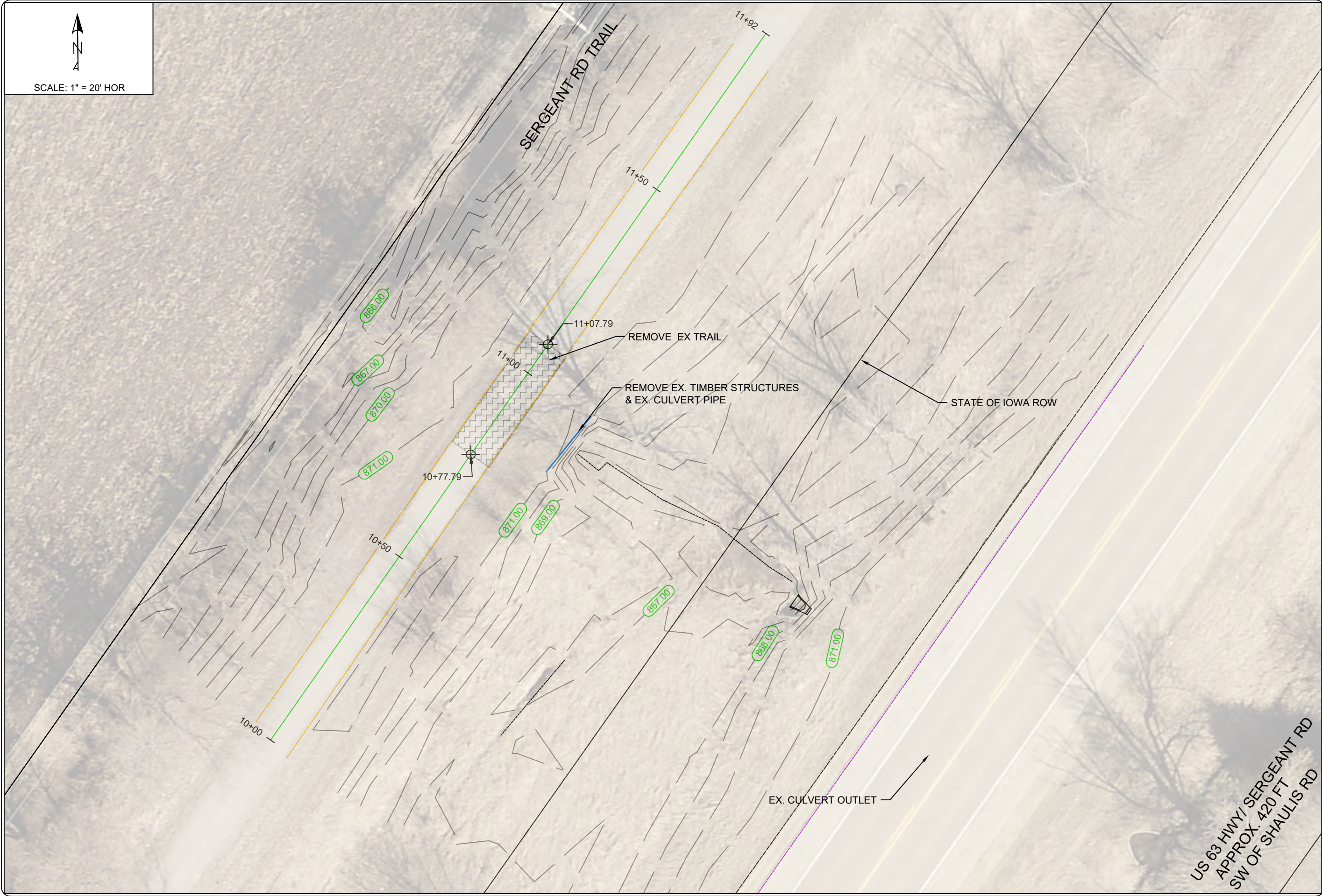
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SCALE: 1" = 20' HOR



US 63 HWY/ SERGEANT RD
APPROX. 420 FT
SW OF SHAULIS RD



PROJECT LOCATION No.1
EXISTING CONDITIONS - REMOVALS

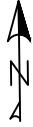
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SERGEANT RD TRAIL BRIDGES
REPLACEMENT
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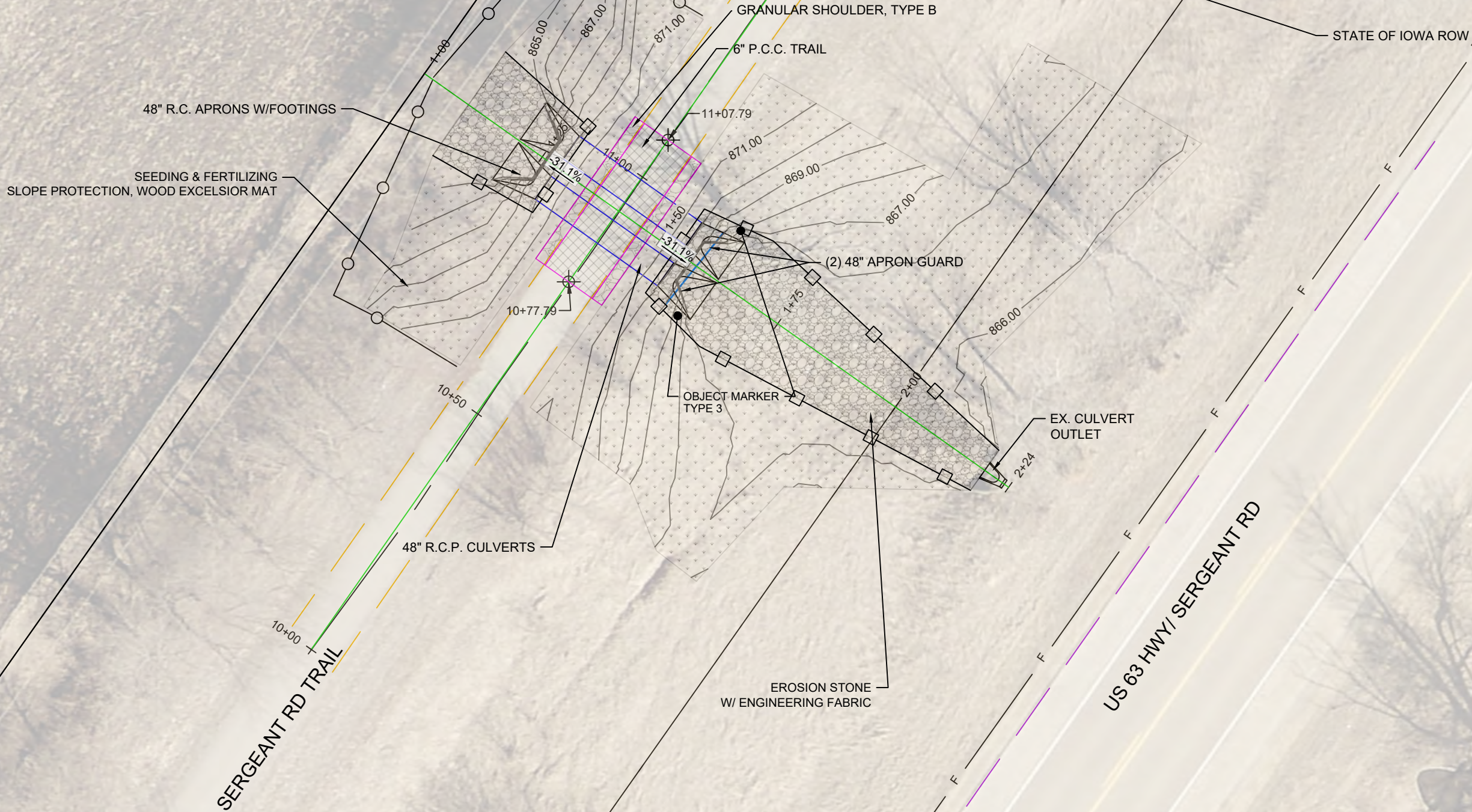
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ROUSSELOW BROS FARMS INC
8814-13- 201-002



PROJECT LOCATION No.1
OVERALL SITE PLAN

TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
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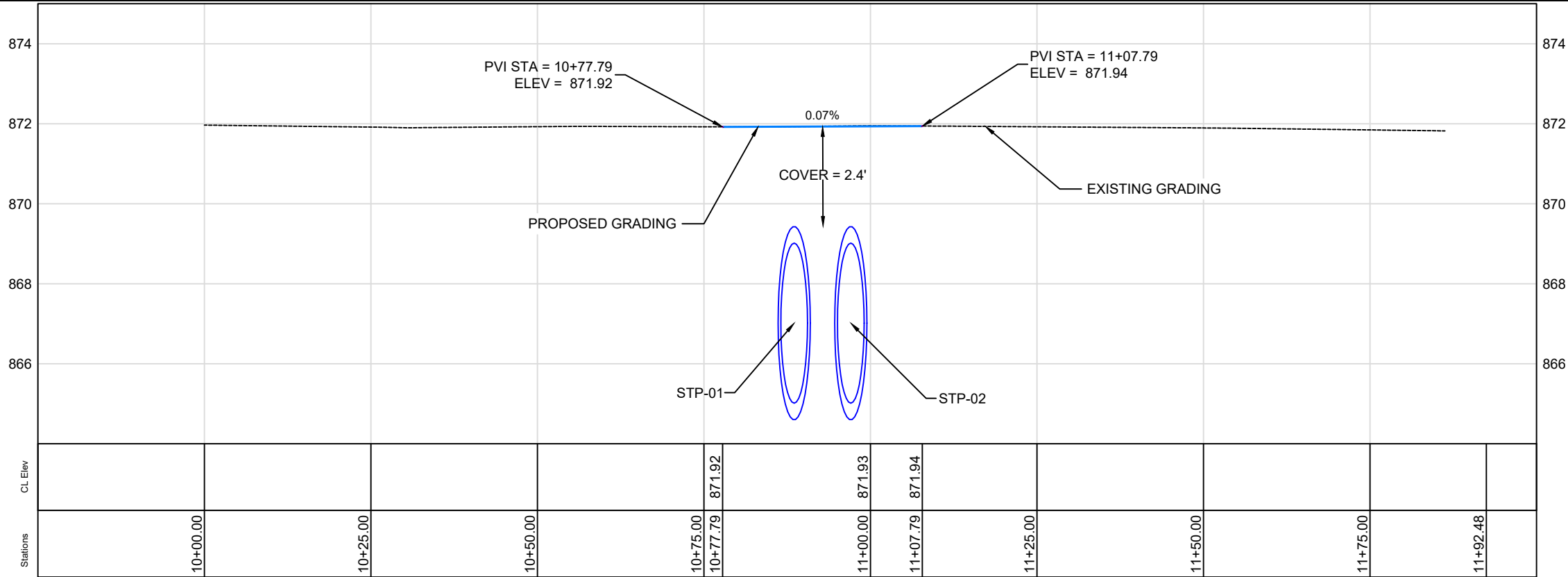
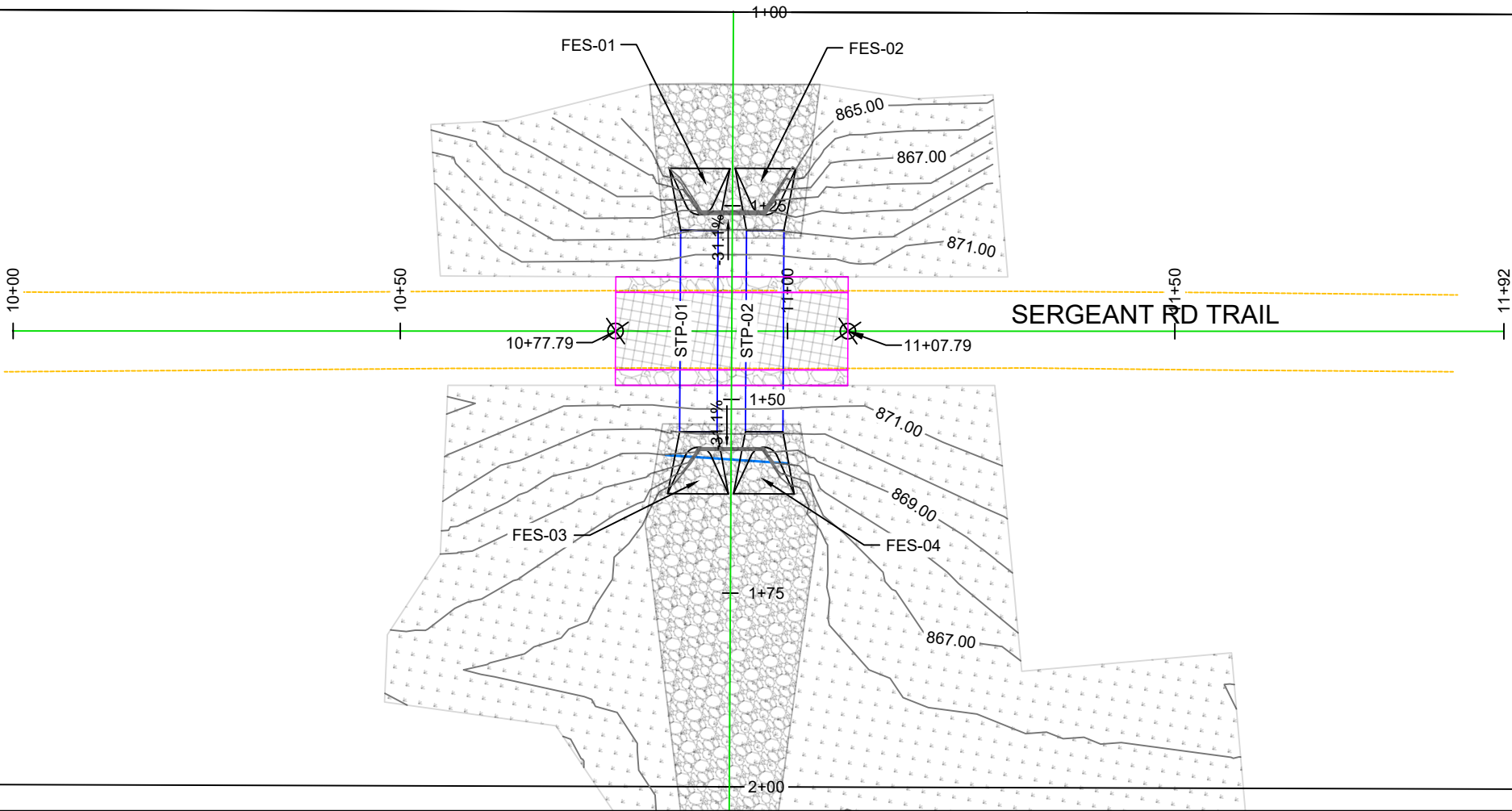
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PROJECT LOCATION No.1

