

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
549	116RS-1		593	75
STA. 435+00		TO STA. 451+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



DRAINAGE AREA = 1.2 sq mi

FLOOD FREQUENCY (YEAR)	Q C.F.	LOW GRADE ELE (FT)		879.39 (Exist)		879.58 (Proposed)		Sta 438+13	
		OPENING (SQ. FT.) EXI	PROP	NAT. H. ELEV.	HEAD (FT) EXIST	PROP	HEADWATER ELE (FT) EXIS	PROP	
TEN-YEAR	10	384	48.7	71.4	874.70	0.99	0.33	876.69	876.03
DESIGN	50	595	58.2	78.8	875.32	2.06	1.14	877.37	878.46
BASE	100	685	58.6	81.2	875.52	2.53	1.62	878.05	877.14
OVERTOP EX	250	805	78.3		877.00	2.39		879.39	
MAX CALC	500	697		84.0	875.95		3.16		879.01

Existing Structure Velocity (10-Yr): 7.8 fps
Proposed Structure Velocity (10-Yr): 6.5 fps

STA 438+13
REMOVAL OF EXISTING STR NO. 2
(RC BOX CULVERT 12' X 6.5')

100.90 CU YD CONCRETE BOX CULVERT
H = 868.37 @ 27.4' LT
H = 868.74 @ 26.4' RT
SLOPE = 0.68%
LT & RT STONE RIPRAP-CL A4
EXTEND CULVERT GRADE & RESHAPE CHANNEL AS NECESSARY

STA 444+42.40
REMOVAL OF EXISTING STR NO. 3
(RC BOX CULVERT 6' X 2.5' WITH GRATED INLETS)

65' PCBC - 8' X 3' @ 15° SKEW RT AHEAD
2 EA GRATED CULVERT EXTENSION NO. 1
STONE RIPRAP CL A4 - LT & RT
H = 874.94 @ 31.8' LT
H = 875.37 @ 30.4' RT
TEMP EASE (LINE CHANNEL BETWEEN STRUCTURES)
SLOPE = 0.69%

STA 448+00
42' P CUL-CLD-T1-18"
31' LT
2 EACH END SECTIONS 18"

STA 439+91
50' P CUL-CLD-T1-24"
45' RT
2 EACH END SECTIONS 24"