TRAIL P&P

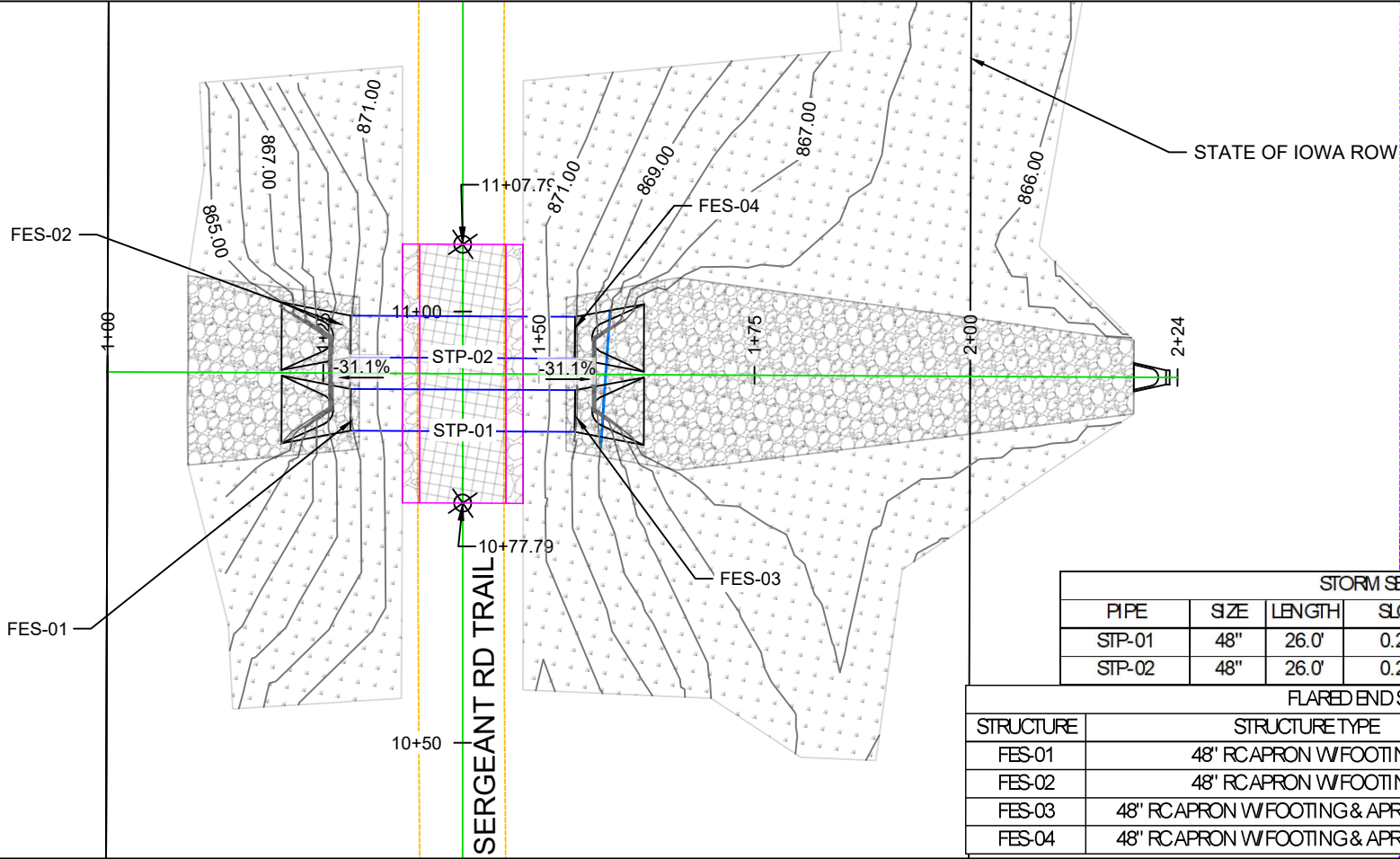
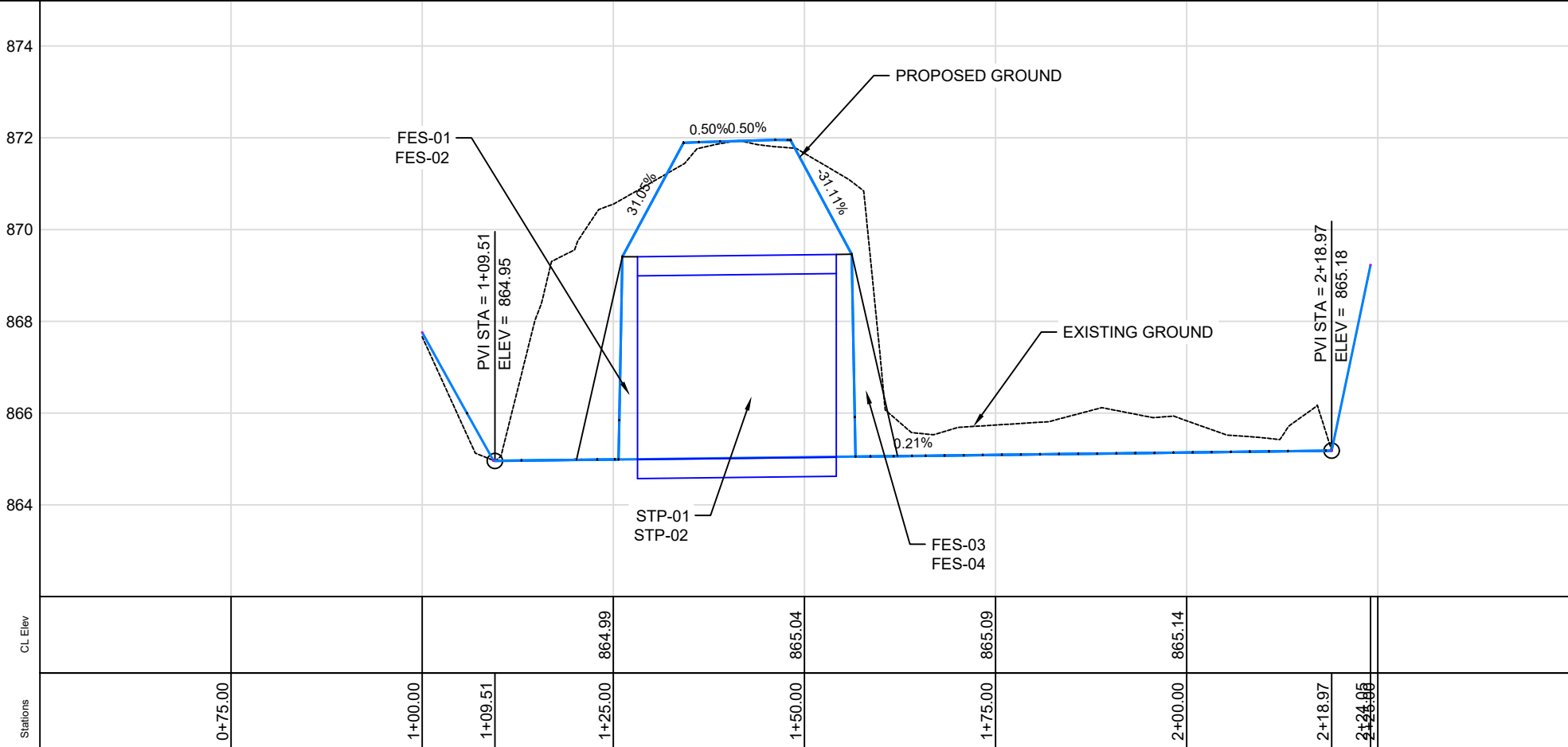
TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
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STORM SEWER PIPES				
PIPE	SIZE	LENGTH	SLOPE	WORK DESCRIPTION
STP-01	48"	26.0'	0.21%	INSTALL RCP, TIE 3 JOINTS BACK
STP-02	48"	26.0'	0.21%	INSTALL RCP, TIE 3 JOINTS BACK

FLARED END SECTION TABLE			
STRUCTURE	STRUCTURE TYPE	STATION/OFFSET	FL ELEVATION
FES-01	48" RC APRON W/ FOOTING	1+20.18/-4.45'	864.98
FES-02	48" RC APRON W/ FOOTING	1+20.18/4.45'	864.98
FES-03	48" RC APRON W/ FOOTING & APRON GUARD	1+62.18/4.45'	865.06
FES-04	48" RC APRON W/ FOOTING & APRON GUARD	1+62.18/4.45'	865.06



PROJECT LOCATION No.1
CULVERT P&P

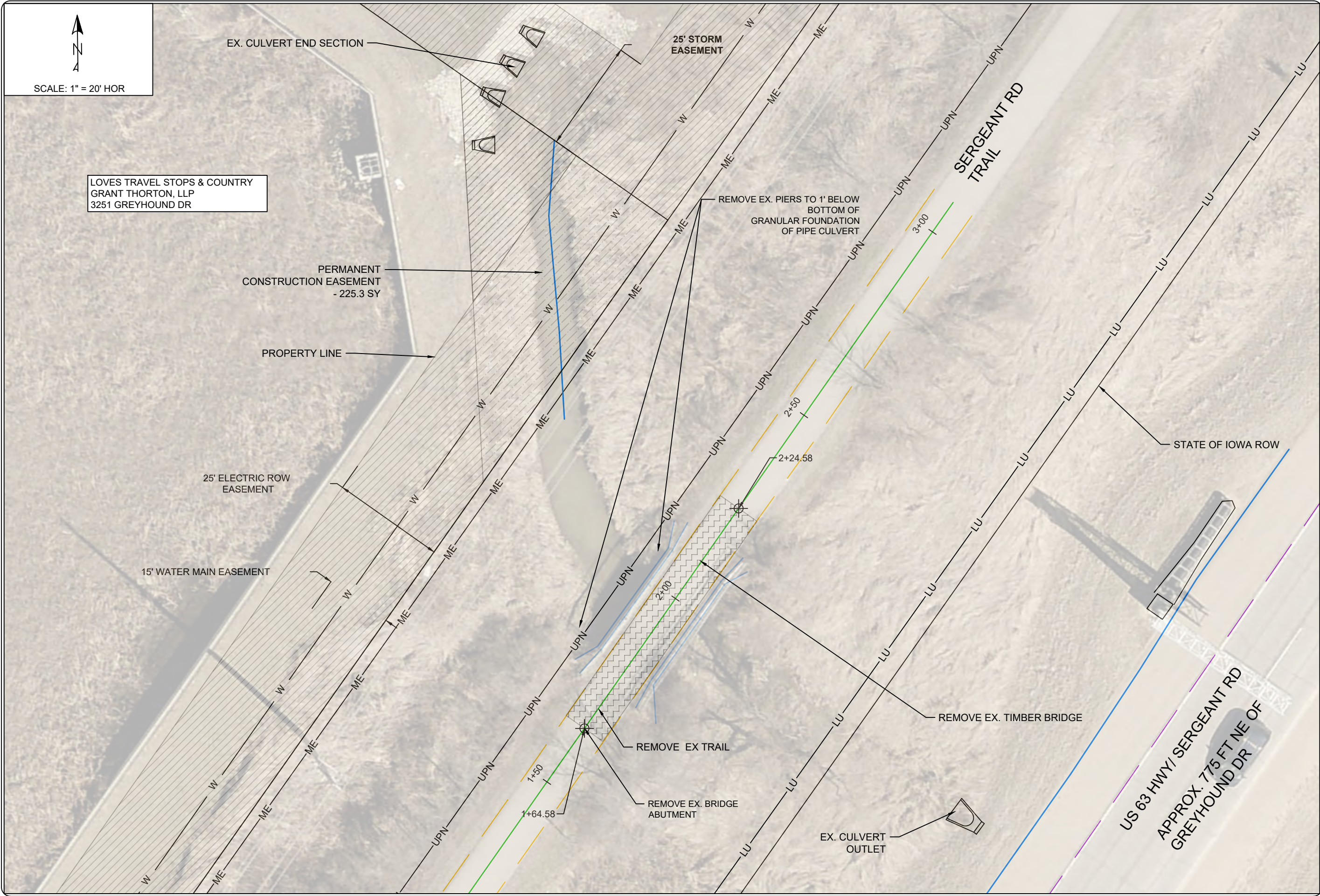
TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
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(319) 291-4312 PHONE
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DATE: 6/22/2026

**SHEET
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PROJECT LOCATION No.2
EXISTING CONDITIONS - REMOVALS

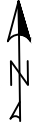
TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

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(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 6/23/2026

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SCALE: 1" = 30' HOR

LOVES TRAVEL STOPS & COUNTRY
GRANT THORTON, LLP
3251 GREYHOUND DR

PRAIRIE LEGACY VENTURES LLC
3315 TITAN TRL

SEEDING & FERTILIZING
SLOPE PROTECTION, WOOD EXCELSIOR MAT

48" R.C. APRONS W/FOOTINGS

48" R.C.P. CULVERTS

HPC: 11+10.61

GRANULAR SHOULDER, TYPE B

2+24.58

6" P.C.C TRAIL

48" APRON GUARD

STATE OF IOWA ROW

HPT: 11+26.40

OBJECT MARKER
TYPE 2

EROSION STONE
W/ ENGINEERING FABRIC

EX. CULVERT
OUTLET

US 63 HWY/ SERGEANT RD



PROJECT LOCATION No.2

OVERALL SITE PLAN

TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

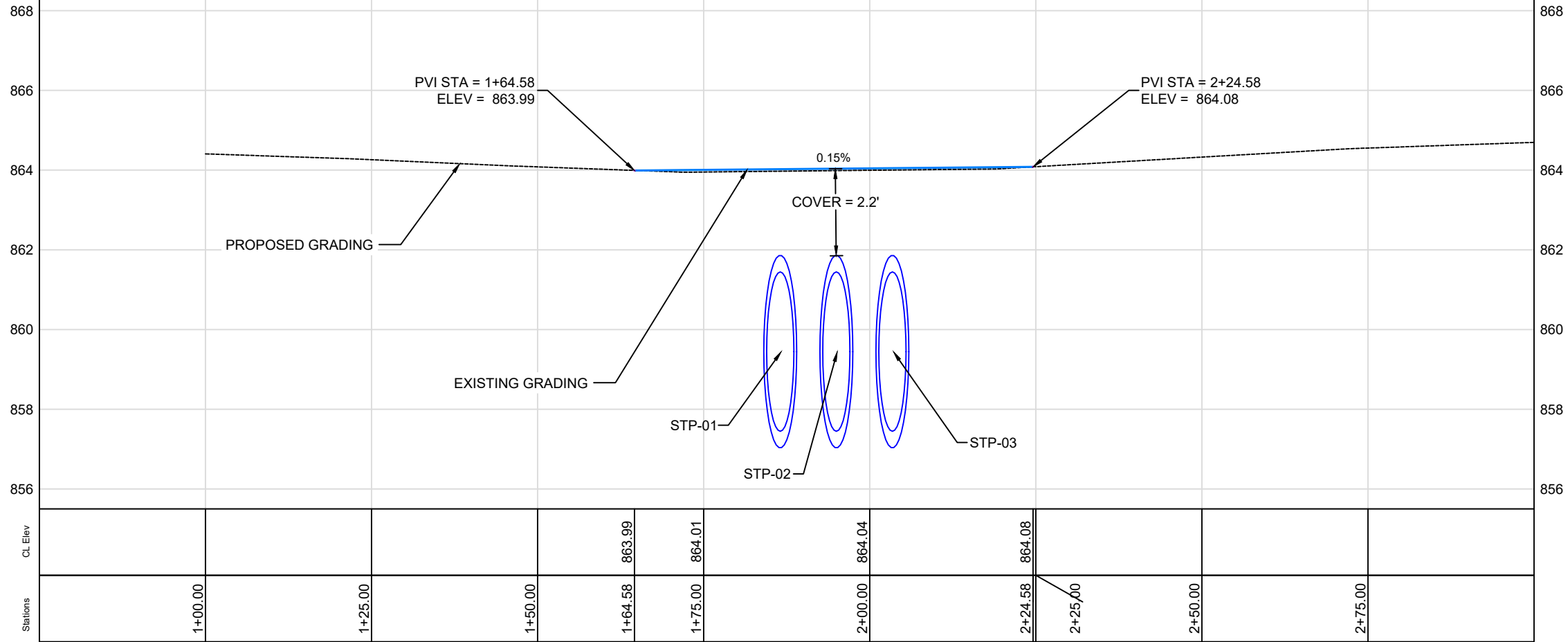
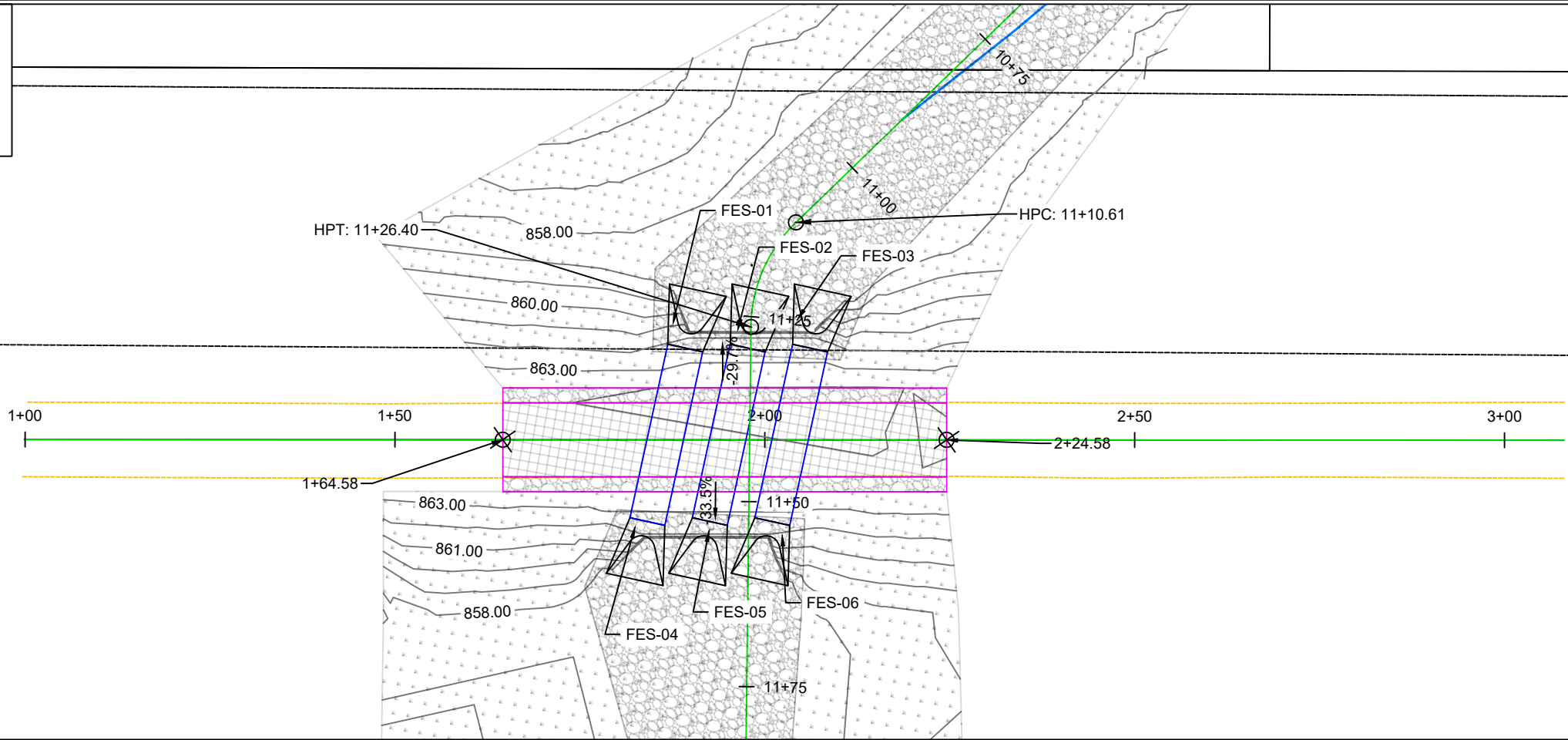
DATE: 6/23/2026

**SHEET
D2.2**

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SCALE: 1" = 20' HOR



PROJECT LOCATION No.2
TRAIL P&P

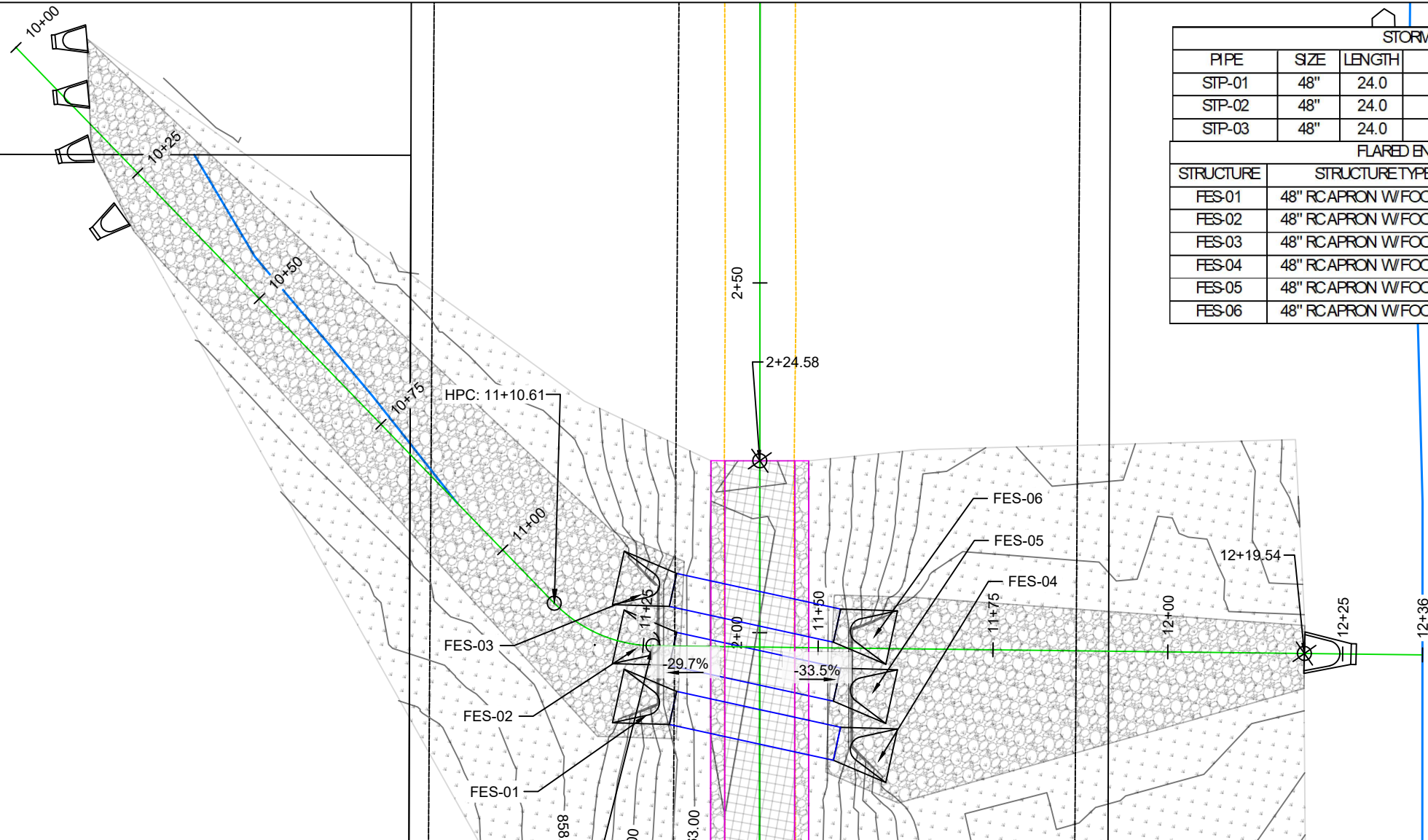
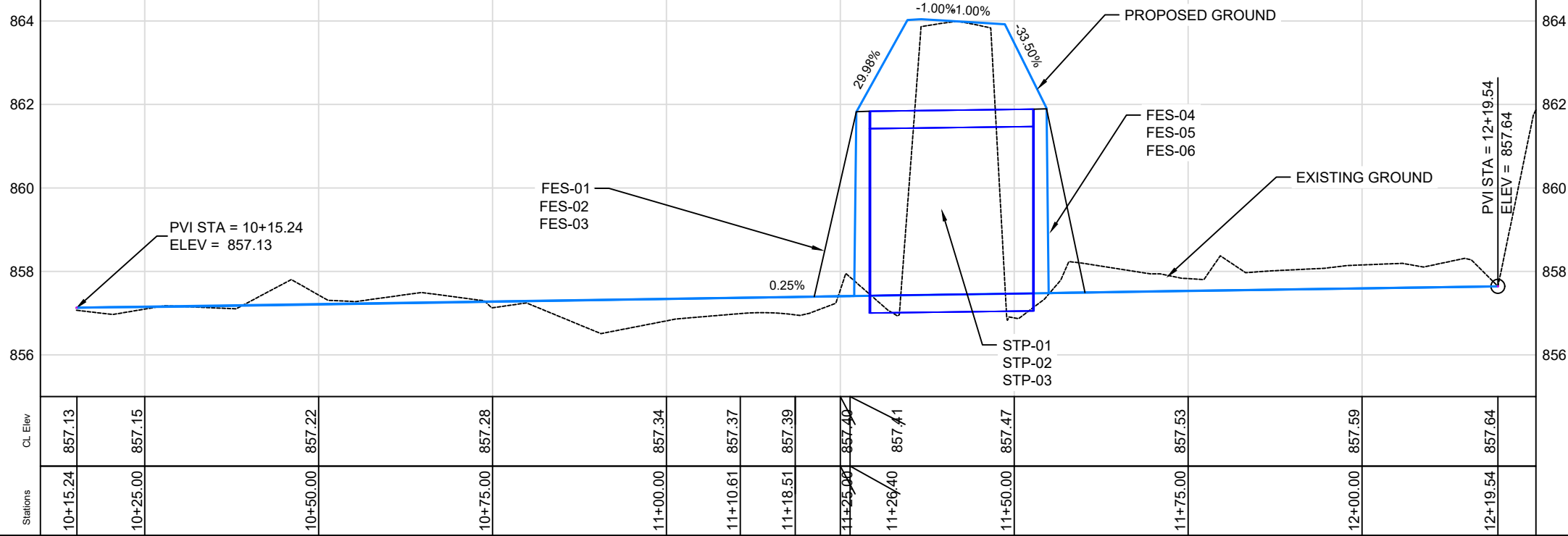
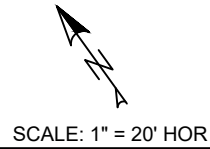
TAP-U-8155(788)-81-07
SERGEANT RD TRAIL BRIDGES
REPLACEMENT
CONTRACT #1091