DRAINAGE AREA = 186 Ac

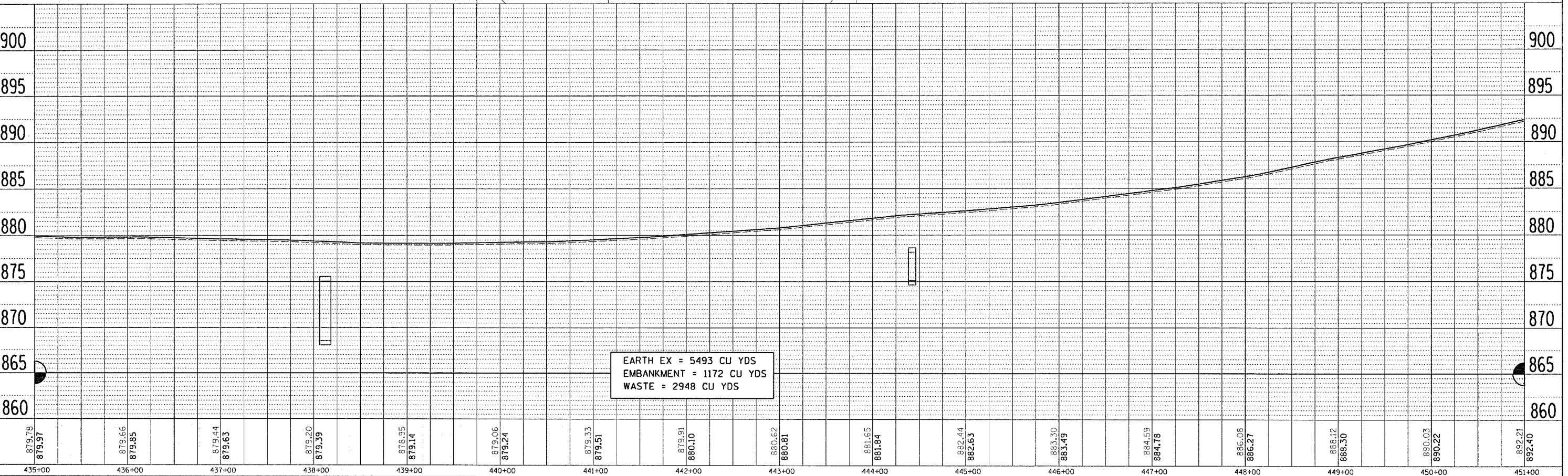
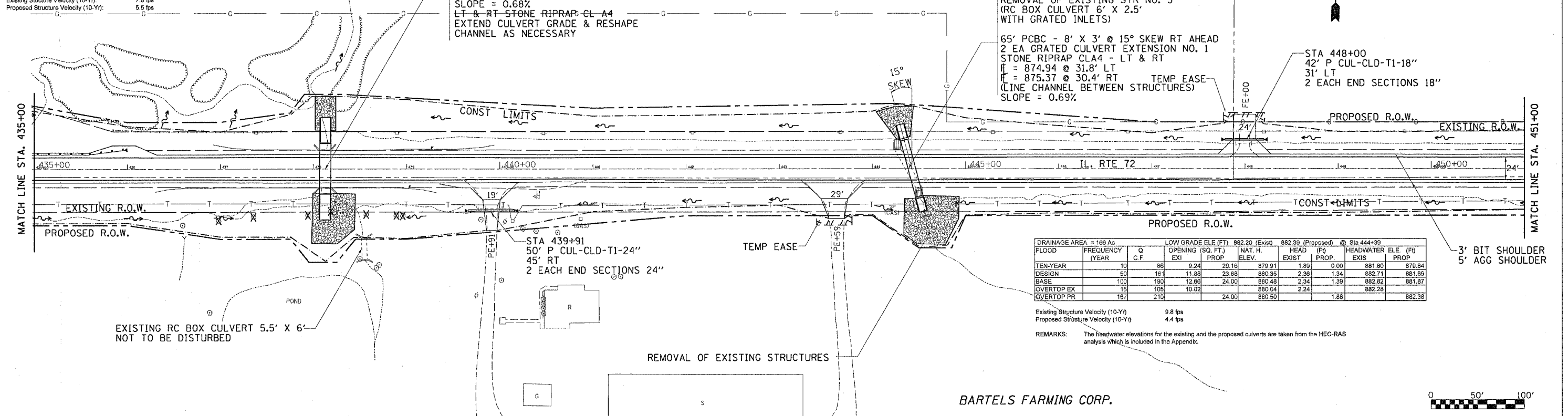
FLOOD FREQUENCY (YEAR)	Q C.F.	LOW GRADE ELE (FT)		882.20 (Exist)		882.39 (Proposed)		Sta 444+30	
		OPENING (SQ. FT.) EXI	PROP	NAT. H. ELEV.	HEAD (FT) EXIST	PROP	HEADWATER ELE (FT) EXIS	PROP	
TEN-YEAR	10	86	9.24	20.16	879.91	1.89	0.00	881.80	879.84
DESIGN	50	161	11.88	23.68	880.35	2.36	1.34	882.71	881.89
BASE	100	190	12.88	24.00	880.48	2.34	1.39	882.82	881.87
OVERTOP EX	15	105	10.02		880.64	2.24		882.28	
OVERTOP PR	167	210		24.00	880.50		1.88		882.38

Existing Structure Velocity (10-Yr): 9.8 fps
Proposed Structure Velocity (10-Yr): 4.4 fps

REMARKS: The headwater elevations for the existing and the proposed culverts are taken from the HEC-RAS analysis which is included in the Appendix.

PLAN	DATE
BY	
CHECKED	
DATE	

PROFILE	DATE
BY	
CHECKED	
DATE	



DATE-TIME: 10:00 AM
JOB-SPEC: 116RS-1
REF: 116RS-1
REF: 116RS-1
REF: 116RS-1