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
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D2.3

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STORM SEWER PIPES				
PIPE	SIZE	LENGTH	SLOPE	WORK DESCRIPTION
STP-01	48"	24.0	0.25%	INTALL RCP, TIE 3 JOINTS BACK
STP-02	48"	24.0	0.25%	INTALL RCP, TIE 3 JOINTS BACK
STP-03	48"	24.0	0.25%	INTALL RCP, TIE 3 JOINTS BACK

FLARED END SECTION TABLE			
STRUCTURE	STRUCTURE TYPE	STATION/OFFSET	FL ELEVATION
FES-01	48" RC APRON W/ FOOTING	11+22.85/7.67' RT	857.4
FES-02	48" RC APRON W/ FOOTING	11+21.24/0.0'	857.4
FES-03	48" RC APRON W/ FOOTING	11+17.28/8.46' LT	857.4
FES-04	48" RC APRON W/ FOOTING	11+60.69/15.31' RT	857.49
FES-05	48" RC APRON W/ FOOTING	11+60.59/6.86' RT	857.49
FES-06	48" RC APRON W/ FOOTING	11+60.50/1.57' LT	857.49



PROJECT LOCATION No.2
CULVERT P&P

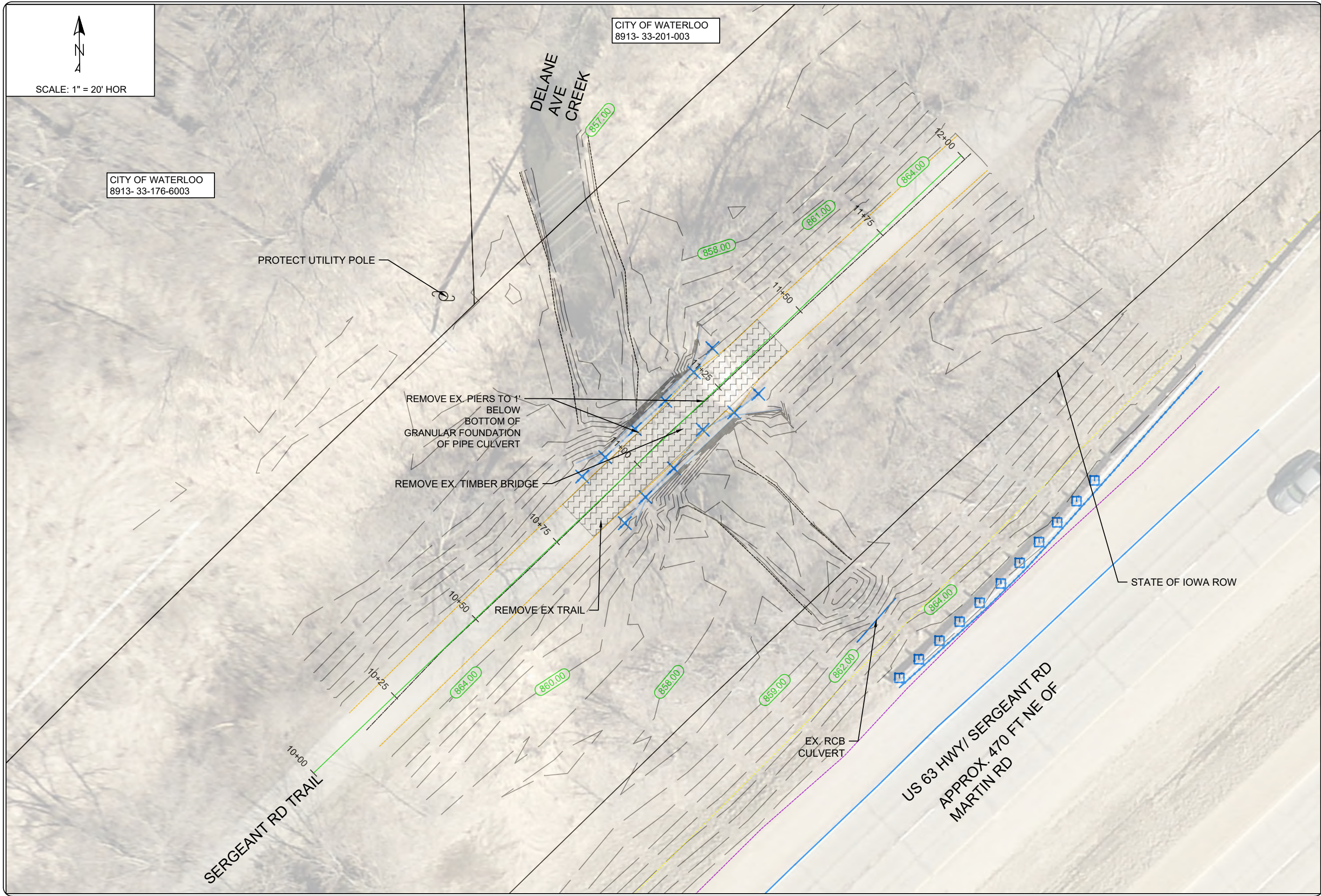
TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
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DATE: 6/23/2026

SHEET
D2.4

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PROJECT LOCATION No.3
D3.1 EXISTING CONDITIONS - REMOVALS

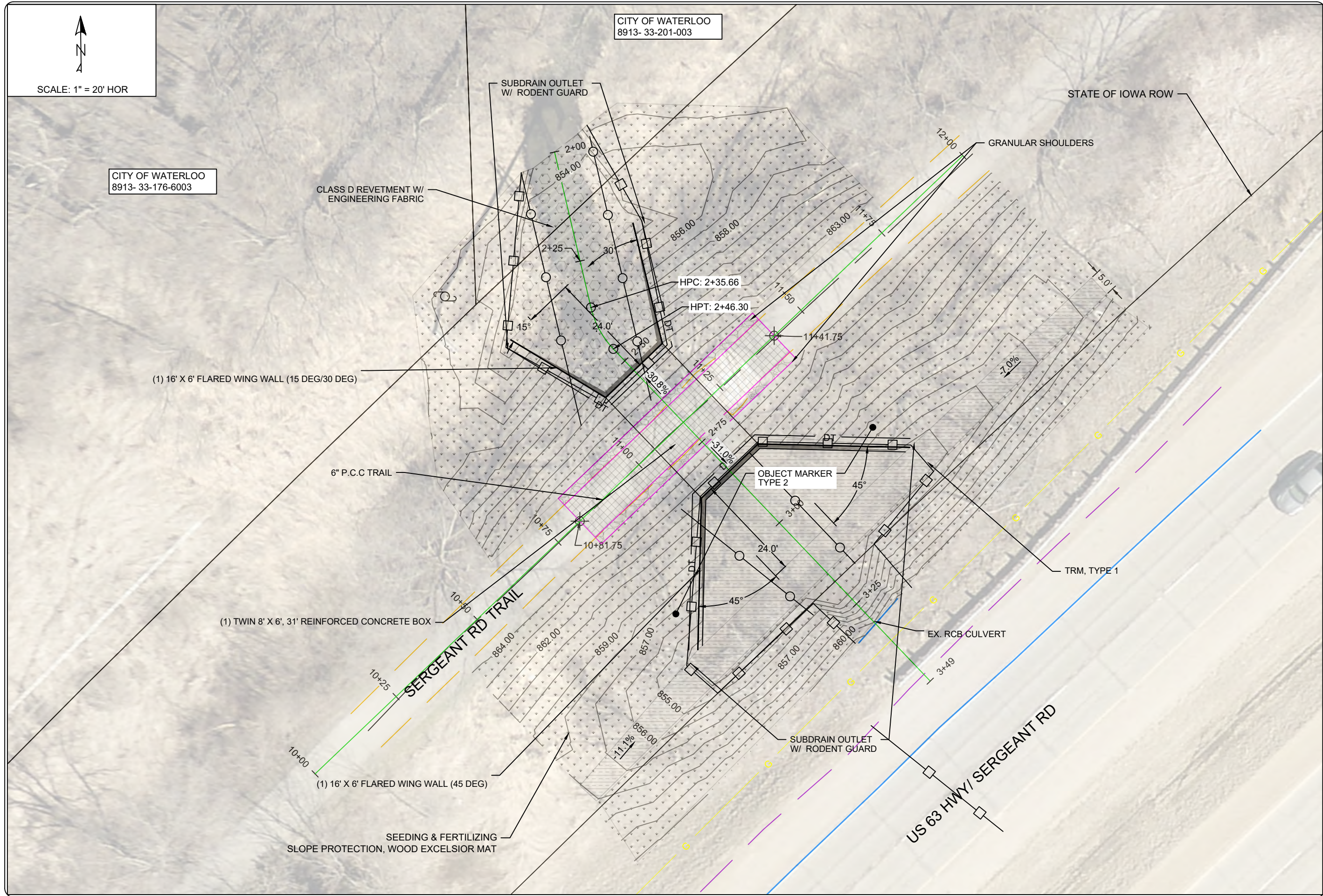
TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

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D3.1**

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PROJECT LOCATION No.3
D3.2 OVERALL SITE PLAN

TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

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ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
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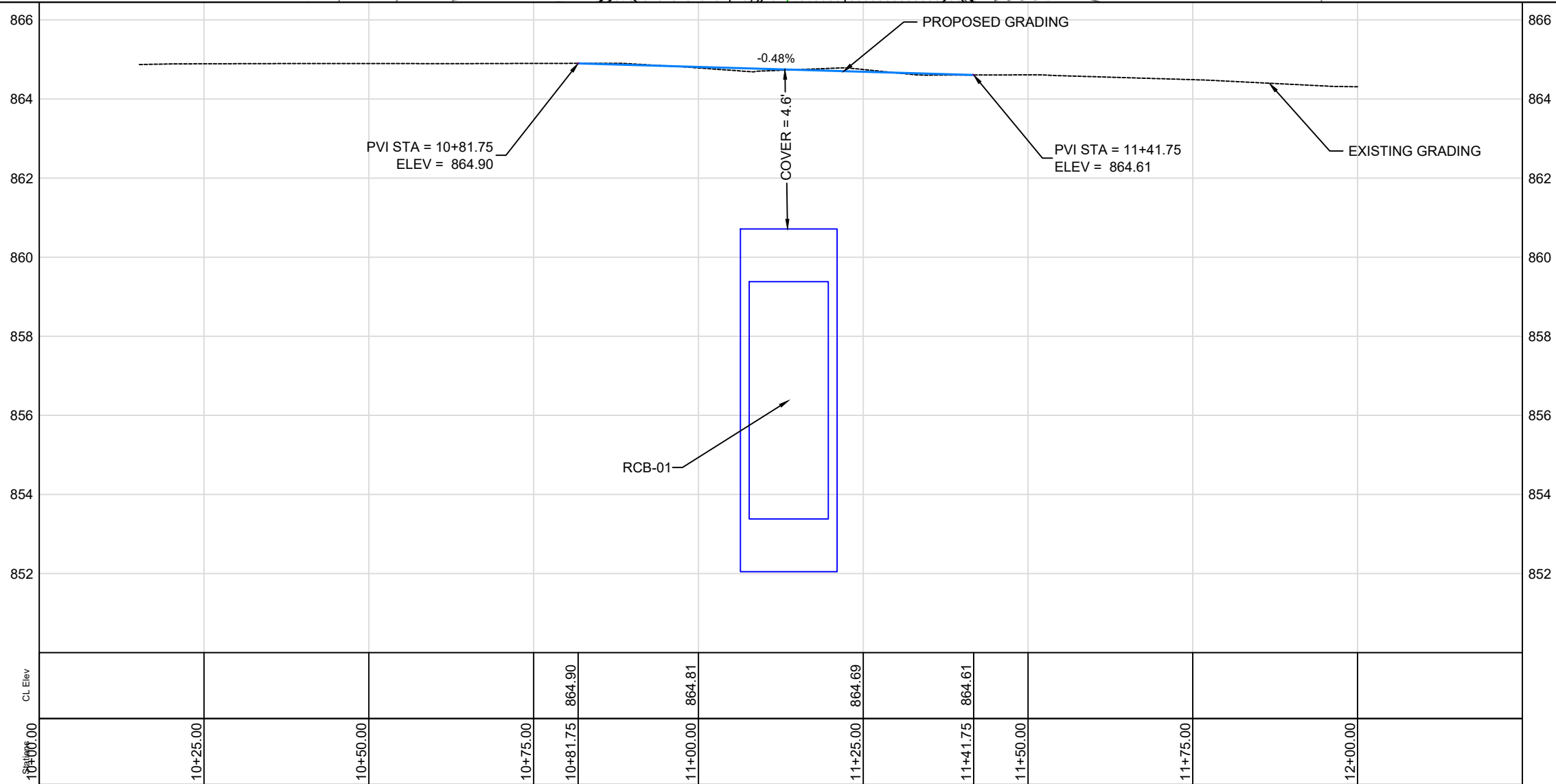
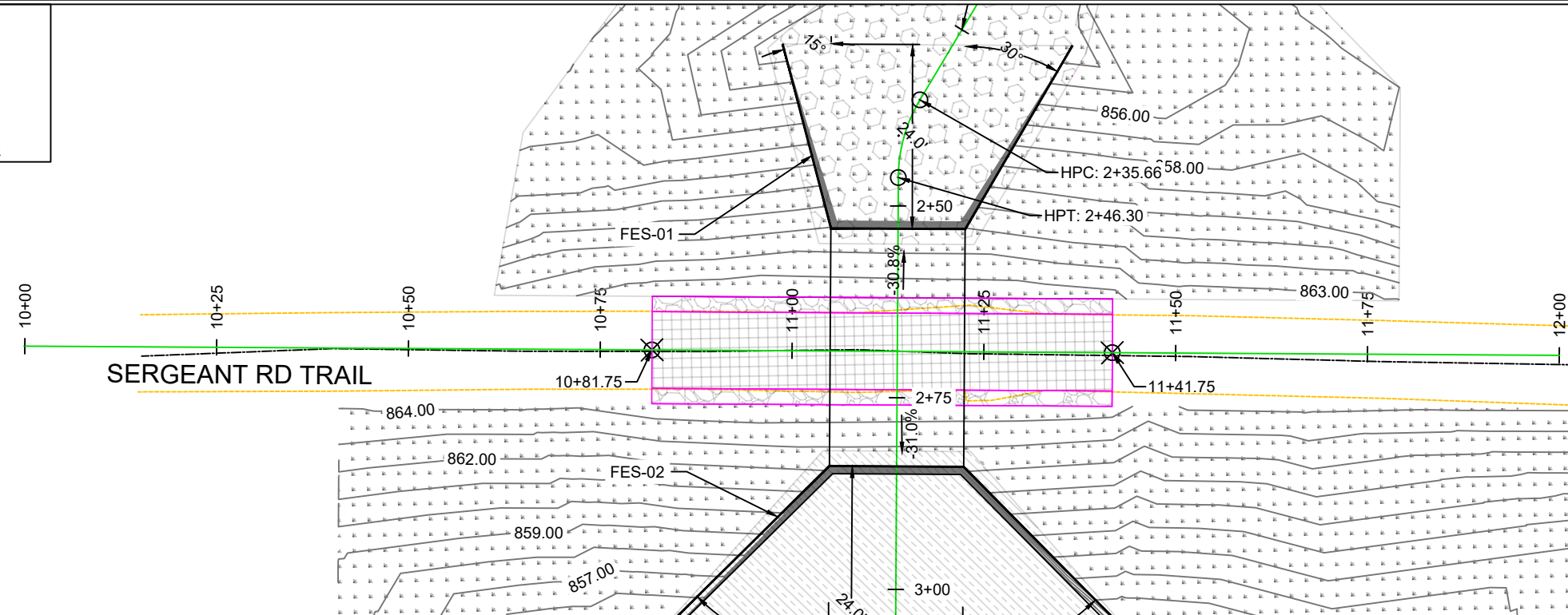
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SHEET
D3.2

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SCALE: 1" = 20' HOR



PROJECT LOCATION No.3
D3.3 TRAIL P&P

TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

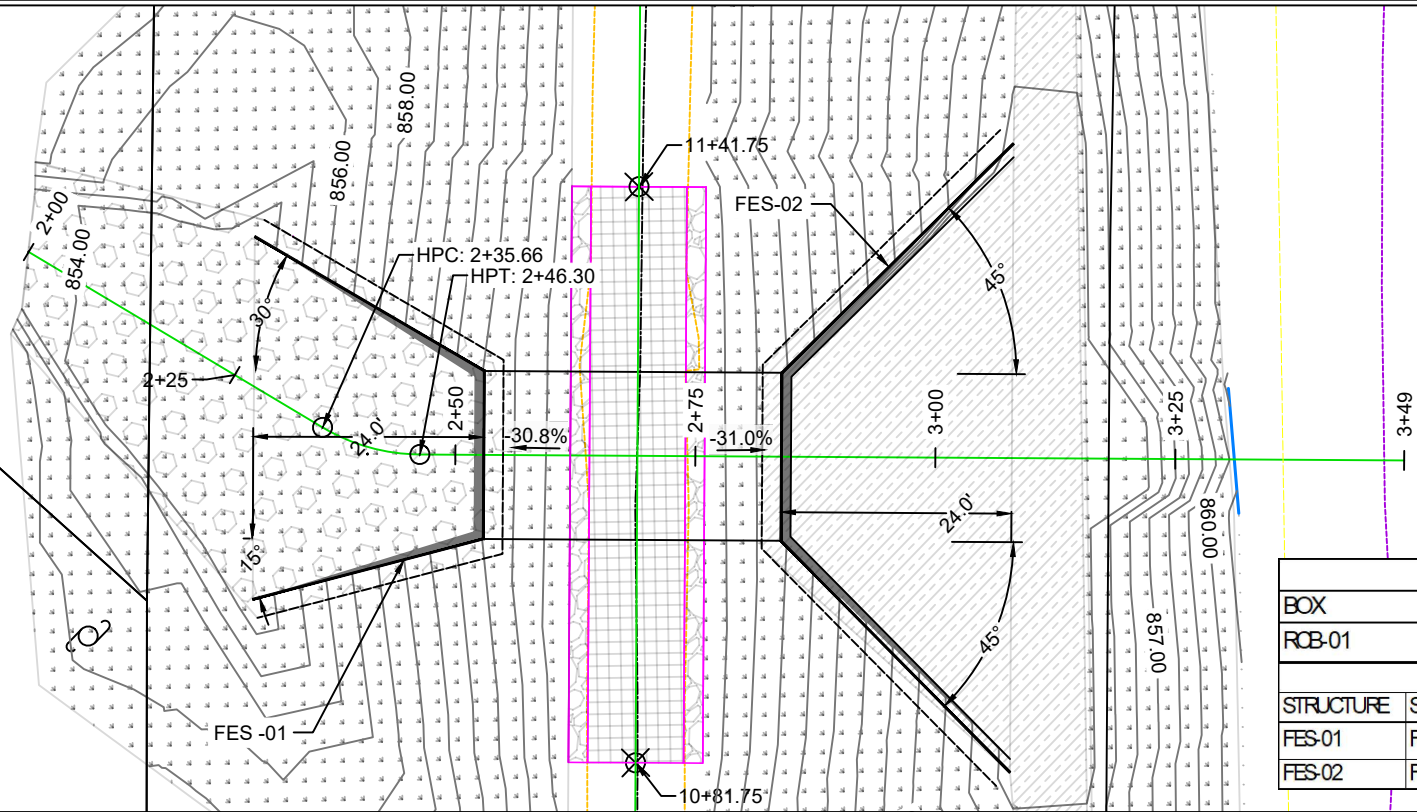
CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 6/23/2026

SHEET
D3.3

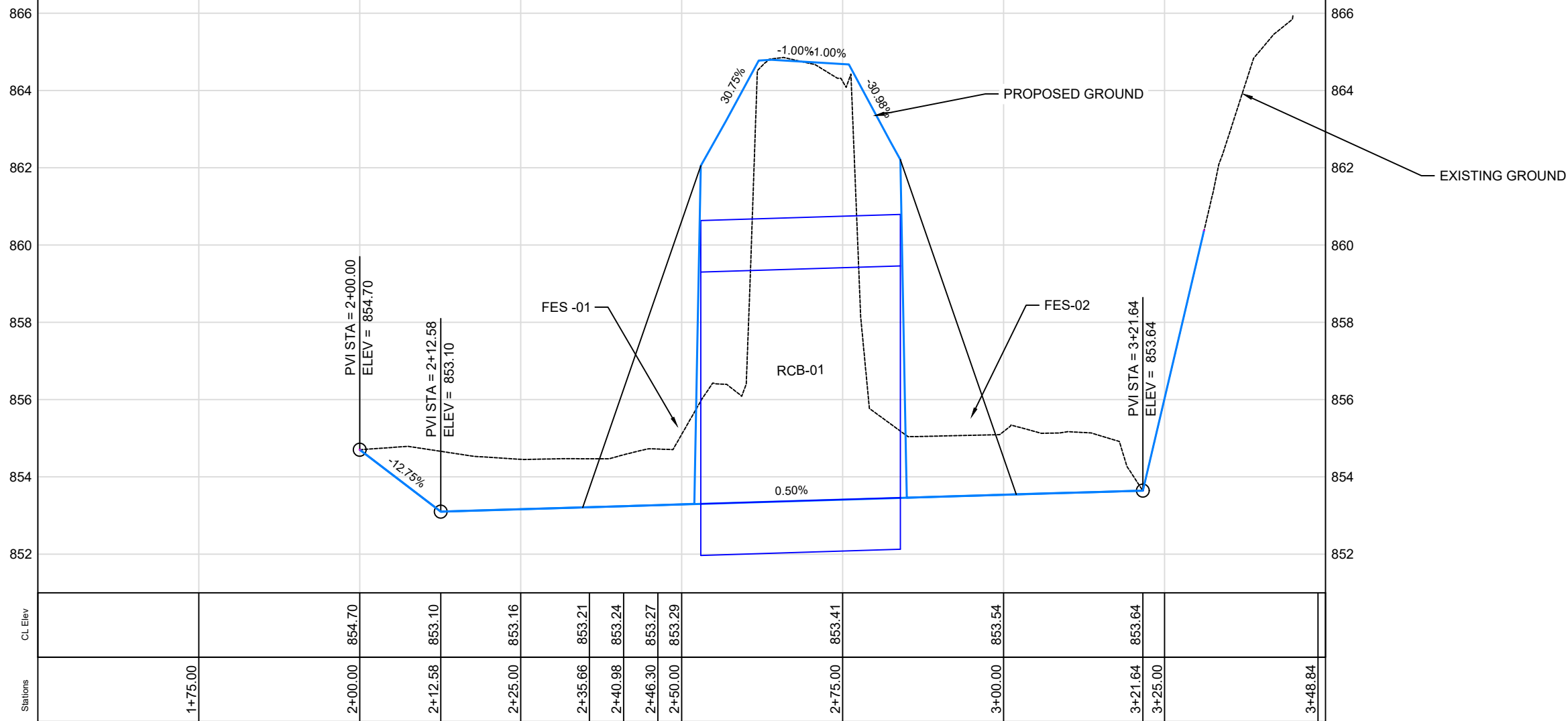
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SCALE: 1" = 20' HOR



US 63 HWY/ SERGEANT RD

BOX CULVERT INFORMATION				
BOX	SIZE	LENGTH	SLOPE	WORK DESCRIPTION
RCB-01	TWN 8' X 6'	31.0'	0.50%	INSTALL RCB
HEADWALL INFORMATION				
STRUCTURE	STRUCTURE TYPE		STATION/ OFFSET	ELEVATION
FES-01	FLARED END SECTION - 15 DEG/ 30 DEG		2+27.33/0.0'	853.17
FES-02	FLARED END SECTION - 45 DEG		3+07.96/0.0'	853.58



PROJECT LOCATION No.3
D3.4 CULVERT P&P

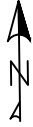
TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
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(319) 291-4262 FAX

DATE: 6/23/2026

SHEET
D3.4

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SCALE: 1" = 20' HOR

MOVILLA ST

PERRY AVE

SERGEANT RD TRAIL

CITY OF WATERLOO
8913-33-206-001

PROTECT UTILITY POLE

REMOVE EX. PIERS TO 1' BELOW BOTTOM OF
GRANULAR FOUNDATION OF PIPE CULVERT

REMOVE EX. BRIDGE
ABUTMENT

REMOVE EX TRAIL

REMOVE EX. TIMBER BRIDGE

EXISTING CULVERT OUTLET

STATE OF IOWA ROW

US 63 HWY/ SERGEANT RD
APPROX. 750' NE
OF MARTIN RD



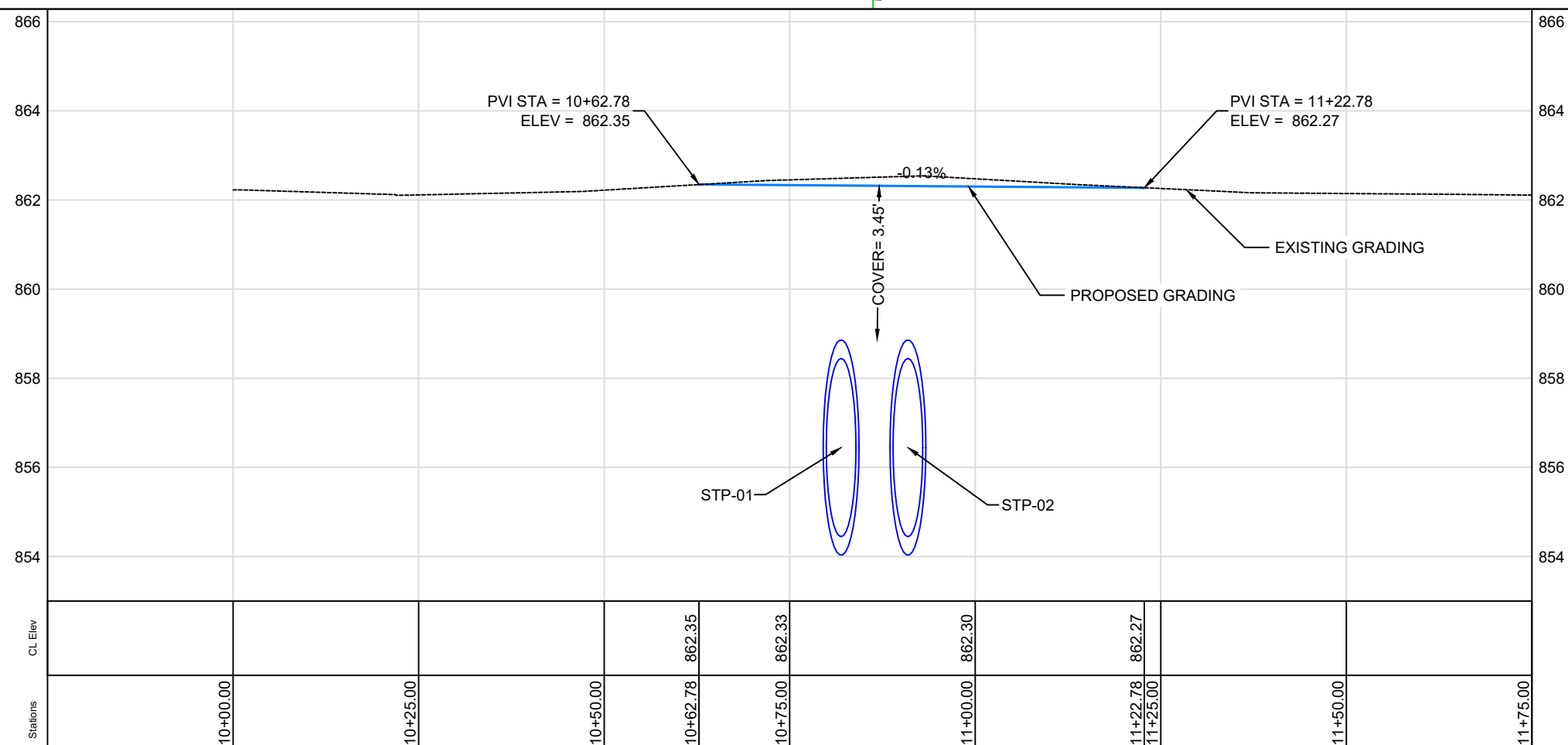
PROJECT LOCATION No.4
EXISTING CONDITIONS - REMOVALS

TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

**CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT**
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/21/2026

**SHEET
D4.1**

[illegible]

PROJECT LOCATION No.4

TRAIL P&P

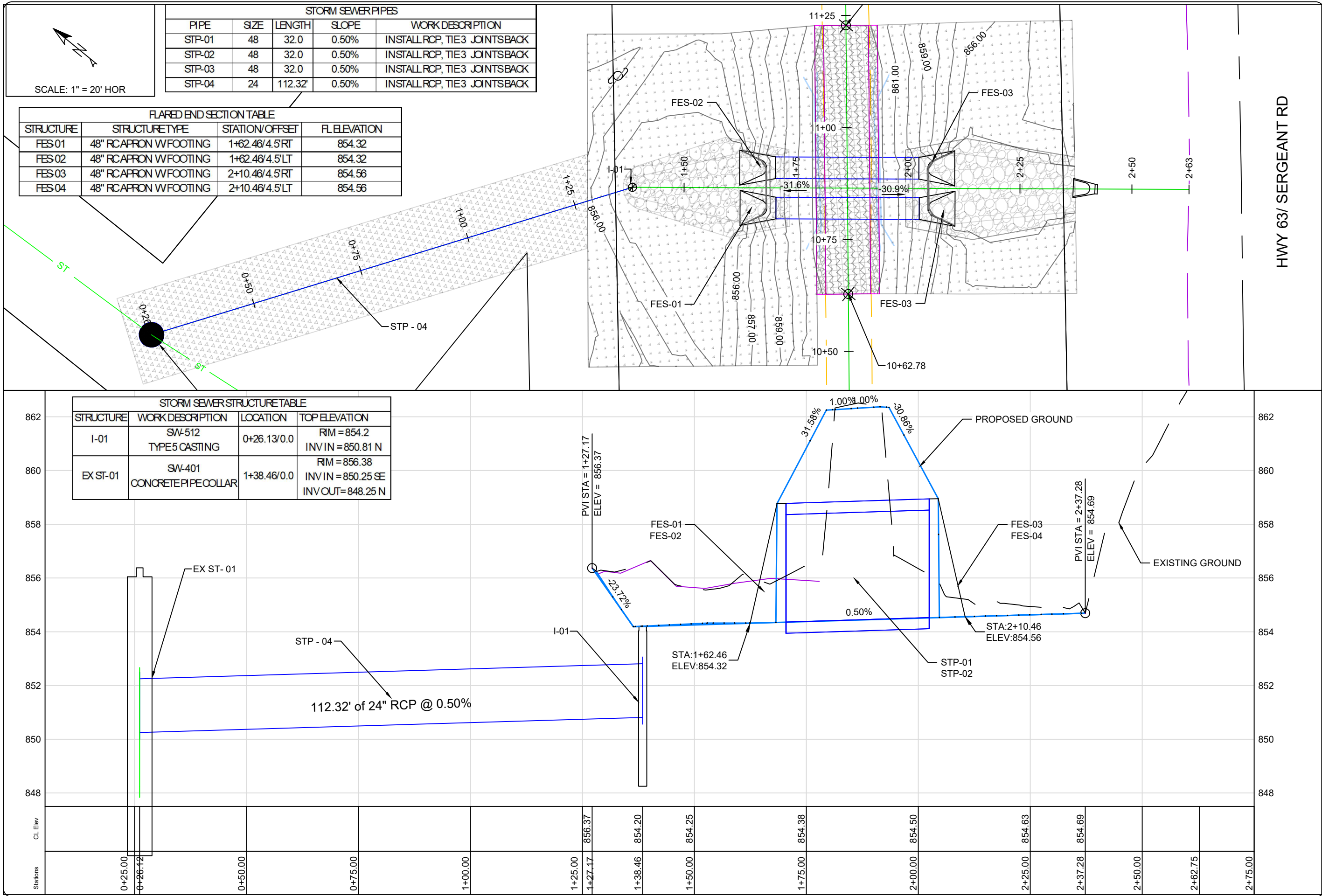
TAP-U-8155(788)-8I-07
SERGEANT RD TRAIL BRIDGES
REPLACEMENT
CONTRACT #1091

CITY OF WATERLOO, IOWA
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715 MULBERRY STREET
WATERLOO, IOWA 50703
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DATE: 4/21/2026

**SHEET
D4.3**

L:\CONT 1091 - 63 Trail Bridge Repairs\TAPICAD DRAWINGS\Design - 4.dwg 7/2/2026 10:02 AM



PROJECT LOCATION No.4
CULVERT P&P

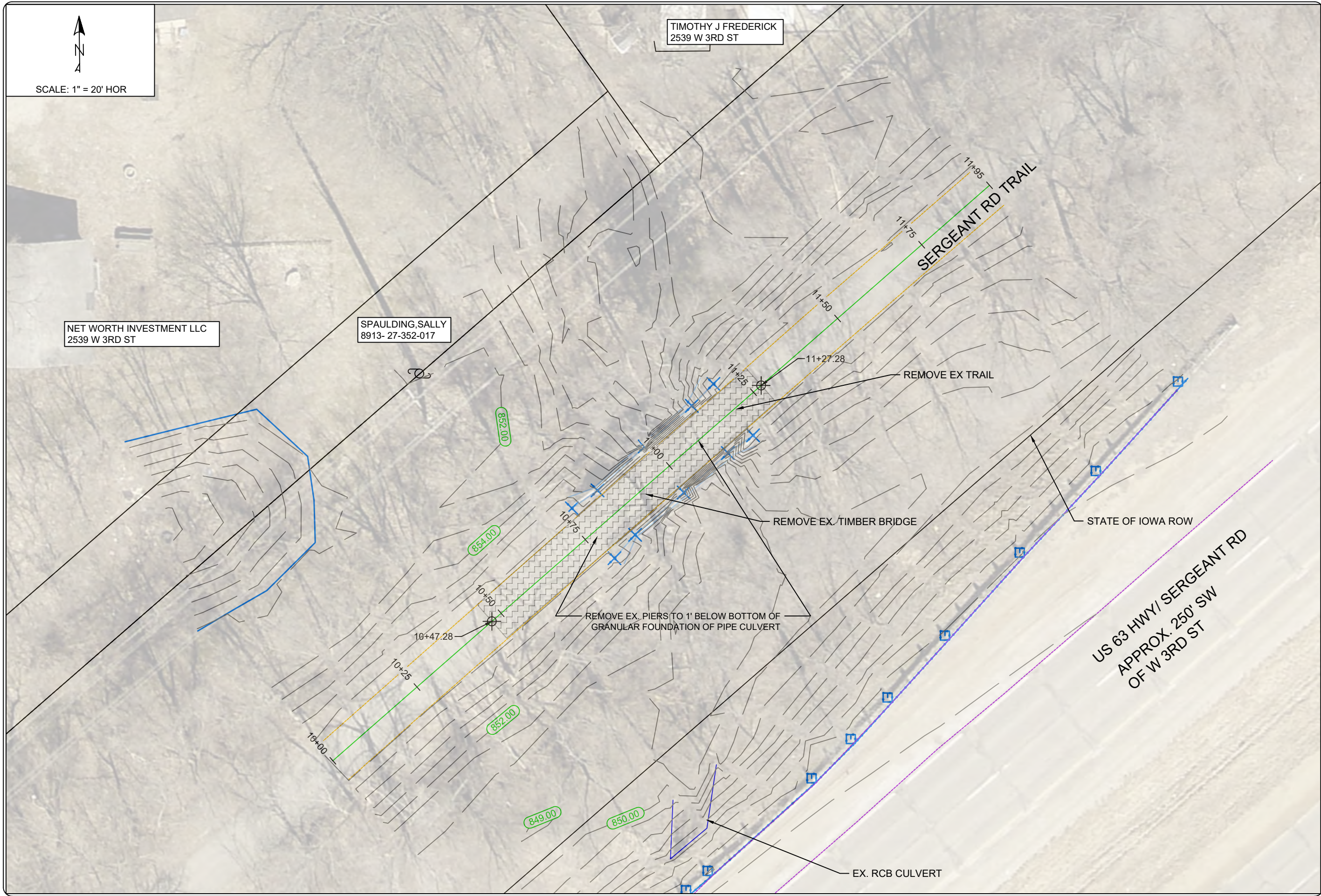
TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/21/2026

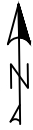
**SHEET
D4.4**

L:\CONT 1091 - 63 Trail Bridge Repairs TAP\CAD DRAWINGS\Design - 5.dwg 7/2/2026 10:02 AM




PROJECT LOCATION No.5 EXISTING CONDITIONS - REMOVALS
TAP-U-8155(788)-81-07 SERGEANT RD TRAIL BRIDGES REPLACEMENT CONTRACT #1091
CITY OF WATERLOO, IOWA ENGINEERING DEPARTMENT 715 MULBERRY STREET WATERLOO, IOWA 50703 (319) 291-4312 PHONE (319) 291-4262 FAX
DATE: 4/21/2026
SHEET D5.1

L:\CONT 1091 - 63 Trail Bridge Repairs TAP\CAD DRAWINGS\Design - 5.dwg 7/2/2026 10:02 AM



SCALE: 1" = 20' HOR

SERGEANT RD TRAIL

SEEDING & FERTILIZING
SLOPE PROTECTION, WOOD EXCELSIOR MAT

48" R.C.P CULVERTS

6" P.C.C TRAIL

10+47.28

10+25

10+00

EROSION
STONE W/
ENGINEERING FABRIC

EX. RCB CULVERT

OBJECT MARKER
TYPE 2

(3) 48" APRONS GUARDS

48" R.C. APRONS W/ FOOTINGS

US 63 HWY/ SERGEANT RD

STATE OF IOWA ROW

GRANULAR
SHOULDERS

11+27.28

11+50

11+75

11+95

1+00

1+50

32.2%

28.7%

2+00

2+50
2+52

850.00

852.00

854.00

856.00

856.00

854.00

852.00

850.00

848.00



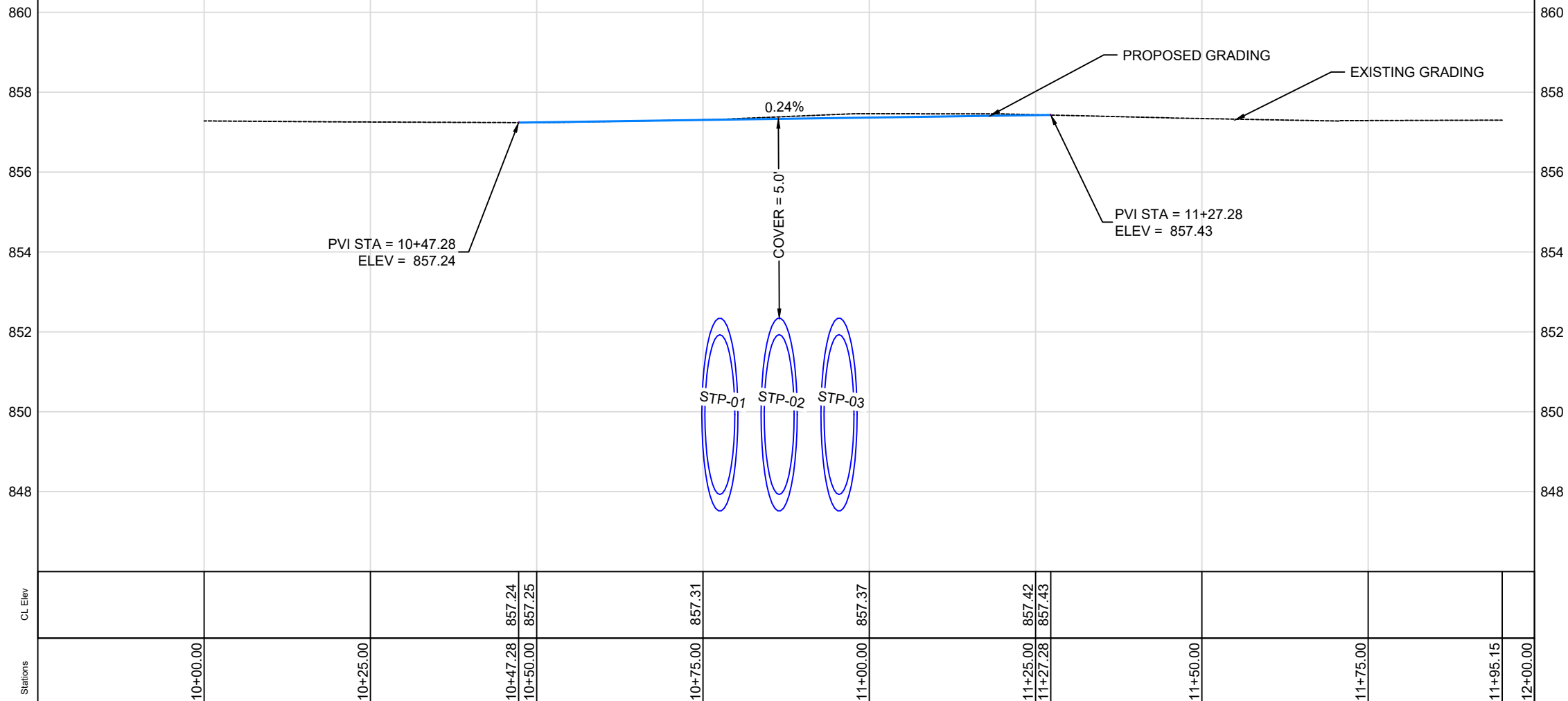
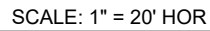
PROJECT LOCATION No.5
OVERALL SITE PLAN

TAP-U-8155(788)-81-07
SERGEANT RD TRAIL BRIDGES
REPLACEMENT
CONTRACT #1091

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
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DATE: 4/21/2026

SHEET
D5.2



TRAIL P&P

TAP-U-8155(788)-81-07
SERGEANT RD TRAIL BRIDGES
DEPT. A OFFICER

**CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT**
**715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX**

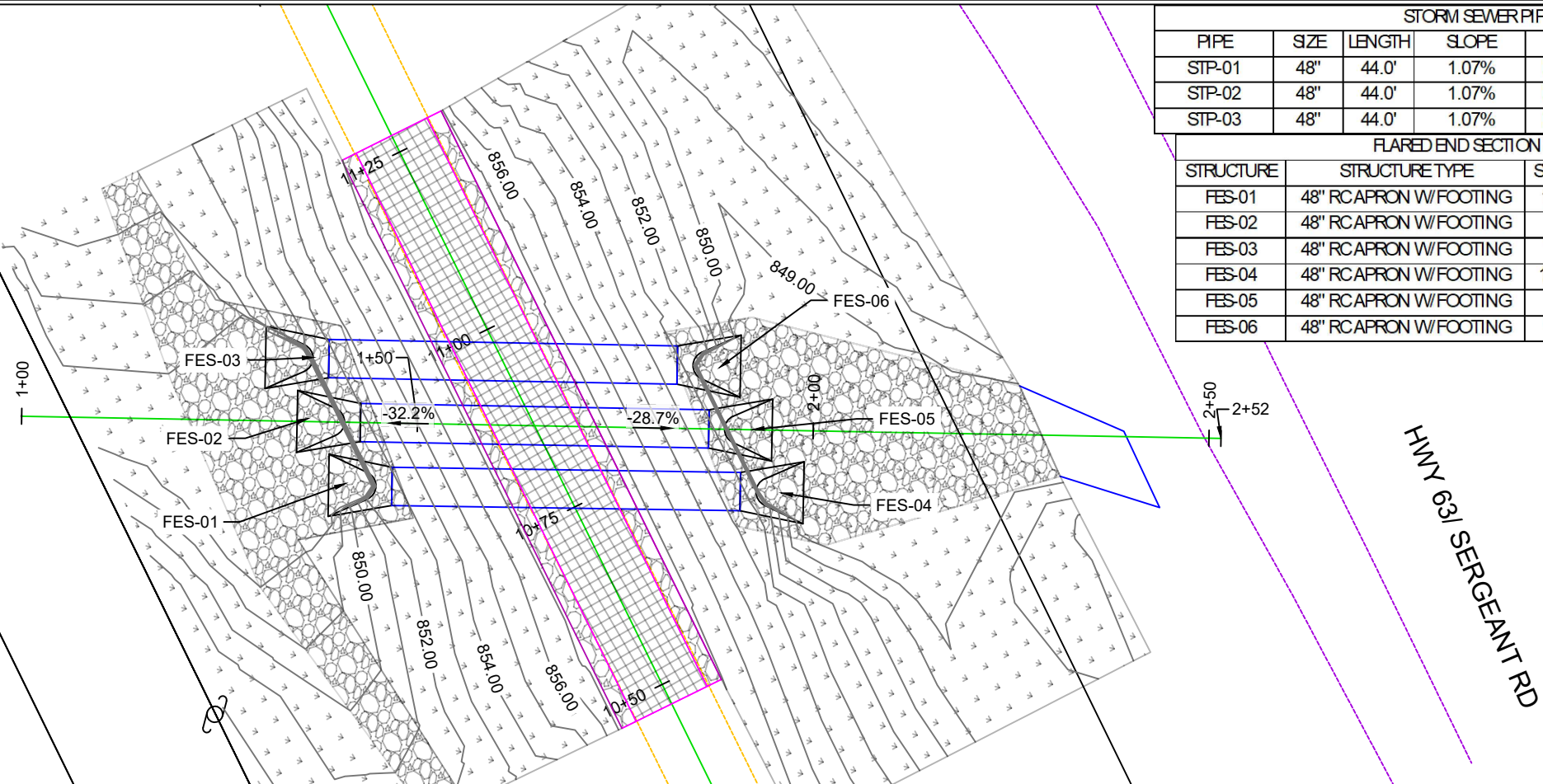
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SHEET
D5.3

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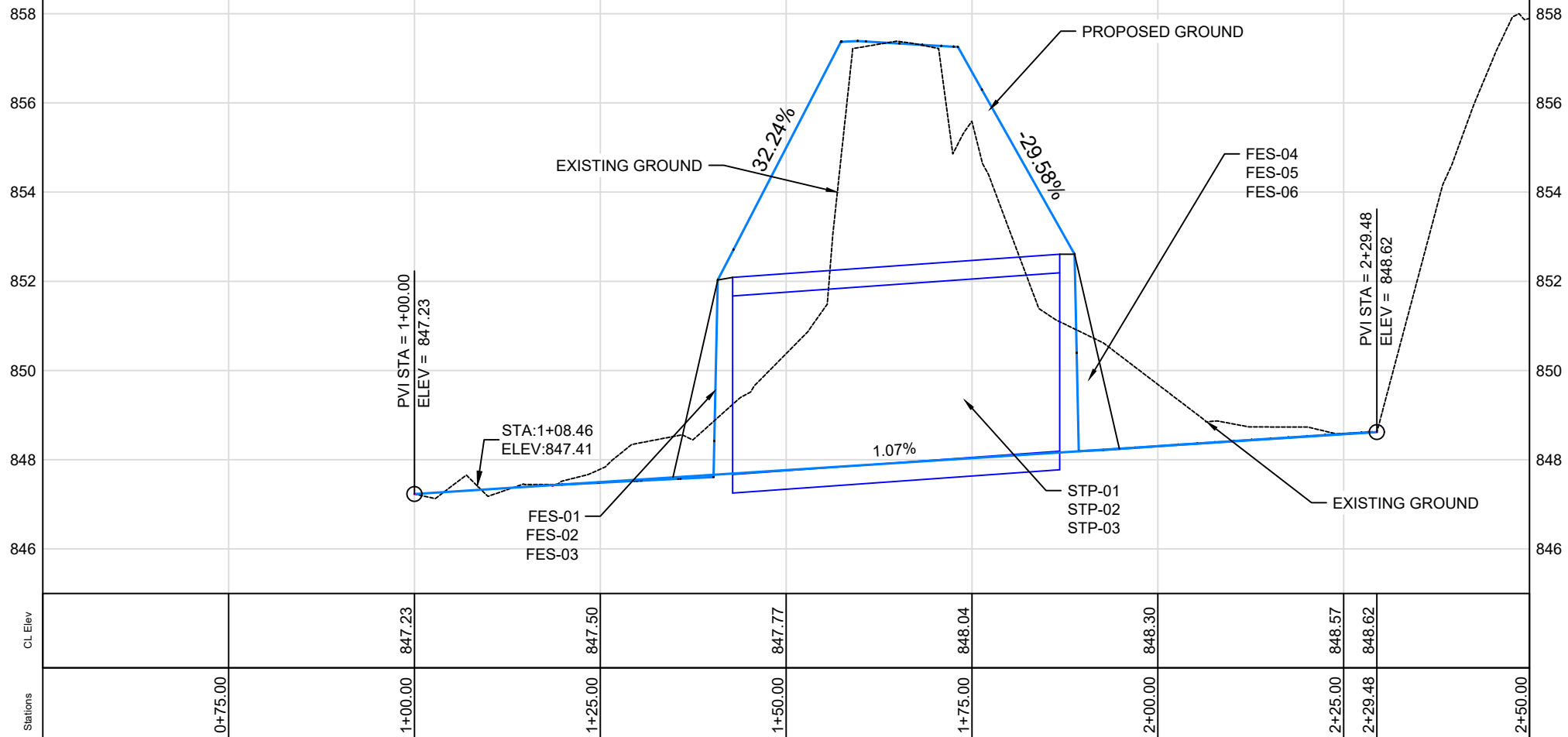


SCALE: 1" = 20' HOR



STORM SEWER PIPES				
PIPE	SIZE	LENGTH	SLOPE	WORK DESCRIPTION
STP-01	48"	44.0'	1.07%	INSTALL RCP, TIE 3 JOINTS BACK
STP-02	48"	44.0'	1.07%	INSTALL RCP, TIE 3 JOINTS BACK
STP-03	48"	44.0'	1.07%	INSTALL RCP, TIE 3 JOINTS BACK

FLARED END SECTION TABLE			
STRUCTURE	STRUCTURE TYPE	STATION/OFFSET	FL ELEVATION
FES-01	48" RC APRON W/ FOOTING	1+38.92/8.0' RT	847.61
FES-02	48" RC APRON W/ FOOTING	1+34.81/0.0'	847.61
FES-03	48" RC APRON W/ FOOTING	1+30.67/8.0' LT	847.61
FES-04	48" RC APRON W/ FOOTING	1+98.93/7.84' RT	848.25
FES-05	48" RC APRON W/ FOOTING	1+94.81/0.0'	848.25
FES-06	48" RC APRON W/ FOOTING	1+90.68/8.0' LT	848.25



PROJECT LOCATION No.5

CULVERT P&P

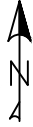
TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT
CONTRACT #1091**

CITY OF WATERLOO, IOWA
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715 MULBERRY STREET
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**SHEET
D5.4**

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SCALE: 1" = 20' HOR

WATERLOO BOARD OF PARK COMMISSION
8913-27-326-004

WATERLOO BOARD OF PARK COMMISSION
8913-27-326-004

PROTECT UTILITY POLE

REMOVE EX. PIERS TO 1' BELOW BOTTOM OF
GRANULAR FOUNDATION OF PIPE CULVERT

REMOVE EX. TIMBER BRIDGE

REMOVE EX TRAIL

EXISTING
CULVERT
OUTLET

STATE OF IOWA ROW

SERGEANT RD TRAIL

US 63 HWY/ SERGEANT RD
ST APPROX. 150' NE OF W 3RD



PROJECT LOCATION No.6
D6.1 EXISTING CONDITIONS - REMOVALS

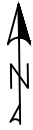
TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

CITY OF WATERLOO, IOWA
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6.1

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SCALE: 1" = 20' HOR

SERGEANT RD TRAIL

(1) 10' X 6' FLARED WING WALL
(15 DEG/ 45 DEG)

PROTECT
EX. UTILITY POLE

(1) 10' X 6' RCB CULVERT

6" P.C.C TRAIL

10+45.89

10+25

GRANULAR SHOULDERS

10+00

EX. RCB CULVERT

CLASS D REVETMENT W/
ENGINEERING FABRIC

SUBDRAIN OUTLET
W/ RODENT GUARD

PROPOSED
SWALE

SEEDING & FERTILIZING
SLOPE PROTECTION, WOOD EXCELSIOR MAT

STATE OF IOWA ROW

OBJECT MARKER
TYPE 2

EX. CULVERT
OUTLET

(1) 10' X 6' FLARED WING WALL (45 DEG)

SUBDRAIN OUTLET
W/ RODENT GUARD

US 63 HWY/ SERGEANT RD
APPROX. 150' NE
OF W 3RD ST



PROJECT LOCATION No.6

D6.2 OVERALL SITE PLAN

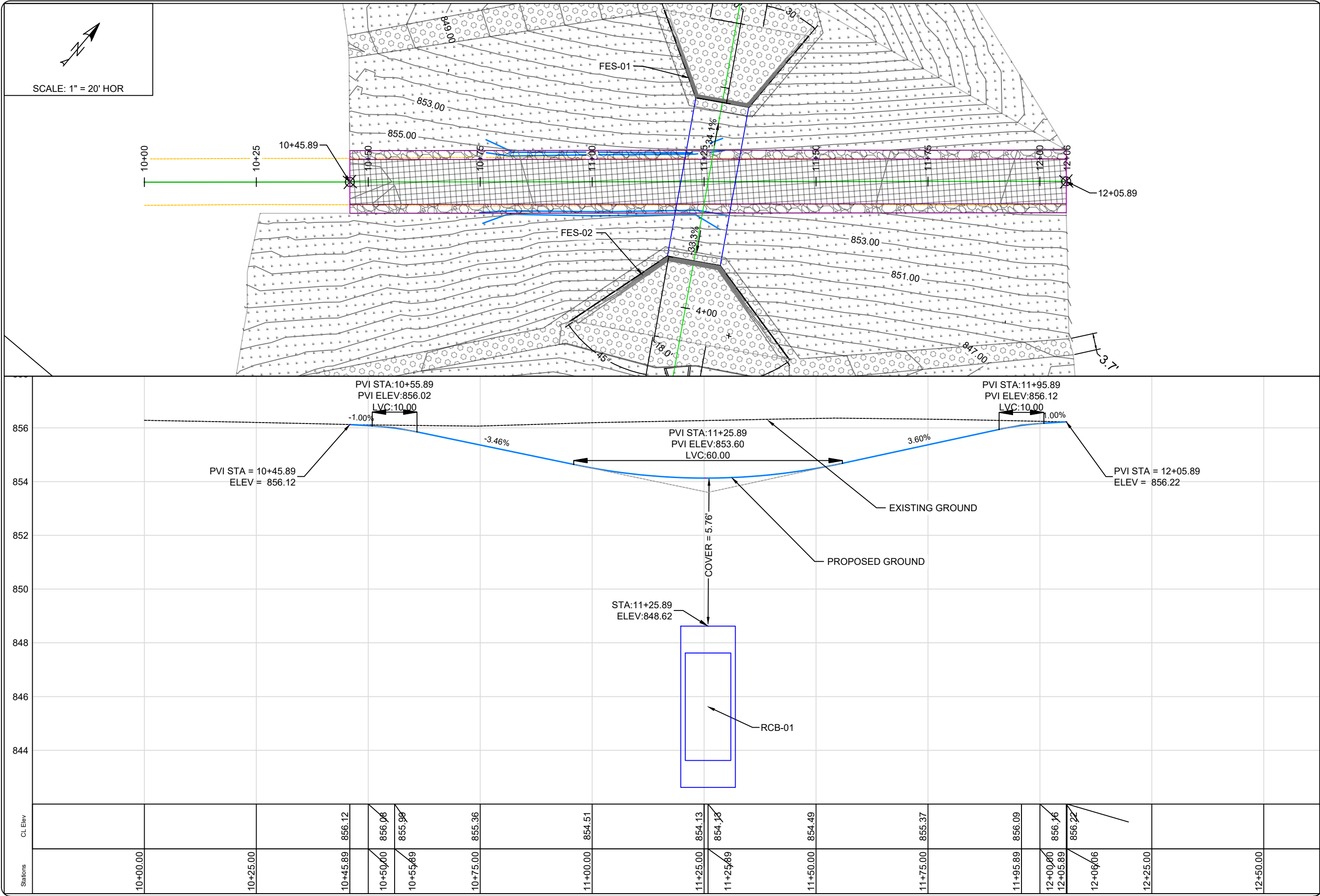
TAP-U-8155(788)-81-07
**SERGEANT RD TRAIL BRIDGES
REPLACEMENT**
CONTRACT #1091

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6.2

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PROJECT LOCATION No.6
D6.3 TRAIL P&P

TAP-U-8155(788)-81-07

SERGEANT RD TRAIL BRIDGES REPLACEMENT

CONTRACT #1091

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6.3

L:\CONT 1091 - 63 Trail Bridge Repairs TAP\CAD DRAWINGS\Design - 6.dwg 7/2/2026 10:03 AM

SCALE: 1" = 20' HOR

Stations CL Elev

2+75.00

3+00.00

3+04.09

843.13

3+25.00

843.30

3+50.00

843.46

3+75.00

854.17

4+00.00

843.83

4+25.00

848.40

4+28.19

849.61

4+50.00

4+75.00

5+00.00

PVI STA = 3+01.61

ELEV = 843.11

PROPOSED GROUND

FES-01

RCB-01

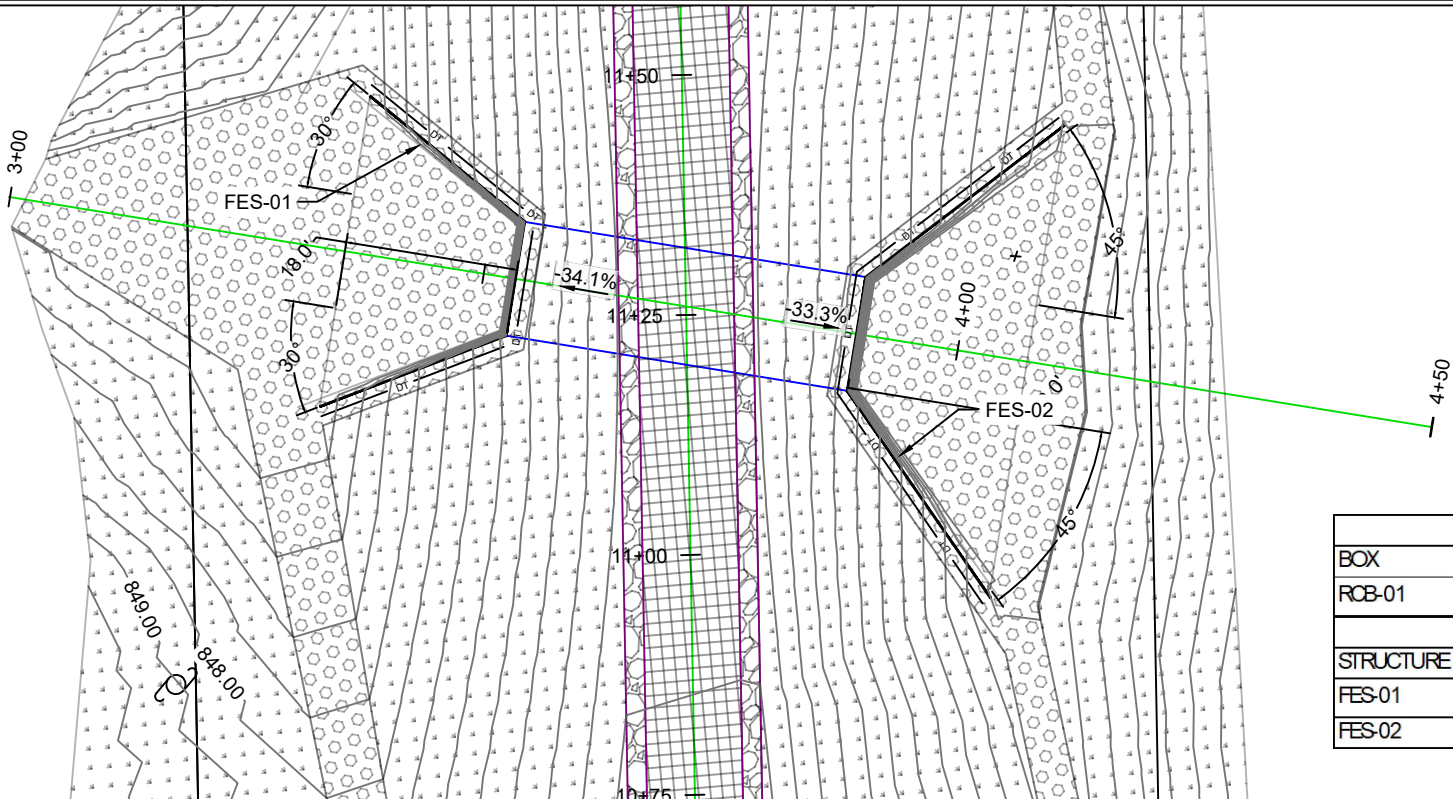
0.74%

EXISTING GROUND

FES-02

PVI STA = 4+13.94

ELEV = 843.94



HWY 63/ SERGEANT RD

BOX CULVERT INFORMATION				
BOX	SIZE	LENGTH	SLOPE	WORK DESCRIPTION
RCB-01	10' X 4'	36.0'	0.50%	INSTALL RCB
HEADWALL INFORMATION				
STRUCTURE	STRUCTURE TYPE		STATION/ OFFSET	ELEVATION
FES-01	FLARED END SECTION		3+35.33/0.0	843.36
FES-02	FLARED END SECTION		4+07.33/0.0	843.88

CITY OF WATERLOO, IOWA
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DATE: 7/2/2026

SHEET
6.4

TAP-U-8155(788)-81-07
SERGEANT RD TRAIL BRIDGES
REPLACEMENT
CONTRACT #1091

PROJECT LOCATION No.6
D6.4 CULVERT P&P



L:\CONT 1091 - 63 Trail Bridge Repairs\TAP\CAD DRAWINGS\BOX CULVERT DETAIL.dwg 7/2/2026 10:03 AM

BENCHMARKS

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
10000	3625987.042	5212263.595	870.77	SPIKE- APPROX. 420' SW SHAULIS RD
10001	3625851.893	5212162.54	871.747	SPIKE- APPROX. 420' SW SHAULIS RD
600	3625851.896	5212162.542	871.614	SPIKE- APPROX. 420' SW SHAULIS RD
10002	3633388.424	5217567.926	864.839	SPIKE- APPROX. 775' NE GREYHOUND DR
601	3633429.896	5217484.093	863.027	SPIKE- APPROX. 775' NE GREYHOUND DR
10004	3639130.618	5221634.944	864.054	SPIKE- APPROX. 470' NE MARTIN RD
602	3639189.784	5221717.295	864.135	SPIKE- APPROX. 470' NE MARTIN RD
603	3639090.853	5221709.217	865.243	SPIKE- APPROX. 470' NE MARTIN RD
10006	3639955.966	5222696.734	863.174	SPIKE- APPROX. 750' NE MARTIN RD
604	3639970.569	5222589.075	861.819	SPIKE- APPROX. 750' NE MARTIN RD
10008	3642153.25	5225222.716	857.82	SPIKE- APPROX. 250' SW W 3RD ST
605	3642204.803	5225151.008	856.707	SPIKE- APPROX. 250' SW W 3RD ST
10010	3642521.654	5225642.482	856.132	SPIKE- APPROX. 150'NE W 3RD ST
606	3642634.176	5225617.167	852.164	SPIKE- APPROX. 150'NE W 3RD ST

HORIZONTAL DATUM
NAD83 Iowa State Planes, North Zone – (NA2011)

VERTICAL DATUM
NAVD88



BENCHMARKS

TAP-U-8155(788)-81-07
SERGEANT RD TRAIL BRIDGES
REPLACEMENT
CONTRACT #1091

CITY OF WATERLOO, IOWA
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